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Birthing Place - An Environment Conducive to Family Oriented Perinatal Care

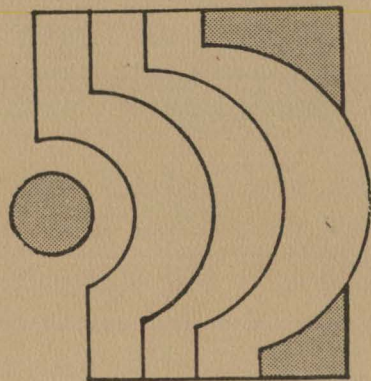
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birthing place

AN ENVIRONMENT CONDUCTIVE TO
FAMILY-ORIENTED PERINATAL CARE



birthing place

**AN ENVIRONMENT CONDUCIVE TO
FAMILY ORIENTED PERINATAL CARE**

**GREENVILLE HOSPITAL SYSTEM
GREENVILLE, SOUTH CAROLINA**

Byron Malet Edwards III

**A terminal project submitted to the Faculty of the College of Architecture,
Clemson University, in partial fulfillment of the requirements for the degree of**

MASTER OF ARCHITECTURE

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To my parents

621177

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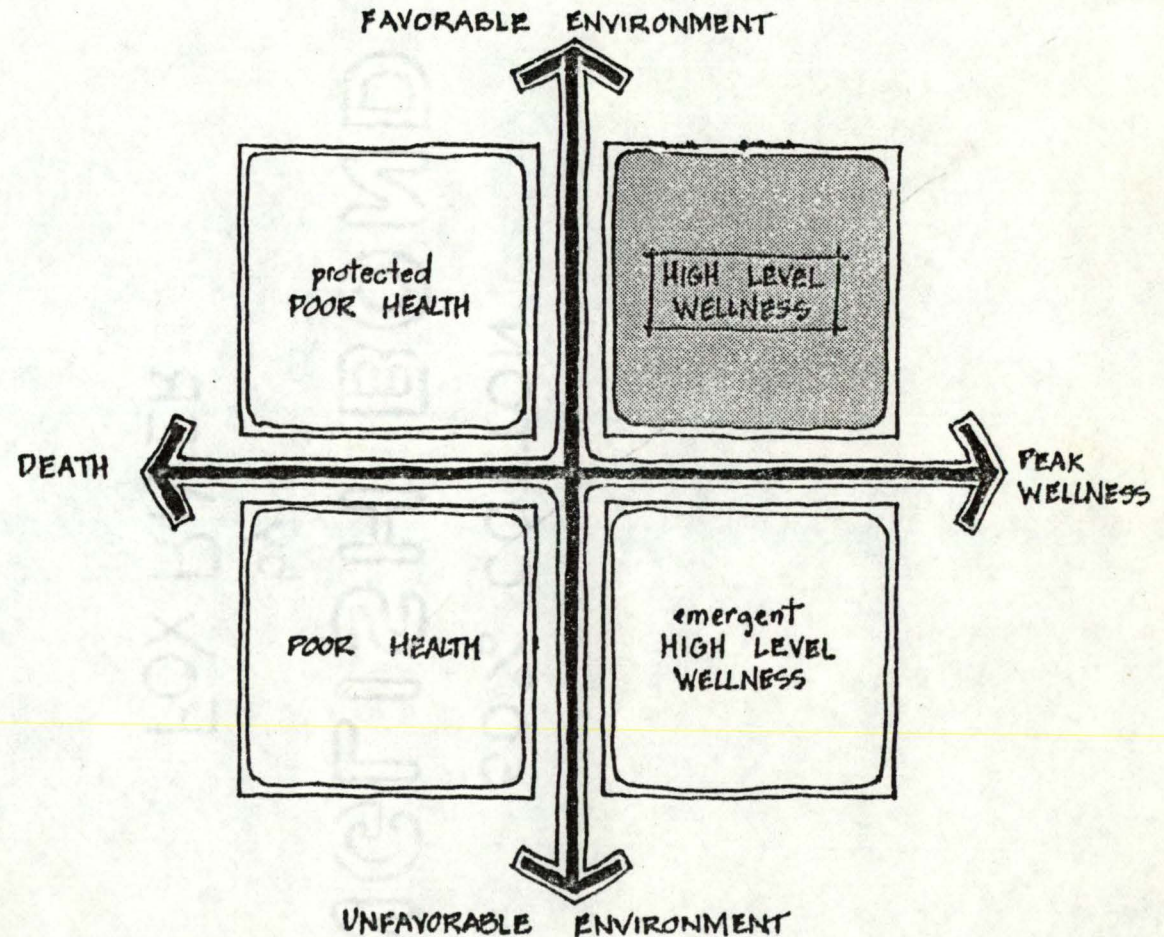
abstract

DUNN'S HEALTH GRID*

PREMISE:

Environment and Health are directly related and the quality of an environment directly affects the level of Health attainable within that environment.

The quality of an environment also affects both the patient/client and the Health Care provider, thereby directly affecting the quality of Health Care offered within that environment.



CONCLUSION:

Therefore, every effort should be made to provide optimum environments that enhance, reflect, and promote the quality of care desired.

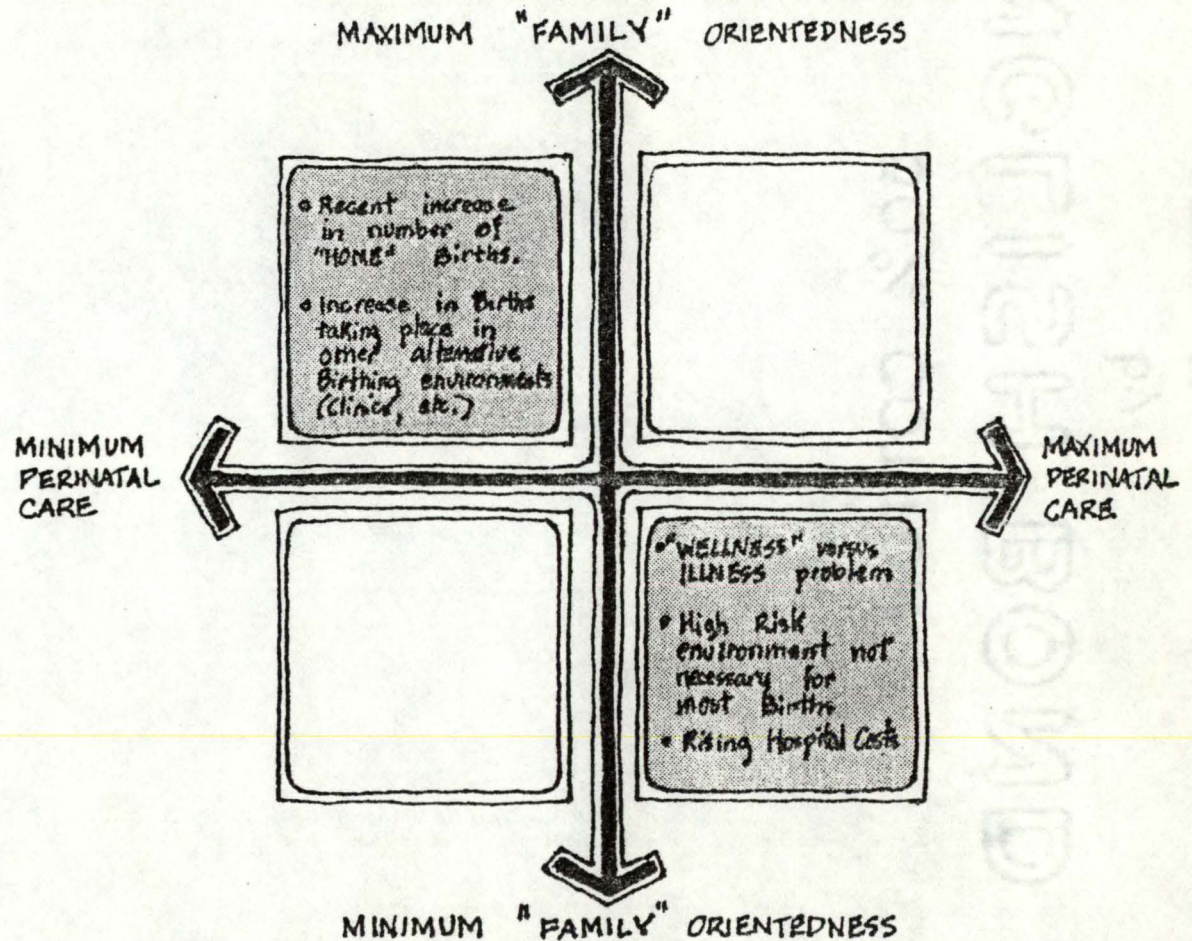
*American Journal of Public Health, Vol. 49, No. 6, June 1959, pp. 786-792.

