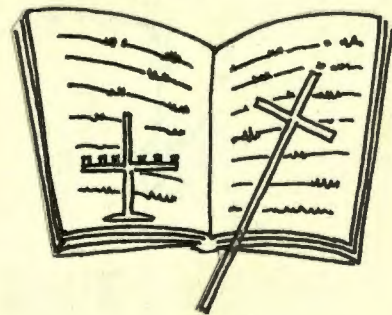


EPsn  
314 ~~31~~ 2



EPsn  
314



RELIGION UNITY CENTER

NUHA FALLAH

International Consultant  
Tel. 349305 - 11x. 20376 LE - P.O.B. 113 - 5067 Hamra - Beirut - Lebanon

1

2

3

4

5

6

7

## TABLE OF CONTENT

- 1 JUSTIFICATION.
- 2 SITE ANALYSIS.
- 3 PROGRAM ANALYSIS.
- 4 SERVICES.
- 5 PROPOSED PROGRAM.
- 6 RELATED EXAMPLES.
- 7 BIBLIOGRAPHIE

1  
2  
3  
4  
5  
6



Telephone 4988805 - FAX 20867011 - P.O. Box 133 50067 Havana - BRUPT - L6888888

...  
...  
DIXION

IF  
WHEN TWO OR THREE ARE GATHERED  
IN MY NAME, THERE AM I IN THE MIDST OF THEM

2  
3  
4  
5  
6  
7



THE SAME COUNTRY ON OPPOSITE SIDES AGAINST ONE ANOTHER.

THE CREATION OF THIS PUBLIC SPACE WILL BE A DEMONSTRATION OF THIS CONCEPT. ALL WHO ENTER IT AT ONCE GET THE FEELING OF BELONGING TO IT. ITS SMALL SIZE, DOMESTIC SCALE, MULTIUSE, CONTINUOUS USE, COMBINE ALL TO BUILD UP THE SENSE OF UNITY.

ALL THIS TO BEGIN TO GROPE TOWARDS A NEW CONCEPT OF SOCIETY: A SOCIETY, IN WHICH ALL ARE FRIENDS, ANIMATED BY LOVE, ACCEPTING DIFFERENCES, INSISTENT ON FREEDOM AND ANXIOUS THAT DECISION - MAKING SHOULD BE AS FAR AS POSSIBLE WITH INDIVIDUALS.

---

### SITE LOCATION FACTORS DETERMINANTS :

- PROMINENT
- EASY ACCESSIBLE
- IDENTITY BY ITSELF

3

4

5

6



International Financial Company  
Tel. 349305 - Telex: 20376 LE - P.O.B. 113 - 5067 Hamra - Beirut - Lebanon



2  
3  
4  
5  
6





International Financial Consultant  
Tel. 549305 - 11X. 20376 LE - P.O.B. 113 - 5067 Hamra - Beirut - Lebanon



International Planning Consultants  
Tel. 349305 - IX. 20376 LE - P.O.B. 113 - 5067 Hamra - Beirut - Lebanon



3  
4  
5  
6



International Financial Consultants  
Tel. 349305 - FAX. 20376 LE - P.O.B. 113 - 5067 Hamra - Beirut - Lebanon

Y-27.500

Y-28.000

FUTURE ROAD

Grotte aux Pigeons

**PROPOSED  
SITE**



3  
4  
5  
6  
7



BEFORE ONE BEGINS TO DESIGN AND CONSTRUCT A BUILDING, ONE SHOULD CAREFULLY CONSIDER THE IMPLICATIONS OF ITS PROPOSED PHYSICAL CONTEXT, THE BLDG SITE. ITS

- GEOGRAPHICAL LOCATION
- TOPOGRAPHY
- CLIMATE
- ORIENTATION
- PERIPHERAL CONDITIONS

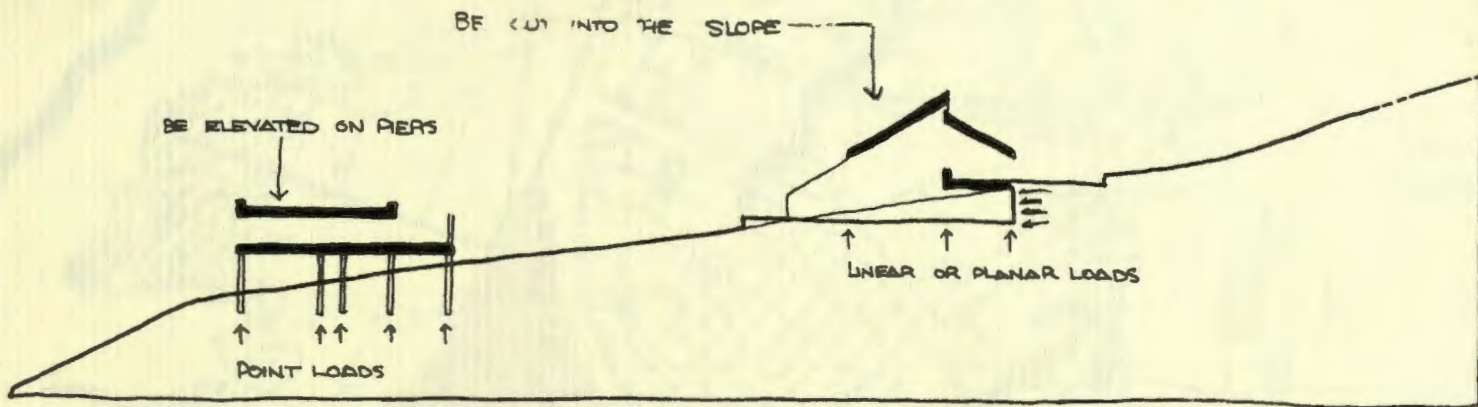
Printer: India Office: Bangalore  
Tel: 084399305 Fax: 2087644 P. O. Box 1813 Bangalore - 560018

3  
4  
5  
6

# GEOGRAPHICAL FACTORS

## TOPOGRAPHY:

MODERATE SLOPES: STRUCTURES MAY BE - ELEVATED ON PIERS  
- BE CUT INTO THE SLOPE







Y-27,500

Y-28,000

20  
25  
30

AVENUE

AVENUE

AVENUE

RUE

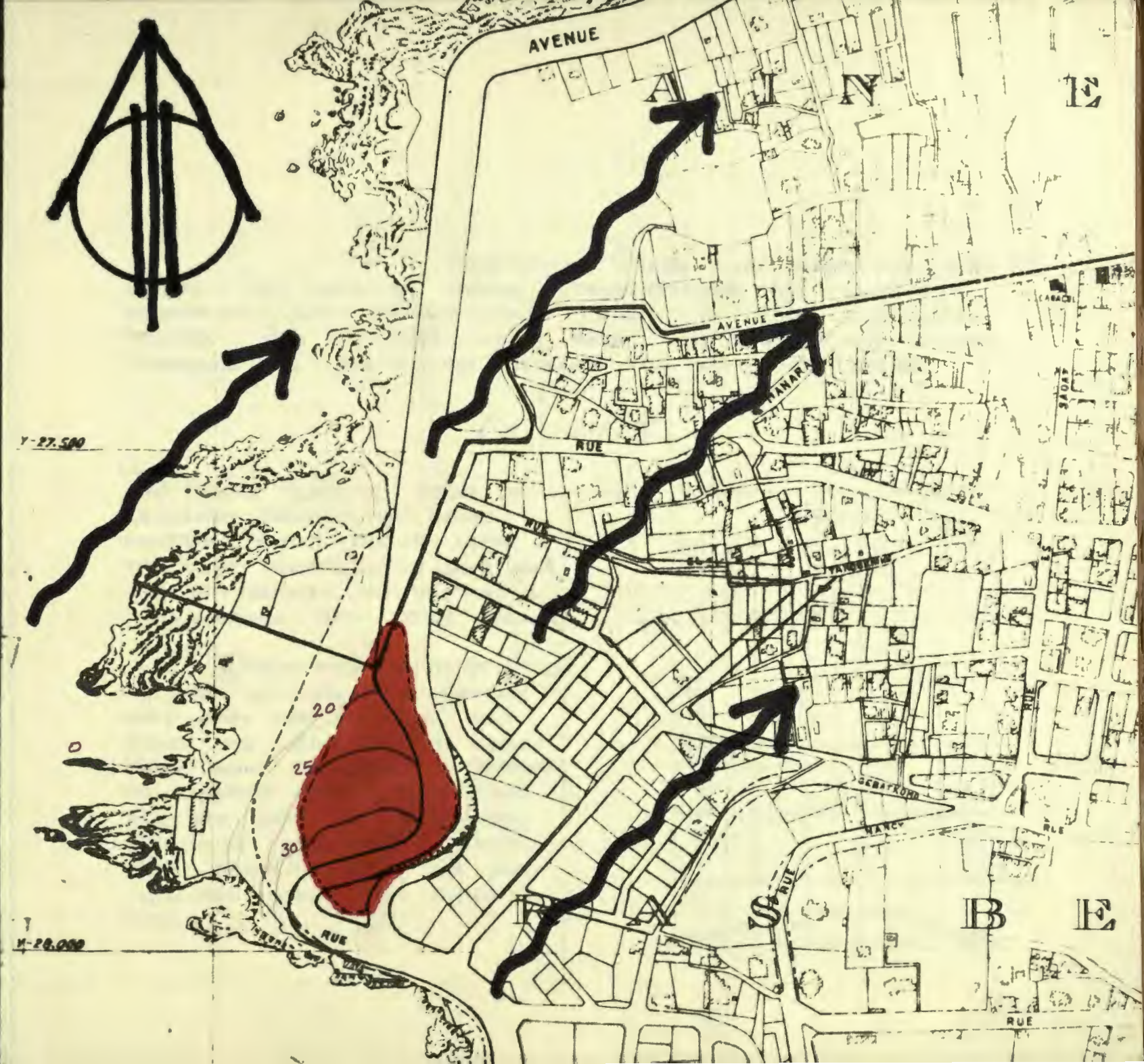
B

E

E

3  
4  
5  
6

Internal File # 1141  
File # 20076-LE  
Date 11-13-66  
Name Barrat  
Location Lebanon



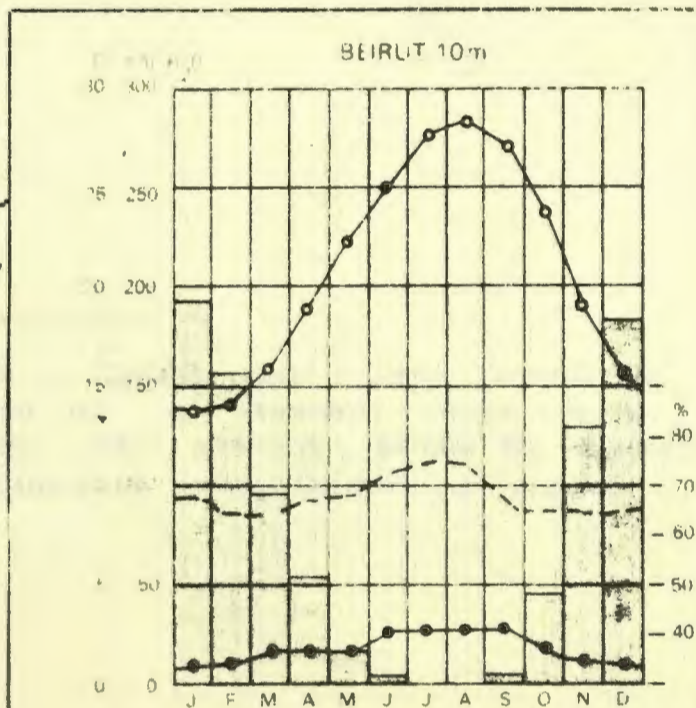


VEGETATION.. GRASS AND VEGETATION GROUND  
COVERS. THEY TEND TO REDUCE TEMPERATURES BY ABSORBING  
INSOLATION AND ENCOURAGING COOLING BY THEIR EVAPORATION  
PROCESS. AID IN STABILIZING SOILS AND PREVENTING EROSION  
INCREASE A SOIL'S PERMEABILITY TO AIR AND WATER

## CLIMATE

THE YEARLY CLIMATIC CYCLE IN  
LEBANON CONSISTS OF RAINY  
WINTERS, EARLY SPRING WITH  
THE LAST RAINFALL IN MAY, FOUR  
HOT, DRY SUMMER MONTHS, AND A  
MILD AUTUMN WITH LITTLE RAINFALL

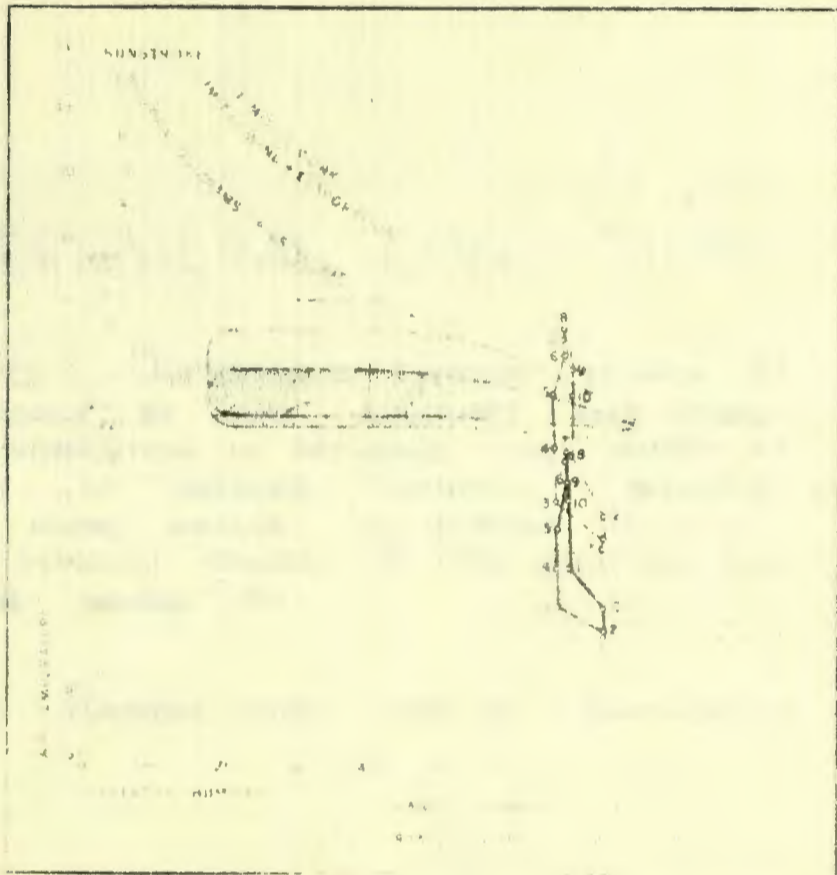
DAILY MAXIMUM TEMPERATURES SURPASS THE COMFORT  
LIMIT FROM MAY ONWARDS, AND  
REACH THE WORK LIMIT IN AUGUST.  
MEAN DAILY TEMPERATURES SURPASS  
THE COMFORT LIMIT FROM JUNE  
TILL THE END OF SEPTEMBER.  
BECAUSE OF HIGH HUMIDITY,  
CROSS VENTILATION IS THE ONLY  
NATURAL MEANS FOR CLIMATIZATION.



3  
4  
5  
6  
7



IT IS NECESSARY TO OPEN BUILDINGS TO THE SUMMER BREEZE FROM THE SOUTH WEST, TO PROVIDE SUN PROTECTION AND SUFFICIENT THERMAL INSULATION. HEATING BECOMES NECESSARY IN THE WINTER DURING STORMY PERIODS WITHOUT SUNSHINE.



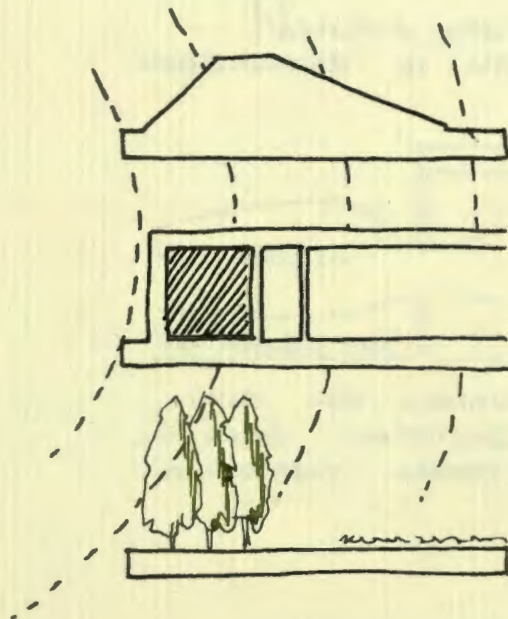
IN A TEMPERATE REGIONS - SOLAR HEAT GAIN SHOULD BE BALANCED WITH SHADE PROTECTION ON A SEASONAL BASIS. WIND: AIR MOVEMENT IS DESIRABLE DURING HOT PERIODS; SHOULD BE BLOCKED DURING COLD PERIODS. BEST BUILDING ORIENTATION IS ALONG EAST-WEST AXIS.

12345678910111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656667686970717273747576777879808182838485868788899091929394959697989910010110210310410510610710810911011111211311411511611711811912012112212312412512612712812913013113213313413513613713813914014114214314414514614714814915015115215315415515615715815916016116216316416516616716816917017117217317417517617717817918018118218318418518618718818919019119219319419519619719819920020120220320420520620720820921021121221321421521621721821922022122222322422522622722822923023123223323423523623723823924024124224324424524624724824925025125225325425525625725825926026126226326426526626726826927027127227327427527627727827928028128228328428528628728828929029129229329429529629729829930030130230330430530630730830931031131231331431531631731831932032132232332432532632732832933033133233333433533633733833934034134234334434534634734834935035135235335435535635735835936036136236336436536636736836937037137237337437537637737837938038138238338438538638738838939039139239339439539639739839940040140240340440540640740840941041141241341441541641741841942042142242342442542642742842943043143243343443543643743843944044144244344444544644744844945045145245345445545645745845946046146246346446546646746846947047147247347447547647747847948048148248348448548648748848949049149249349449549649749849950050150250350450550650750850951051151251351451551651751851952052152252352452552652752852953053153253353453553653753853954054154254354454554654754854955055155255355455555655755855956056156256356456556656756856957057157257357457557657757857958058158258358458558658758858959059159259359459559659759859960060160260360460560660760860961061161261361461561661761861962062162262362462562662762862963063163263363463563663763863964064164264364464564664764864965065165265365465565665765865966066166266366466566666766866967067167267367467567667767867968068168268368468568668768868969069169269369469569669769869970070170270370470570670770870971071171271371471571671771871972072172272372472572672772872973073173273373473573673773873974074174274374474574674774874975075175275375475575675775875976076176276376476576676776876977077177277377477577677777877978078178278378478578678778878979079179279379479579679779879980080180280380480580680780880981081181281381481581681781881982082182282382482582682782882983083183283383483583683783883984084184284384484584684784884985085185285385485585685785885986086186286386486586686786886987087187287387487587687787887988088188288388488588688788888989089189289389489589689789889990090190290390490590690790890991091191291391491591691791891992092192292392492592692792892993093193293393493593693793893994094194294394494594694794894995095195295395495595695795895996096196296396496596696796896997097197297397497597697797897998098198298398498598698798898999099199299399499599699799899910001001100210031004100510061007100810091010101110121013101410151016101710181019102010211022102310241025102610271028102910301031103210331034103510361037103810391040104110421043104410451046104710481049105010511052105310541055105610571058105910601061106210631064106510661067106810691070107110721073107410751076107710781079108010811082108310841085108610871088108910901091109210931094109510961097109810991100110111021103110411051106110711081109111011111112111311141115111611171118111911201121112211231124112511261127112811291130113111321133113411351136113711381139114011411142114311441145114611471148114911501151115211531154115511561157115811591160116111621163116411651166116711681169117011711172117311741175117611771178117911801181118211831184118511861187118811891190119111921193119411951196119711981199120012011202120312041205120612071208120912101211121212131214121512161217121812191220122112221223122412251226122712281229123012311232123312341235123612371238123912401241124212431244124512461247124812491250125112521253125412551256125712581259126012611262126312641265126612671268126912701271127212731274127512761277127812791280128112821283128412851286128712881289129012911292129312941295129612971298129913001301130213031304130513061307130813091310131113121313131413151316131713181319132013211322132313241325132613271328132913301331133213331334133513361337133813391340134113421343134413451346134713481349135013511352135313541355135613571358135913601361136213631364136513661367136813691370137113721373137413751376137713781379138013811382138313841385138613871388138913901391139213931394139513961397139813991400140114021403140414051406140714081409141014111412141314141415141614171418141914201421142214231424142514261427142814291430143114321433143414351436143714381439144014411442144314441445144614471448144914501451145214531454145514561457145814591460146114621463146414651466146714681469147014711472147314741475147614771478147914801481148214831484148514861487148814891490149114921493149414951496149714981499150015011502150315041505150615071508150915101511151215131514151515161517151815191520152115221523152415251526152715281529153015311532153315341535153615371538153915401541154215431544154515461547154815491550155115521553155415551556155715581559156015611562156315641565156615671568156915701571157215731574157515761577157815791580158115821583158415851586158715881589159015911592159315941595159615971598159916001601160216031604160516061607160816091610161116121613161416151616161716181619162016211622162316241625162616271628162916301631163216331634163516361637163816391640164116421643164416451646164716481649165016511652165316541655165616571658165916601661166216631664166516661667166816691670167116721673167416751676167716781679168016811682168316841685168616871688168916901691169216931694169516961697169816991700170117021703170417051706170717081709171017111712171317141715171617171718171917201721172217231724172517261727172817291730173117321733173417351736173717381739174017411742174317441745174617471748174917501751175217531754175517561757175817591760176117621763176417651766176717681769177017711772177317741775177617771778177917801781178217831784178517861787178817891790179117921793179417951796179717981799180018011802180318041805180618071808180918101811181218131814181518161817181818191820182118221823182418251826182718281829183018311832183318341835183618371838183918401841184218431844184518461847184818491850185118521853185418551856185718581859186018611862186318641865186618671868186918701871187218731874187518761877187818791880188118821883188418851886188718881889189018911892189318941895189618971898189919001901190219031904190519061907190819091910191119121913191419151916191719181919192019211922192319241925192619271928192919301931193219331934193519361937193819391940194119421943194419451946194719481949195019511952195319541955195619571958195919601961196219631964196519661967196819691970197119721973197419751976197719781979198019811982198319841985198619871988198919901991199219931994199519961997199819992000

3  
4  
5  
6

## PERIPHERAL CONDITIONS

SOUND - UNDESIRABLE EXTERIOR SOUNDS OR NOISE ARE CAUSED PRIMARILY BY CARS, AIRCRAFT, AND OTHER MACHINERY. THE FIRST CONSIDERATION IN REDUCING THE IMPACT OF EXTERIOR NOISE IS ONE OF DISTANCE, LOCATING A BUILDING AS FAR AS FAR FROM THE NOISE SOURCE AS POSSIBLE. IF IT IS NOT POSSIBLE THEN THE INTERIOR SPACES OF THE BUILDING MAY BE SCREENED FROM THE SOURCE BY:



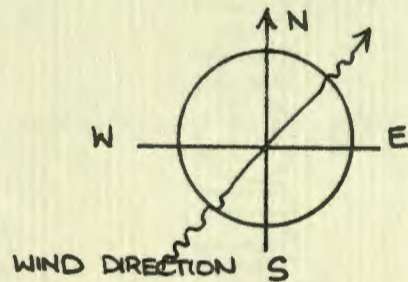
⇒ PHYSICAL MASS SUCH AS EARTH BERMS

⇒ BUILDING ZONES WHERE NOISE CAN BE TOLERATED: I.E. MECHANICAL, SERVICE, AND UTILITY AREAS.

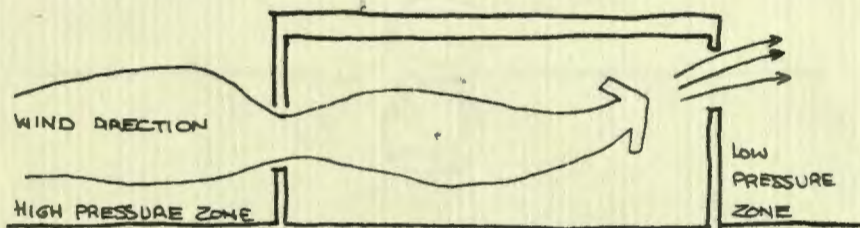
⇒ LANDSCAPING ELEMENTS.  
• DENSE TREE PLANTING  
• PLANTED GROUND COVER AREAS.



WIND. - WIND DIRECTION IN BEIRUT IS  
SOUTH - WEST NORTH - EAST



NATURAL VENTILATION MUST BE USED, IT IS GENERATED BY DIFFERENCES IN AIR PRESSURE AS WELL AS TEMPERATURE.



- INLET FOR MAXIMUM AIR FLOW.
- INTERIOR PARTITIONS AND LARGE PIECES OF FURNITURE MAY ADVERSELY AFFECT AIR FLOW PATTERNS.

- POSITION OF OUTLET DOES NOT ALTER FLOW PATTERN
- SHOULD BE HIGH TO LET RISING WARM AIR ESCAPE
- OUTLET SHOULD BE AS LARGE OR LARGER THAN

1116-3067 Hamra - Beirut - Lebanon  
 003 005 1116-3067 Hamra - Beirut - Lebanon  
 003 005 1116-3067 Hamra - Beirut - Lebanon

3  
4  
5  
6

MY CENTER WILL BE COMPOSED OF :

SYNAGOGUE

CHURCH

MOSQUE

SOCIAL HALL

LIBRARY

ADMINISTRATION .

DETAILED PROGRAM AS FOLLOWS → . . . .

file 13 353005 - 100X-208301EE - PICUS: 1135-50067Halmita - B&RTIT - Lieberman

4

5

6



# SYNAGOGUE

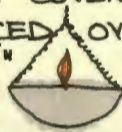
## JEWISH TRADITION.

A FOLK RELIGION BASED ON ETHICAL MONOTHEISM. THE SERVICES CONSIST OF PRAYERS, READINGS FROM SACRED TEXTS, SONGS, RESPONSIVE READINGS, SERMONS.

THE LITURGICAL FURNITURE STEMMING FROM THE TRADITION (EXODUS 25) CONSISTS OF :

### ARK

FOCAL POINT, HOLDS THE 'SCROLLS OF THE LAW' → "TORAH". THE CONGREGATION FACES THE ARK IN PRAYER, WHICH IS TRADITIONALLY EAST, SO AS TO FACE JERUSALEM. A COVERING IN THE FORM OF CURTAIN → "PAROCHES". A LAMP PLACED OVER THE ARK TO BURN ETERNALLY → "ETERNAL LIGHT".



### BEMA

THE READER'S AND PREACHER'S DESKS, MAY BE ON A PLATFORM FACING THE CONGREGATION OR IN THE CENTER OF THE SYNAGOGUE WITH THE PENS BUILT AROUND IT. ON THE PLATFORM ARE LOCATED FOUR OR MORE SEATS FOR PARTICIPANTS IN THE SERVICE. GENERALLY, SEATING IS PROVIDED FOR THE RABBI, (WHICH IS NOT A PRIEST BUT A SCHOLAR, AND THE TEACHER OF HIS CONGREGATION) CANTOR, PRESIDENT, GUESTS AND THOSE TO



BE HONORED, USUALLY ABOUT SIX PEOPLE.

## MENORAH

A CANDLESTICK OF SEVEN OR MORE LIGHTS BASED ON THE DESCRIPTION IN 'EXODUS 25'. THE REASON FOR THE SEVEN BRANCHES HAS BEEN VARIOUSLY INTERPRETED. IT REPRESENTS THE SIX DAYS OF CREATION WITH THE CENTER CANDLE SYMBOLIZING THE "SABATH" DAY OF REST.



## CHOIR

IN THE REFORM AND CONSERVATIVE SERVICE THE CHOIR IS IMPORTANT, THOUGH NEVER DOMINANT. ITS SIZE AND PLACEMENT (SMALL OR LARGE, VISIBLE OR CONCEALED) DEPENDS ON CONGRE-GATIONAL DECISION.

## SEPERATION OF WOMEN

IN ORTHODOX TRADITION A SPECIAL SECTION IS RESERVED FOR WOMEN, FOR WOMEN WERE TRADITIONALLY SEPERATED FROM MEN IN THE SYNAGOGUE.

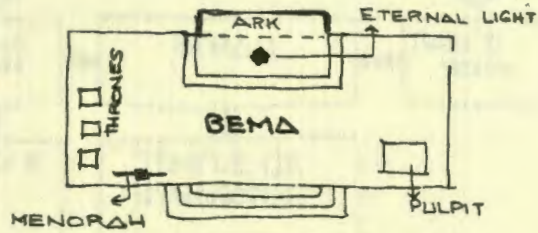
## WEDDINGS

IN MODERN PRACTICE A CENER AISLE IS PROVIDED FOR WEDDING PROCESSIONS, BUT WHERE THE BEMA IS CENTRAL THERE IS A SPACE AROUND IT.

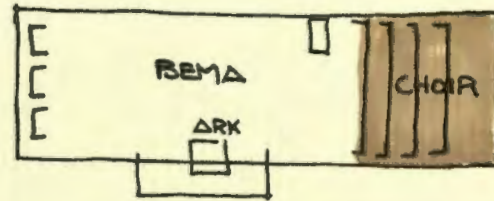
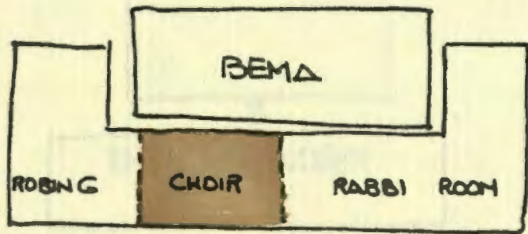


# ROBING ROOMS

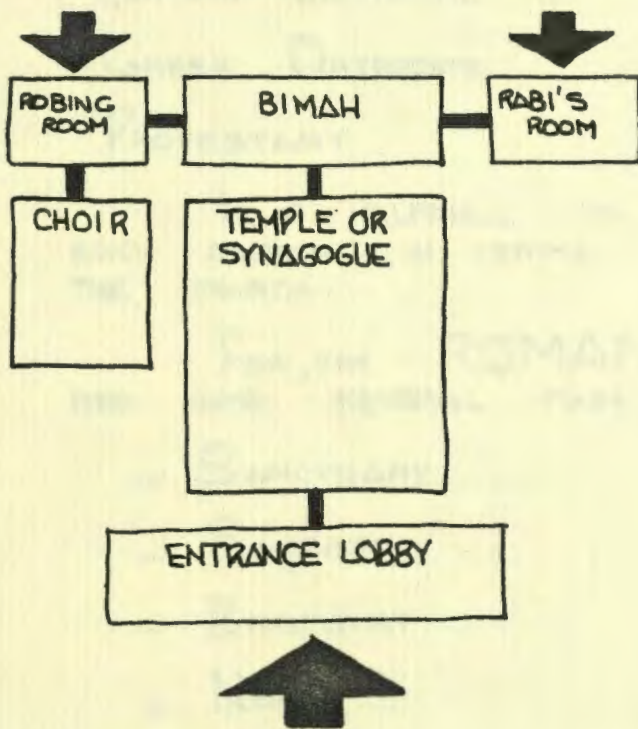
THE CELEBRANT REQUIRES A ROOM FOR ROBING AND THE STORAGE OF VESTMENTS. ALSO CHOIR REQUIRES A ROOM FOR ROBING.



DIFFEREN LOCATION OF CHOIR



# SPACE AND FUNCTION



tel: 043880505 - FAX: 020870111 - P. 01831 133 5656 Hiamra - Beirut Lebanon

4

5

6



# CHURCH

THIS CHURCH IS A UNITY CHURCH WHICH HAS TO ACCOMMODATE THE DIFFERENT SECTS OF CHRISTIANITY NAMELY :

ROMAN CATHOLIC

GREEK ORTHODOX

PROTESTANT

IT IS HELPFULL TO DISCUSS THE ESSENTIAL ITEMS OF EACH CHURCH IN TERMS OF ITS PHYSICAL LOCATION WITHIN THE CHURCH.

FOR, THE ROMAN CATHOLIC CHURCH IS DIVIDED INTO SEVERAL MAIN SECTIONS :

- SANCTUARY
- SACRISTY
- BAPTISTRY
- NAVE
- CHOIR
- NARTHEX.



THE GREEK ORTHODOX  
CHURCH IS DIVIDED ALSO INTO MAIN ITEMS:

- SANCTUARY
- SACRISTY
- NAVE
- CHOIR
- NARTHEX

THE PROTESTANT CHURCH IS DIVIDED  
INTO TWO PARTS ,

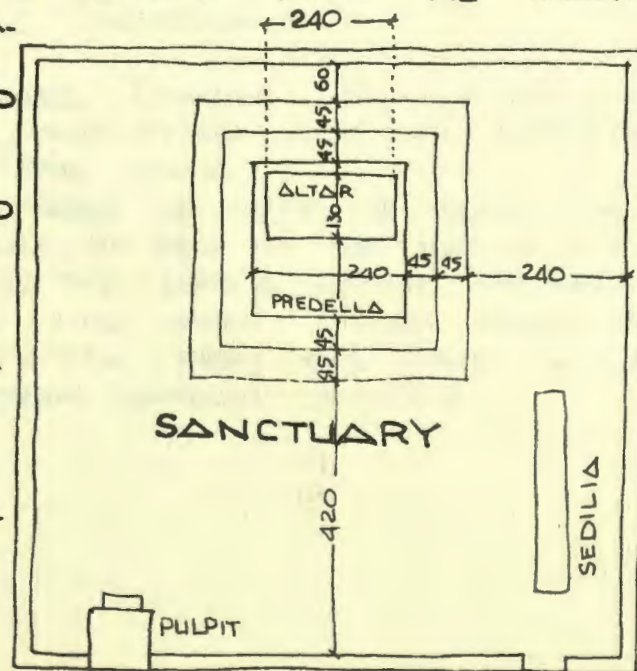
- THE NAVE
- CHANCEL
- NARTHEX
- SACRISTY
- CHOIR



## SANCTUARY. — ROMAN CATHOLIC.

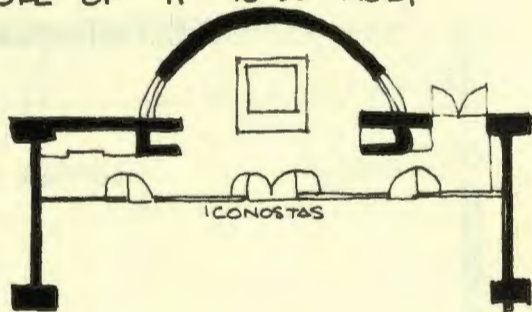
THE AREA KNOWN AS THE SANCTUARY SURROUNDS THE MAIN ALTAR, AND THE ALTAR IS THE HEART AND SOUL OF THE PARISH, THE TABLE WHERE THE SACRIFICE OF THE MASS IS CELEBRATED EACH DAY. THE CONGREGATION SHOULD BE BROUGHT AS CLOSE TO THE ALTAR AS POSSIBLE. IT IS QUITE IMPORTANT TO ELIMINATE OBSTRUCTION TO THE ALTAR FROM ANY POINT OF VIEW. EVERY PARISHIONER SHOULD BE ABLE TO SEE AND HEAR THE PRIEST WHEN HE IS CELEBRATING MASS.

THE MAIN ALTAR SHOULD BE RAISED FROM THE SANCTUARY FLOOR IN AN ODD NUMBER OF STEPS. THE PERMANENT FURNISHINGS ON THE ALTAR ARE THE CRUCIFIX AND CANDLESTICKS. THE SANCTUARY SHOULD BE SPACIOUS ENOUGH, AND A SPACE MUST BE PROVIDED FOR SEDILIA TO SEAT THREE PRIESTS COMFORTABLY. A PULPIT OR LECTERN MUST BE PLACED ON THE LEFT SIDE WHEN FACING THE ALTAR. THE COMMUNION RAIL WHICH IS LOCATED AT THE TRANSITION BETWEEN NAVE AND SANCTUARY, SHOULD BE PROVIDED WITH AN ARRANGEMENT TO HOLD THE COMMUNION CLOTH. IT IS IMPRACTICAL TO HAVE MORE THAN ONE STEP AT THE COMMUNION RAIL.



## SANCTUARY — GREEK ORTHODOX.

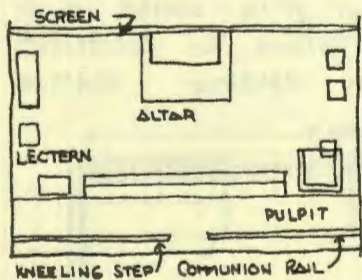
IT REPRESENTS THE DWELLING OF THE MOST HIGH, THE HOLY OF HOLIES. IN THE MIDDLE OF IT IS A HOLY TABLE → ALTAR. THE SANCTUARY OF THE CHURCH IS SEPERATED FROM THE NAVE BY A SCREEN CALLED ICONOSTAS. IT IS STUDDED WITH HOLY PICTURES REPRESENTING THE HIGHLIGHTS FROM THE LIFE OF JESUS CHRIST AND THE MOTHER OF GOD AS WELL AS NUMBER OF SAINTS. THE BIG. MUST ALWAYS FOLLOW THE EAST-WEST LINE SO THAT THE SANCTUARY FACES EAST.



## SANCTUARY. — PROTESTANT.

CALLED CHANCEL; CONTAINS ALTAR, PULPIT AND A LECTERN, AND OFTEN ALSO THE BAPTISMAL FONT AND THE CHOIR.

THE TABLE OR ALTAR IS USUALLY THE MOST PROMINENT SYMBOL OF THE RITE OF HOLY COMMUNION, OR THE LORD'S SUPPER. THE AREA IN FRONT OF THE ALTAR SHOULD REMAIN FREE, SO THAT THE VIEW FROM THE NAVE WILL BE UNOBSTRUCTED LIKE IN THE ROMAN CATHOLIC CHURCH.



UNOBSTRUCTED LIKE IN THE ROMAN CATHOLIC CHURCH.

letter... 111... 181 3 5000 714444444 - B. Blamut L. d. abraham

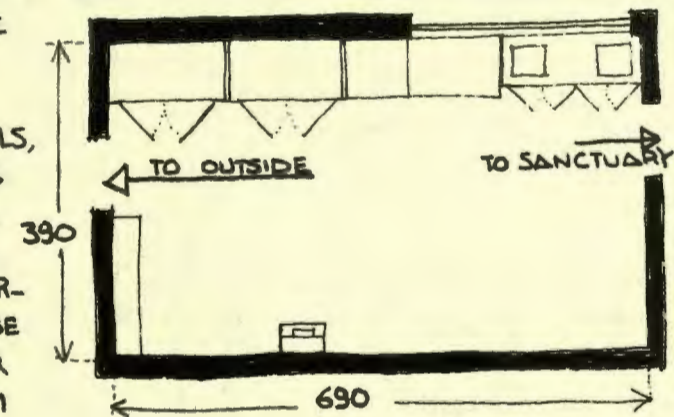
4  
5  
6  
7



## SACRISTY. —

IN CLOSE PROXIMITY TO THE SANCTUARY, THE PRIESTS' SACRISTY MUST BE LOCATED. THE SACRISTY SHOULD BE AT THE SAME ELEVATION AS THE SANCTUARY.

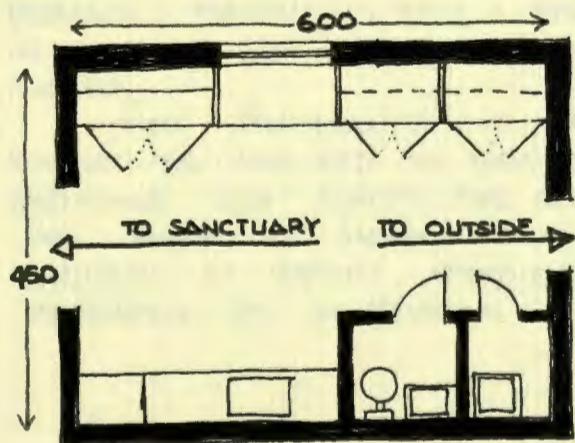
IT IS THE PLACE FOR KEEPING THE VESTMENTS, THE SACRED VESSELS, RELIQUARIES, ALTAR LINENS, MASS BOOKS, MASS WINE, HOLY WATER, AND ALL ELSE NECESSARY FOR THE SACRED FUNCTIONS TO BE PERFORMED DAILY. VESTMENTS SHOULD BE HUNG OR STORED FLAT NO TIGHTER THAN 3 PER 30 CM. THE SACRARIIUM IS A BASIN WITH A DRAIN FOR THE DISPOSAL OF WATER FROM LITURGICAL ABLUTIONS AND THE WASHING OF ALTAR LINENS. THE SACRARIIUM MUST HAVE ITS DRAIN CONNECTION LEADING



DIRECTELY TO DRY WELL, NEVER TO THE REGULAR SEWAGE DISPOSAL.

CONNECTED TO THE PRIESTS SACRISTY SHOULD BE ALTAR BOY'S SACRISTIES, WORK SACRISTY AS STORAGE FOR ALTAR CLOTHS,...

WE SHOULD ALSO HAVE A CHOIR ROBING ROOM WHICH MUST BE VERY SPACIOUS. ROBES SHOULD BE STORED 4 PER 30 CM. OF HANGING. THIS ROOM COULD SERVE AS A REHEARSAL ROOM IF ACOUSTIC ISOLATION. A PIANO OR SMALL ELECTRICAL ORGAN WOULD BE NECESSARY.

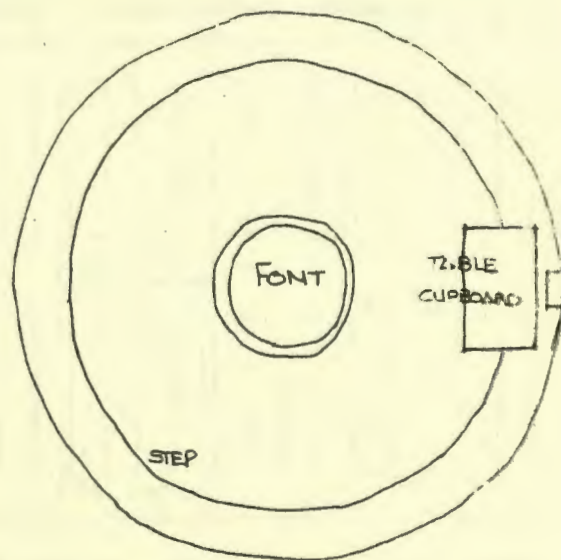


## BAPTISTRY. —

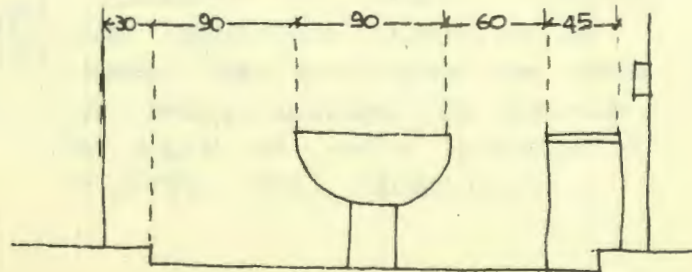
NEXT IN IMPORTANCE TO THE ALTAR IN THE PARISH CHURCH OF ROMAN CATHOLIC IS THE BAPTISTRY IN THE SACRAMENTAL SYSTEM OF THE CHURCH, BAPTISM IS THE REBIRTH OF THE NEW MEN. THE BAPTISTRY SHOULD BE A SEPERATE CHAPEL SPACIOUS ENOUGH FOR A SMALL CONGREGATION TO ASSIST THE LOCATION OF THE BAPTISTRY COULD BE ON AN AXIS WITH THE ALTAR. HOWEVER IN MOST CHURCHES, THE BAPTISTRY HAS BEEN PLACED AT THE GOSPEL SIDE OF THE CHURCH, NEAR THE ENTRANCE AND THIS SEEMS TO BE AN ACCEPTED LOCATION

THE MATERIAL OF THE FONT ITSELF SHOULD BE OF NON POROUS MATERIAL, SUCH A STONE OR MARBLE IN ORDER TO RETAIN WATER.

FOR PROTESTANT THE BAPTISTRY SHOULD BE LOCATED SO THAT THE AUDIENCE CAN WATCH THE CEREMONY. THE BAPTISTRY SHOULD BE LARGE ENOUGH TO PERMIT COMPLETE IMMERSION OF A PERSON.



PLAN



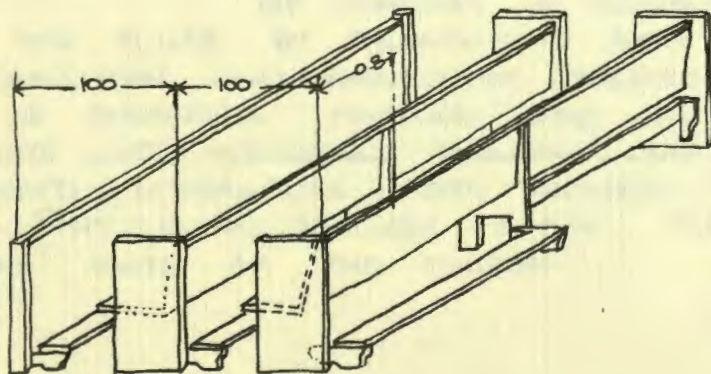
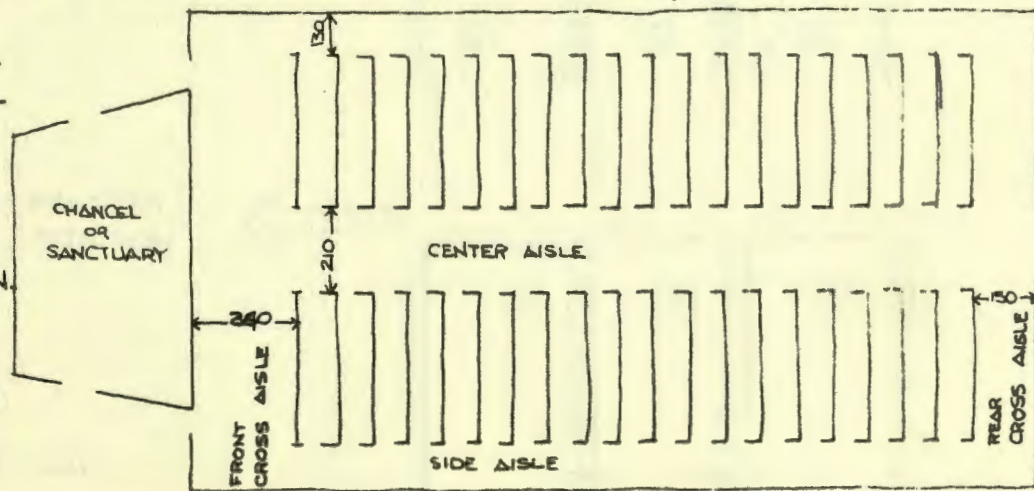
SECTION



## NAVE. —

THE NAVE OR BODY OF THE CHURCH, LOCATED BETWEEN SANCTUARY AND NARTHEX, IS USED FOR ALL MEMBERS OF THE PARISH. A CENTER AISLE AT LEAST WIDE ENOUGH TO ACCOMODATE PROCESSIONS, WEDDINGS AND FUNERALS, SHOULD ALWAYS BE PROVIDED FOR. SIDE AISLES, SOMEWHAT NARROWER MAY BE NECESSARY ALSO, DEPENDING ON THE SIZE OF THE CHURCH.

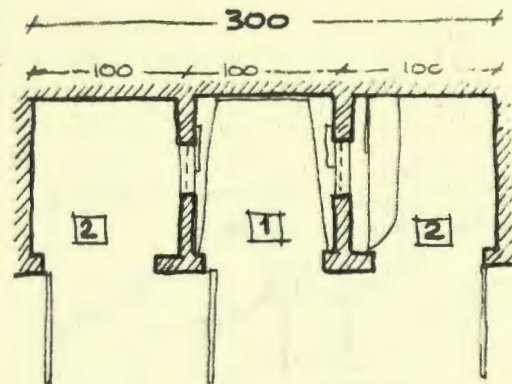
PEWS: ARE USUALLY DESIGNED IN SUCH A MANNER THAT THE CONGREGATION CAN KNEEL, STAND OR SIT COMFORTABLY AT THE REQUIRED TIMES



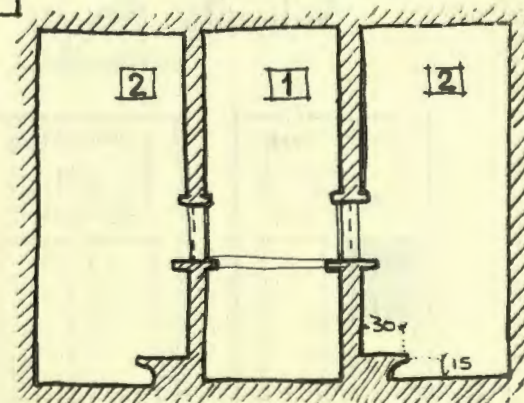
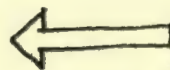
DURING FUNCTIONS THAT TAKE PLACE IN THE CHURCH

SHRINES FOR PRIVATE DEVOTIONS ARE SOMETIMES PLACED IN THE NAVE. THEY MAY TAKE THE FORM OF SMALL ALCOVES OR CHAPELS IN EACH OF WHICH A STATUE IS PLACED FOR VENERATION.

CONFESSORIALS SHOULD BE EASILY ACCESSIBLE. ALL THREE COMPARTMENTS MUST BE SOUNDPROOF, THEY SHOULD ALSO BE COMFORTABLE. GOOD VENTILATION IS OF PRIMARY IMPORTANCE.



- 1 CONFESSOR'S STATION
- 2 PENITANT'S STATION



### NARTHEX. —

THE NARTHEX OR VESTIBULE IS THE PLACE OF PREPARATION AND TRANSITION AND SHOULD BE TREATED IN A DIGNIFIED MANNER AND GIVEN AMPLE SPACE. THE HOLY WATER FONTS AND MEMORIAL TABLETS, AND SOMETIMES A PLACE FOR SACRED LITERATURE, ARE LOCATED THERE. A HOLY-WATER STROUP OR FONT IS A SHALLOW BASIN, PLACED CLOSE TO THE ENTRANCES AND EXITS OF THE CHURCH.

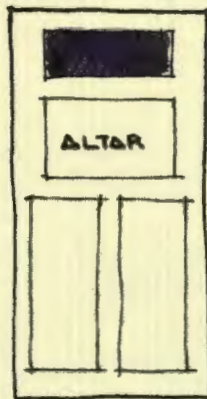
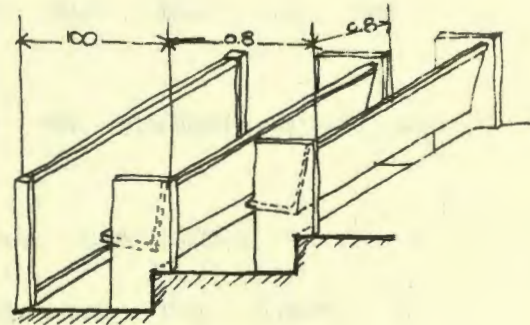
4  
5  
6  
7

11/13/34 349005 -- WX-208396-LE -- PFO008.1193-550671 Hamma -- BBeitrit - Lisebaroun

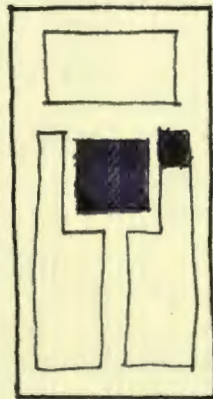


# CHOIR. —

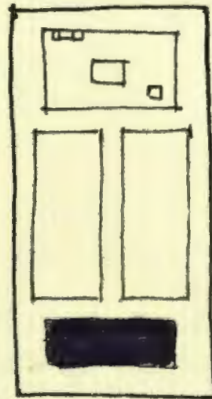
THE LOCATION OF THE  
CHOIR NEAR THE SANCTUARY : BEHIND  
ALTAR , BEFORE ALTAR ; OR IN THE REAR  
OF THE CHURCH .



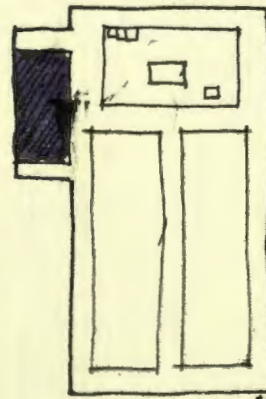
1  
BEHIND ALTAR



2  
BEFORE ALTAR



3  
REAR OF  
CHURCH



4  
CHOIR ALCOVE



5  
WITHIN THE PEWS

4  
5  
6  
7

Vertical text on the left margin: 1013 310067 Hamira - B Beirut Libanon

1.- BEHIND ALTAR: CHOIR IS NOT PART OF THE CONGREGATION AND HAVE POOR OPPORTUNITY TO PARTICIPATE IN THE WORSHIP

2.- BEFORE ALTAR: CHOIR IS SEGREGATED BUT PART OF THE CONGREGATION

3.- REAR OF CHURCH: CHOIR IS PART OF THE CONGREGATION BUT STILL NOT GOOD

4.- CHOIR ALCOVE: EFFICIENT, HAS MANY VARIANTS.

5.- WITHIN THE PEWS: THE SIGNIFICANCE OF THE CHOIR IS VERY MUCH REDUCED.

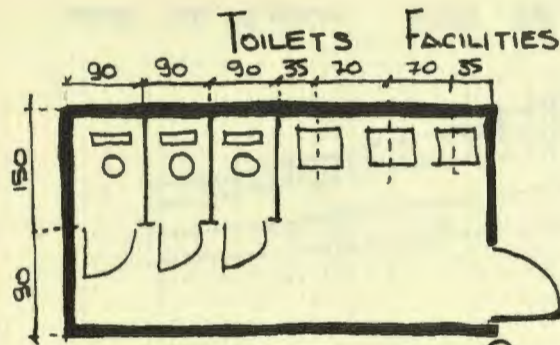








## OTHER PLANNING CONSIDERATIONS . . .

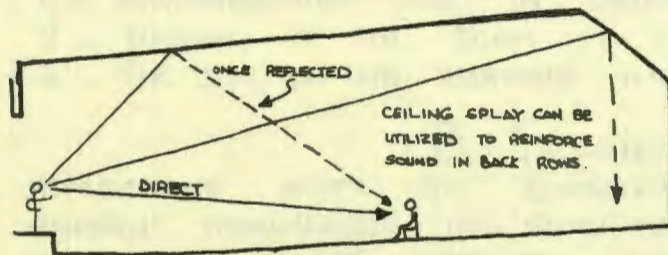


AN IMPORTANT CONSIDERATION SHOULD BE THE PROVISION OF ADEQUATE TOILETS. THEY COULD BE LOCATED IN THE BASEMENT AREA, OR OF THE VESTIBULE OF THE CHURCH.

## ACOUSTICAL CONSIDERATIONS:

A. SOUND INSULATION: OUTSIDE DISTURBANCES MUST BE ISOLATED OR OF SUFFICIENTLY LOW INTENSITY SO THAT THEY DO NOT INTERFERE WITH SPEECH AND MUSIC. THE FIRST STEP IN SOLVING THIS PROBLEM IS THE SELECTION OF THE SITE, NEXT MUST BE CONSIDERED THE COMPOSITION AND THICKNESS OF WALLS, WINDOWS...

## B. SOUND INTENSITY:



SOUND OF MUSIC AND SPEECH WITH IN THE AUDITORIUM MUST BE SUFFICIENTLY LOUD, BOTH AT THEIR SOURCE AND TO THE ENTIRE AUDIENCE. SOUND REINFORCEMENT CAN BE ACHIEVED BY PROVISION OF A HARD REFLECTING WALL SURFACE IMMEDIATELY BEHIND THE SPEAKER'S POSITION AND BY SHAPING THE WALLS AND CEILING

IN SUCH A WAY THAT AS MANY OF THE REFLECTED SOUND WAVES AS POSSIBLE WILL TRAVERSE PATHS, FROM THE SOURCE TO EACH LISTENER, WHICH ARE LESS THAN 20M LONGER THAN THE PATH OF DIRECT SOUND.

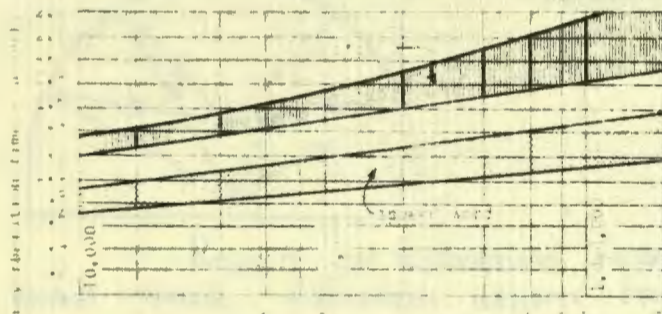
4

5

6

7

C. REVERBERATION TIME: THE REVERBERATION TIME OF A ROOM MUST BE SUCH AS TO AVOID EXCESS OVERLAPPING OF MUSICAL OR SPEECH SOUNDS AND YET BE LONG ENOUGH TO GIVE LIFE AND COLOR TO MUSIC. THE REVERBERATION TIME OF A CHURCH BUILDING WILL VARY, DEPENDING ON THE NATURE OF THE SERVICE AND WHETHER EMPHASIS IS PLACED UPON MUSIC OR THE SPOKEN WORD.



→ RANGE OF ACCEPTABLE REVERBERATION TIME AT A FREQUENCY OF 512 CYCLES FOR CHURCHES OF VARIOUS SIZES.

THE REVERBERATION TIME OF A ROOM CAN BE CALCULATED APPROXIMATELY BY THE FOLLOWING EQUATION:

$$t = \frac{.05V}{A}$$

$t$  = REVERBERATION TIME IN SECONDS

$V$  = VOLUME OF THE ROOM IN CUBIC FEET

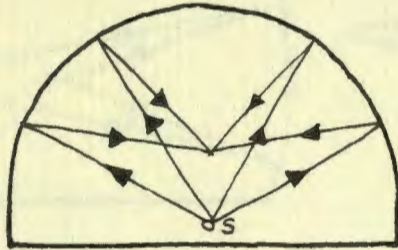
$A$  = THE SUM OF THE SURFACE AREAS X THEIR ABSORPTIVITY.

D. SOUND DISTRIBUTION: ECHOES OR DIRECT REFLECTIONS MUST BE ELIMINATED AND SOUND MUST BE DISTRIBUTED PROPERLY THROUGHOUT THE ROOM TO GIVE A HIGH DEGREE OF ACOUSTIC UNIFORMITY TO THE GREATEST NUMBER OF LISTENERS.

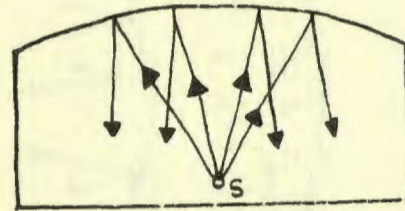
THE FOLLOWING DIAGRAMS SHOW THE EFFECT OF VARIOUS ROOM SHAPES UPON THESE FACTORS — ...



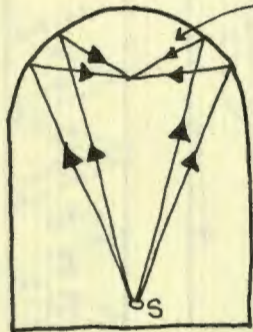
→ CENTER OF CURVATURE NEAR FLOOR LINES  
PRODUCES SEVERE FOCUSED EFFECTS



RADIUS OF CURVATURE MORE  
THAN TWICE CEILING HEIGHT PRODUCES  
MORE EVEN SOUND DISTRIBUTION.

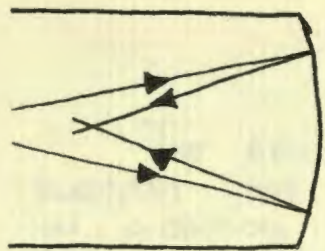


→ FOCAL POINT IS FAR ENOUGH ABOVE AUDIENCE THAT  
ITS EFFECTS ARE NOT USUALLY NOTICEABLE.



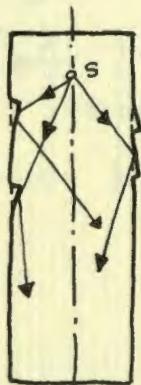
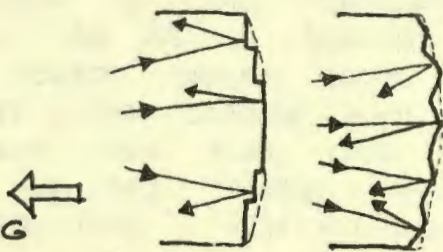
→ RADIUS OF CURVATURE LESS THAN 1/2 THE CEILING  
HEIGHT.

THESE ARE REFLECTION FROM CURVED CEILINGS HAVING  
VARIOUS RADIUS. (FOCUSING EFFECTS ARE MUCH MORE SERIOUS WHEN  
PRODUCED BY A DOUBLE CURVED SURFACE.)



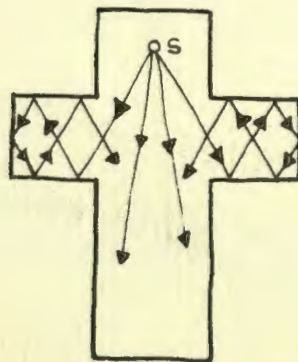
→ CURVED REAR WALL PRODUCES FOCUSING ECHO, ESPECIALLY IF 15 M OR MORE FROM SOURCE OF SOUND.

FOCUSING EFFECT CAN BE BROKEN UP BY PROPER SHAPING



→ LONG PARALLEL, UNBROKEN WALLS GIVE RISE TO FLUTTER ECHOES. FOR CORRECTION, THEY CAN BE SPLAYED OR BROKEN BY WINDOWS OR COLUMNS.

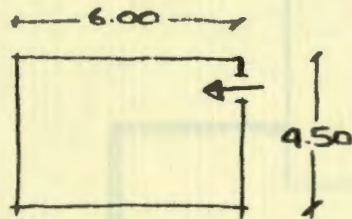
TRANCPTS, IF THEY ARE DEEP, MAY RETURN SOUND OUT OF PHASE WITH THAT TRAVELLING IN THE NAVE.





## BELL TOWER.

THE BELL TOWER AND SPIRE OF A CHURCH IS INTENDED TO SUGGEST THE HEAVENLY ASPIRATION OF THE CRISTIAN SPIRIT, IN ADDITION TO ITS FUNCTIONAL USE AS A SUPPORT AND SHELTER FOR THE BELLS. THE TOWER SHOULD HAVE A STAIR LEADING TO THE BELL CHAMBER, FOR SERVICE AND MAINTENANCE OF THE BELLS. THIS STAIR CAN ALSO GIVE TO AN ~~RE~~ OBSERVATION POST AT THE TOP OF THE TOWER. AVERAGE DIMENSIONS OF A BELL TOWER ARE : 4.50 X 6.00 M.



122

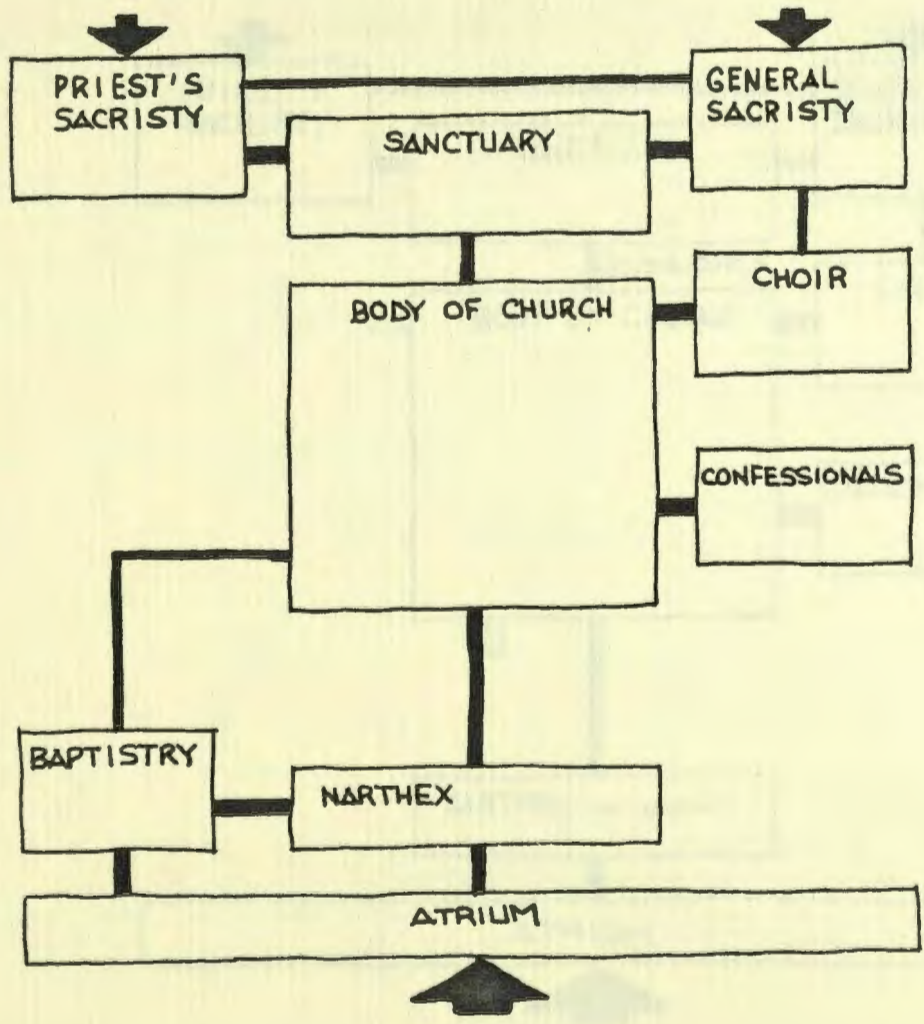
4

5

6

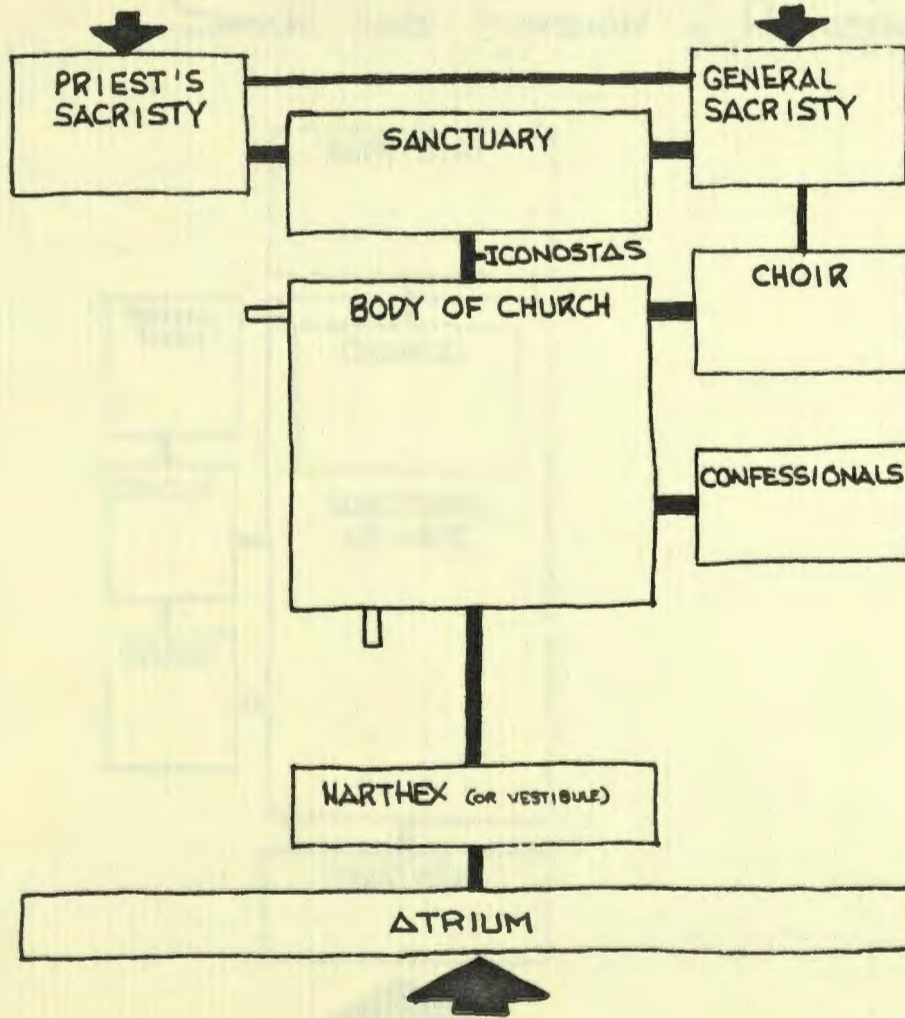
7

# SPACE AND FUNCTION (ROMAN CATHOLIC).





# SPACE AND FUNCTION (GREEK ORTHODOX)

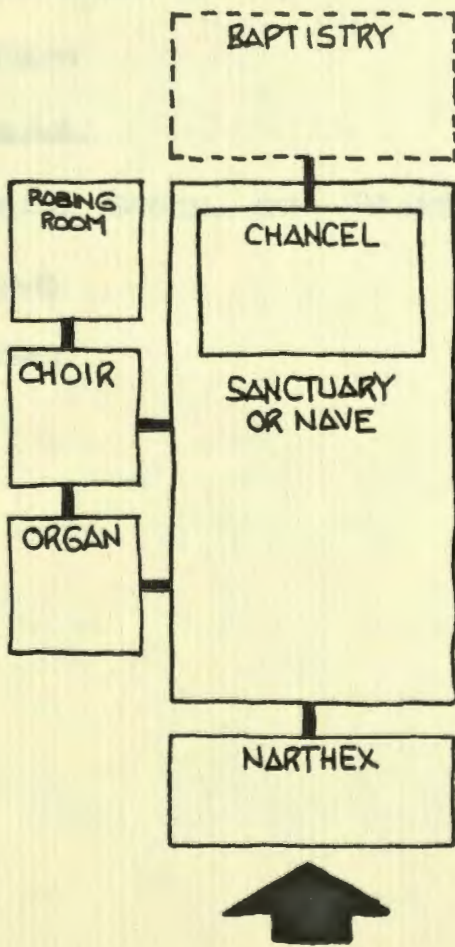


International Journal of Management, Economics and Business Research  
Tel: 30320015 - FAX: 21820111 - WWW: 113-3067 Hamra - Beirut - Lebanon

4  
5  
6  
7

MOSQUE

# SPACE AND FUNCTION (PROTESTANT)



4  
5  
6  
7

Water...  
Tel: 343005  
Fax: 2087066  
P.O. Box 1133  
50067 Hamra - Beirut - Lebanon



# MOSQUE.

THE MOSQUE IS COMPOSED OF DIFFERENT PARTS.