"PERINATAL" HEALTH GRID*

In the twentieth century, with the development of modern medicine, the trend in perinatal care shifted dramatically from the traditional home births assisted by midwives and/or physicians to the physically safer and more secure antiseptic, acute care hospital births.

In recent times, the physical safety and security of the hospital birth has been overshadowed by the public's fear, doubts and non-acceptance of the "unsympathetically" sterile, unfamiliar, and highly technical environment present in typical hospital birthing facilities.

Increasing number of families are opting to take some physical risks in choosing the more psychologically secure and intimate environment of Home Births. Some alternative birthing environments are emerging to try to ensure some physical safety while allowing more intimacy than traditional hospital environments.

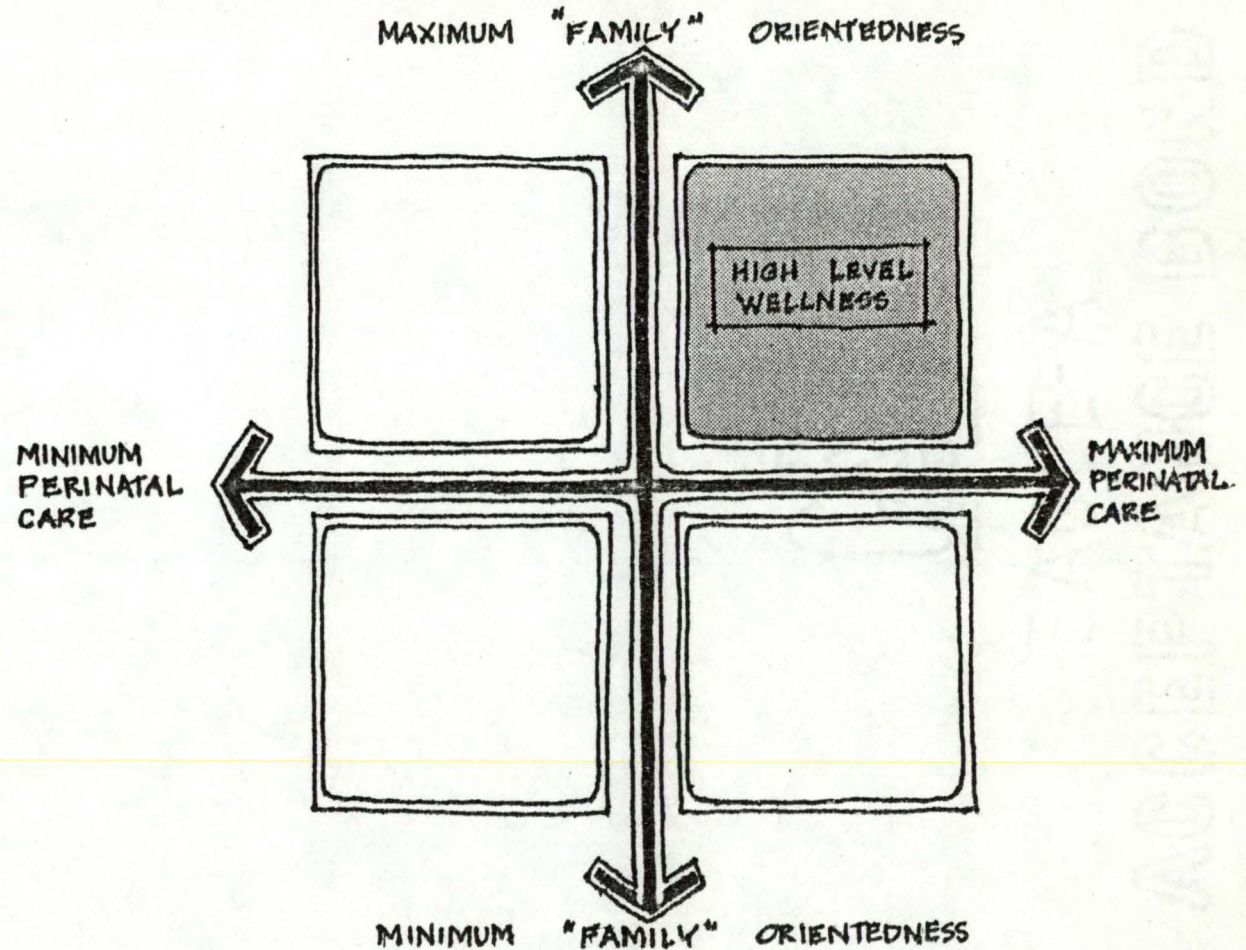


*Perinatal Health Grid was extrapolated from Dunn's Health Grid shown on preceding page.

"PERINATAL" HEALTH GRID

As more alternative Birthing environments continue to arise there will be a larger cost-containment problem in existing hospital obstetrics' wards. To avoid costly duplication of services it appears that a better solution to competing Birthing environments would be an environment that could be flexible enough to allow for all contingencies.

It is the purpose of BIRTHING PLACE to create a comprehensive blending of the physiological advantages of the acute care hospital setting with the psychological advantages of the home environment into one homogeneous environment. Thereby, not only satisfying public demand for "family-oriented" care with a "wellness" approach to Birthing, but also the medical profession's demand for the best technical care possible to help ensure physical safety for mother and child.



introduction

Definition

PROJECT PROPOSAL

To define a health-care program that is capable of responding to the FAMILY-ORIENTED needs of most users of a PERINATAL-CARE facility while ensuring the safety of both mother and child. And after defining that program, to design a built-environment response that would be conducive to such a program.