- THE CENTRAL COURT OR SAHN.
- FOUNTAIN
- VESTIBULE
- CENTRAL SPACE OR PRAYER HALL
- MIHRAB
- MINARET.

4

5

6

7

inter...  
Tel: 308005  
Fax: 308005  
P.O. Box 133  
Barrut Libanon

# MOSQUE

THERE ARE TWO MAJOR SOURCE OF ISLAMIC DOCTRINE AND PRACTICE - PARTICULARLY IN THE FIELD OF LAW, WHICH STANDS AT THE CENTER OF THE ENTIRE ISLAMIC SYSTEM -

1. THE QUR'AN: ITS SOURCE IS DIVINE, AND CANNOT BE THE COMPOSITION OF HUMAN BEING MIND, EVEN THAT OF THE PROPHET HIMSELF.

2. THE SUNNAH (EXAMPLE OR MODEL) OF THE PROPHET - THAT IS HIS PRECEPTS AND CONDUCT, BOTH IN PRIVATE AND PUBLIC ACTIVITY.

MECCA, (A CITY IN SAUDI ARABIA) THE MOST SACRED CITY OF ISLAM, WHERE THE PROPHET MUHAMMAD WAS BORN, WHERE HIS MISSION WAS FIRST REVEALED TO HIM AND WHERE HE BEGAN PREACHING ISLAM. IN THE CENTER OF MECCA STANDS THE SACRED MOSQUE (AL MASJID AL HARAM), A LARGE OPEN COURTYARD ENCLOSED BY CLOISTERS. ROUGHLY IN THE CENTER OF THE SACRED MOSQUE STANDS THE KA'BAH, THE HOUSE OF GOD, TOWARDS WHICH ALL MUSLIMS TURN THEIR FACES IN THEIR DAILY PRAYERS, NO MATTER WHERE THEY MAY BE.

\* FROM WHATSOEVER RACE THOU ISSUEST,  
TURN THY FACE TOWARDS THE HOLY MOSQUE \*



THE KA'BAH  
AS ITS NAME DENOTES,  
IS A CUBE - SHAPED  
BUILDING OF STONE

"GOD HAS APPOINTED  
THE KA'BAH, THE HOLY  
HOUSE, AS AN ESTAB-  
LISHMENT FOR MEN"



THE QUR'AN ACTUALLY GIVES MENTION TO "THINKING", THE  
'MIND' AND SYNONYMOUS EXPRESSIONS NO LESS THAN THREE  
HUNDRED PLACES. CONTEMPLATION AND OBSERVATION ARE OF  
EQUAL IMPORTANCE. THE HOLY BOOK TELLS US THAT SCIENTIFIC  
INVESTIGATION LEADS TO THE DISCOVERY OF THE MARVELLOUS  
WORK OF OUR CREATOR; THEREFORE, IT SHOULD BE APPRECI-  
ATED AND ENCOURAGED.

SCIENCE AND TECHNOLOGY CAN HELP MAN ONLY IN MATTERS MATERIALS. FAITH ALONE CAN HELP HIM ACHIEVE SPIRITUAL SATISFACTION AND PSYCHOLOGICAL WELL-BEING. AS THE QUR'AN PUTS IN:

" IT IS REMEMBRANCE OF ALLAH THAT HEARTS FIND SERENITY AND PEACE "

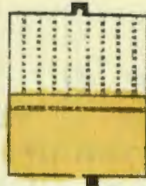
TO REMEMBER ALLAH THERE IS NO NEED FOR A TEMPLE, INDIVIDUAL AND COLLECTIVE PRAYERS COULD BE EFFECTIVATED IN OPEN AIR ON A MUQALLA, A RUG OR CARPET ON THE GROUND - SAJJADA ORIENTED TOWARDS MECCA; THEREFORE THE IDEA OF COURT OR SAHN. IN A HOT AREA (SAUDI ARABIA) PEOPLE WOULD FIND IT EASIER AND MUCH BETTER TO PRAY OUTSIDE NOT INSIDE.

IN MANY CASES THESE COURTS WERE BORDERED BY COVERED GALERIES WHERE THE CONGREGATION COULD BE IN THE SHADE, AND MOST OF THE TIME IT WAS PLANTED BY TREES WHICH ACCOMPLISHED THE SAME AIM.

THE SHAPE OF THE COURT VARIES WITH THE STYLES, WE HAVE A STYLE WHICH HAVE THE DEPTH MUCH BIGGER THAN THE WIDTH, AND A STYLE WHICH HAVE THE WIDTH MUCH BIGGER THAN THE DEPTH.



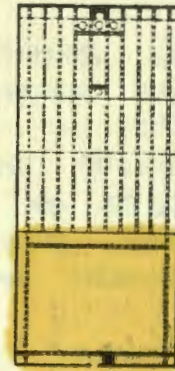
# TYPES OF COURTS



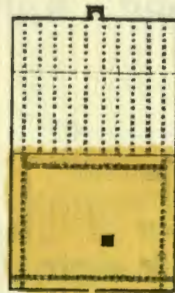
CORDOUE I  
ABD AQ QANMAN I 785, 87



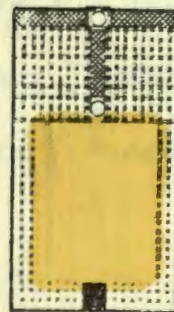
KAIROUAN I  
(836)



CORDOUE III  
(EL AKAM II 1061-966)



CORDOUE II.  
ABD AQ QANMAN II 833-357

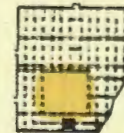


KAIROUAN II  
836-8

## Ⓧ ALMORAVIDES



ALGER  
GRANDE MOSQUEE  
(1096)



IN FACT, THE COURT IS AN ESSENTIAL ORGAN IN RELIGIOUS ARCHITECTURE OF ISLAM, AND IS OF SEMETIC TRADITION.

## MINARETS.

IT IS NOT SURE THAT THESE TOWERS HAVE THEIR INITIAL OBJECT : CALL FOR PRAYER , BECAUSE MUSLEMS AUTHORS MENTIONED THAT THE CALL WAS IN STREETS OR FROM A HIGH PART OF THE TOWN IN AN EPOQUE WHERE MINARETS WERE PRESENT . IN ADDITION TO THAT THE PROPHET MOSQUE IN MEDINA DIDN'T HAVE ONE AND THE NEGRO BILAL ■ CALL PEOPLE FOR PRAYER (ADHAN) FROM THE TOP ROOF OF A HOUSE .

## PRAYER HALL.

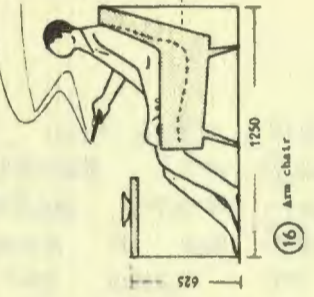
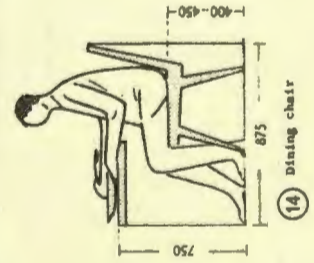
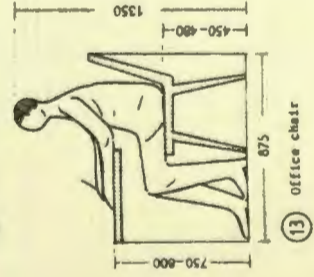
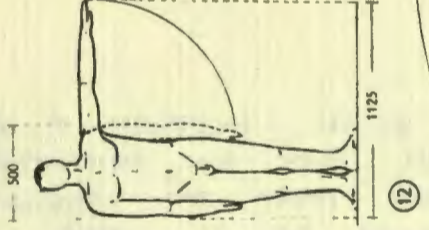
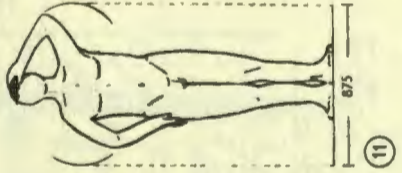
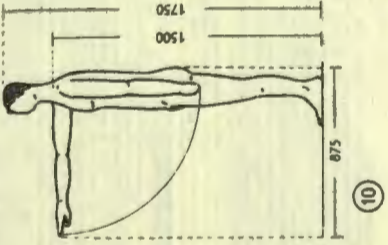
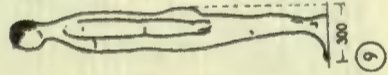
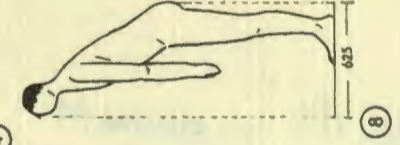
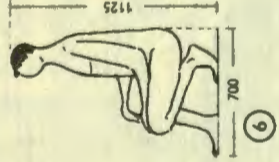
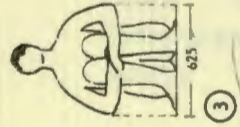
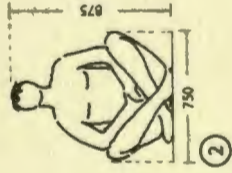
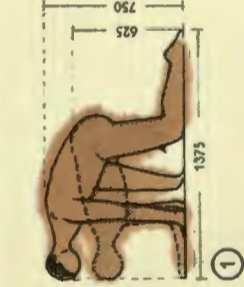
AS I HAVE SAID BEFORE THERE IS NO NEED FOR A SPECIAL TEMPLE TO ONE EXPRESS HIS FAITH. THE PRAYER COULD BE IN ANY PLACE , THEREFOR THE SIMPLICITY OF THE MOSQUE .



MAN

Dimensions and space requirements

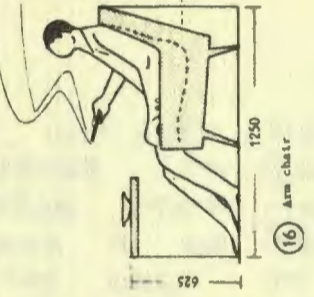
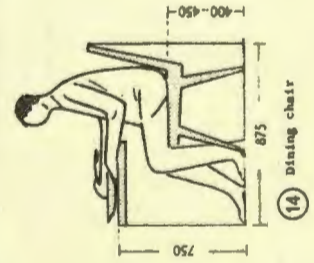
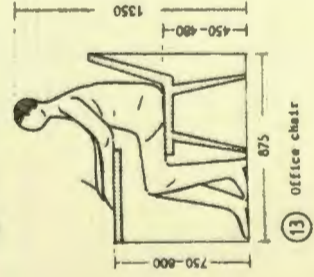
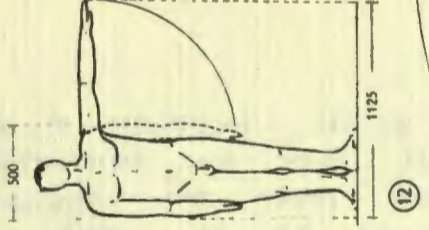
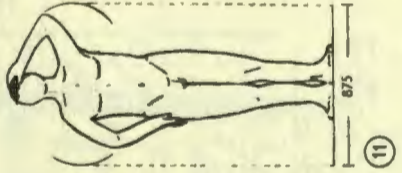
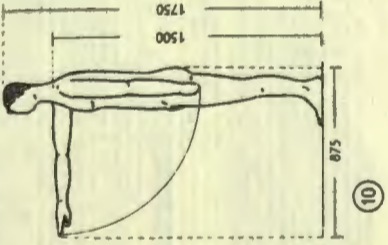
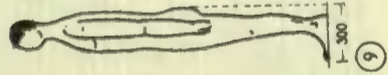
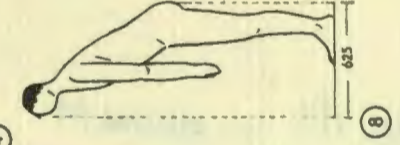
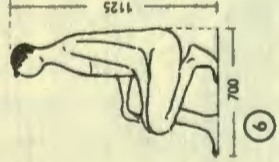
BODY MEASUREMENTS



13 office chair

14 Dining chair

16 Arm chair

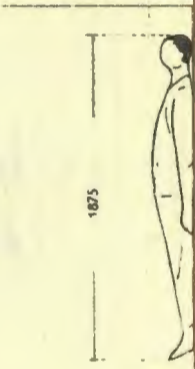


13 office chair

14 Dining chair

16 Arm chair

15 Small easy chair for occasional table



4

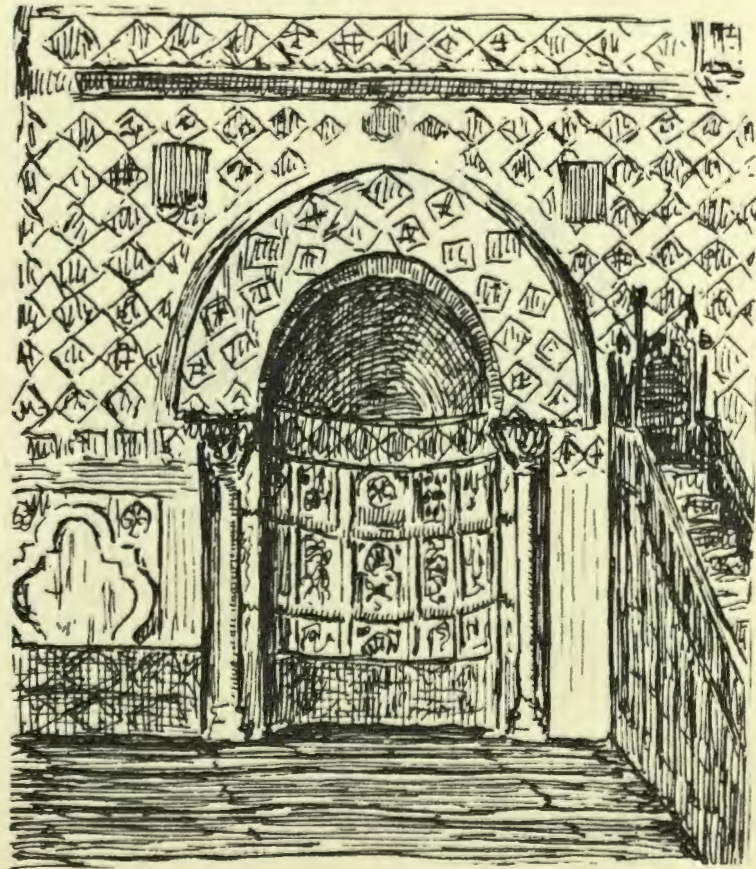
5

6

7



**MIHRAB.**— It is a narrow niche, not very high, which indicate the orientation of the prayer "the QIBLA" towards the Holy Mosque. The term MIHRAB means the place where the prince stay in his palace. In the mosque the MIHRAB indicate the place where the chief or prince of the community should occupy. That's why we can see that in general it is the place the most ornamented in the mosque so the most noble, and the most sacred.



4  
5  
6  
7









SHELVES. — IN ALL MOSQUES THERE SHOULD EXIST SHELVES WHERE WE PUT SHOES BEFORE ENTERING THE MOSQUE.

CARPETS AND RUGS. — THEY COVER THE PRAYER HALL. THE UTILIZATION OF RUGS IS TO ISOLATE CONGREGATION FROM GROUND.

WATER. —

IT IS VERY IMPORTANT IN A MOSQUE BECAUSE PEOPLE BEFORE ENTERING THE MOSQUE TO PRAY, THEY SHOULD WASH THEMSELVES.  
: CONCEPT OF ABLUTION

4

5

6

7

1618020876ELE P.020.E.1350860A.Himara B.Rerut Lebhamon

# SOCIAL HALL

ESSENTIAL TO THE CENTER IS A PLACE FOR SOCIAL ACTIVITIES: RECEPTIONS, LUNCHES, DINNERS, LECTURES, DRAMATICS, SOCIAL ASSEMBLIES, ARE GENERALLY PROVIDED IN A SOCIAL HALL. THIS SPACE IS MADE AS ATTRACTIVE AS POSSIBLE, HAS A PLATFORM, STAGE, AMPLE STORAGE, SPACE FOR THE FURNITURE AND A GOOD SIZED KITCHEN.

### 3. CAFETERIA - KITCHEN

#### EXAMPLE:

Assume a seating capacity of 200 persons.

Seating 200 at 18 sq. ft. per person . . . . . 3600 sq. ft.

Kitchen: 1200 sq. ft.

**Dining area:**

Allow 18 sq. ft. per person seated (Includes serving counter area.)

Kitchen equals . . . . . one-third of dining area  
broken down as follows:

1. meat preparation . . . . .	4% of kitchen area
2. vegetable preparation . . . . .	7% " " "
3. cold foods . . . . .	10% " " "
4. cooking . . . . .	12% " " "
5. bakery . . . . .	20% " " "
6. dishwashing . . . . .	10% " " "
7. circulation area . . . . .	37% " " "

100% of kitchen area

Kitchen services. The following percentages (of the kitchen area) are required in addition to those of the kitchen proper.

1. storage, dry . . . . .	15% of kitchen area
2. storage, refrigerator . . . . .	15% " " "
3. receiving . . . . .	10% " " "
4. trash and garbage . . . . .	10% " " "
5. help's facilities . . . . .	20% " " "
6. general office . . . . .	5% " " "

75% of kitchen area

1. meat preparation . . . . .	50 sq. ft.
2. vegetable preparation . . . . .	90 sq. ft.
3. cold foods . . . . .	120 sq. ft.
4. cooking . . . . .	150 sq. ft.
5. bakery . . . . .	225 sq. ft.
6. dishwashing . . . . .	120 sq. ft.
7. circulation area . . . . .	455 sq. ft.
	1200 sq. ft.

1. storage, dry . . . . .	180 sq. ft.
2. storage, refrigerator . . . . .	180 sq. ft.
3. receiving . . . . .	120 sq. ft.
4. trash and garbage . . . . .	120 sq. ft.
5. help's facilities . . . . .	240 sq. ft.
6. general office . . . . .	60 sq. ft.
	900 sq. ft.

Total area for preliminary calculations . . . . . 5700 sq. ft.

Data by Anthony J. Amendola, Food Service Equipment Consultant

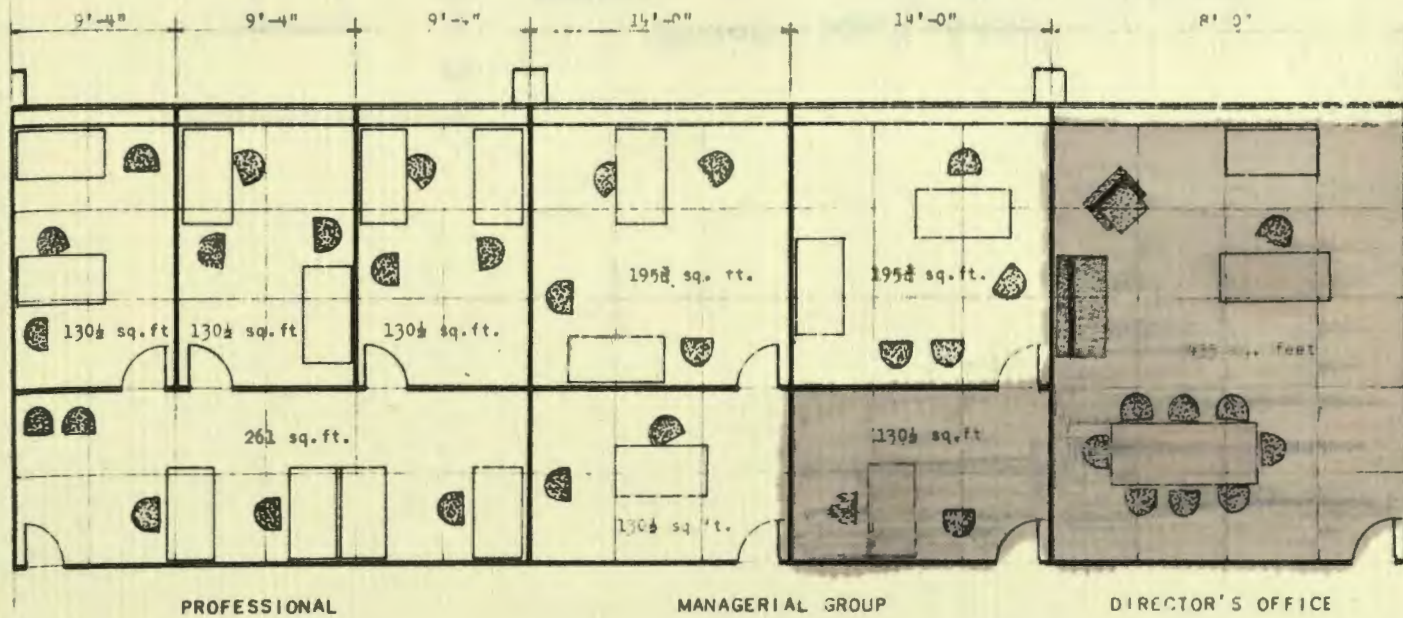
4  
5  
6  
7

4988805 +1XJX1206v e tLE -P. eua. b1 113 3 511067 Harara -B Berut L Lebanon  
 113 3 511067 Harara -B Berut L Lebanon  
 4988805 +1XJX1206v e tLE -P. eua. b1 113 3 511067 Harara -B Berut L Lebanon



# ADMINISTRATION

THE CENTER WILL BE RUN BY A COMMITTEE OF ADMINISTRATIVE NATURE FORMED OUT OF PEOPLE ELECTED FROM THE NEIGHBORING COMMUNITY. THE COMMITTEE WILL BE COMPOSED OF A MANAGER, ASSISTANT MANAGER, SECRETARIES.



SCALE 1/8" = 1'-0"

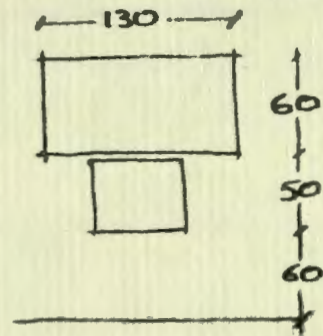
MODULAR PLANNING SYSTEM

4  
5  
6  
7

10/24 8:55:05 L:\11x-20876-LE P:\B.B.1813-00506M-Harara J. Bellut L. Ekobon  
 Printer: HP LaserJet P1102  
 Date: 10/24/2008 8:55:05 AM

# LIBRARY.

THE LIBRARY WILL BE AN IMPORTANT ELEMENT IN THE COMPLEX BECAUSE IT IS THE PLACE WHERE PEOPLE CAN COMMUNICATE AND COOPERATE TO FORM A BETTER SOCIETY



FOR READING WE NEED  $1.70 \times 130$  PER PERSON  
 $\downarrow$   $2.2 \text{ M}^2$

FOR STACKS; SPACE REQUIREMENTS ACCORDING TO  
NEUFERT IS:  $32.5 \text{ VOLS/M}^2$  ( $3 \text{ VOLS/ft}^2$ ) UP TO  
25000 BOOKS STOCK.



# MECHANICAL & ELECTRICAL SYSTEMS.

MECHANICAL AND ELECTRICAL SYSTEMS AFFECTS HUMAN HEALTH, SAFETY, AND COMFORT, AS WELL AS BUILDING FORM AND CONSTRUCTION. HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS CONDITION THE INTERIOR SPACES OF A BUILDING FOR THE ENVIRONMENTAL COMFORT OF THE OCCUPANTS. WATER SUPPLY IS ESSENTIAL FOR HUMAN CONSUMPTION, SANITATION, AND COMFORT.

## AIR-CONDITIONING SYSTEMS

THE BASIC TYPES OF AIR-CONDITIONING SYSTEMS ARE

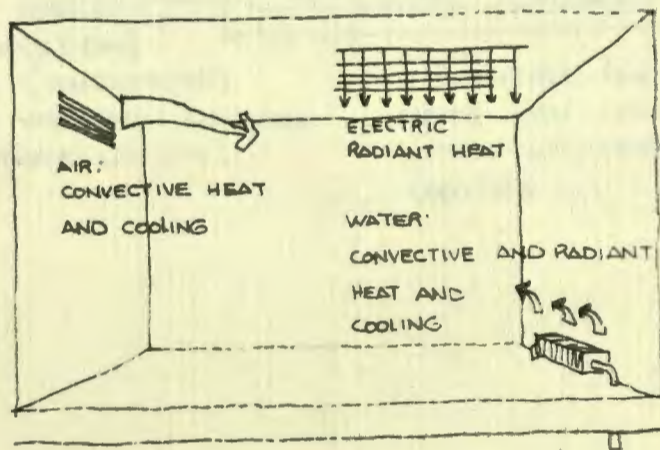
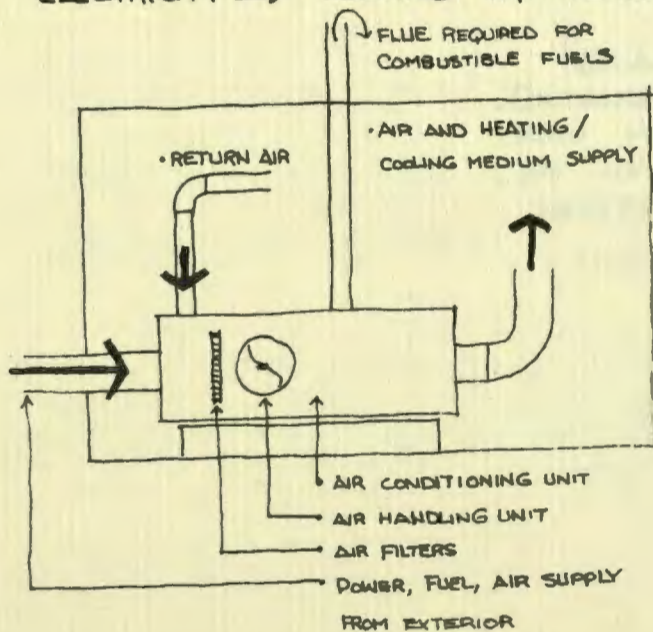
- . SINGLE DUCT SYSTEMS OR ALL AIR SYSTEMS.
- . ALL WATER SYSTEMS
- . REFRIGERANT SYSTEMS
- . ELECTRICAL SYSTEMS

# HEATING SYSTEMS

EXCEPT FOR ELECTRICAL HEAT PUMPS AND RESISTANCE HEATERS, HEATING IS A COMBUSTION PROCESS REQUIRING A POWER SOURCE, FUEL, VENTILATION, AND EXHAUST TO THE OUTDOORS, FRESH AIR, AND POSSIBLY A WATER SUPPLY.

HEATING AND COOLING MEDIUM USED:

AIR → HEATING AND COOLING BY CONVECTION / RADIATION  
 WATER → HEATING AND COOLING BY CONVECTION / RADIATION  
 ELECTRICITY → HEATING BY RADIATION AND CONVECTION

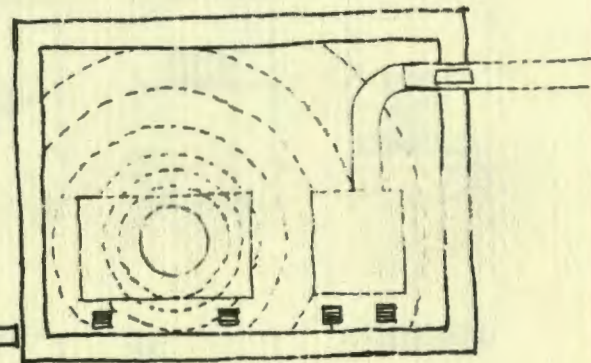




IN HEATING AND COOLING WE SHOULD HAVE A  
NOISE AND VIBRATION CONTROL

. PROVISION FOR THE ACOUSTICAL ISOLATION OF THE MECHANICAL EQUIPMENT WITHIN AN ISULATED SPACE.

. PROVISION FOR THE BAFING AND ABSORPTION OF NOISE THAT MAY TRAVEL THROUGH AN AIR DUCT SYSTEM.



ISOLATE NOISE BY:

- . DISTANCE (LOCATION)
- . WITH MASS (ENCLOSURE)
- . BY USE OF VIBRATION CONTROL DEVICES (INSTALLATION).

CONTROL DUCT NOISE WITH INSULATION AND MUFFLERS.

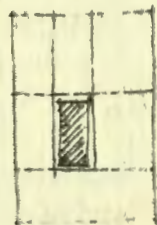
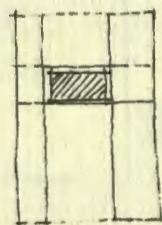
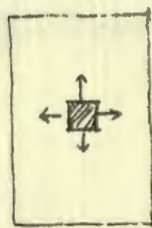
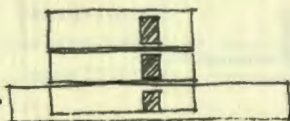
# LOCATION

MACHINERY AND EQUIPMENTS MAY BE LOCATED IN A BLDG IN A NUMBER OF WAYS:

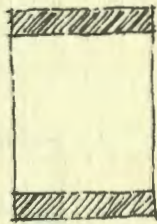
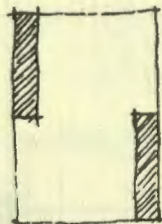
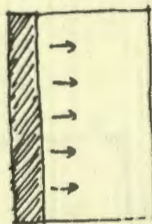
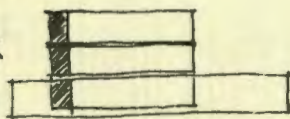
- MAY BE LOCATED WITHIN A SPACE

CENTRAL LOCATIONS ARE IDEAL FOR SHORT, EFFICIENT DISTRIBUTION PATTERNS.

MAY AID IN DEFINING OR QUALIFYING A SPACE.



- MAY BE LOCATED DIRECTLY ADJACENT TO A SPACE. IT MAY SERVE AS A WALL OR BARRIER ELEMENT.



5

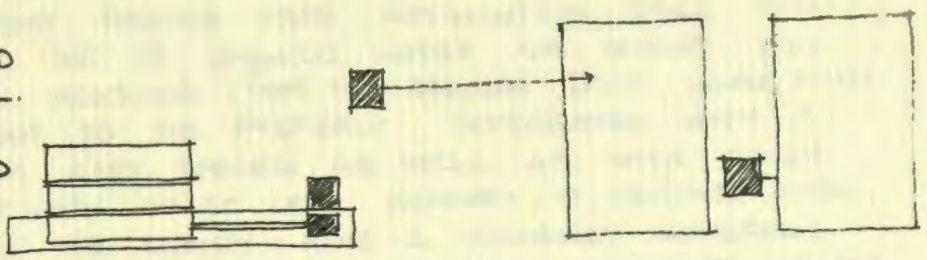
6

7

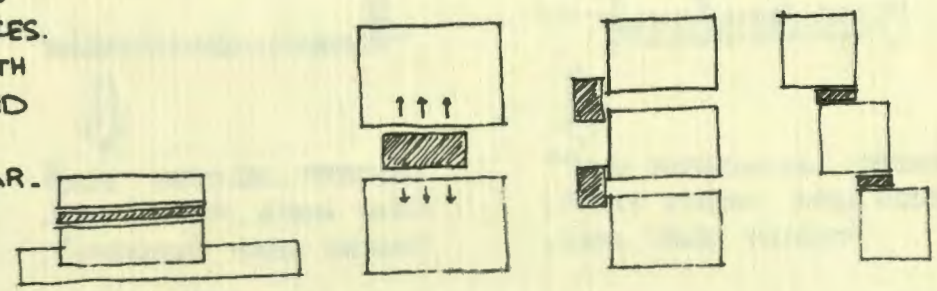


# DISTRIBUTION

• MAY BE LOCATED OUTSIDE OF A SPACE.  
 IT MAY BE ISOLATED FOR ACOUSTICAL CONTROL.  
 IT MAY BE LOCATED FOR EASIER ACCESSIBILITY TO AIR OR WATER SUPPLY AND SERVICE.



• MAY BE DISPERSED AND LOCATED BETWEEN SPACES.  
 TO SERVE SPACES WITH DIFFERENT DEMANDS AND LOAD REQUIREMENTS.  
 MAY SERVE AS BARRIERS BETWEEN THE SERVED SPACES.



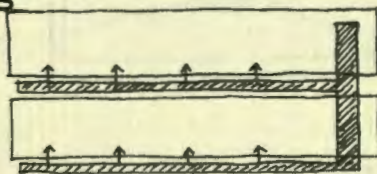
Tel: 041 598505 Fx: 180 983  
 Pte. 131 581606  
 Baitanra Be Betruil, Labanon

5  
6  
7

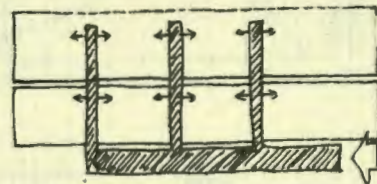
# DISTRIBUTION

AIR DUCT SYSTEMS REQUIRE MORE INSTALLATION SPACE THAN EITHER PIPES CARRYING HOT OR CHILLED WATER OR WIRING FOR ELECTRICAL RESISTANCE HEATING. FOR THIS REASON DUCT WORK MUST BE CAREFULLY LAID OUT TO BE PROPERLY INTEGRATED WITH A BLDG STRUCTURE, FORM AND SPACES AS WELL AS WITH OTHER SYSTEMS. IF THE DUCT WORK TO BE LEFT EXPOSED, IT BECOMES EVEN MORE IMPORTANT THAT THE LAYOUT HAVE A VISUALLY COHERENT ORDER AND BE COORDINATED WITH THE PHYSICAL ELEMENTS OF THE SPACE.

CONCEALED DUCTWORK USUALLY HAVE VERTICAL COMPONENTS HOUSED IN SHAFT SPACES WHILE HORIZONTAL RUNS MAY BE UNDERGROUND, IN BASEMENT OR CRAWL SPACES OR WITHIN FLOOR OR ROOF CONSTRUCTION ASSEMBLIES.



MAIN VERTICAL FEEDER;  
• LESS FLOOR AREA USED  
• GREATER BLDG. HEIGHT.



MAIN HORIZONTAL FEEDER  
• MORE FLOOR AREA USED  
• LESS BLDG. HEIGHT.

5

6

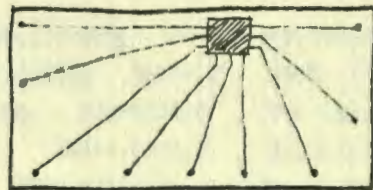
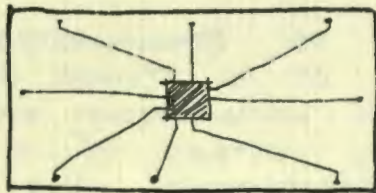
7



HORIZONTAL DISTRIBUTION PATTERNS MAY BE CLASSIFIED AS RADIAL, PERIMETER, OR LATERAL IN LAYOUT.

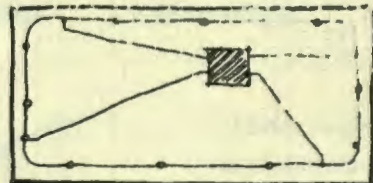
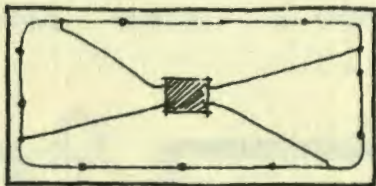
• RADIAL PATTERN

- MINIMUM LENGTH OF RUN
- USED IN CLEAR SPACES WHICH ARE FREE OF OBSTACLES.



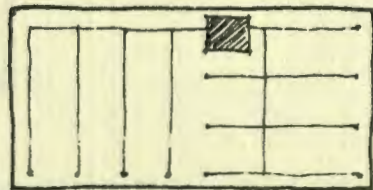
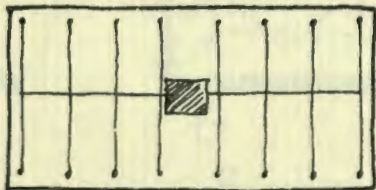
• PERIMETER LOOP.

- EFFECTIVE AGAINST PERIMETER HEAT LOSS OR GAIN
- USED OFTEN WITH CONCRETE SLABS.



• LATERAL

- GREATEST LENGTH OF RUN
- WIDE, UNIFORM, FLEXIBLE DISTRIBUTION PATTERNS POSSIBLE
- EXPOSED DUCTWORK USUALLY UTILIZES A LATERAL PATTERN LAYOUT.

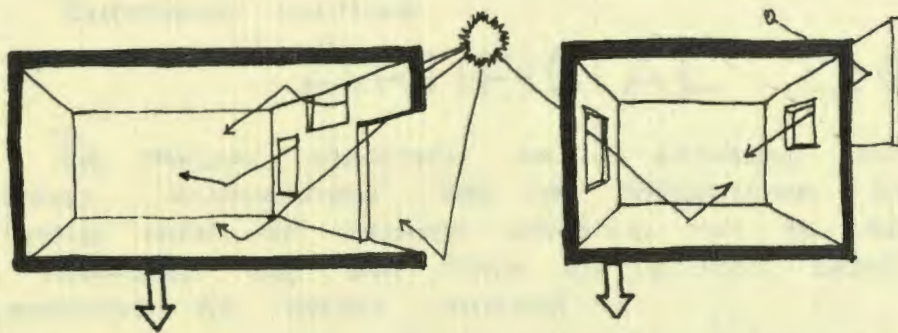


1029 3344  
1015 493095 - FAX: 289961EE - P: 0585-1133-5067 HAMRIS - BRUIT - LABORON

5  
6  
7

# NATURAL LIGHTING

THE TWO MAIN DETERMINANTS OF EXCELLENCE IN RELIGIOUS ARCHITECTURE ARE THE QUALITY OF ITS ENCLOSED SPACE AND OF ITS NATURAL LIGHTING. NO CONGREGATION CAN BE EXPECTED TO LOOK INTO GLARE AND LIKE IT. THE LIGHTING IN A RELIGIOUS BUILDING REFLECTS THE FREEDOM GIVEN CONTEMPORARY STRUCTURE; DRAMATIC SPOTLIGHTS OF SUN FROM ROOF MONITORS WILL VIE WITH CONTINUOUS PERIPHERAL ILLUMINATION; CHURCHES FLOODED WITH LIGHT WILL BE SEEN CONTRASTED TO THOSE WHERE A MYSTERIOUS ATMOSPHERE PREVAILS.

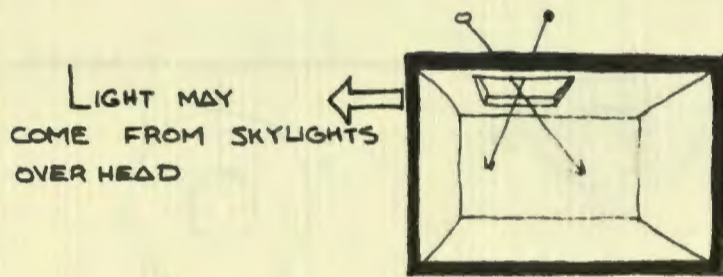


LIGHT MAY BE REFLECTED OFF WALLS, FLOORS, AND CEILINGS

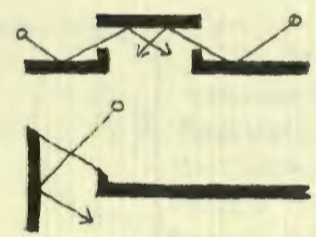
BALANCED LIGHTING FROM 2 SIDES IS BETTER FOR DIFFUSION

LIGHT MAY BE REFLECTED OFF EXTERIOR WALLS.





LIGHT MAY  
COME FROM SKYLIGHTS  
OVER HEAD

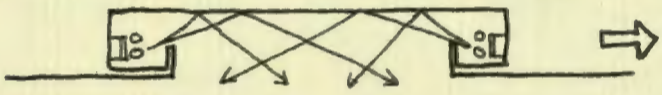


↓  
SKYLIGHTS MAY  
PROVIDE REFLECTED LIGHT

NEED NATURAL LIGHTING IS NEED , BUT IN ADDITION TO IT WE  
NEED ARTIFICIAL LIGHTING

## ARTIFICIAL LIGHTING

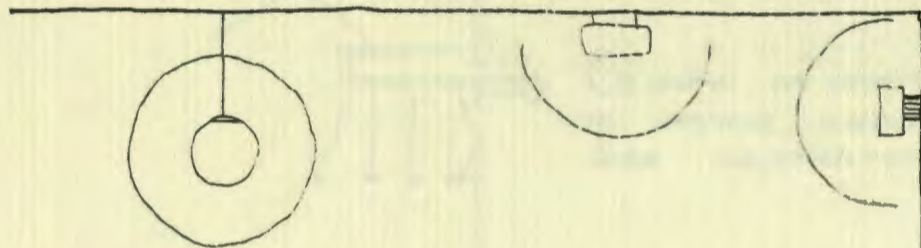
THE PRIMARY FUNCTION OF AN ARTIFICIAL LIGHTING IS TO PROVIDE SUFFICIENT ILLUMINATION FOR THE PERFORMANCE OF VISUAL TASKS. A SIMPLE FORM OF INDIRECT LIGHTING MAY BE SATISFACTORY BUT IT IS DESIRABLE THAT ANY FORM OF INDIRECT LIGHTING SHOULD BE SUPPLEMENTED BY DIRECT LIGHTING.



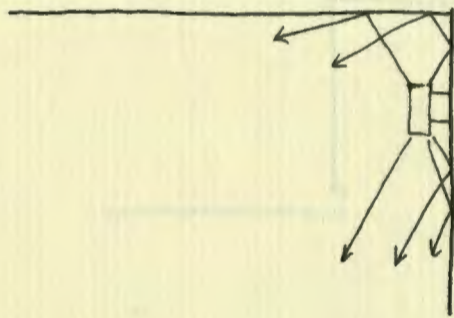
→ COVERED LIGHT PANELS:  
• PROVIDES DIFFUSED ILLUMINATION  
EITHER THROUGH A PRISMATIC

Tel: 44336505 Tlx: 203987ELE P. O: B. 4.131.5085674 Ahwaga B. B. Jember  
 m. 08123456789  
 05 Tlx: 203987ELE P. O: B. 4.131.5085674 Ahwaga B. B. Jember

5  
6  
7

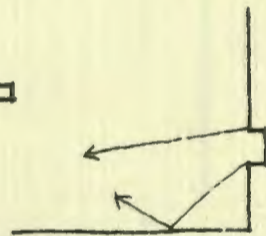
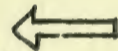


SURFACE MOUNTED INCANDESCENT FIXTURES REQUIRE TRANSLUCENT ENCLOSURES THAT MINIMIZE THE BRIGHTNESS RATIO BETWEEN THE LIGHT SOURCE AND THE SURROUNDING SURFACES.



FIXTURES SIMILAR TO DOWNLIGHTS MAY BE WALL MOUNTED TO PROVIDE UP AND DOWN ILLUMINATION.

WALL MOUNTED FIXTURES ARE USED TO ILLUMINATE CORRIDORS AND WALKWAYS



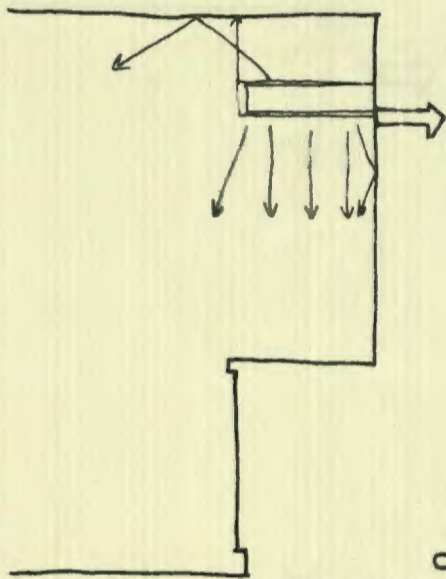
5

6

7

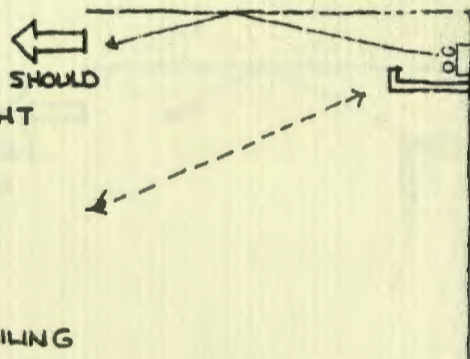
Tel: 3493035 Tlx: 20376 QEE P.O. Box 133 5687 Hbanga - Beirut Lebanon





CANOPY OR SOFFIT LIGHTING IS USED TO PROVIDE HIGHER ILLUMINATION LEVELS OVER COUNTERTOPS.

ILLUMINATED CEILING SURFACES SHOULD BE WHITE OR LIGHT IN COLOR.



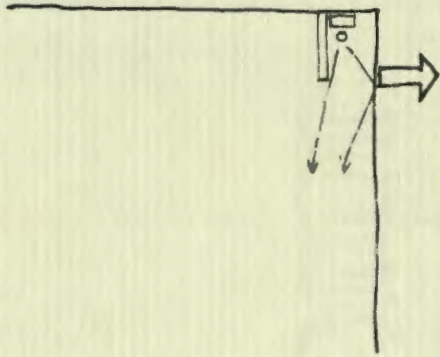
COVE LIGHTING ILLUMINATES CEILING SURFACES. FRONT LIP SHOULD SHIELD LIGHT SOURCE FROM VIEW YET EXPOSE CEILING SURFACE TO THE ILLUMINATION

5

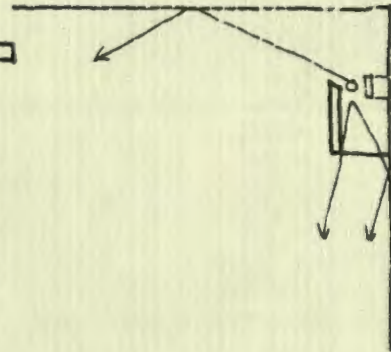
6

7

05 FTX120 208 WELLE P.O. 47.4.13 1350808 ahagaya BePerutLebahanon



CORNICE LIGHTING ILLUMINATES WALL SURFACES ( INCREASING THEIR BRIGHTNESS ) AND WORK SURFACES NEAR WALLS.



VALANCE LIGHTING ILLUMINATES INTERIOR WINDOW SHADING DEVICES (OR WALLS) AND CEILING SURFACES.

5

6

7

1815 50866 Harara - Harut Lathakon  
05 7171806 WE-E P  
05 7171806 WE-E P



## SYNAGOGUE

### MAIN ACCESS AREA

	NB. OF PERS.	AREA/PER	TOTAL AREA	TOTAL M <sup>2</sup>
- COVERED PORCH			70	
- MAIN HALL	1000	0.13	130	70
- RECEPTION			3	130
- COATS ROOM			10	5
- TOILETS			35	10
- CARE TAKER				35
LIVING ROOM			12	
KITCHENNETTE			6	
BEDROOM			12	
BATHROOM			5	
CIRCULATION 10%			3	
				38
- TOTAL				<u>286</u>

6

7

1312-888805 - 111111/2020/1111 - P. 1111/1111 - 1111 55557-1111 - 888888 - 11111111 - 11111111

# SYNAGOGUE

	NO OF PERS.	AREA/PER.	TOTAL AREA	TOTAL M <sup>2</sup>
- ENTRANCE LOBBY			50	50
- TOILETS			20	20
- SANCTUARY				
SEATING	200	0.6	120	
CHOIR	20	0.6	12	
CIRCULATION 25%			33	
				165
- BEMA				
ARK PLATFORM			28	
FRONT PLATFORM			35	
				63
- SERVICES				
RABBI'S ROOM	1	28	28	
CHOIR ROBING ROOM	20	1	20	
STORAGE OF FURNITURE			40	
CIRCULATION 15%			13	
				101
- TOTAL				400

6

7

13-0009067 4141414 R. G. W. B. 13-0009067 4141414 Beirut Lebanon  
 13-0009067 4141414 R. G. W. B. 13-0009067 4141414 Beirut Lebanon  
 13-0009067 4141414 R. G. W. B. 13-0009067 4141414 Beirut Lebanon





# MOSQUE

	NO. OF PERS.	AREA / PER.	TOTAL AREA	TOTAL M <sup>2</sup>
- CENTRAL COURT OR SAHN	300	1	300	300
- ABLUTION				
MEN ABLUTION AREA	300		16	
WOMEN ABLUTION AREA	200		12	
				28
- VESTIBULE				100
- PRAYER HALL	500	1.30	650	650
- IMAM ROOM			20	20
- TOTAL				<u>1098</u>

6

7

193 3 91006 711877 2 - B. Beirut - Liban  
 P. 00151 193 3 91006 711877 2 - B. Beirut - Liban  
 P. 00151 193 3 91006 711877 2 - B. Beirut - Liban



# SOCIAL HALL

NB OF PERS AREA / PER TOTAL AREA TOTAL M<sup>2</sup>

## - ENTRANCE LOBBY

FOYER ..... 400 ..... 0.13 ..... 52

COAT ROOM ..... 10

TOILETS ..... 24

86

## - HALL

SEATING ..... 400 ..... 1.08 ..... 432

STAGE ..... 45

STORAGE ..... 50

CIRCULATION 15% ..... 79

606

## - SERVICES

KITCHEN ..... 144

STORAGE ..... 70

214

## - TOTAL

906

6

7

1135 30007 Hamat - Beirut - Lebanon  
 0820011135  
 0820011135  
 0820011135

# ADMINISTRATION.

	NB. OF PERS.	AREA / PER	TOTAL AREA	TOTAL M <sup>2</sup>
- MANAGER'S OFFICE	1	23	23	23
- CONFERENCE ROOM	6	2	12	12
- ASSISTANT MANAGER	1	12	12	12
- SECRETARY	2	8	16	16
- LIBRARIAN'S OFFICE	1	12	12	12
- STAFF ROOM OFFICE	2	9	18	18
- WORKING ROOM				
FILING			35	
BINDING			35	
STORAGE			35	
				105
- TOTAL				198

6

7

05-060605-111112 (2020) C.E.E.-P. 010001 133 50007-100000-000000-000000



# LIBRARY

	NB. OF PERS	AREA / PER	TOTAL AREA	TOTAL M <sup>2</sup>
<b>- STACKS AREA</b>				
BOOK STACKS	20.000 VOLS		615	
STORAGE			40	
				655
<b>- READING AREA</b>				
SEATING	150	2.2	330	
LIBRARIAN DESK			18	
				348
<b>- TOTAL</b>				1003

TEL: 8556605 - FAX: 8867612 - P. 21651 13 3 5006711111111 - Beirut - Lebanon

6

7

$$\text{TOTAL AREA: } 286 + 400 + 959 + 1098 + 906 + 198 + 1003 = \\ 4850 \text{ M}^2$$

$$+ \text{SERVICES } 10\% = 4850 + 485 = 5335 \text{ M}^2$$

$$\text{PARKING FOR 50 CARS} = 50 \times 25 = 1250 \text{ M}^2$$

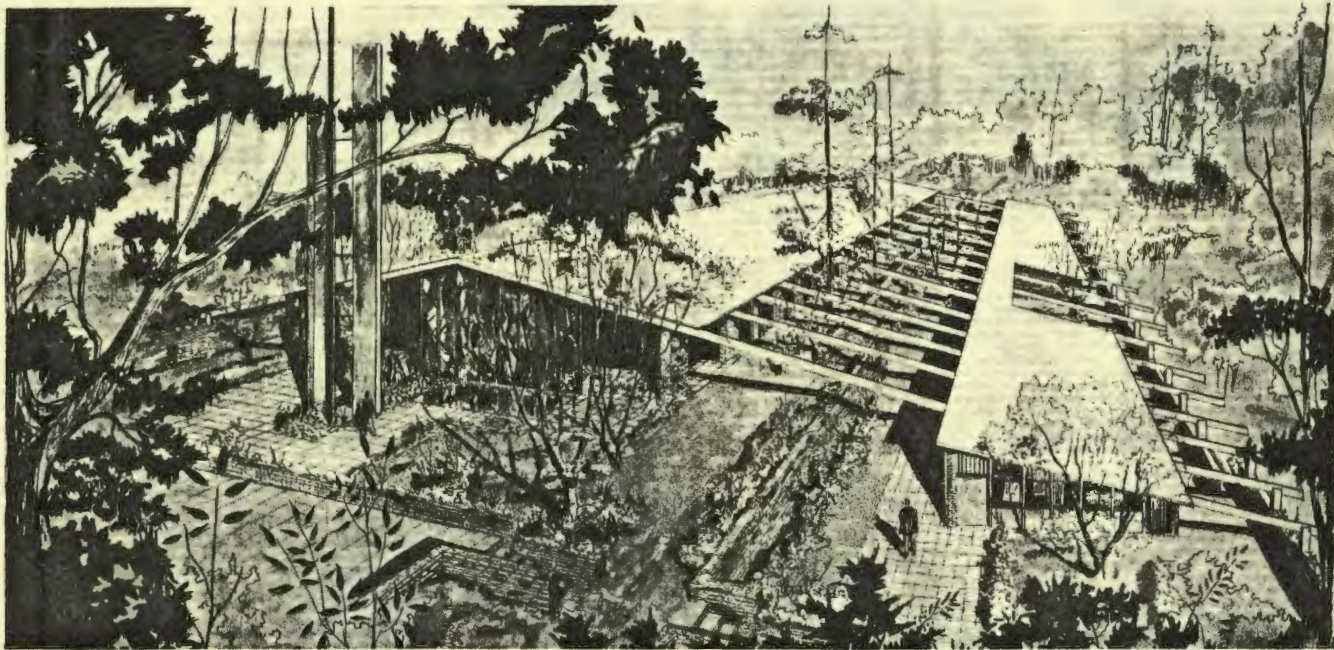
TOTAL BUILT-UP AREA IS

**5335 M<sup>2</sup>**

6

7





**PROPOSED COMMUNITY CHURCH**  
**FOR ST. MICHAEL'S PARISH**  
**Raleigh, North Carolina**

*131P This proposed design, by Thomas J. Condit, for St. Michael's Episcopal Church in Raleigh, North Carolina, emerged from a study made by students at the North Carolina State College School of Design.*

On this and the two following pages are summarized the results of a study made by a group of students at the North Carolina State College School of Design. Under the direction of Edward W. Waugh, Associate Professor of Architecture, assisted by George W. Qualls, the students designed a community church for the recently established Episcopal parish of St. Michael's in Raleigh, N. C. Thomas J. Condit was designer of the church shown on these pages.

For many years Christ Church Cathedral has been the center of Raleigh parish. But as the town has grown rapidly during the past few years toward the northwest, it became necessary to found another church in that area. The new parish of St. Michael was created, and the parishioners erected a temporary church to house religious services and community activities. Now they are considering designs for a larger and per-

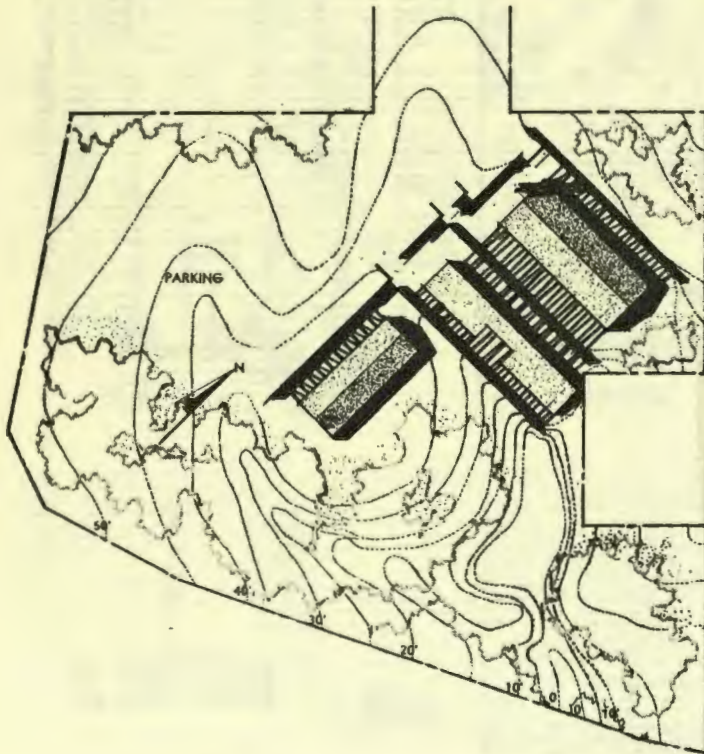
manent group of buildings carefully designed to serve the particular needs of this parish.

The Rt. Rev. Edwin Anderson Penick, Episcopal Bishop of North Carolina, has pointed out "a number of local characteristics that might, with appropriateness, be included in a design for a church building. These several distinctive features point towards the one central concept of youth. St. Michael's is the newest Episcopal church in town. It has just celebrated its first birthday. The congregation is largely composed of young families. There are many children. The building site is in the heart of a developing residential section. It is surrounded by new homes of recent construction.

'Should not the church building to be used by such a congregation in such an environment reflect something of the spirit of youth? This would seem to rule out the massiveness of the



132 and 133P (right and below)  
The building group stretches upward  
from the bottom of the wooded glen  
to the main church building, which  
is dominant.



downtown church with its historical associations and traditional usage. The spirit of youth is reverent, idealistic and a bit informal. It is grateful for the genius that can take the old truths of life and make them real and vital in the contemporaneous scene. It welcomes the art that can incorporate the essential lines of beauty in church architecture into a design that suggests, not only the freshness and vitality of youth, but also the seriousness and sincerity of youth, impelled to worship and inspired to serve."

The Episcopal church has a long tradition behind it. Its symbolism, ritual, and form of service date back almost two thousand years. Yet it is still a vigorous, youthful force, and it expresses the hope of everlasting life. So the design of an Episcopal church should combine the repose of tradition with the vitality of youth.

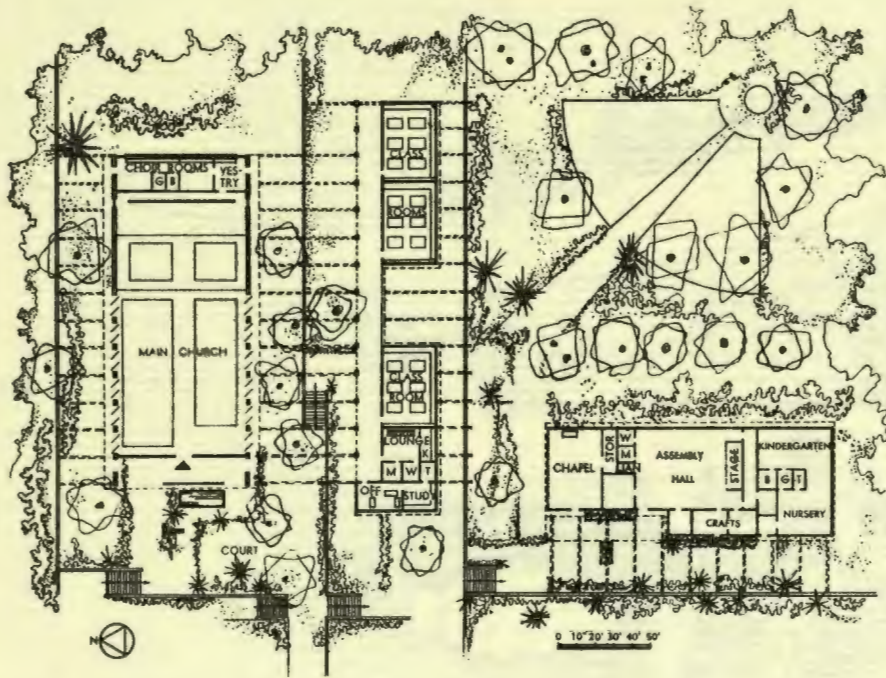
St. Michael's required that its main church should seat between 300 and 400. In addition they required a separate chapel seating between 50 and 100. Then they have need for classrooms and a nursery school, so that all children, from tots to teens, can find appropriate facilities. Space was needed for small meetings, for scout activities, for social gatherings, suppers, plays and dances. The rector must have an office. Even the outdoors could well be developed for active use. For this was to be truly a community center to serve all ages and tastes.

The site picked for the new church is deeply ravined and wooded over much of its area. It was at first proposed to set the church upon the small piece of flat open land in the western corner (now occupied by the temporary church building). Finally, however, it was decided to keep that area for parking and set the church buildings on the side of the steep wooded glen. Use has been made of several natural level steps, which minimize costly earth moving. On the highest step is the church, below it the subsidiary buildings—parish house, Sunday school and chapel. Laminated wood beams reach up the hillside from one building to the next, giving a physical coherence to the whole group. The tall pine trees growing through these beams dapple the buildings with shadow, and emphasize the unity of church and site, of God and nature.

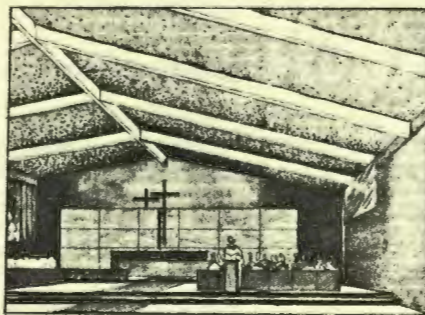
Pivoting stained glass panels along the sides of the nave can be opened in fair weather so that both outdoor and indoor space can be used by processions. with tremendous possibilities for a dramatic play of light and color between vestments, stained glass, foliage and flowers.

7





136P (above) The church, at the top of the slope, is connected by laminated wood beams with the classroom block at the next lower level, so that tall pines and garden courts seem to pierce the building forms.



137P (above) The church interior is direct and simple in design.

138P (right) Small paved garden courts between the classrooms create, with laminated wood beams, a modern version of the medieval cloister.

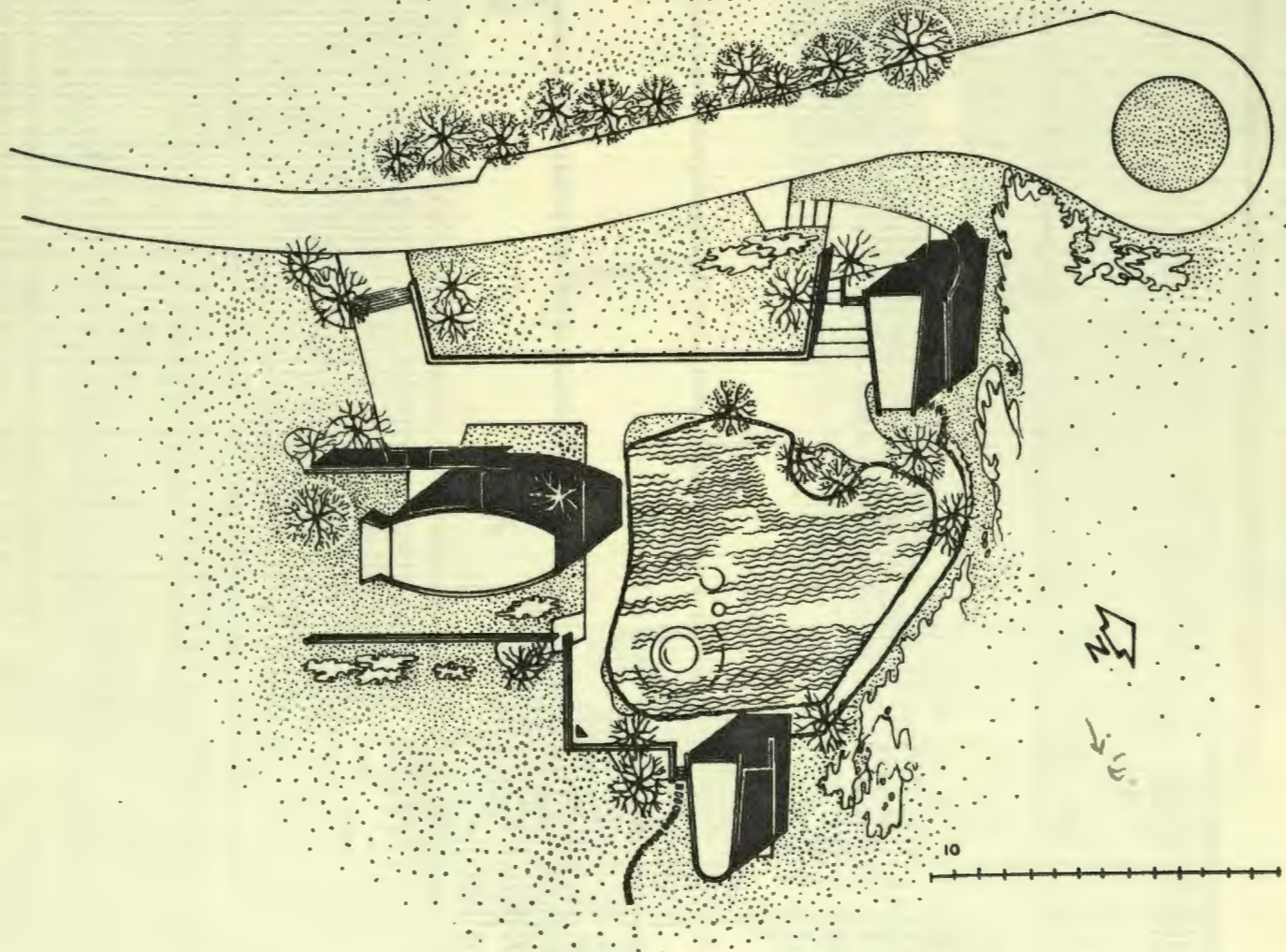
134P (above left) The church group is divided into three sections: the church proper, the Sunday school, and the parish house.