FAMILY-ORIENTED defined:

The Interprofessional Task Force on Health Care of Women and Children defines Family-Centered (family-oriented) Maternity/Newborn care as:

"The delivery of safe, quality health care while recognizing, focusing on, and adapting to both the physical and psychosocial needs of the client-patient, the family and the newly born. The emphasis is on the provision of maternity/newborn health care which fosters family unity while maintaining physical safety."¹

PERINATAL defined:

PERI = around (Greek)
NATAL = birth (Greek)
PERINATAL = around birth

One commonly used definition of the perinatal period (Ross Laboratories) is from conception through day 28 of life.

History

"In the past, women gave birth to their children at home. There, among family and friends, they were not 'patients' and childbirth was not an 'illness.' It was a natural process but too often unsafe."²

As modern medicine emerged in the early twentieth century, increasing emphasis was placed on the safety and security of hospital births. Almost overnight, the natural process of Birthing was moved from the family-oriented and familiar home environment to the unfamiliar, sterile, but supposedly safer hospital obstetrics ward. As modern hospital obstetrics care grew more sophisticated, even more emphasis was placed on the potential complications and less on the more likely normal and healthy deliveries.

The enactment of the Hill-Burton Act of 1947 renewed interest in further modernization of hospitals, which in turn, led to more up-to-date treatment techniques along with the necessary sophisticated equipment, facilities, and personnel. Likewise, the hospital obstetrics programs became more technically sophisticated. (Which it was thought would lead to safer medical care for both mother and child.) Because of this new direction in thinking, the occasional "illness" of Birthing and not the typical "wellness" associated with the majority of births became the standard by which most of the hospital obstetrics departments were designed over the last thirty years.

Several years before the Hill-Burton Act of 1947, George Kosmak, editor of the American Journal of Obstetrics and Gynecology, wrote in 1938:

"During the last 25 years, the hospital has been substituted for home in 75 to 80% of all cases. This undoubtedly has contributed to the ease and comfort of patients, although not necessarily safety. The more frequent resort to hospitals has provided a temptation for operative interference with ultimate results that are deplorable."³

This concern was apparently unheeded by the Health Care Industry at large, because until recently (except in isolated cases), no real attempts were made to direct attention toward the naturalness of childbirth, and the inclusion of the family as a full participant.

While modern hospital births offer safety, the atmosphere is often associated with illness and suffering, lacking the warmth and reassurance that the home had previously provided.

"In some patient populations, the trend of health care services is away from a highly scientific hospital experience to a community-, home-, or folk-based orientation. These families have been disenchanted with maternity care in some hospitals and seek a home delivery as something better. There is considerable evidence that the desire for a personal and family involvement related to the childbearing experience is not a passing trend."⁴

Present Trends

"The Interprofessional Task Force on Health Care of Women and Children endorses the philosophy of family-centered (family-oriented) maternity/newborn care. The development of this conviction is based upon a recognition that health includes not only physical dimensions but social, economic, and psychologic dimensions as well. Therefore, health-care delivery, to be effective and satisfying for providers and the community alike, does well to acknowledge all these dimensions by adhering to the following philosophy:

- That the family is the basic unit of society;
- That the family is viewed as a whole unit within which each member is an individual enjoying recognition and entitled to consideration;
- That childbearing and childrearing are unique and important functions of the family;
- That childbearing is an experience that is appropriate and beneficial for the family to share as a unit;
- That childbearing is a developmental opportunity and/or a situational crisis, during which the family members benefit from the supporting solidarity of the family unit."⁵

The Task Force Organizations (the American College of Obstetricians and Gynecologists, the American College of Nurse-Midwives, the Nurses Association of the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, and the American Nurses' Associations), along with many other professionals in obstetrics, pediatrics, and related fields, are endorsing the same family-oriented perinatal care (for sound medical reasons) that many expectant families prefer for varying psychosocial, spiritual, and personal reasons.

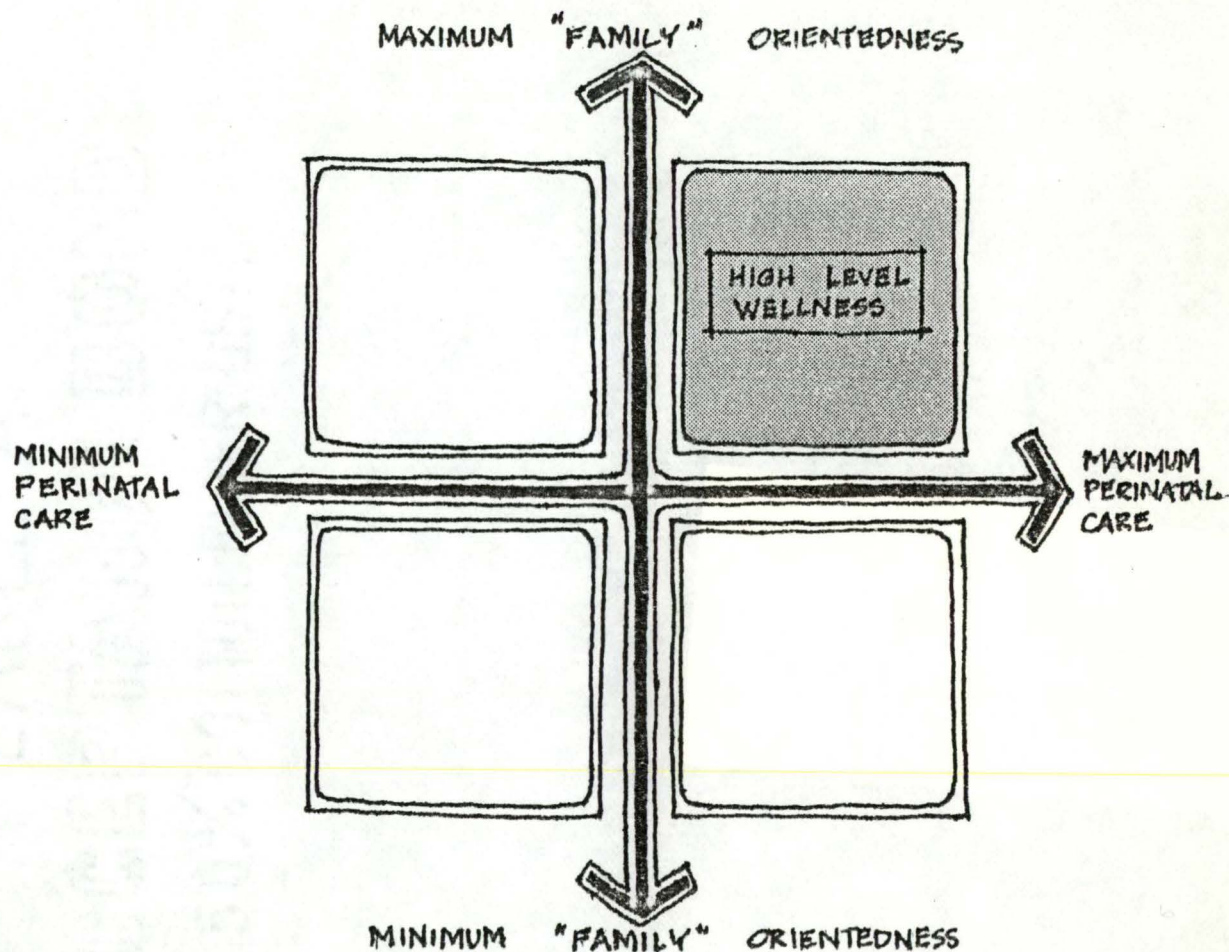
It is this growing demand for family-oriented care from both the public and health-care providers themselves that offers a real challenge to the health-care industry at large to create viable family-oriented perinatal-care programs.