135P (below) Pivoted stained glass panels along each side of the nave open up the whole church to the outdoors when the weather is warm.





# AN UNUSUAL DESIGN FOR COLLEGIATE RELIGION



*Interfaith Center, Brandeis University, Waltham, Mass.*

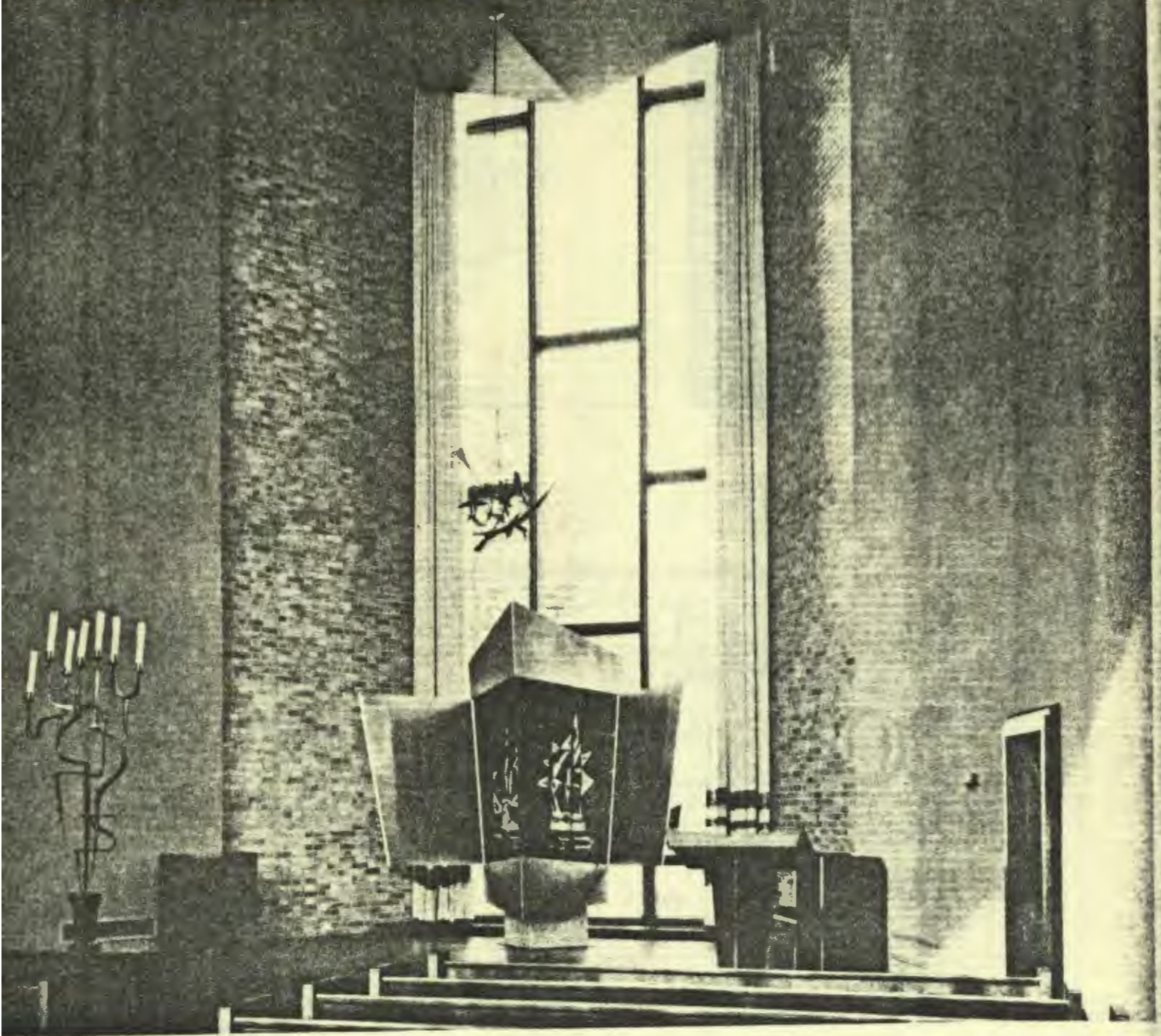
*Harrison & Abramovitz, Architects*

Structural Engineers — *Eipel Engineering*; Mechanical & Electrical Engineers — *Sears & Kopf*; Utilities Engineers — *Linenthal & Becker*; Acoustical Engineers — *Bolt, Beranek & Newman*; Lighting Consultant — *Lighting by Feder*; General Contractor — *Lilly Construction Co.*; Interior Consultant — *Alice Tiebout*; Sculpture (Eternal Light & Menorah) — *Herbert Ferber*; Ark Curtain — *Design, Mitchell Siporin* — Execution, *Helen Kramer*; Ark, Lecterns, Furniture — built by *Jens Risom*; Religious Appointments executed by *Rambush*.

Drawings by Theod Leati of Harrison & Abramovitz

7





**Architect Max Abramovitz says:**

“Following the development of a program at Brandeis University to provide equal and distinct facilities for the Catholic, Protestant and Jewish faiths, it became apparent after many studies that the best solution would be three distinct structures — not one with subdivisions or movable appointments within. Each group would then have its own atmosphere and quality — possible only with special attention to individual space and

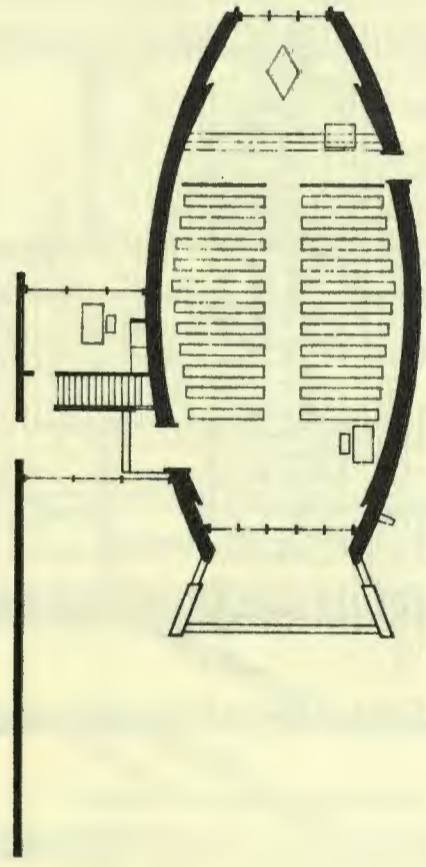
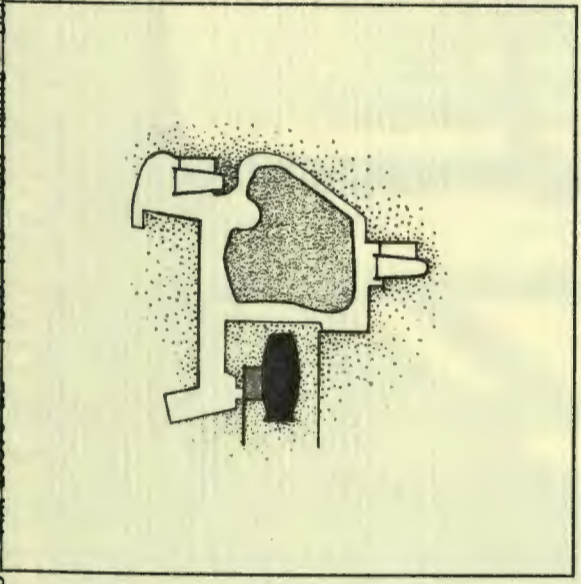
concern for specific religious ritual and procedure. Thus developed the idea of three chapels grouped about a pond adjacent to a growth of trees. The composition permits a view of each building in relation to the other, as well as a vista from the campus proper.

“Although varied in shape and design — expressive of the peculiar characteristics and functions within — a feeling of unity and neighborliness was provided by

7



Inter...nal F...cial U...tant...  
Tel. 69005 203... 11... 67 Hamra - Beirut - Lebanon

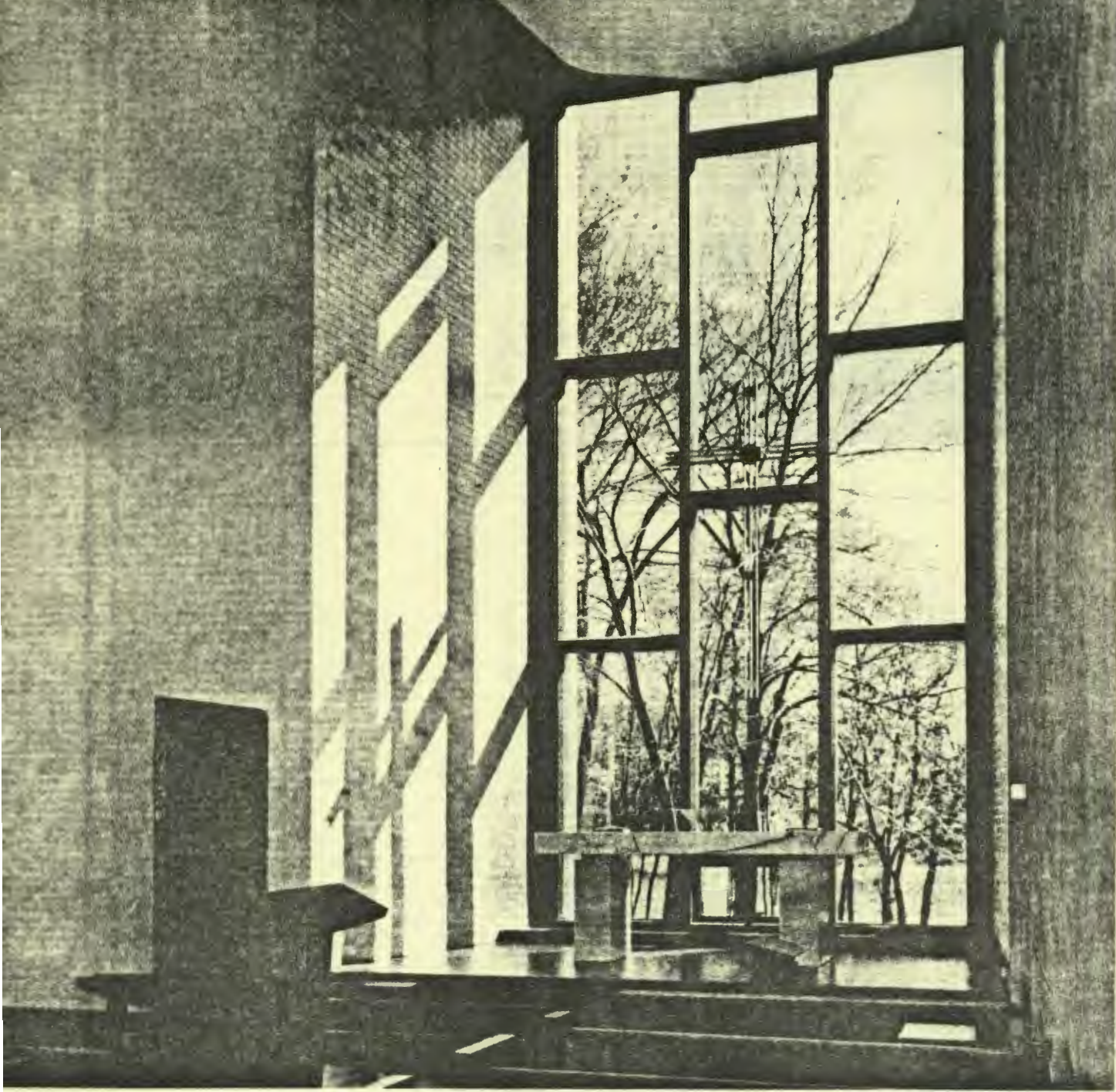


13

7



## THREE CHAPELS: PROTESTANT



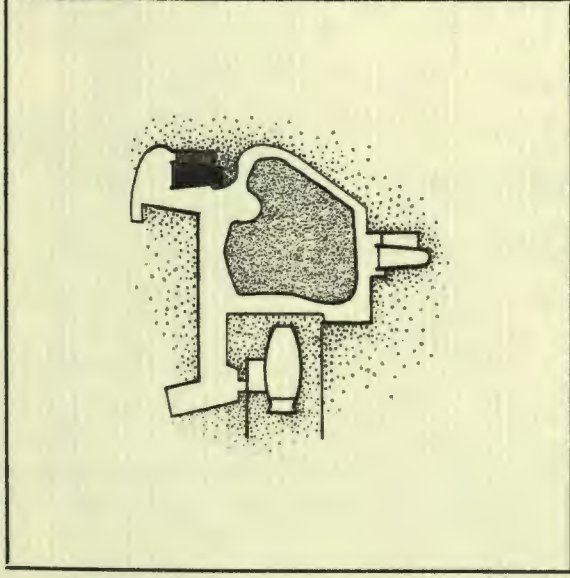
### Max Abramovitz:

using similar materials and a like character throughout. Competition was avoided by an absence of exterior symbolism — yet individual identification becomes apparent to one strolling about the pond. There is the Ark form in the Jewish chapel; the Communion table in the Protestant chapel; the Altar for the Catholic chapel — all readily apparent through the plate glass and wood

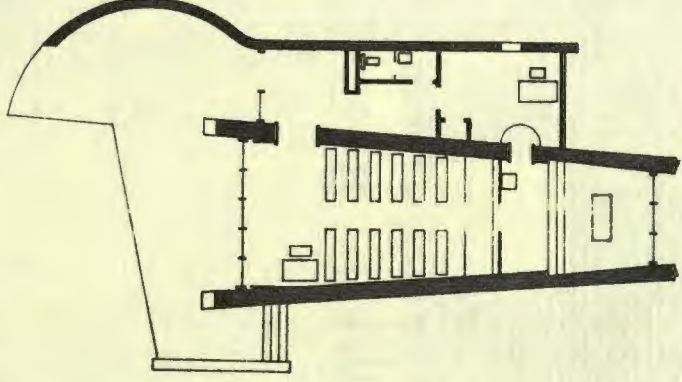
“The Catholic chapel is round-ended. The enclosed east end envelops the ritual of the high Mass and helps achieve a low lighting level; the open, glass-walled west end reveals the altar from without. The Protestant chapel is of bold trapezoidal shape with glass and white-oak end walls, the walls focusing on the Communion table and sky beyond. The Jewish chapel is formed of

7





© Ezra Skoler



5



15



## THREE CHAPELS: CATHOLIC



### Max Abramovitz:

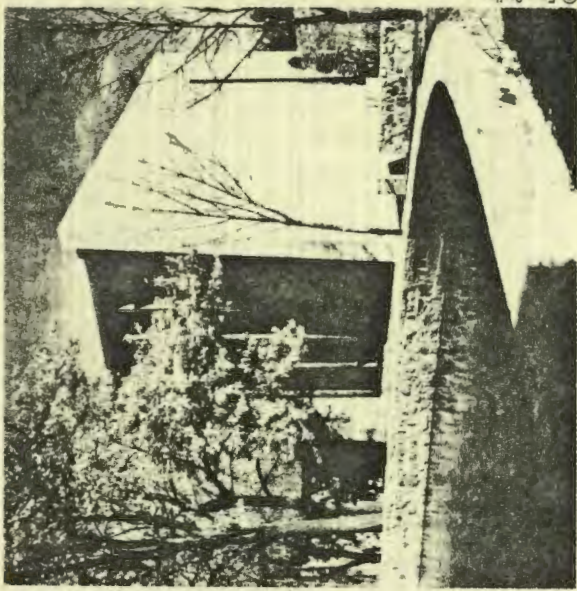
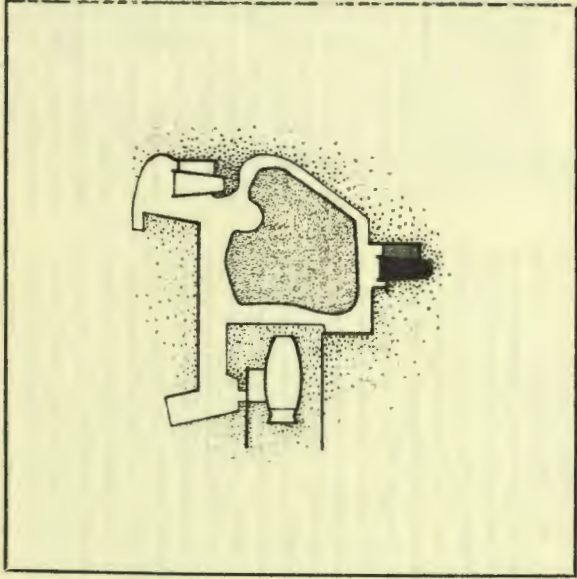
and glass, yielding a view through to the Ark and the grouped trees beyond.

"Architecturally, the aim was to develop a special atmosphere within the group which would set it apart from the academic buildings and develop an inner mood associated with today's three major faiths.

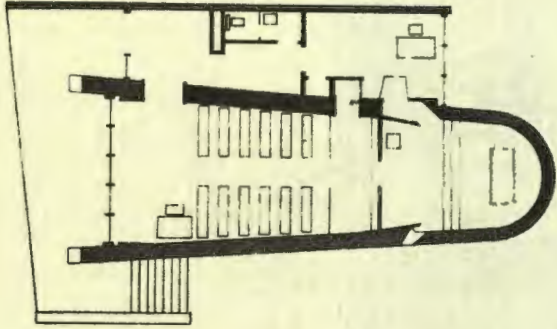
"The ceilings are visually separated from the walls

for an impression of airiness. They also slope downwards toward Altar. Communion table or Ark to accent the focal points for each of the faiths. The floors are all of dark oak planking, and the end screens uniformly of natural finish white-oak and polished plate glass for exterior unity. Great care was taken in both the design and execution of the ritualistic furnishings, executed by





© Ezra Stoller





Synagogues are not in every respect comparable with Christian places of worship. They have always been designed on more pragmatic principles as a house of prayer, of teaching, and of assembly. The latter function far exceeded the purpose of a purely religious community; it was here that the Jewish groups found their coherence. The ghetto synagogue was the centre of all community activities, in fact exactly what we nowadays aim at in the Christian church. In modern times, most of the synagogues have become more exclusive places of worship. With the synagogue, it is not possible to discern a historic development of a style, let alone a type, to the same degree as in church design. The awareness of being apart or different has always induced the Jews to keep a distance from Christian styles. Moreover, the liturgical requirements are comparatively simple - a place of sacrifice, for instance, is not needed. On the other hand, every synagogue must have a holy ark (*Aron ha-kodesch*), containing the scrolls of the Torah with the text of the Pentateuch. This text is read out publicly on the 52 sabbaths of the year. Such readings as well as prayers play a much more important role than lectures

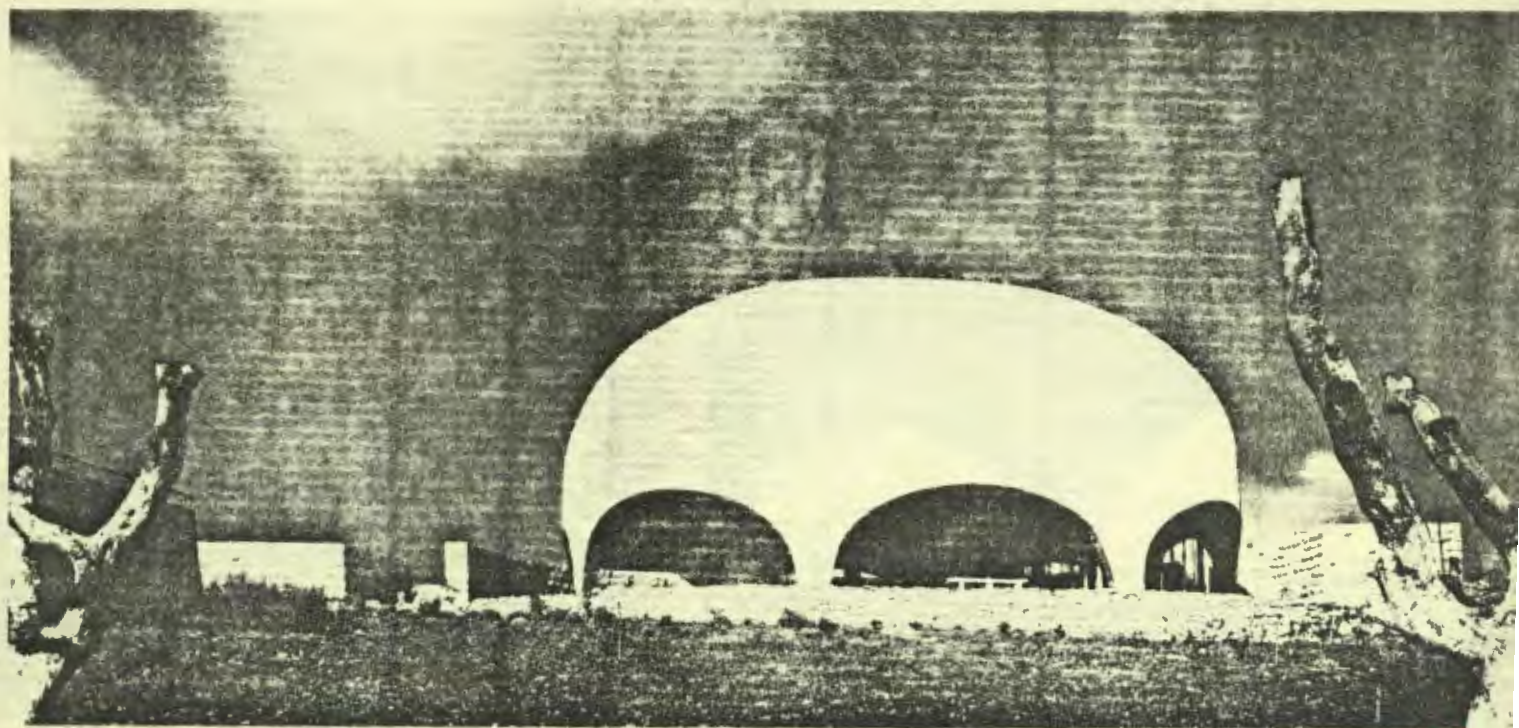
or sermons. For the reading, the synagogue must therefore have a further essential part, namely the reading desk (*almemor*), which is often identical with the desk of the prayer leader (*chasan*). Public worship may only be held in the presence of at least ten male persons over 13 years of age. Originally, divine service was confined to men, whilst women were relegated to a gallery.

The synagogue of the Hebrew University in Jerusalem forms, together with a small library, a precinct of its own which, in its seclusion, conveys a feeling of security.

A zone consisting of rooms and open spaces surrounded by rubble stones is covered by the independent, isolated structure of the white dome. The visitor enters the dome along the flanking walls. He is surrounded by a covered courtyard which provides a view framed by the arches. A curved flight of stairs leads to the place of worship on the upper level. Indirect light enters from below through the gap between the dome and the isolated floor slab. The white, seemingly infinite shell appears to float, conveying an impression of spacelessness which distinguishes the worship area from its secular surroundings.

Synagogen sind nicht in jeder Hinsicht Kultbauten vergleichbar. Sie waren von pragmatisch angelegt, als Haus des Gebetes der Versammlung. Die letztere Funktion im Rahmen der reinen Religionsgemeinschaft in ihr fanden die jüdischen Gruppen ihren Halt. Die Synagoge des Gettos war Mittelpunkt der gemeindlichen Aktivitäten, also das, was die christliche Kirche wünschen. Heute sind in den meisten Fällen nur Kultraum, Stilentwicklung oder gar einen Typus einer Synagoge nicht in dem Maße feststellbar. Das Bewußtsein des Abseits- und Außenseins hat die Juden immer wieder die gleichen Stilen nehmen lassen. Dazu kommt, daß die liturgische Vereinfachung vergleichsweise einfacher ist - ein Ort der Opferung ist zum Beispiel nicht benötigt. Jede Synagoge hat die heiligen Schreine (Aron ha-kodesch) zur Aufbewahrung der Thora-Rollen haben. Der Text der fünf Bücher Moses verzeichnet wird im Laufe eines Jahres an 52 Sabbaten Verlesung und Gebet spielten eine viel

1. The precise shape of the synagogue contrasts with the rough surroundings.
2. The glass-encased entrance hall is recessed.
3. Plan and section. Key: 1 shrine, 2 library, 3 entrance, 4 courtyard, 5 court.
4. The arches form a frame for the courtyard which is separated from the outer wall by a glass screen which admits daylight to the upper level.



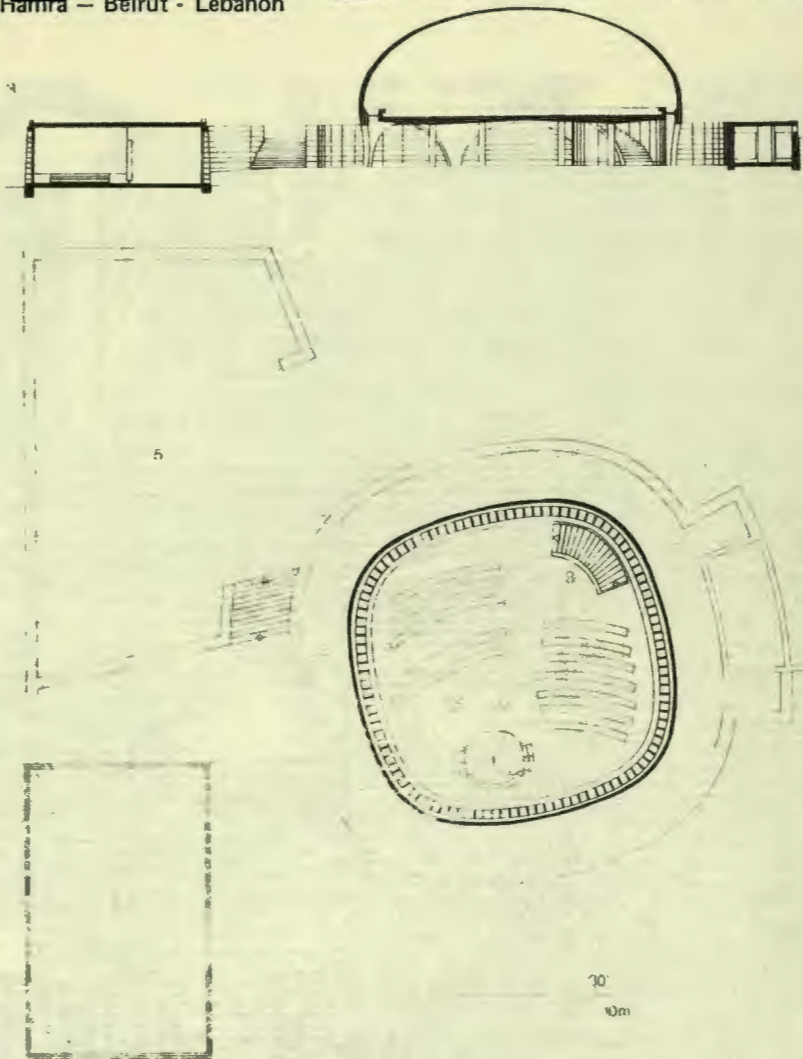


oder Predigt. Zur Verlesung dient das Vorleser-  
 (Vorleser), das oft identisch mit dem Pult des Vor-  
 (Vorleser) ist. Zum Gottesdienst ist es notwendig,  
 über dreizehn Jahre alte Männer anwesend  
 Gottesdienst war ursprünglich reine Männer-  
 Frauen wurde eine Empore vorgesehen.

Die Synagoge der Hebräischen Universität in Jerusalem  
 zusammen mit einer kleinen Bibliothek einen  
 Bereich, der durch seine Intimität ein Gefühl  
 der Intimität vermittelt.

In der Zone von bruchsteinumgebenen Räumen  
 erhebt sich die unabhängige Einzelform  
 der Kuppel. Der Besucher wird durch die Beglei-  
 tungs- u. unter die Kuppel geführt. Ein gedeckter  
 Gang durch die Bögen gerahmten Aussicht um-  
 gebung. Über eine gekrümmte Treppe gelangt er in  
 den Raum der oberen Ebene. Indirektes Licht kommt  
 durch den Spalt zwischen Kuppel und frei  
 liegender Bodenplatte in den Raum. Durch die weiße,  
 schalenartige Schale entsteht der Eindruck des  
 Raumes, der den Ort aus seiner Umgebung  
 heraushebt.

Die runde Form der Synagoge bildet einen starken  
 Kontrast zu der rauhen Umgebung  
 und die Eingangshalle ist zurückgesetzt  
 (siehe Schnitt. Legende. 1 Schrein, 2 Vorleser-  
 pult, 3 Bibliothek, 4 Hof.  
 Die beiden Rahmen sind die Anschlüsse von der  
 Kuppel zu einem Lichtstreifen über der







This church was blasted out from the rock on a site surrounded by tenement houses. Out of bed-rock and man-made walls, an almost circular space, covered by a flat dome, was created which is, in its austerity, reminiscent of early Christian religiosity. Daylight enters through the roof windows between the ribbons which support the flat, copper-lined dome. An underground passage connects the church with the parish premises. The service rooms are accessible from the main entrance. The cupola is surrounded by a rock garden.

The coarsely cut altar and the font consist of the same reddish stone as the walls. The traces of the blasting operations and drill holes in the walls are deliberately left unconcealed.

Here, a space has been created to suit modern theology. Young theologians had unsuccessfully demanded that the church should not be consecrated. They justified their demand by the fact that this room, financed from public funds, should be used not only for public worship but also for secular activities of the congregation.

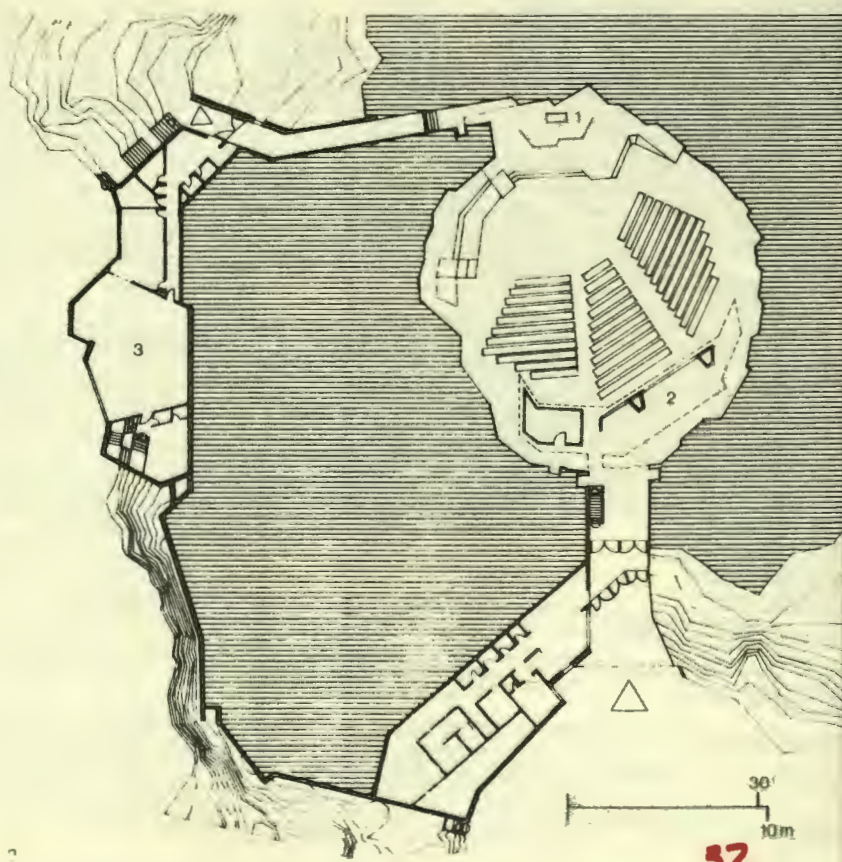
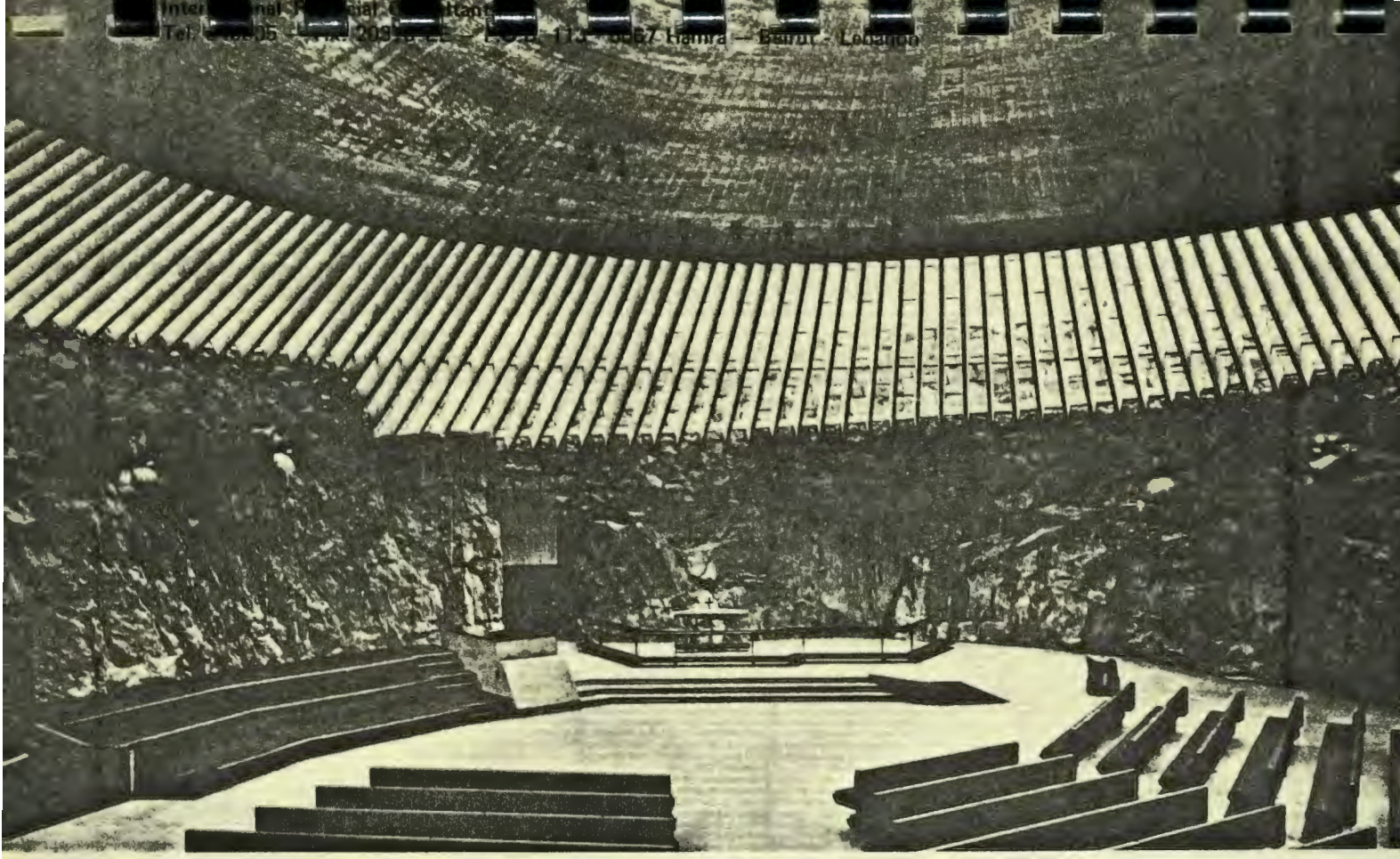
Die Kirche wurde aus einem zwischen Wohnblocks liegenden Fels herausgehauen. Zwischen gewachsenem Stein und aufgemauerten Wänden entstand ein fast runder, nach oben durch eine flache Kuppel begrenzter Raum, der in seiner Schlichtheit den Eindruck frühchristlicher Religiosität erweckt. Licht fällt zwischen den verglasten Rippen ein, die die flache, mit Kupfer beschlagene Kuppel tragen. Ein unterirdischer Gang verbindet die Kirche mit den Gemeinderäumen. Um die Kirchenkuppel herum wurde ein Felsengarten angelegt. Aus dem gleichen rötlichen Stein wie die Wände sind auch der grob behauene Altar und der Taufstein. Die Spuren der Sprengungen und die Bohrlöcher an den Wänden sind bewußt erhalten.

Hier ist ein Raum für die moderne Theologie entstanden. Junge Theologen hatten sich vergeblich dafür eingesetzt, die Kirche nicht zu weihen. Sie begründeten ihren Wunsch damit, daß dieser mit öffentlichen Mitteln finanzierte Raum nicht nur dem Gottesdienst, sondern auch profanen Aktivitäten der Gemeinde dienen sollte.

1. The church is blasted into the rock and therefore only visible from the air.

1. Der aus dem Fels herausgesprengte Raum ist durch seine flache Kuppel nur aus der Luft zu sehen.





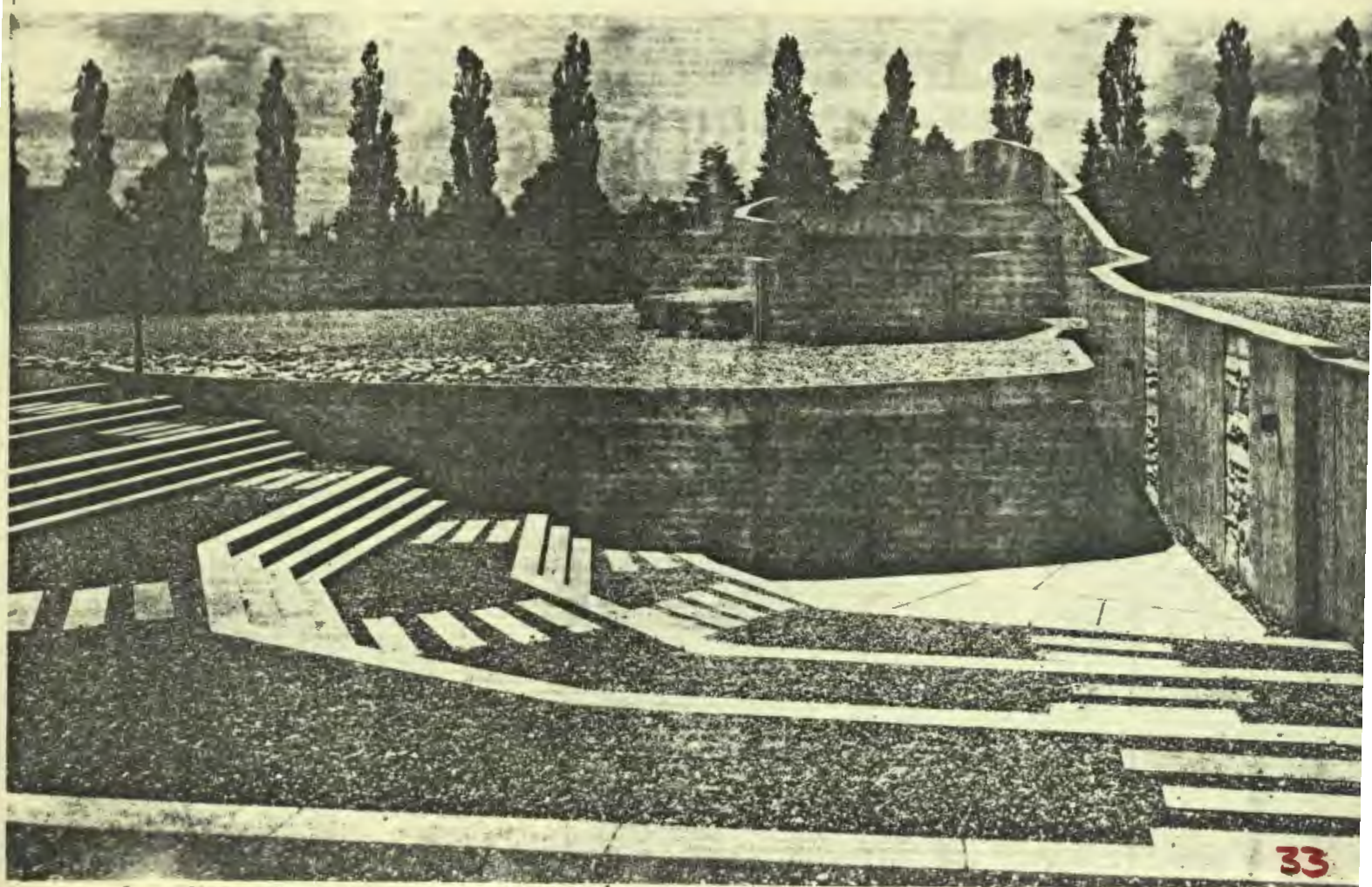
View from the gallery toward the altar.  
Plan. Key: 1 altar, 2 gallery, 3 parish room  
Detail of the connection between the ribs of the dome  
and the rock wall. Key: 1 copper plate 0.5 mm, 2 base  
lining, 3 bitumen felt, 4 base lining, 5 windbreak, asbes-  
tos sheet, 6 heat insulation, light gravel concrete and  
ceram wool, 7 reinforced concrete shell, 8 acoustic  
panels asbestos sheet, 9 wooden daises 10 copper  
surface, slats 20 x 1 mm, holes 5 mm, 11 roof  
down, steel shell and heat glass units (lower pane  
plex glass), 12 reinforced concrete beam (factory  
made), 13 copper-surfaced bitumen felting, 14 reinforced  
concrete slab with snow-melting resistors, 15 rainwater  
drainage, 16 heat insulation, hard mineral wool, 17 quarried  
stone wall, 18 rainwater pie, 19 external quarry line, 20  
internal quarry line, 21 rock surface, 22 hole for outgoing  
ground water from rock, 23 ditching tubes.  
Gallery.  
Radial section of the church.



With great care, the notorious concentration camp in Dachau has been restored; the watch towers have been freshly painted, the barbed wire renewed, the gravel paths freshly covered, creating an oppressively perfect monument to the atrocities of the Nazi period. In addition, the three religious denominations have built memorial chapels. The last to be erected was the Protestant chapel which was built in 1967. The architect was required to build a monument, yet wanted to do so without monumentality. He saw in the rectangularity of the camp a "symbol of a deathly police regime" so outrageously abused that he would not wish to use it for his chapel. The memorial chapel is "dug like a trace of life in the pitiless realm of the camp". A path leads down over large steps, becomes narrower, expands again to form a patio of tranquility and contemplation, passes through the chapel before returning through another bottleneck into the open. The three premises - an ante-room for information purposes, the patio and the chapel - form an optical unit which can also be made real by pushing aside the glass partitions which separate them.

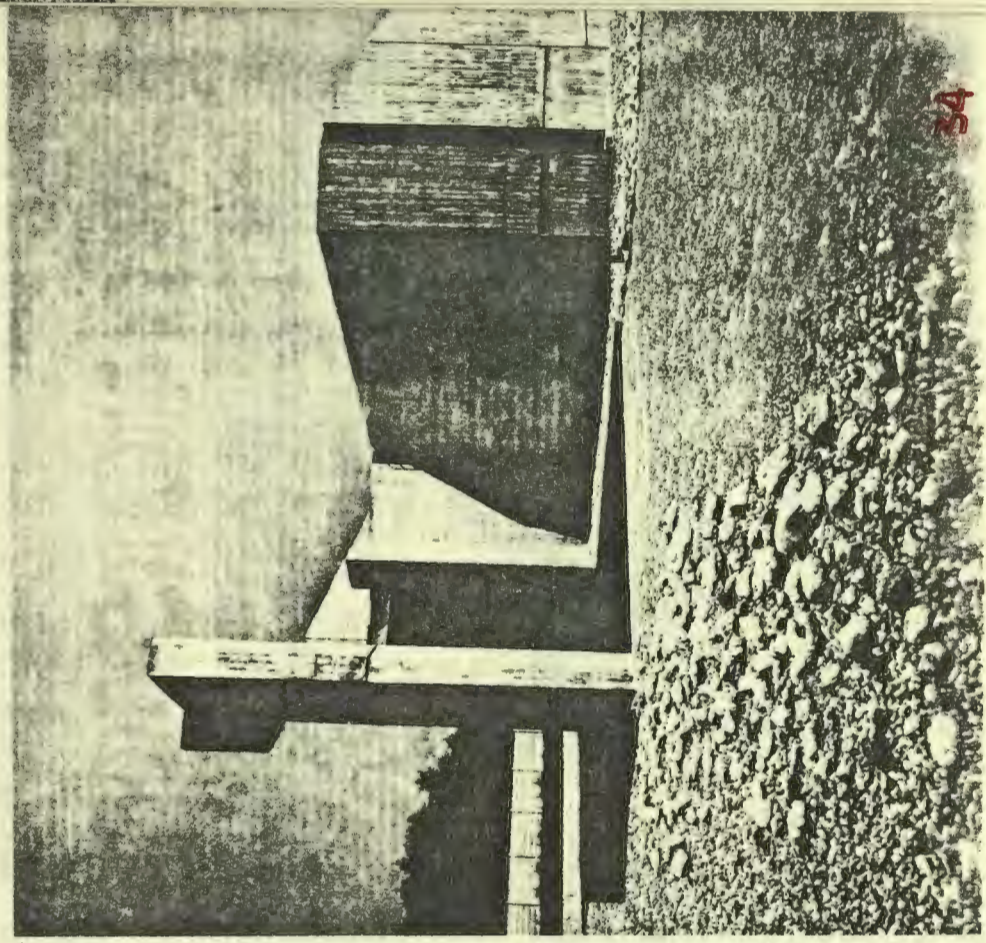
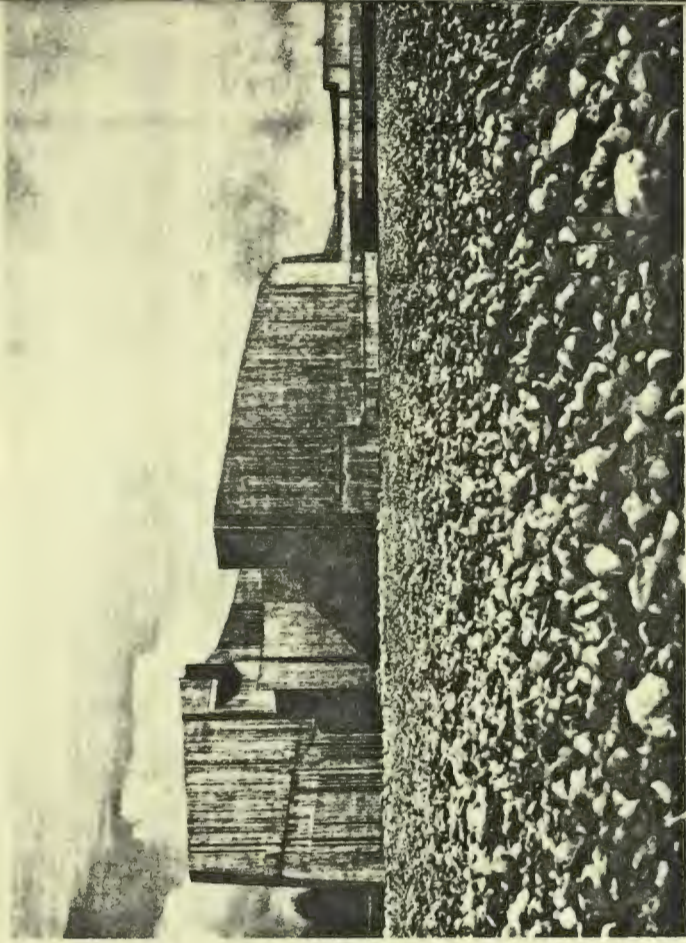
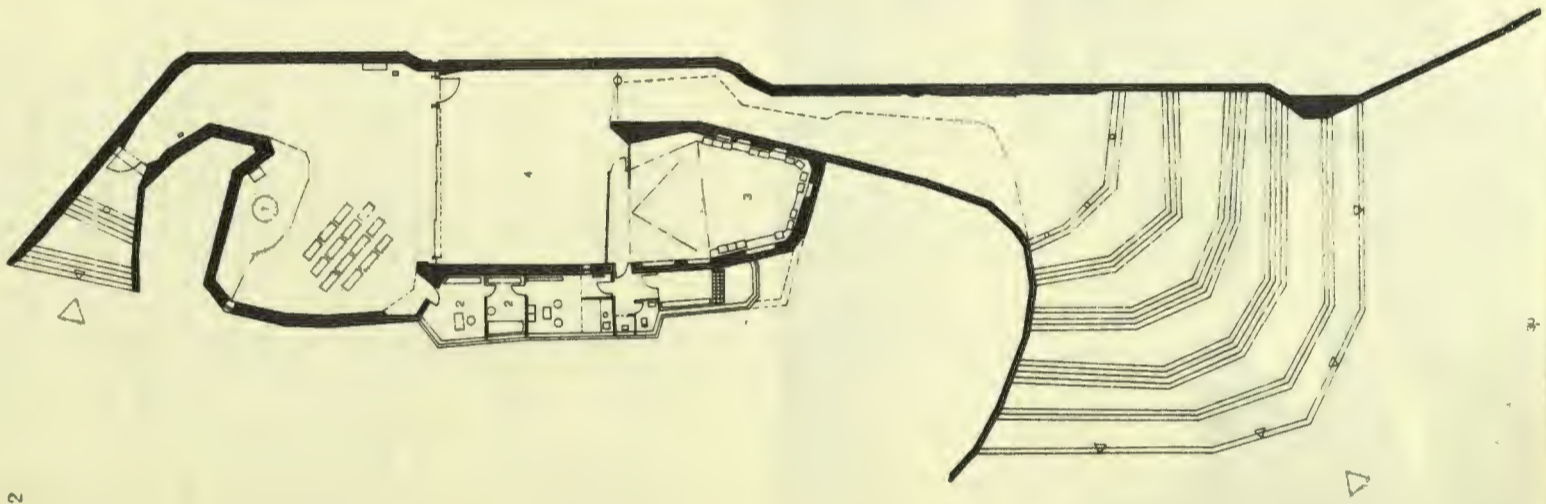
Das Konzentrationslager Dachau wurde mit großer Gründlichkeit wiederhergestellt, die Wachtürme frisch gestrichen, der Stacheldraht erneuert, die Kieswege neu bestreut: es entstand ein bedrückend perfektes Denkmal an die hier verübten Greuel der Nazi-Zeit. Zusätzlich haben die drei Konfessionen Gedenkkapellen gebaut. Die evangelische Kapelle wurde 1967 als letzte errichtet. Der Architekt hatte ein Monument zu bauen und wollte es ohne Monumentalität tun. Er glaubte, in der Rechtwinkligkeit des Lagers »Symbol der tödlichen Polizeiordnung« zu sehen, mit der zuviel Mißbrauch getrieben worden war, um sie auch noch für seinen Bau anwenden zu können. Die Gedenkstätte ist wie eine »lebendige Spur in die unbarmherzige Fläche des Lagers eingegraben«. Ein Weg führt mit großen Treppen hinab, wird enger, erweitert sich zu einem Platz der Ruhe und Stille und findet - durch den kirchlichen Raum hindurch - wieder halseng ins Freie. Die drei Räume - Sozialraum mit Informationsraum, der Hof und die Kapelle - bilden, durch Glaswände verbunden, eine optische Einheit, die auch durch Wegschieben der Glaswände real hergestellt werden kann.

- 1 Concentric stairs lead down to the entrance
- 2 Plan. Key: 1 altar, 2 sacristy, 3 community room, 4 court.
- 3, 4 External views.
  
- 1. Zum Eingang führen sammelnde Treppen
- 2. Grundriß. Legende: 1 Altar, 2 Sakristei, 3 Sozialschaftsraum, 4 Hof.
- 3, 4. Außenansichten.



7

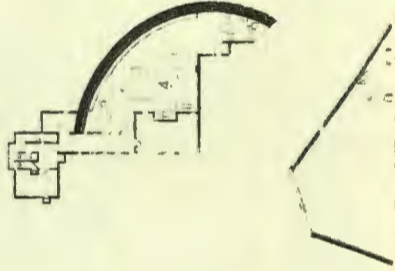
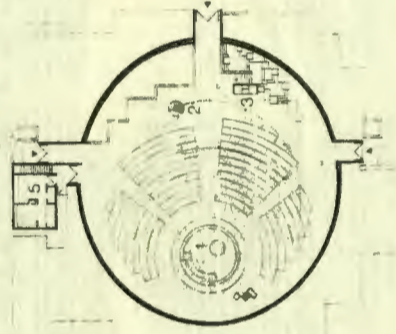
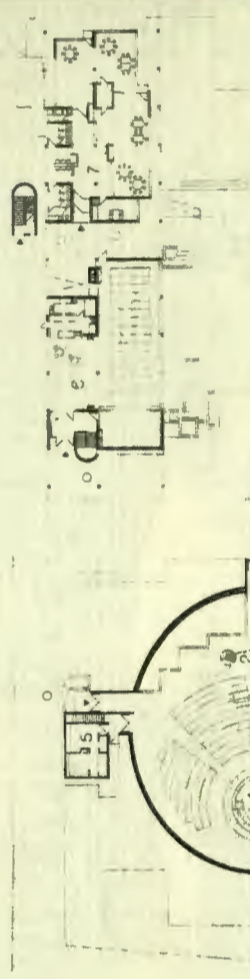
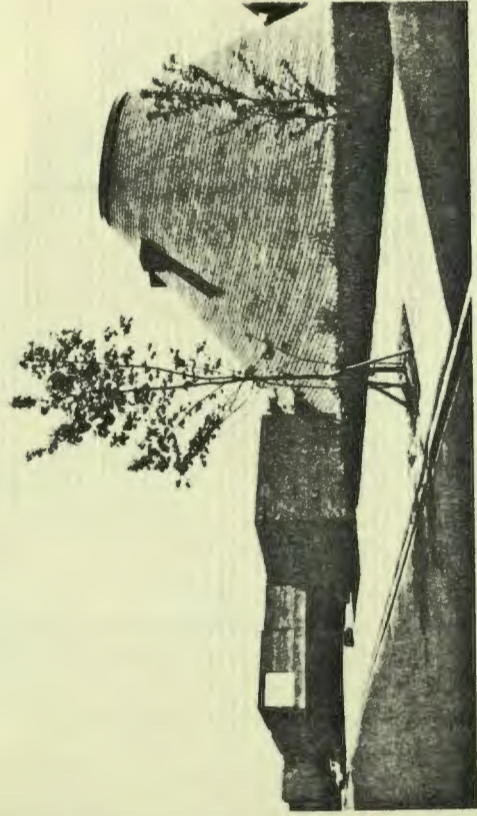








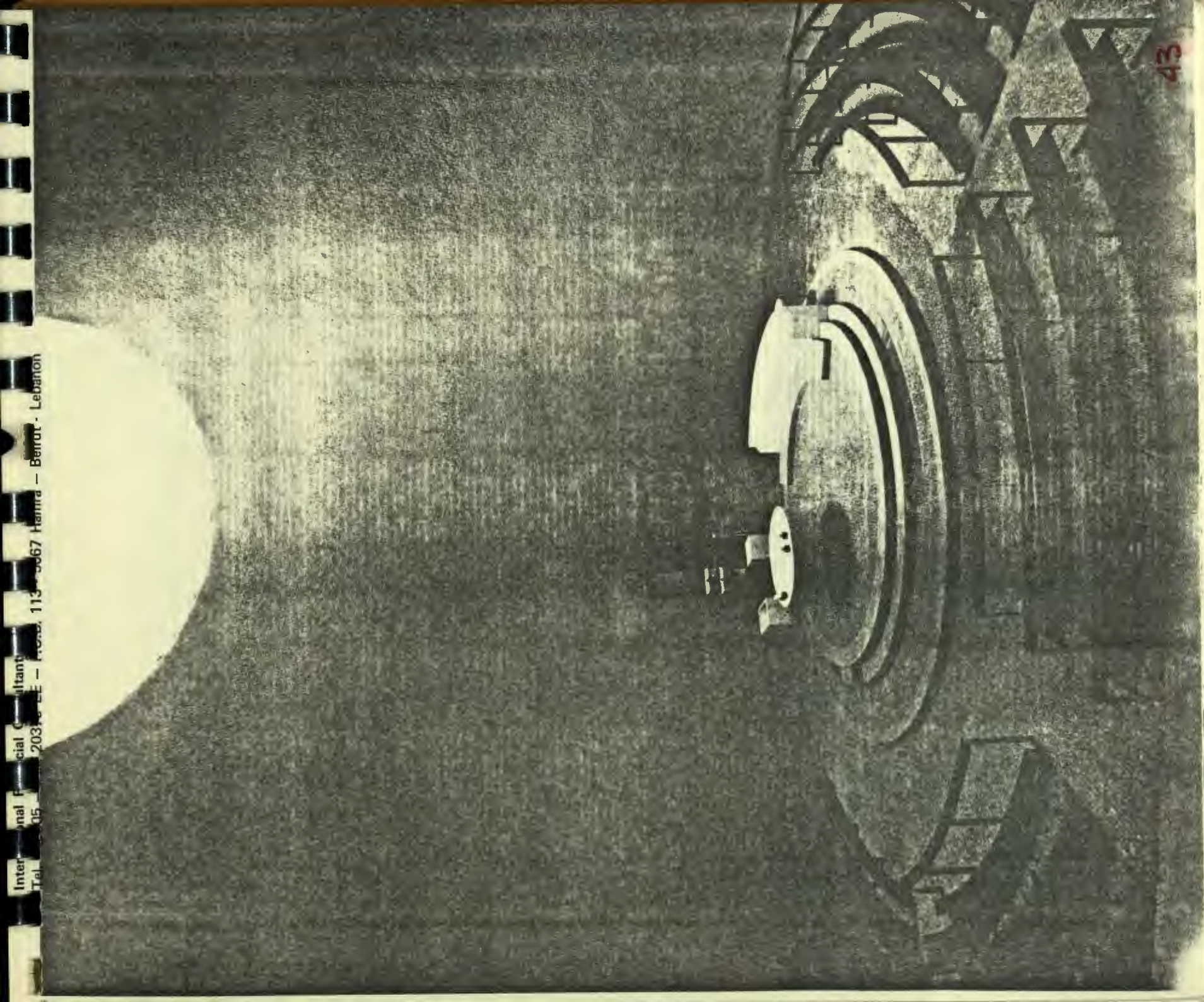




20m



International Financial Consultant  
Tel. 05 203 6222 - P.O. Box 113 3667 Hamra - Beirut - Lebanon





This plastic building, which belongs to a military camp, stands like a mastaba composed of large, multi-faced stones against the background of a monotonous desert landscape. The space is enclosed by three different three-dimensional concrete units: truncated tetrahedrons, octahedrons and cubo-octahedrons. These units are hollow, with very thin walls. The result is a symmetric, hexagonal room, with entrance, reader's desk and ark placed in the axis, and the pews on either side. The room is like a grotto; the plastic effect is fascinating.

Below the building is a well from which the camp draws its water supply.

This monument, set against the backcloth of the landscape, is one of the most interesting buildings designed by these architects who have a distinct preference for three-dimensional units.

Der plastische Bau, der zu einer Kaserne gehört, steht wie eine Mastaba aus großen vielflächigen Steinen vor der eintönigen Wüstenlandschaft. Der Raum ist aus drei verschiedenen räumlichen Betonelementen gebildet: abgestumpfte Tetraeder, Oktaeder und Kubo-Oktaeder. Diese Formen sind hohl und haben minimal dünne Wandungen. Es entsteht ein symmetrischer sechseckiger Raum, in dessen Achse Eingang, Pult und Schrein angeordnet sind. Seitlich sind die Bänke aufgestellt. Die Raumwirkung erinnert an eine Grotte und fasziniert durch ihre hohlplastische Wirkung.

Unter dem Bau liegt eine Zisterne, von der die Kaserne ihr Wasser bezieht.

Dieses gegen die Landschaft gesetzte Monument ist einer der interessantesten Bauten der vorzugsweise mit Raumelementen arbeitenden Architekten.

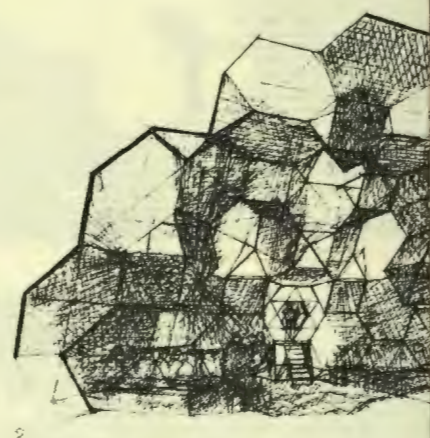
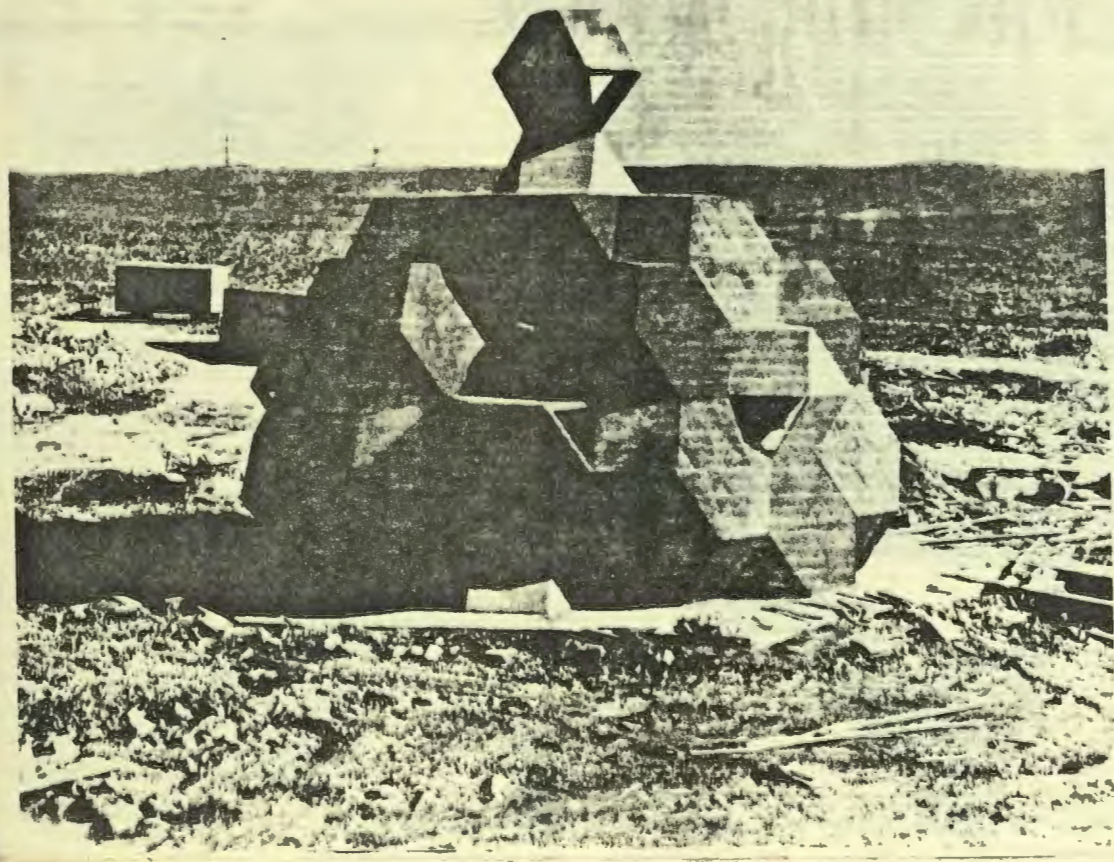
1. The strangely alive synagogue building in contrast to a monotonous, lifeless landscape. The hedrons are of concrete, partly painted in colours, partly left unpainted.

2. Architect's sketch.

3. Plan and section. Key: 1 shrine, 2 lectern.

4. Aron ha-kodesch. Polygonal apse with form. Inserted in the Star of David is a hexagon in which the Torah scrolls are kept.