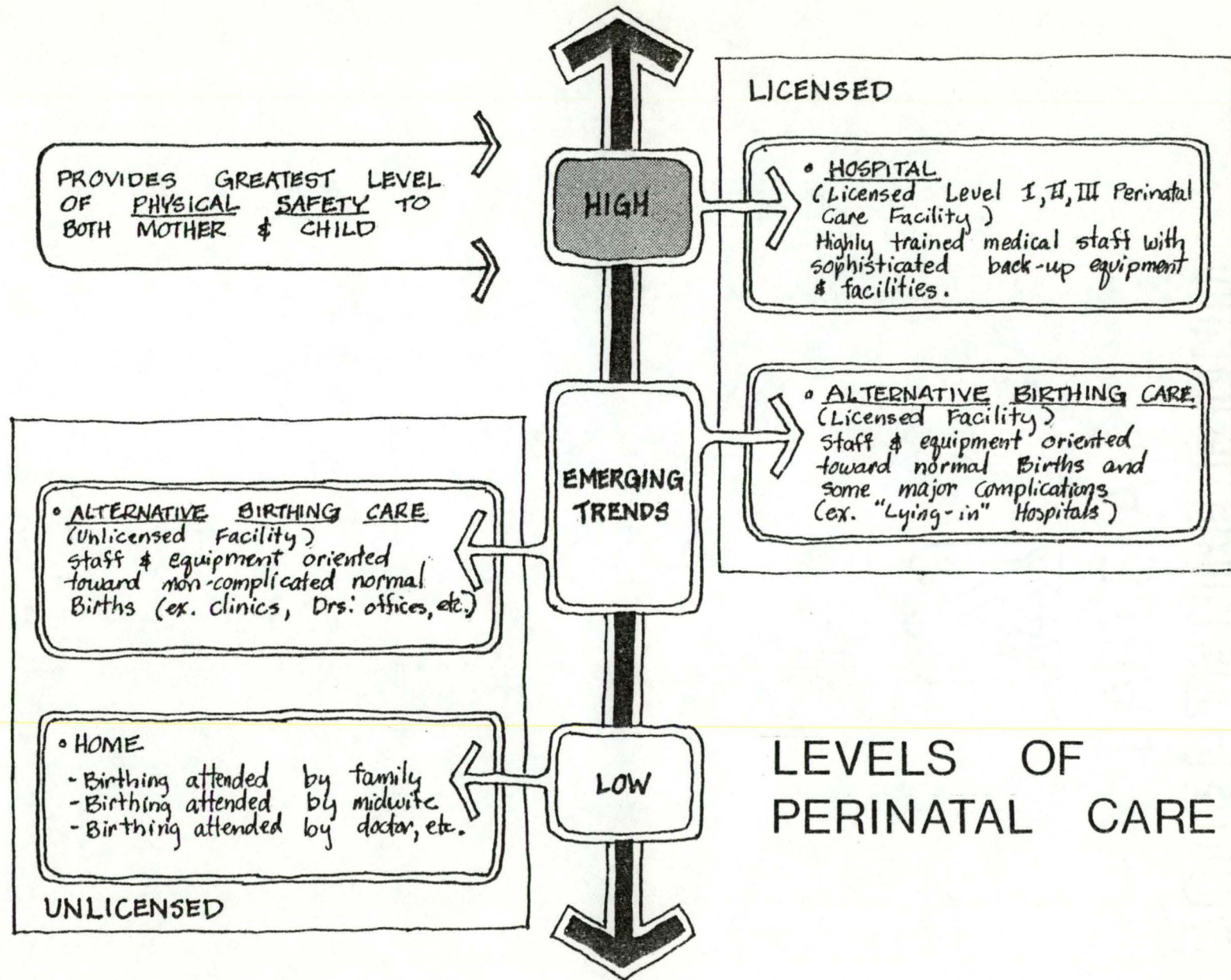
"PERINATAL" HEALTH GRID

Goals

In addressing the challenge of how to provide family oriented perinatal care, it appears that in order to achieve the highest level of perinatal health; it becomes necessary to create a program that will provide the maximum perinatal care while allowing for the maximum family orientation. (See diagram this page.)

If, in fact, it is then the goal to provide the maximum perinatal care while allowing for maximum family-orientation in order to achieve the highest level of perinatal health; then it becomes necessary to investigate not only the potential ranges in levels of both perinatal care and family orientation, but also the range of environments that could be conducive to family-oriented perinatal care. (See diagrams on following pages.)





Levels of Perinatal Care

A recent and growing trend within the Health Care Industry has been toward the regionalization and consolidation of perinatal health services at the inpatient hospital level with the ultimate objective of improving the outcome of pregnancy.

Regionalization is an attempt to create a workable system of perinatal services that will assure needed care of the best quality is available and accessible to all and that it will be provided within feasible economic constraints.

Each licensible perinatal service within the geographic region or "service area" is assigned a rating on the degree of complexity of the services it offers.