5. A well at the entrance.





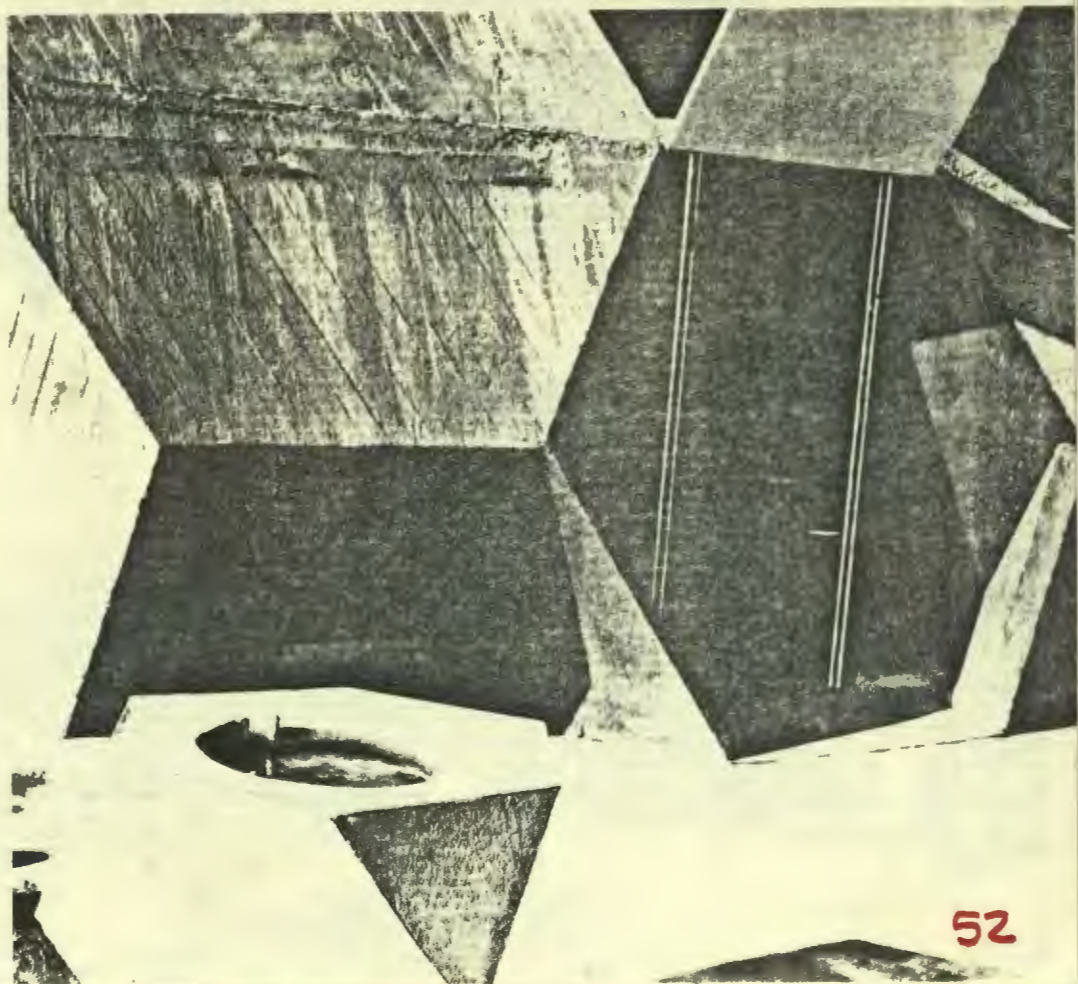
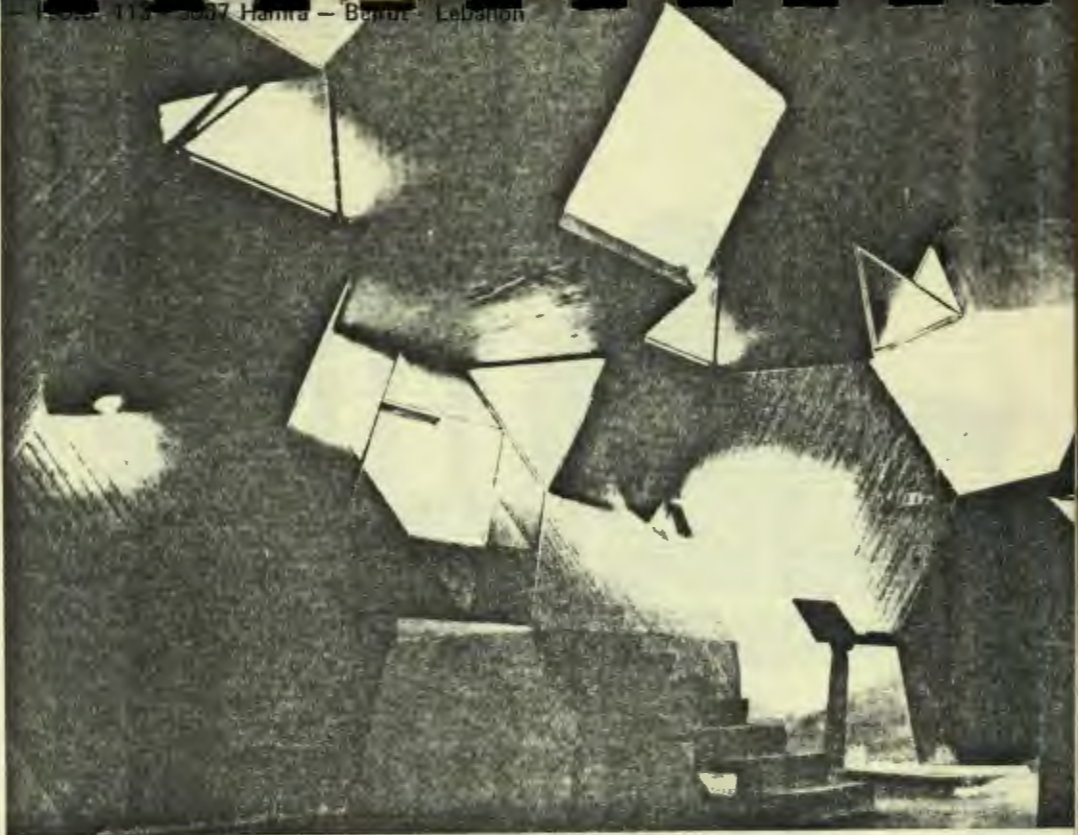
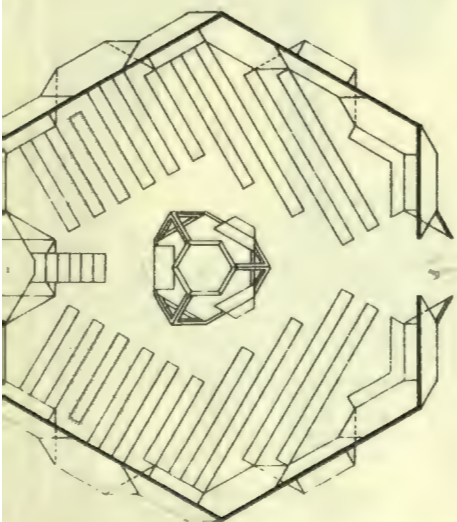
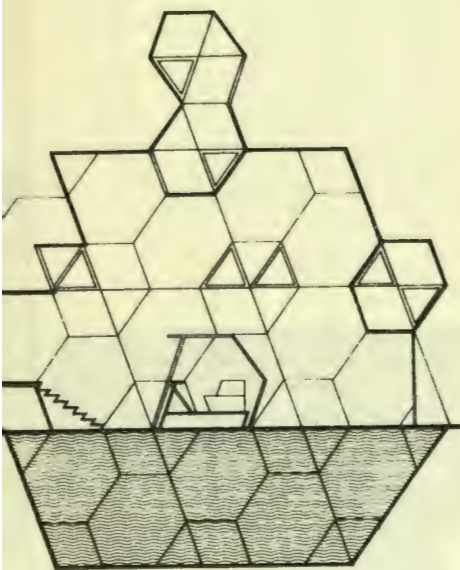
Synagoge bildet den Kontrast einer seltsam lebendigen Gebäudeform zu einer monotonen und toten Struktur. Die Betonpolyeder sind teilweise farbig ge-

zeichnet, wie in der Skizze des Architekten.

Grundriss und Schnitt. Legende: 1 Schrein, 2 Pult.

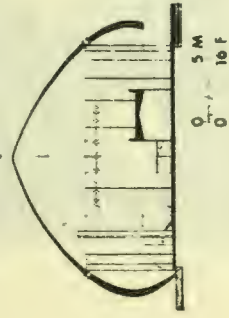
Architekt: Moshe Safdie. Polygone Apsis mit erhöhter Decke. In den Davidstern ist eine sechseckige Nische eingebaut, in der die Thorarollen aufbewahrt werden.

Einige am Eingang.

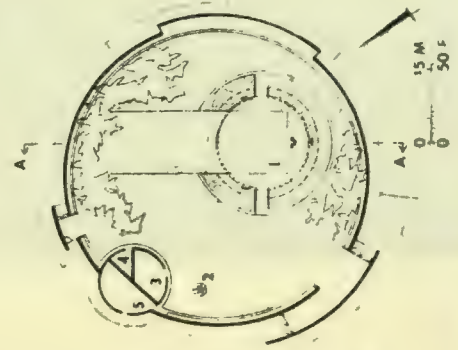


7

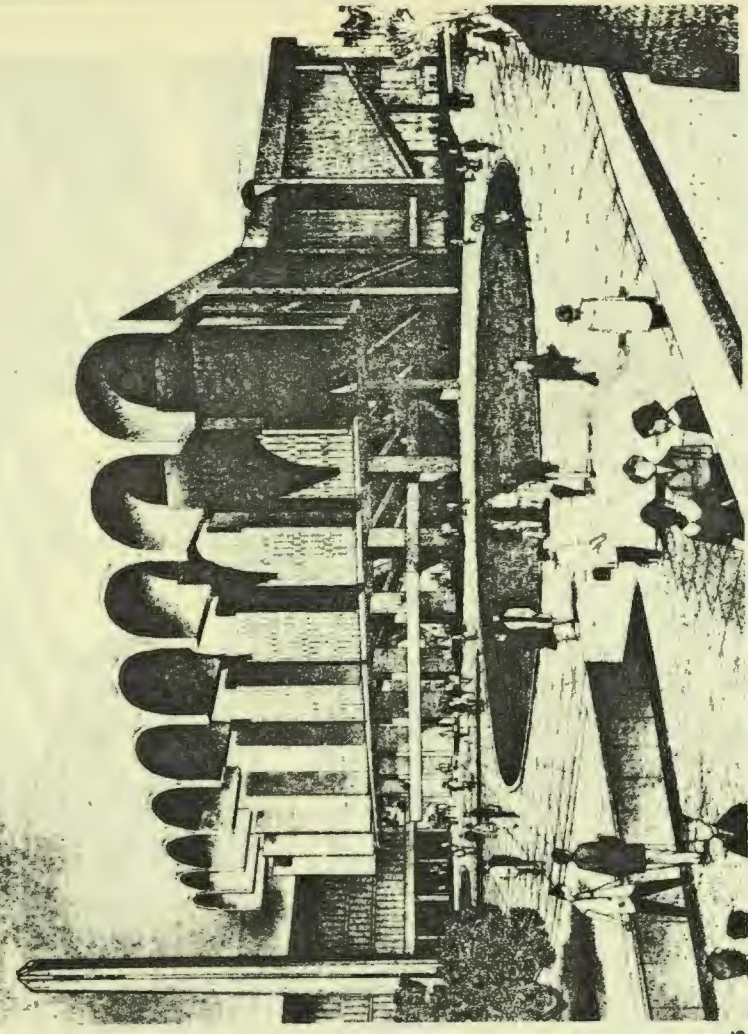




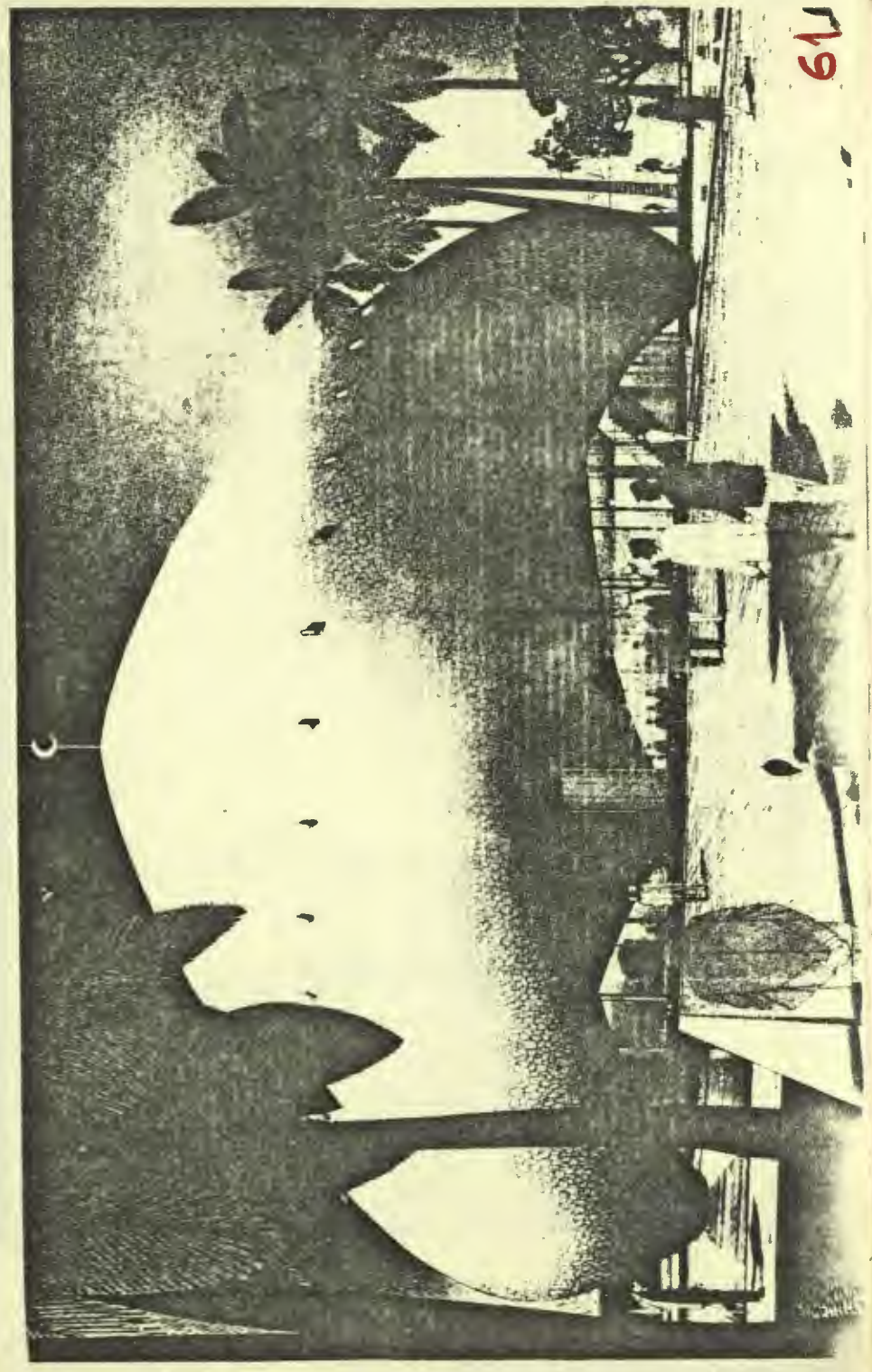
B



A

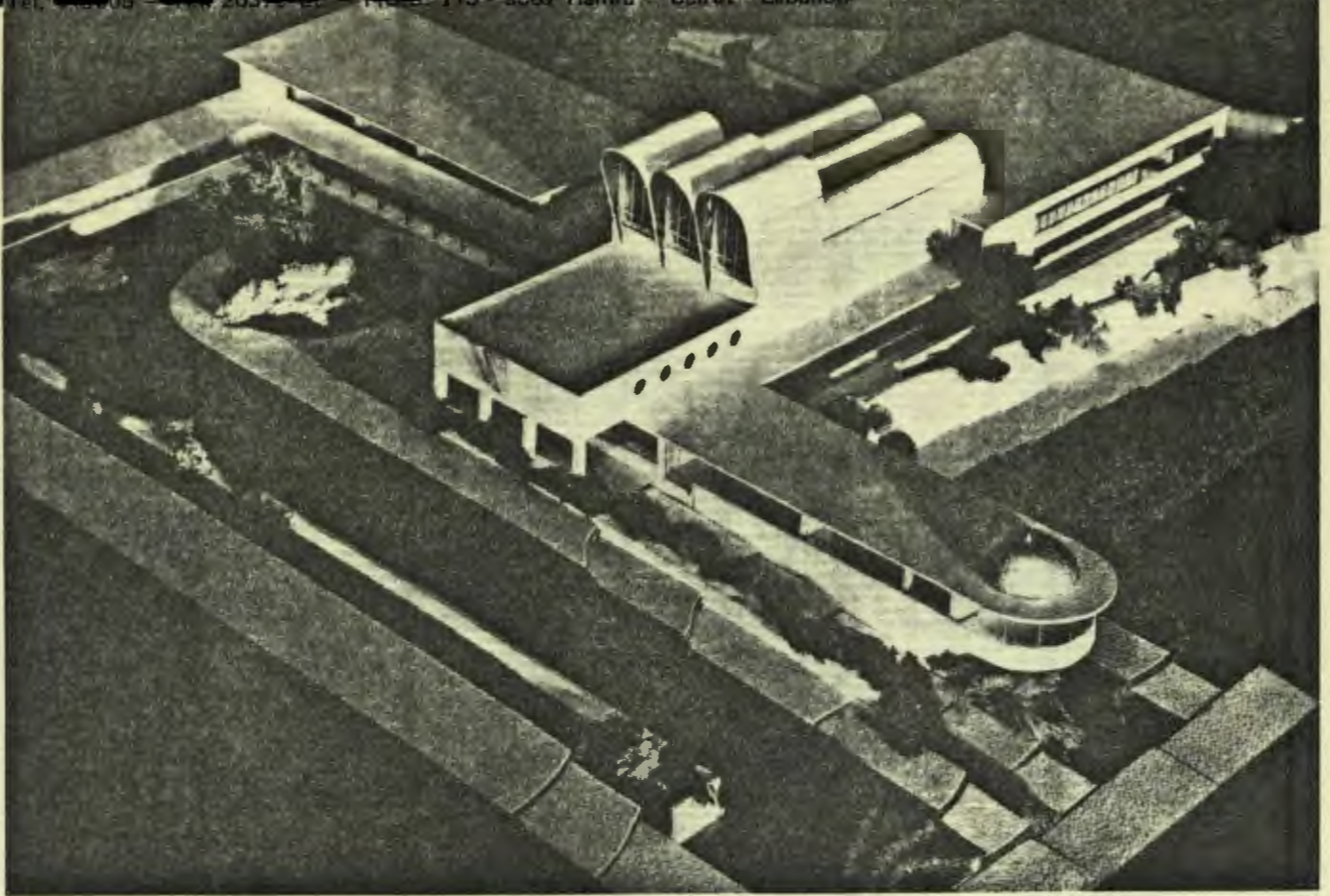


B



A

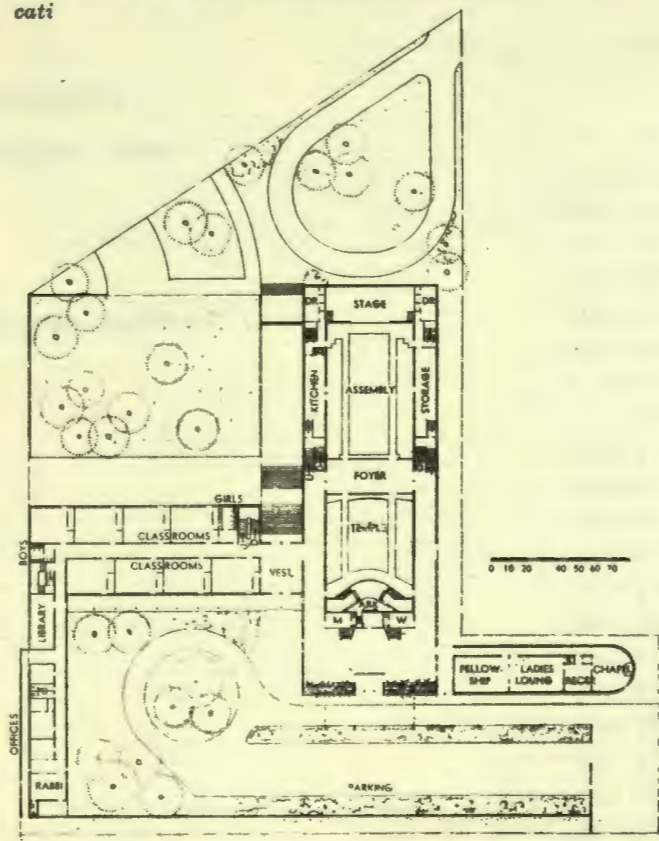




80J Model. Photo by Stone & Stecatti

**CONGREGATION BETH EL**  
**Baltimore, Maryland**

**Eric Mendelsohn, Architect**



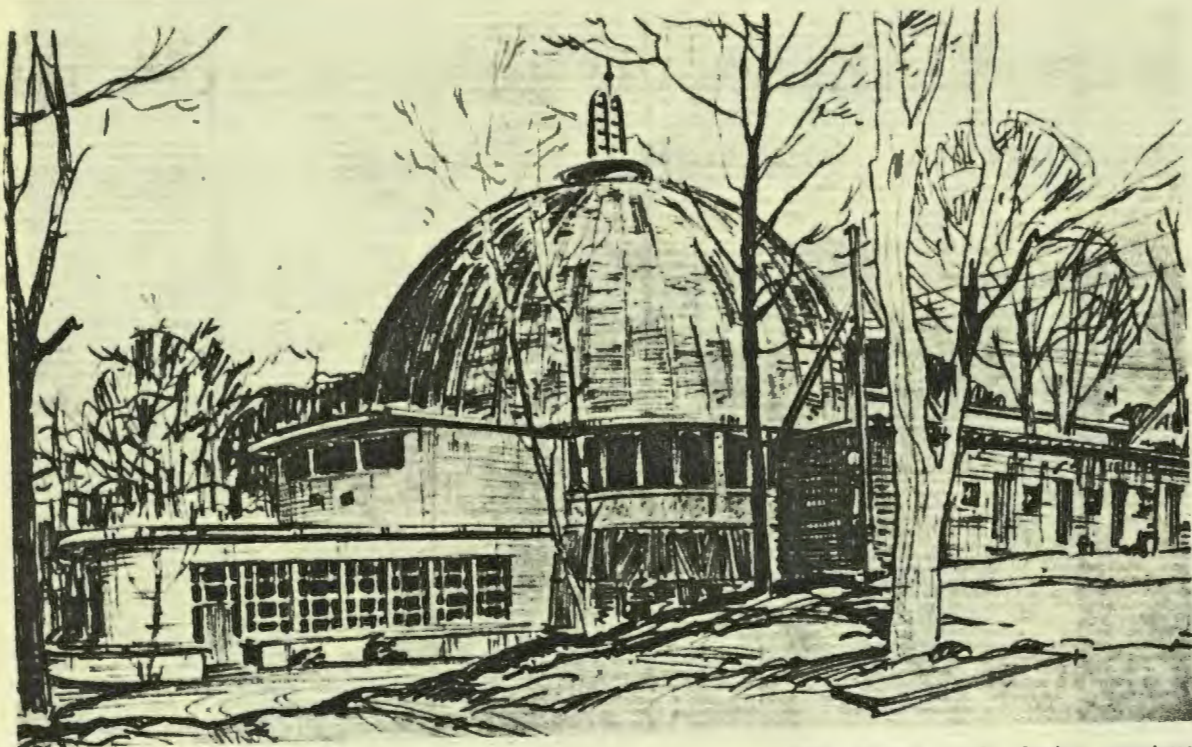
81J Plan.

In studying this plan one should note the generous lobby; the covered auto entrance; the parking area; and the clear articulation of administrative, club and chapel, and school wings arranged about the assembly element. The model reveals the characteristic sweep and vitality of this masterful designer's work. The dome over the little chapel, the vaults of the roof with their great glazed end walls, and the insignia boldly projected from the center of the entrance contribute to the vigorous character of the whole.

71

7





82J Sketch made during construction.

**PARK SYNAGOGUE**  
Cleveland Heights, Ohio

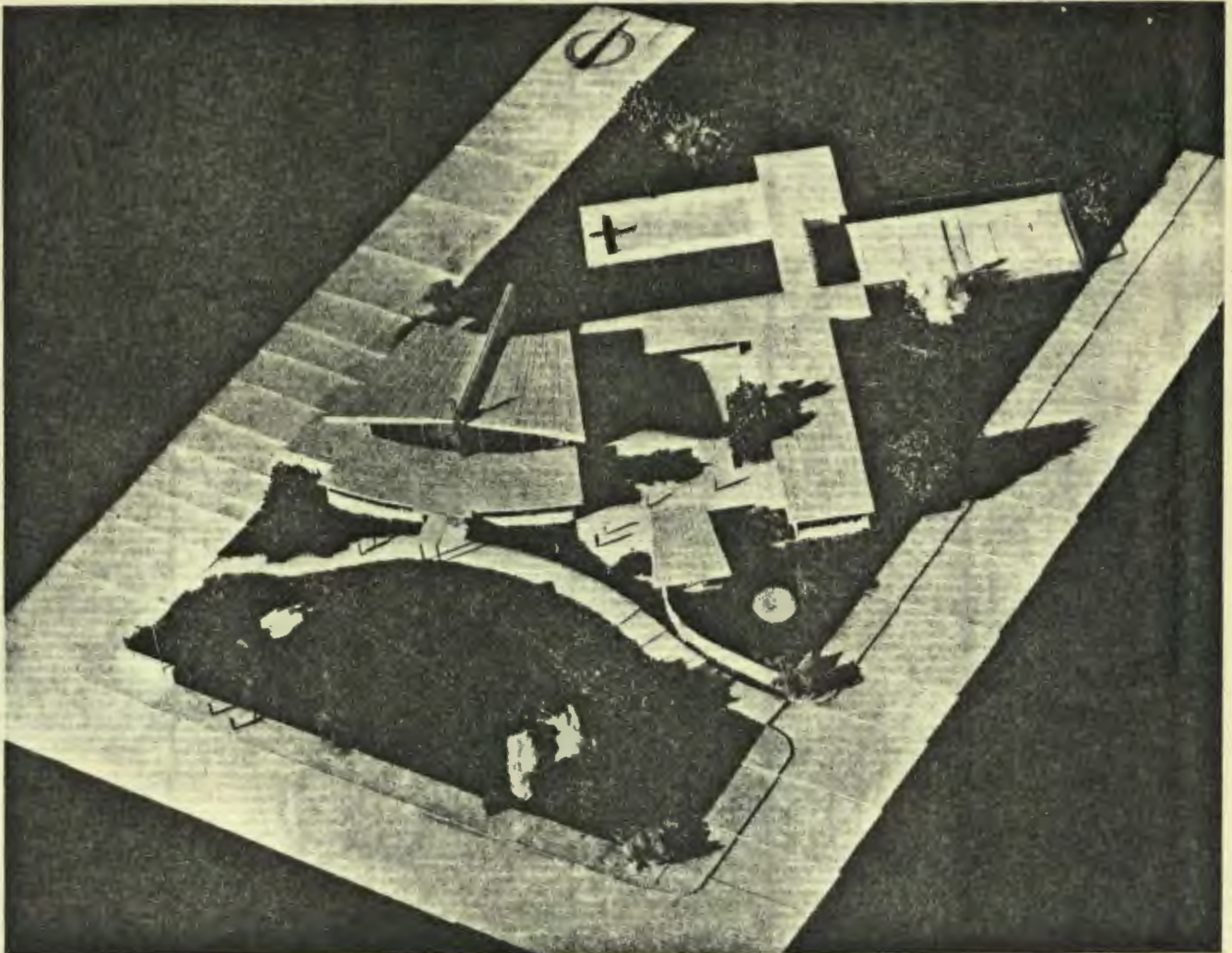
**Eric Mendelsohn, Architect**

The Park Synagogue is a large building situated on twenty-eight acres of irregular parkland, and this surrounding landscape functions as an important element in the total visual effect. The building is dominated by a dome 100 feet in diameter surmounted by an original expression of the Tablets of the Law. The dome, a true hemisphere inside and out, is made of reinforced Gunitite concrete four inches thick covered with copper, insulated, and faced on the interior with acoustic material.

The sanctuary beneath will seat 1,000, a capacity increased to 1,800 when a central foyer and fan-shaped assembly hall are opened into it by means of large, disappearing sets of folding doors. One of the most exciting features is a pair of glass and stainless steel doors between the assembly room and an exterior court. About 20 feet high by 60 feet wide and weighing some four tons; these doors are motor operated. Flat steel trusses up to 98 feet span the assembly room.



83J Model. Photo by Dean Stone & Hugo Steccati



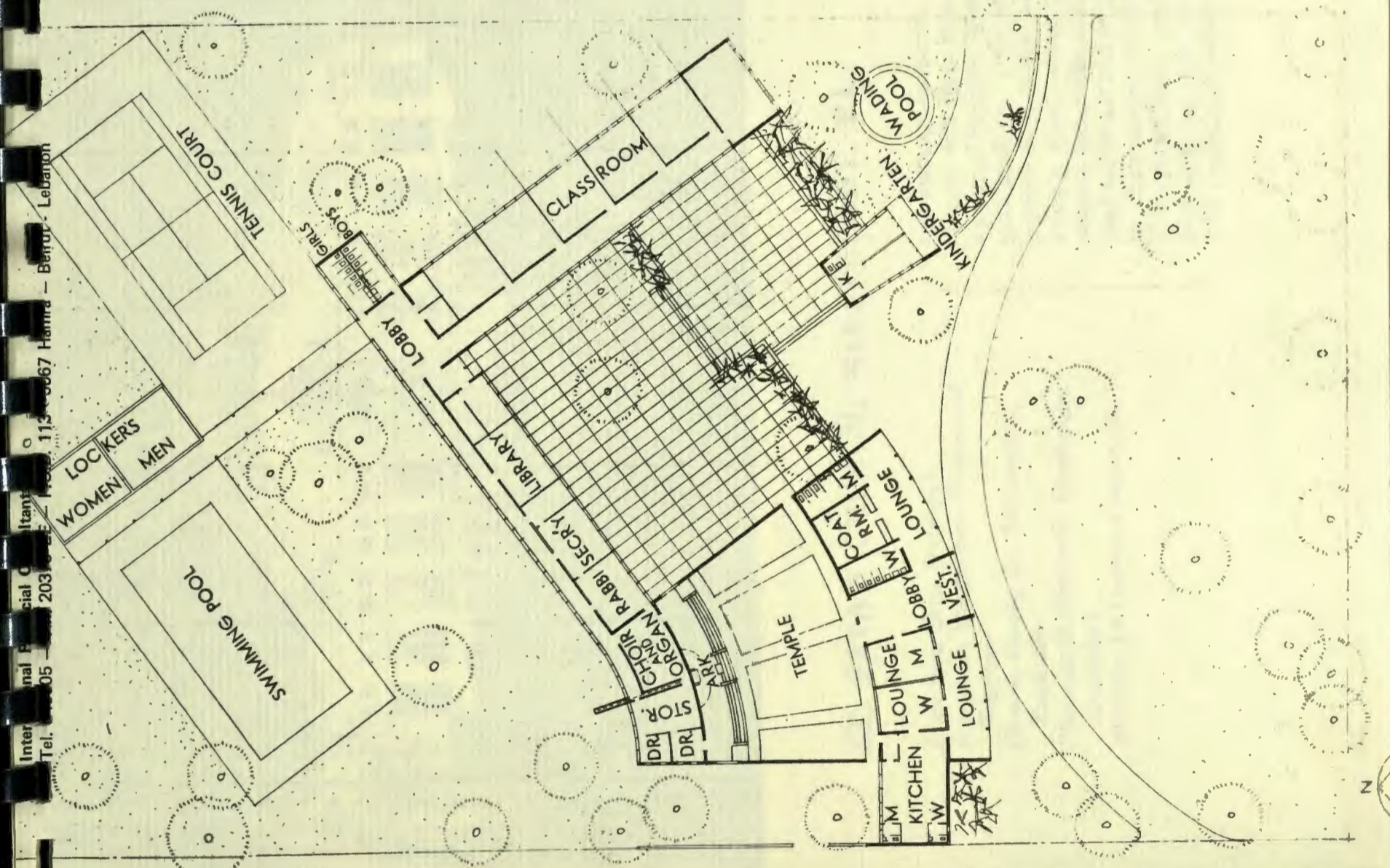
**Eric Mendelsohn, Architect**

Although more usual than the synagogues Eric Mendelsohn is doing in Baltimore, Cleveland, and St. Louis, this design for a smaller community exhibits the same dynamic use of low office and classroom wings to form sides of a courtyard. The completely free kindergarten is, however, an innovation. The women's lounge and the men's fellowship room can be opened into the auditorium when a large, single space is desired. Recreational facilities include a pool and tennis court.

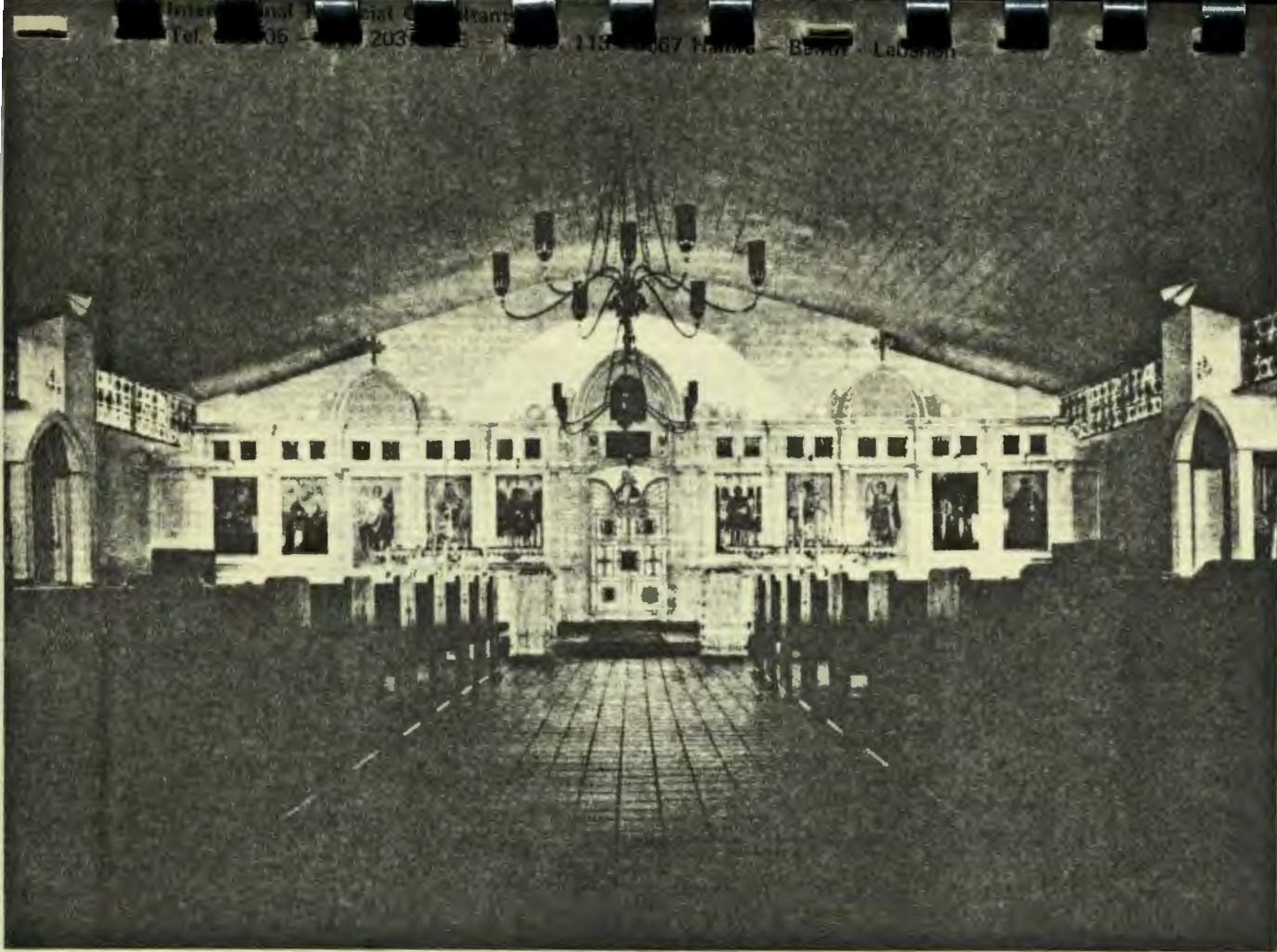
The photograph of the model shows how the roof of the temple is held by a forcefully expressed, apparently rigid frame girder across the center. At the front the support appears as a slender column, crowned by an elongated Star of David and flanked by broad clerestory windows.