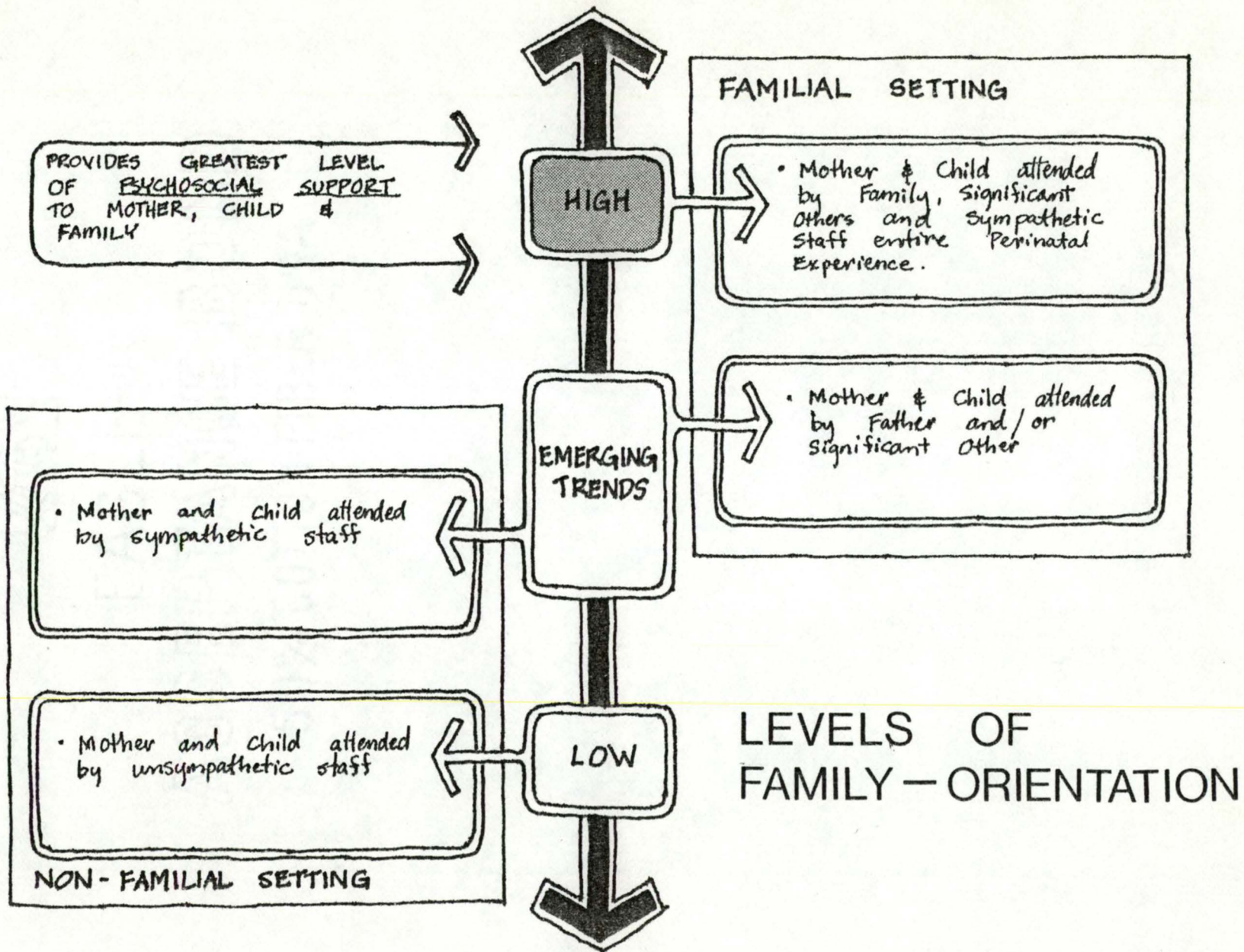
"Regionalization provides for delivery of perinatal care at three hospital levels as follows:

Level I: A hospital that would provide services for the uncomplicated pregnancy and normal newborn, as well as for emergencies that could arise. This hospital might be designated as a *Primary Care Center*.

Level II: A hospital that would provide services for the uncomplicated pregnancy and normal newborn, as well as selected complicated pregnancies involving identified high-risk patients and their newborns. This hospital might be designated as a *Community Center for Maternal and Neonatal Care*.

Level III: A hospital that would provide services for uncomplicated births plus all types of illness or abnormalities of the mother, fetus or newborn, and provide special expertise at the most sophisticated levels of maternal, neonatal and infant care. This hospital might be designated as a *Regional Center for Maternal and Neonatal Care.*"⁶

Most professionals within the Health Care Industry agree that the preferred birthing environment is one that provides the maximum physical safety for mother and child and therefore, recommend that all births occur with a licensible perinatal facility in order to eliminate unnecessary physical risks to both.



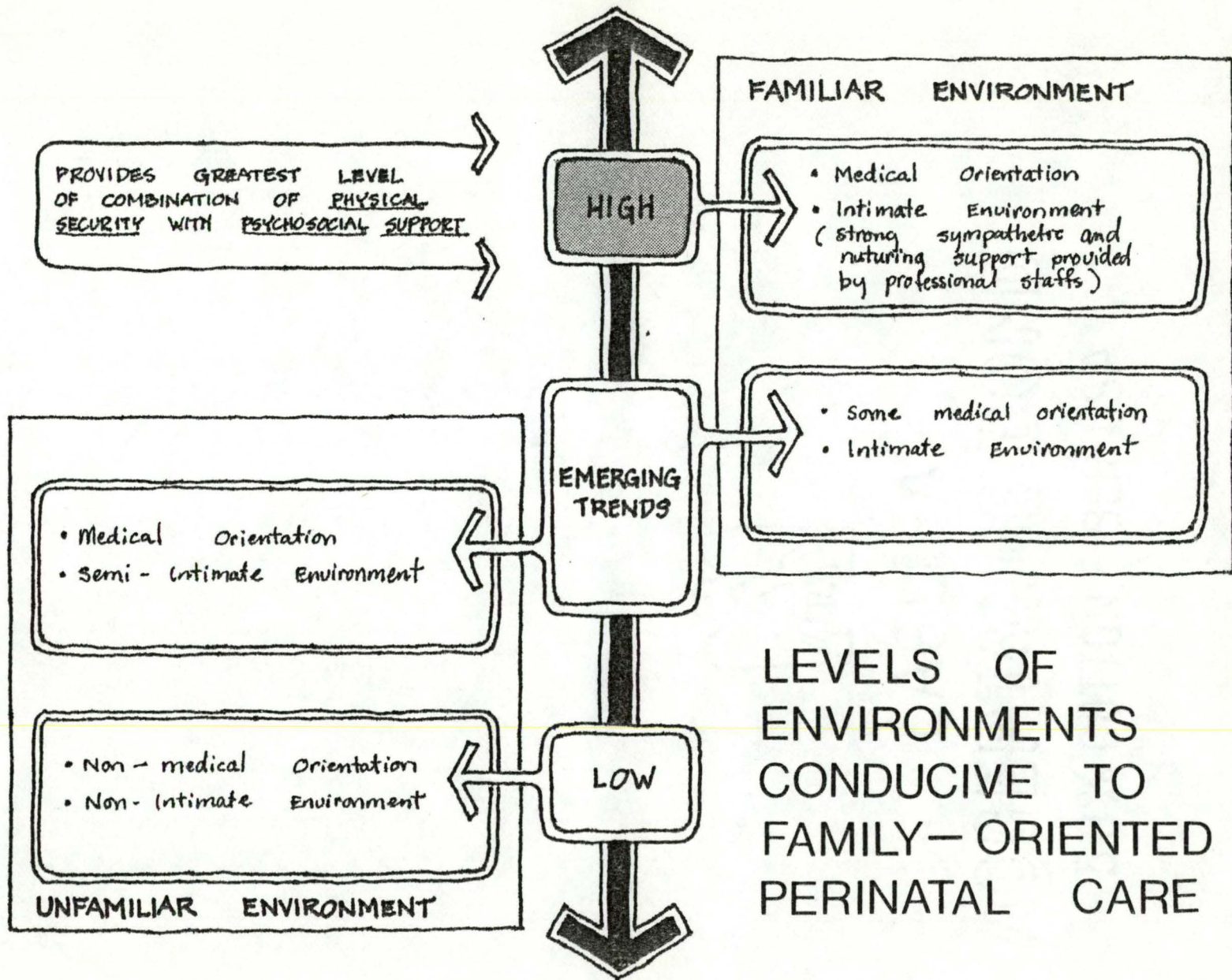
Family Orientation

According to the Committee on Maternal Health Care and Family Planning (of the Maternal and Child Health Section of the American Public Health Association):

“Expectant parents should be encouraged to participate actively in the childbirth experience by becoming prepared physically, emotionally, and intellectually for the birth experience and by preparation for making informed decisions regarding their care and participation in the childbearing process.”⁷

Many perinatal health-care providers are finding the need to not only prepare the expectant family through prenatal classes and instruction but also to provide an emotionally and physically supportive environment in which the family can participate fully in the birthing experience.

It is felt by many in the field of perinatal health that an environment that is staffed by sympathetic professionals who are trained to provide emotional, physical, and educational support for the expectant family is the best way to ensure an emotionally and physically supportive family-oriented birthing experience. Coupled with the encouragement and supportive interaction of other participating families, this type of environment could be even more family-oriented than the home environment itself.



Environment

Health-care providers recommend licensable perinatal-care facilities as the preferred birthing environment for the obvious medical reasons of physical safety for mother and child. They also recommend those licensable perinatal-care facilities not just for that obvious physical safety, but also for the reassuring emotional and psychological support that the simple knowledge of that physical security provides the expectant family.

Herein lies the dilemma. How does one provide a physically secure (and, therefore, psychologically reassuring) environment that is not only family-oriented and medically secure but is also capable of being an emotionally, spiritually, and psychologically intimate and familiar environment?

Much of this problem can be addressed by medical procedures approach, other parts can be addressed through staffing attitudes and education, but some facets of the problem are physical in nature with inherent psychosocial considerations that can be answered only by a sympathetic built-environment response.

facility concepts

Continuity of Care

The traditional perinatal-care experience is characterized by a lack of continuity in family involvement. In most cases, the father/family and/or significant others are excluded from the prenatal office visits. It is rare when the family is allowed (much less encouraged) to participate in the prenatal education and clinical visits.

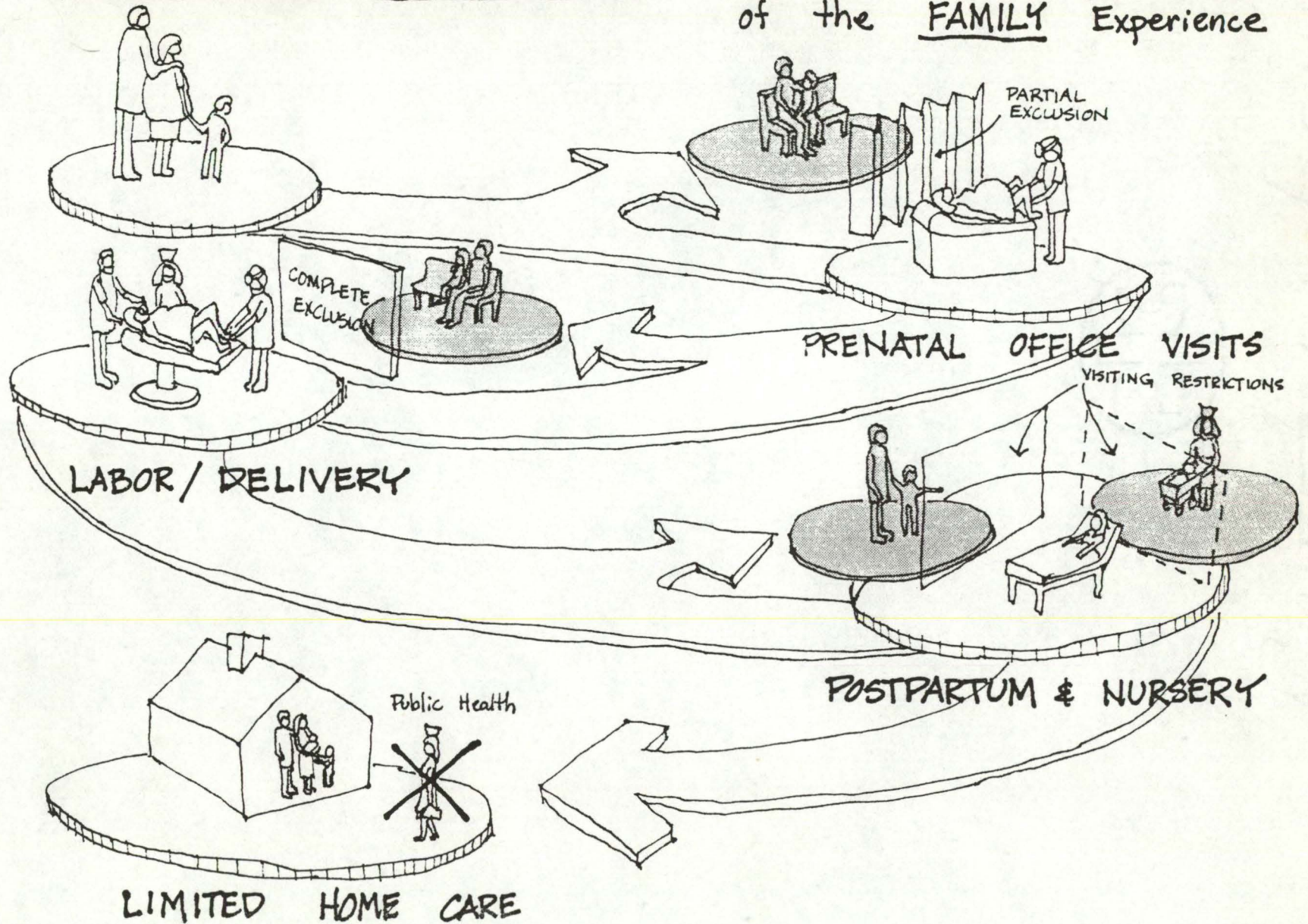
The typical hospital obstetrics or perinatal-care environment is set up for the illness-oriented birth and not the wellness-oriented birth and, therefore, generally creates medical procedures barriers that exclude the family in the birthing areas, particularly the delivery room itself. Even if the father is allowed into the delivery room, it is an environment that is oriented to medical procedures and not too sympathetic to the comforting familiarity and familial-like needs of the expectant family.

For the most part, hospitals are places for the ill. Because of this, most hospital perinatal services are illness-oriented in nature and must adhere to similar visitor restrictions in hours, times of day, and how many visitors a patient may receive. In most cases, even the mother and child are limited in visiting because of lack of "rooming-in" approaches.

It is this lack of continuity in family-oriented perinatal care that the Birthing Place will attempt to address. There is a definite need for a licensable perinatal-care facility that not only offers a full range of family-oriented perinatal-care services but also encourages their use.