International Financial Consultants  
Tel. 05 203 667 - 113 0667 Hamra - Beirut - Lebanon







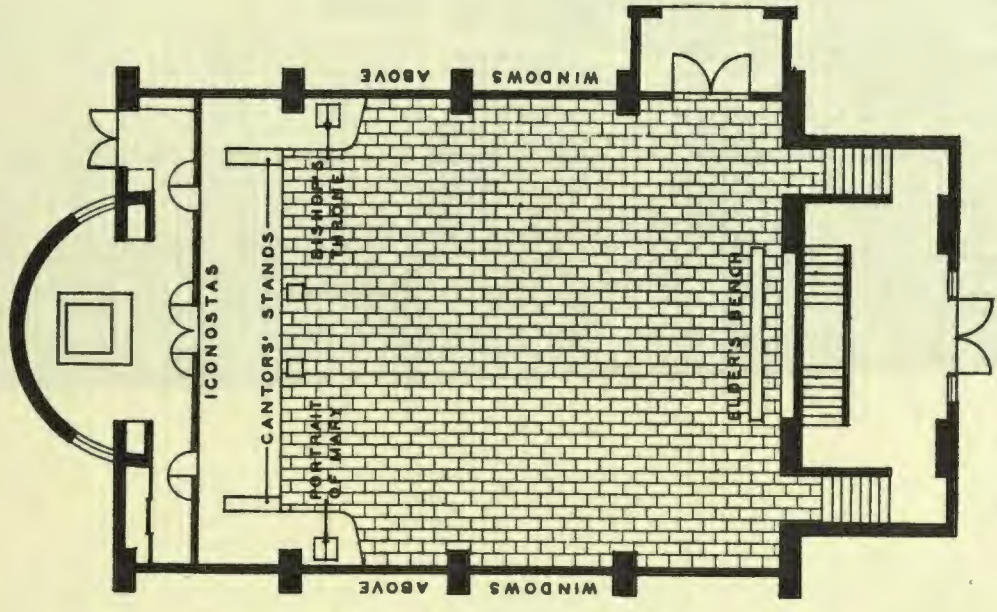
## ST. SAVA'S CHURCH, McKEESPORT, PA.

*John Pekruhn, Architect*  
*Joseph E. Spagnuolo, Structural Engineer*  
*Charles Hawk, Jr., Mechanical Engineer*  
*Simonds & Simonds, Landscape Architects*  
*Nicholas Le Donne, Contractor*

THE SERBIAN ORTHODOX parish of St. Sava's brought with them from their former church a group of liturgical fittings and a strong liturgical tradition. They asked the architect to organize on a hillside site a setting for their worship which would recall for older worshippers the architectural forms of their European childhood and at the same time express the environment and technology and interests of the parish young people. The structure is of steel bents and open web joists, with a copper roof, acoustic tile ceiling and quarry tile floor.

7









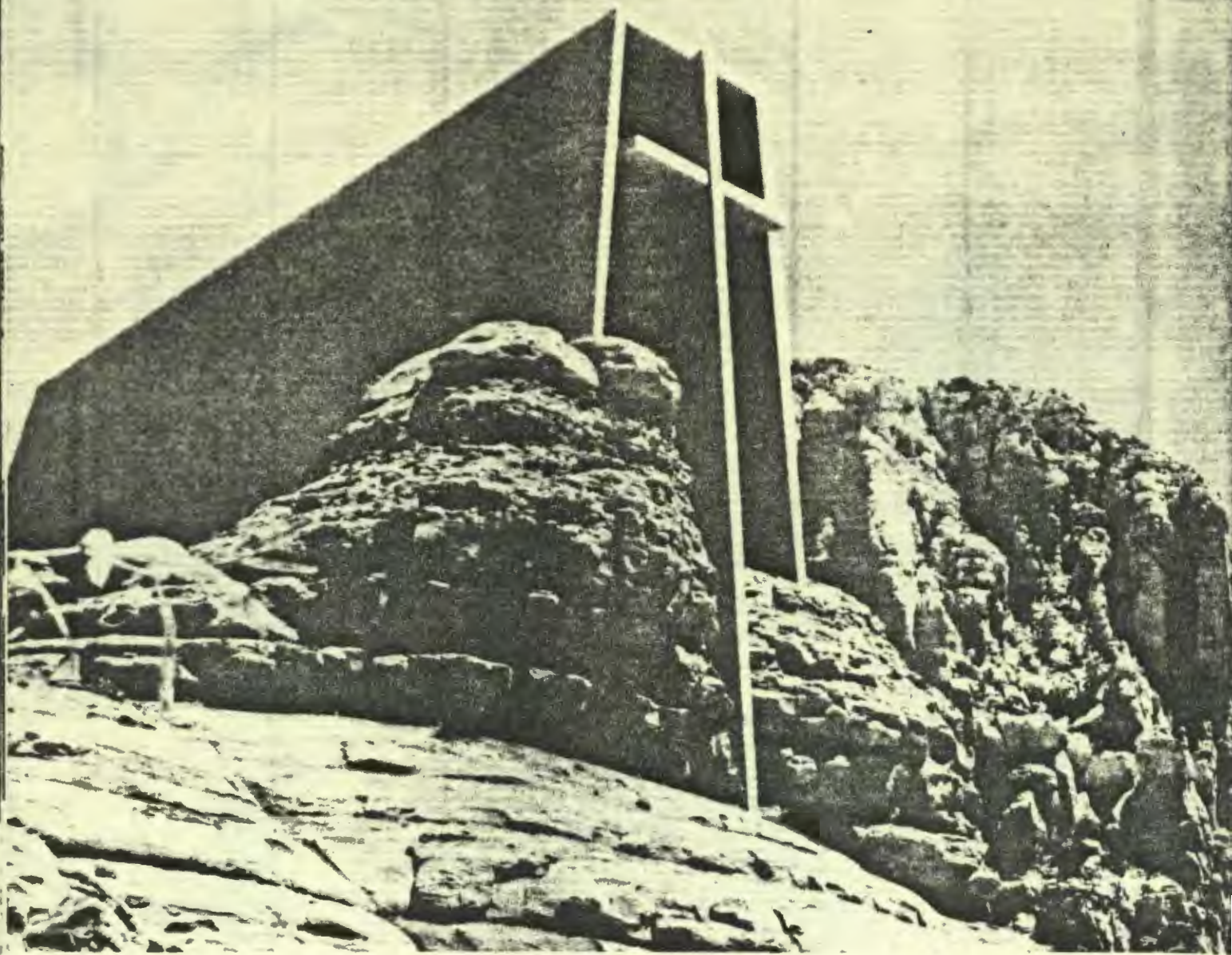
All photos by Julius Shufman

## CHAPEL OF THE HOLY CROSS

*Anshen & Allen, Architects; Robert D. Dewell, Civil and Structural Engineer; Earl & Gropp, Electrical and Mechanical Engineers; William Simpson Construction Co., General Contractors; Fred Coukos, Construction Superintendent; Bernard T. Espelage, O.F.M., D.D., Bishop of Gallup; John Driscoll, Pastor; Keith Monroe, Sculptor*

7





*The Chapel of the Holy Cross at Sedona, Arizona is an arresting building. It is also fine architecture. It combines more than the usually requisite assortment of identifiable satisfactions in such a way that the total effect renders analysis of its particulars, though pleasurable, an academic process only partially instructive because it is incapable of completion.*

*Of course all fine architecture resists analysis. Here, for example, it is possible to identify the particular ingredient of an unparalleled site; to recognize in the shape and scale of the building and its parts, in the choice of surface, color*

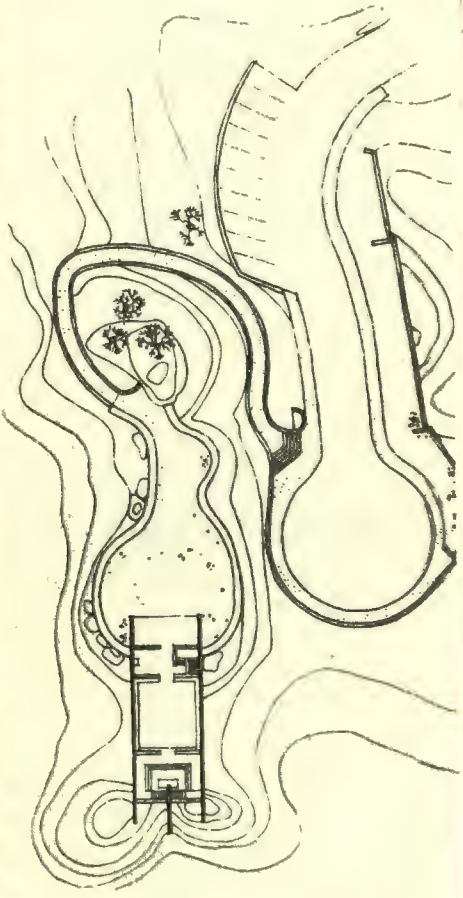
*and texture the sensitive respect which the architects have expressed for the character of that site and at the same time for the particular functions and materials and processes involved.*

*These are causes and effects capable of sensible amplification. But beyond the ability of words to describe its achievement, this building can speak to the mind and spirit regarding place and time and purpose. Certainly it suits its site. It has the ability to suggest today, both yesterday and tomorrow, and it is an architecture appropriate for worship with power to impress its expressive image on the memory.*

7



International Field Year for the Middle East, 1958-1962, 113, 1967 Hamra - Beirut - Lebanon







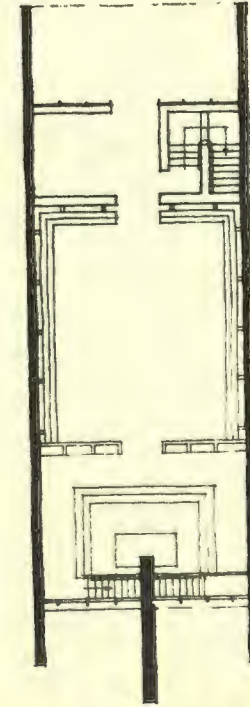
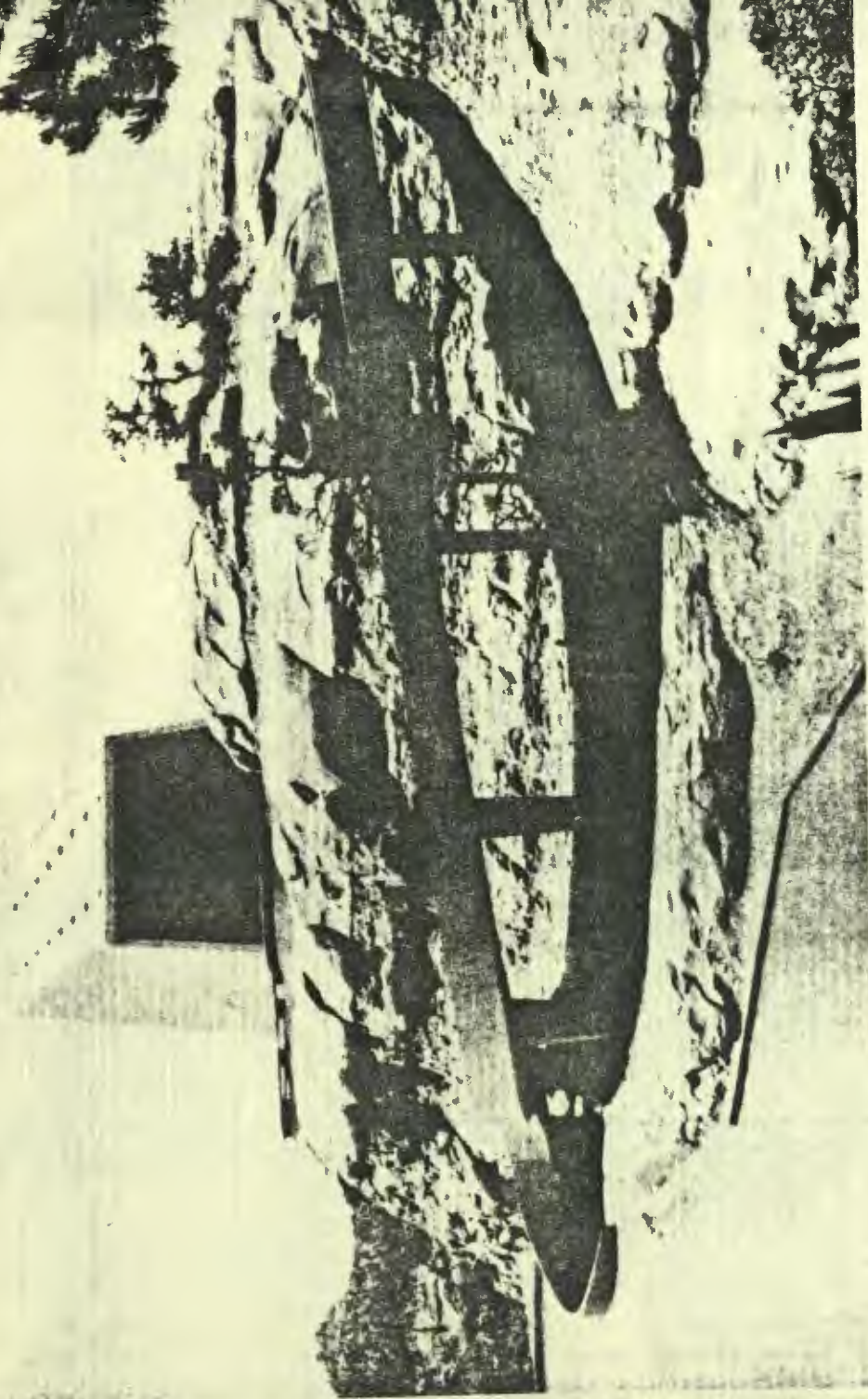
**THREE MILES** from Sedona, Arizona and one hundred fifty feet above the floor of the Verde River Valley, the chapel rises from a spur of deep red sandstone at the base of a fifteen hundred foot vertical cliff graduated in color from the red of the spur to a light cream top.

From the car turn around below and east of the chapel, steps lead to the textured concrete ramp, which curves up and around the cliff of the spur to the chapel entrance plaza.

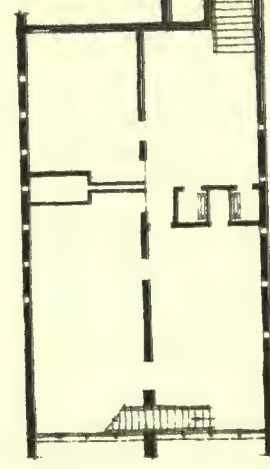
The chapel itself, the gift of Marguerite Staude to the Roman Catholic Church in memory of her parents, is designed to seat approximately fifty people in the permanent pews along the side walls and across the rear. In the months when tourists may swell the size of the congregation, folding chairs will increase the capacity to one hundred fifty. In the basement are the confessional, office, two sacristies and services.

The building is a reinforced concrete shell, twelve



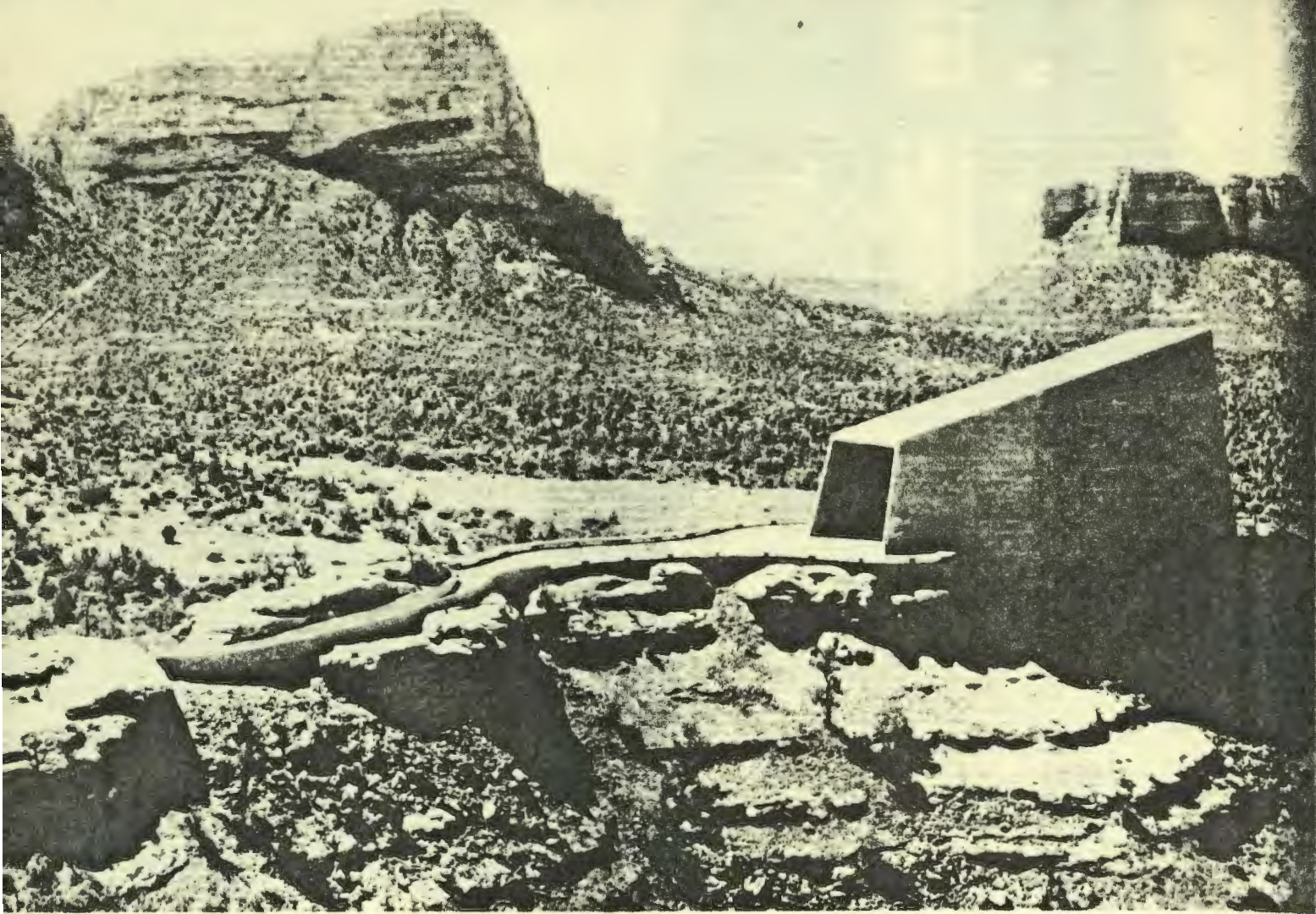


MAIN LEVEL



LOWER LEVEL



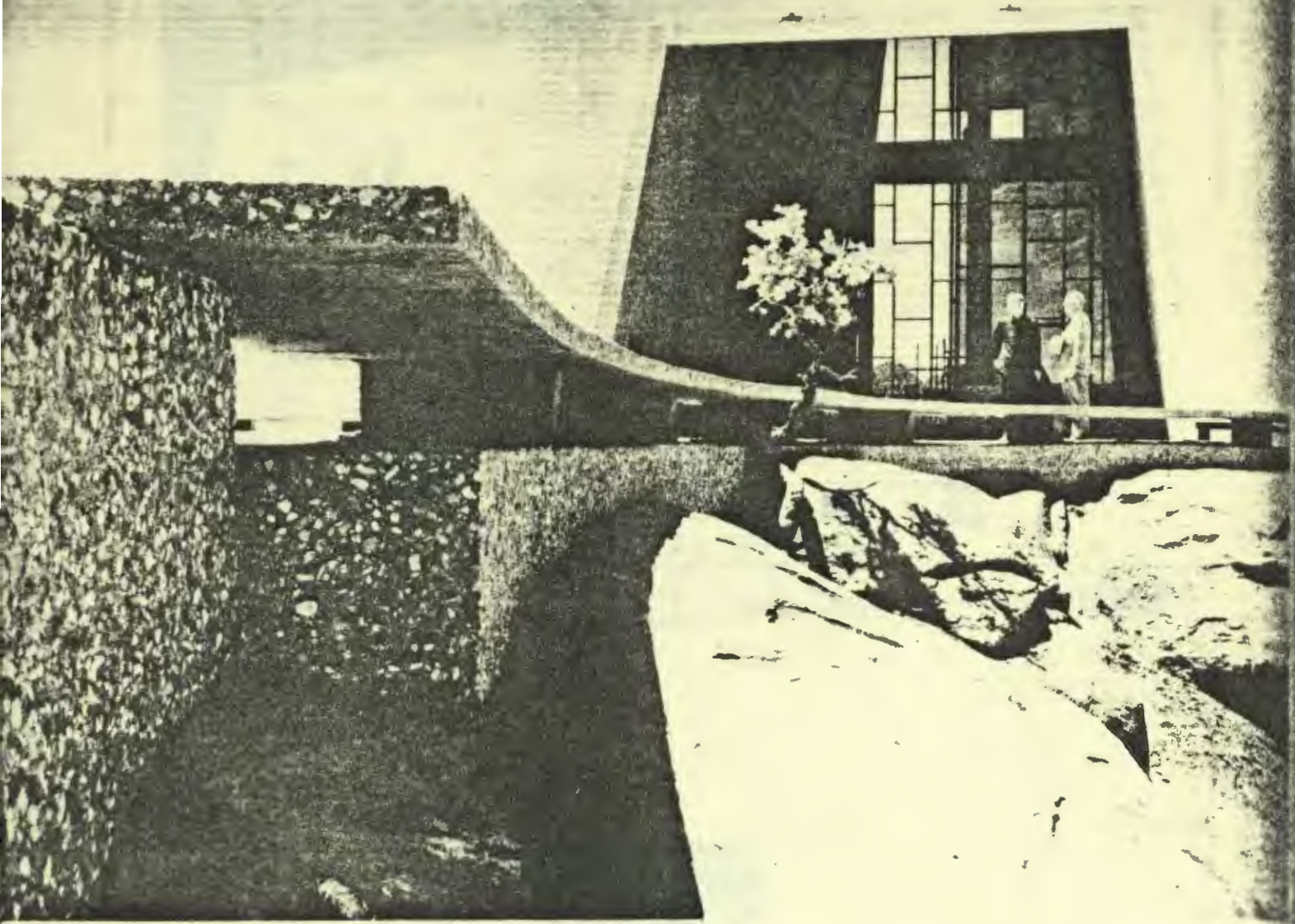


inches thick, integrally colored and sandblasted to expose a rich textured aggregate on both the interior and exterior surfaces. The walls were poured in sections, eight feet high. The two ends of the chapel are glazed with a smoke colored glass which eliminates glare while permitting a clear view of the magnificent panorama beyond the altar. The orientation to the southwest and the projecting side walls and cross act as a large louver in preventing direct sunlight from falling on the glass.

The floor surfaces are trowel-finished concrete. The tall, slim entrance doors are aluminum with specially detailed horn-shaped handles.

Construction was carried out under most difficult conditions and the architects are particularly grateful to the general contractor and his job superintendent for the high quality of the work. Interestingly the contractor as a young man had built the church which is the headquarters for the chapel pastor.





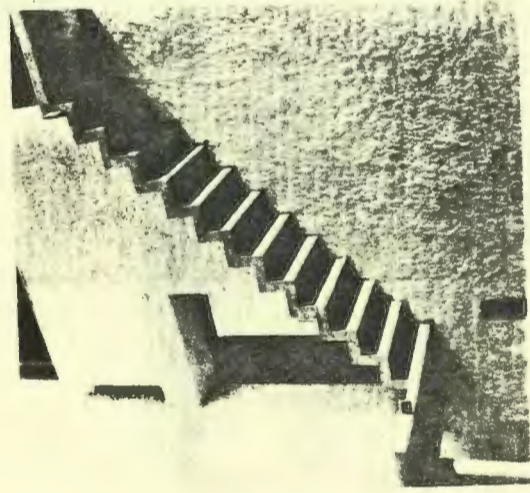
The great cross in the southwestern end wall is ninety feet high and carries on its interior face both the black marble altar and the Corpus. This fine piece is the work of Keith Monroe, San Francisco sculptor. It is wrought in iron and like the building as a whole strongly reflects the rugged environment. It is thirteen feet high and its rough highlighted shell surface is in strong contrast with its dark hollowed interior spaces.

Taken all together, this building is a transcendent

integration which seems to draw its strength from its location, from the simple freshness and suggestion of endurance in its profile, the rigorously restricted palette of materials, the recall of environmental elements without actual use of site materials, the skillful contrast of the curvilinear ramp and plaza with the crystalline contours of the building, and most importantly the precise organization of parts to achieve an impression of size which is in harmonious scale with the grand setting.



International Financial Corporation  
Washington, D.C. 20540  
Tel. 202-462-2000  
113-067 Hamra - Beirut - Lebanon





JOHN SHEAR

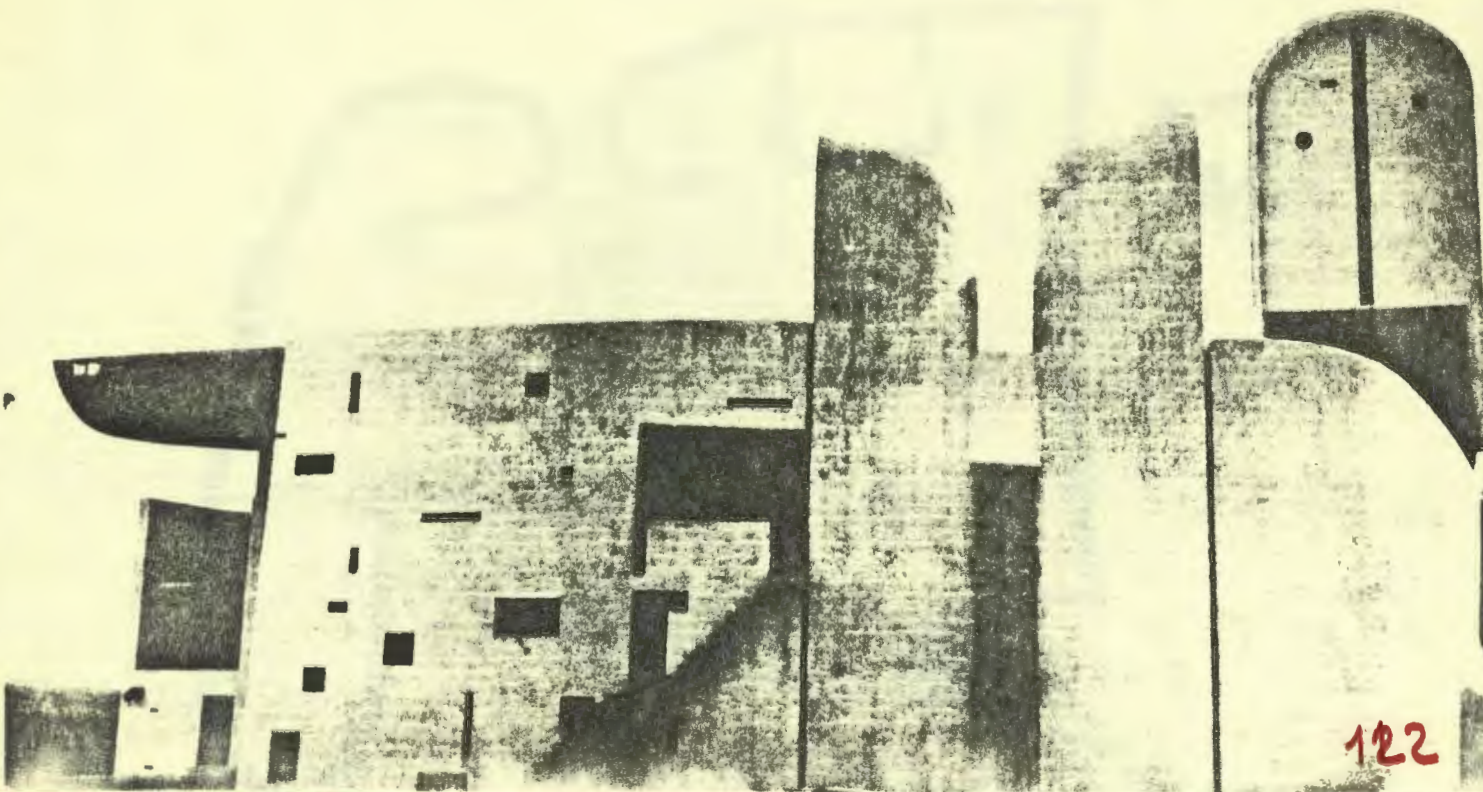
ARCHITECTURAL RECORD

NEW YORK

CORBU HAS MADE GREAT PROGRESS IN ARCHITECTURAL COMPOSITION. NOTRE DAME DU HAUT CHAPEL IS HIS BEST. DOUBTS CREATED BY ALL PUBLISHED PHOTOGRAPHS COMPLETELY ERASED BY ANALYSIS "A PIED D'OEUVRE." BERNINI'S AND BORROMINI'S TOOLS WERE USED BY CORBUSIER AS 13TH CENTURY ONES WERE USED BY PERRET AT NOTRE DAME DU RAINCY. GOOD ADAPTATION TO SITE AND LIFE WITH SAME BASIC TOOLS USED IN SANCTUARIES BY GREEKS, MAYANS, CHRISTIANS, ETC. EVERYTHING IS THERE INCLUDING CORBUSIER'S SIGNATURE BY FINGERPRINTS NEAR THE SYMBOL OF THE VIRGIN MARY. UNFORTUNATELY CROSS AND CHRIST WITHIN CROSS PERFECT EXAMPLE OF ARCHITECTURAL ANTI-CLIMAX YET ELEMENTS OF COMPOSITION ARE MAGNIFICENT EXAMPLE OF MONUMENTALITY WITHIN MINIMUM PHYSICAL SIZE. RONCHAMP EXPRESSES A LIBERATION OF CORBUSIER FROM CORBUSIER.

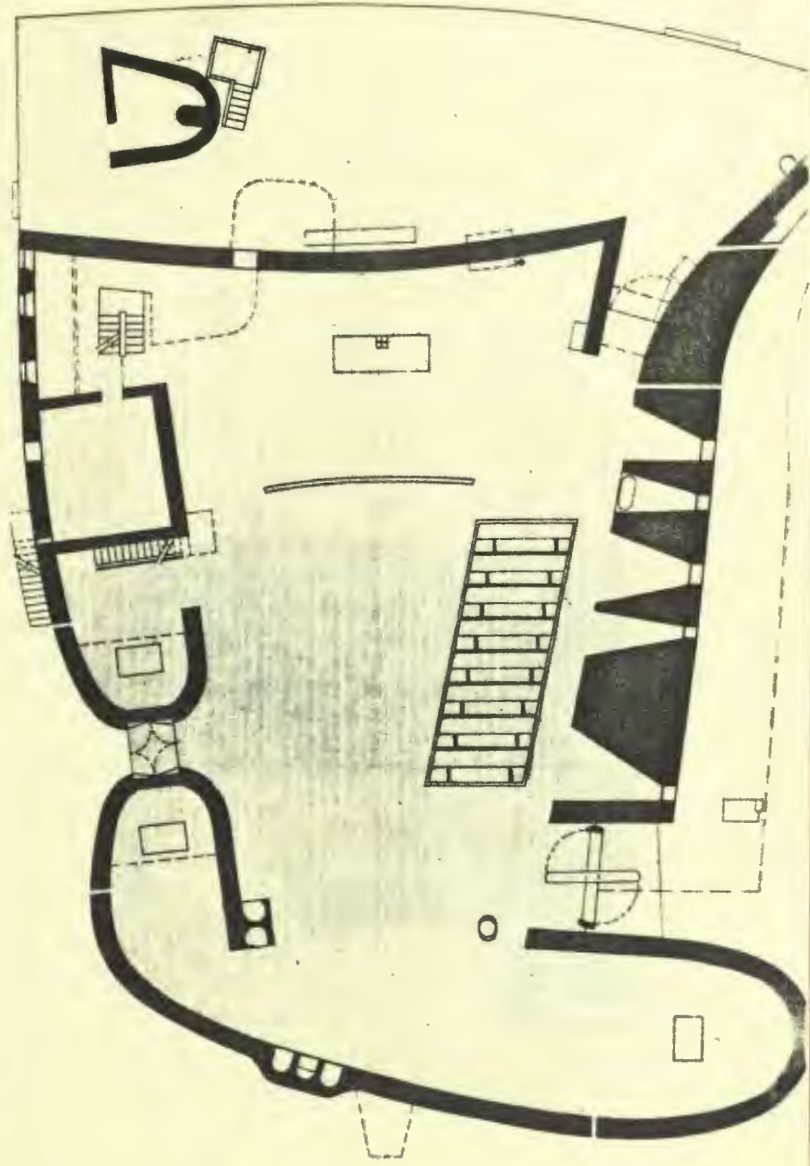
LABATUT

*Prof. Jean Labatut, Director of Graduate Studies, School of Architecture, Princeton University, visited Ronchamp on behalf of ARCHITECTURAL RECORD. Prof. Labatut's acquaintance with Corbusier and his work dates from 1920*

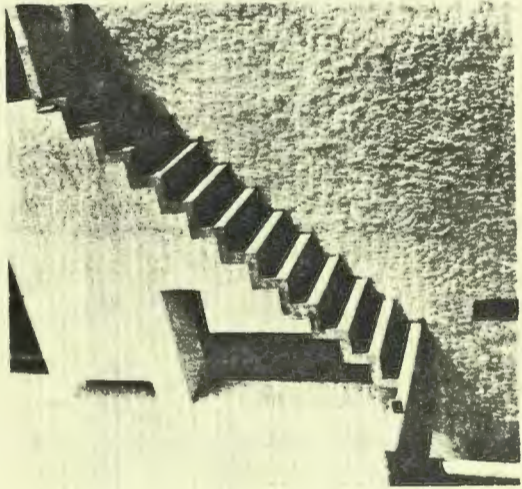


122











- RELIGIOUS BLDGS. FOR TODAY. BY JOHN KNOX SHEAR, AIA.
- CONTEMPORARY CHURCH ARCHITECTURE. THAMES AND HUDSON.
- RELIGION IN THE MIDDLE EAST A.J. ARBERRY.
- NEW CHURCHES OF EUROPE SMITH.
- CHURCHES AND TEMPLES THIRY.
- THE MODERN CHURCH. EDWARD D. MILLS.
- LA MOSQUEE
- MOSQUEE
- TIME. SAVOR FOR BLDG. TYPES.
- NEUFERT
- BUILDING AND DESIGN STANDARDS
- BUILDING CONSTRUCTION ILLUSTRATED
- PERIODICALS: AA, Ar, AR, PA,