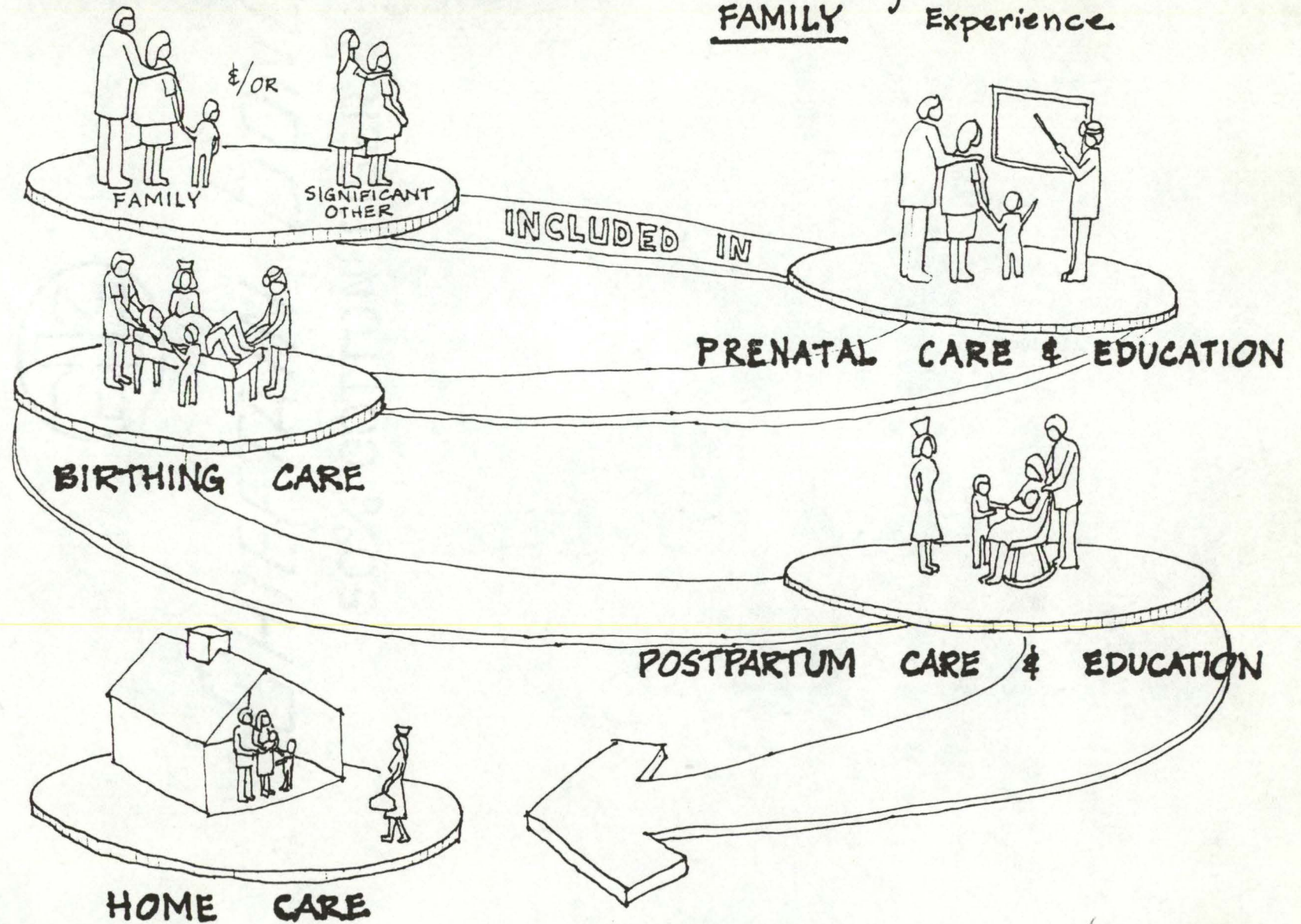
EXISTING SITUATION:

Interruption & Fragmentation
of the FAMILY Experience



PROPOSED SITUATION:

Continuity of the
FAMILY Experience.



Birthing Room Concept

If the goal is continuity of the family experience in a licensable perinatal-care facility, the most critical stage in that continuity is the birthing experience itself. What kind of environment does the mother labor, deliver, and recover in?

Traditionally, in hospital obstetrics, the three stages of labor, delivery, and recovery take place in three separate rooms or environments. The present trend is toward a single birthing-room environment where all three stages may occur without interruption.

“The traditional concept of labor being managed in one room and delivery in another suggests that parturition is two distinct processes, thus failing to recognize the essential continuity of the labor-delivery sequence. So why not admit the parturient directly to an attractive, comfortable room and bed in which she will both labor and deliver, thus avoiding a transfer at the critical moment when she should be concentrating on the coming events instead of expending energy moving? Such maternity units could also reflect the joy and beauty of childbirth by making their facilities and policies as warm and homelike as is compatible with medical safety. Prepared childbirth patients, especially, can be managed in such a hospital unit with simplicity, dignity, and a relaxed atmosphere.”⁸

It is this emerging trend within the health-care industry of trying to satisfy both the physiological needs and the psychosocial needs of its clients that suggests that birthing rooms, as a concept, are here to stay.

Hypothesis

It appears that in order to ensure continuity of family participation in the birthing experience, it may be appropriate, if not necessary, to remove the birthing phenomena itself from "illness-oriented" hospital environments.

A "wellness-oriented" birthing environment is not only psychologically supportive but *physiologically* supportive as well. A comforting, reassuring, familial-like environment will help to eliminate the ignorance and concern that create fear-induced physiological birthing complications.

An emphasis on the naturalness and wellness of birthing could also encourage the family to participate not just in the birthing experience itself, but also the postnatal care of mother and child. This, in turn, would lead to better psychological, as well as physiological, health of both mother and child for many years to come.

A separate "wellness-oriented" built-environment would eliminate some potential for the types of cross-infections normally associated with "illness-oriented" environments and/or hospitals. The South Carolina Department of Health and Environmental Control's Minimum Licensing Standards states:

"The obstetrics service shall be PHYSICALLY SEPARATED from the other services of the hospital."

This is usually accomplished by separate firewall partitioning coupled with a total separation of mechanical systems. The purpose of this physical separation is to isolate the birthing area away from potential "illness-oriented" cross-infection.

For these reasons, Birthing Place is proposed as a separate, free-standing, "wellness-oriented" birthing environment that is both physically and psychologically removed from the hospital setting.

LABOR

DELIVERY

RECOVERY

LABOR

DELIVERY

RECOVERY

RECUPERATION

RECUPERATION

BIRTHING ROOM EXPERIENCE
Three stages of Labor, Delivery and Recovery take place in one room.

TRADITIONAL EXPERIENCE
Three stages of Labor, Delivery and Recovery take place in three separate rooms.

In recent times, perinatal services have undergone a great flux in services available. More and more people are opting for natural child-bearing techniques such as Lamaze and LeBoyer. Some families are choosing to have their babies at home to create even more of a natural experience.

Because of the inherent dangers of home births, the Health Care Industry is starting to create new "home-like" environments (Birthing Rooms, etc.) in which to offer family-oriented, perinatal care. The emerging trend within the Health Care Industry is to try and satisfy both the physiological and PSYCHOSOCIAL needs of its users.

Emerging Trends In Perinatal Care

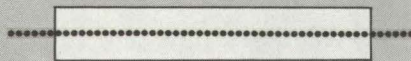
REMOVE PERINATAL SERVICES FROM HOSPITAL SETTING:

WHY?

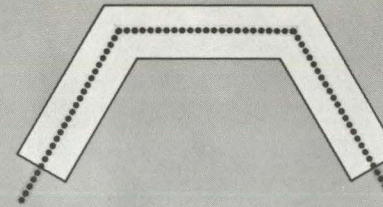
- **WELLNESS VERSUS ILLNESS**
(Birthing is a healthy, normal experience and should take place in a familiar and normal environment.)
- **VISITOR RESTRICTIONS**
(Hospitals exercise a necessary control on circulation that inhibits the freedom of movement that a total family oriented birthing experience requires.)
- **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL MINIMUM LICENSING STANDARDS Section 607.3** The obstetrics service shall be **PHYSICALLY SEPARATED** from the other services of the hospital.

Hypothesis

Long straight corridors have one constant focal point that psychologically lengthens distance traveled.



versus

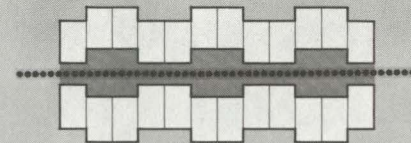


Angled or bent corridor provides psychological relief from otherwise long corridors by creating everchanging focal points.

Long repetitive linear placement of rooms gives psychological effect on an endless and unchanging tunnel.



versus



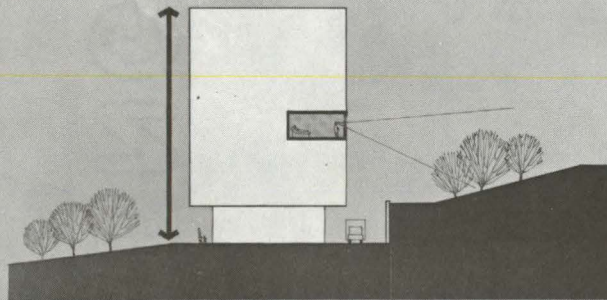
Alternating compression and expansion of spatial flow created by placement of rooms give a variety of spatial experiences. (Also provides some psychological relief to an otherwise long and repetitive corridor.)

Psychosocial Phenomena

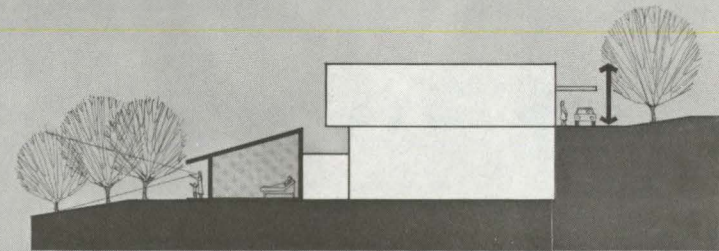
CONCEPT: To return the birthing experience to a family-oriented and familiar environment.

ISSUES:

- Intimacy of scale
- Indoors Outdoors relationship
- Site compatibility
- Image



versus



Psychosocial Phenomena

Division of Care

There are three distinct types of care within the Perinatal Care experience:

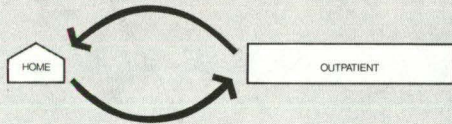
The first, Outpatient Care, is usually associated with prenatal care office or clinic visits. However, it is a goal of Birthing Place to provide a total Outpatient Care program. This would include both prenatal and postnatal clinics along with their respective educational programs. It is also suggested that a Home Care prenatal/postnatal care program be established in the future.

The second type of care is Inpatient Care, which is usually associated with the normal recuperative postpartum beds and nurseries. Because Birthing Place is to be designated as a Level III perinatal care facility, it will also include both Special Care recuperative beds and a Special Care nursery. The Special Care area will include both postpartum and antepartum beds.

The third type of care is Birthing Care. Birthing Care cannot be correctly classified as either Inpatient or Outpatient Care, but is a transitory stage that can lead to either. This type of care surrounds the birthing experience itself, and involves laboring, birthing, and recovering of both mother and child.

A built-environment response should reflect an awareness of the differences between these three types of care and would hopefully allow for these differences to express themselves when or where the need arises.

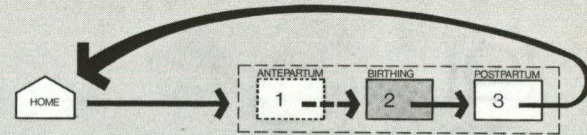
Outpatient



Non-continuous CYCLICAL care with scheduled visits spanning the times from conception to Birth and from just after Birth to 28 days (or as long as needed in special cases)

1. PRENATAL EDUCATION and CARE (from conception to just prior to Birthing)
2. POSTPARTUM EDUCATION and CARE (usually one postpartum visit around 28 days after Birth, but more often and longer duration for special cases)
3. HOME CARE (as needed)

Inpatient

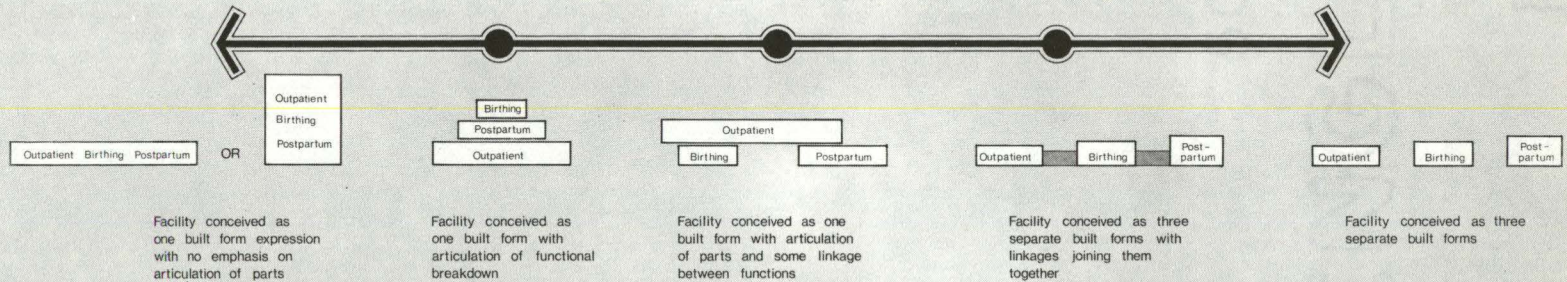


Continuous LINEAR and SEQUENTIAL care that surrounds the time just before, during, and just after Birthing

1. ANTEPARTUM CARE (prenatal inpatients for High Risk or Domiciliary special care)
- * 2. BIRTHING CARE (Laboring, Birthing, and Recovering) Birthing is not correctly classified as either Inpatient or Outpatient, but is a transitory stage that will lead to either
3. POSTPARTUM CARE
 - a. Recuperative beds
 1. Normal
 2. Special care
 - b. Recuperative bassinets
 1. Normal
 2. Special care

Perinatal Care

RANGE OF OPTIONS



Massing Alternatives

functional program

The Process

Programming is the generation of alternatives.

Design is the elimination of alternatives.

In order to fully investigate potential solutions to an architectural problem, one must go through the process of programming. Programming is the process by which a range of solutions (alternatives) are generated by identifying and analyzing all potential issues and concerns of a particular problem. Design is the process by which all but one of these alternatives are eliminated by the careful synthesis of the issues. The use of these processes should lead to an appropriate built-environment response.

The following is an attempt to describe how these rather abstract and complex processes were applied to this project.

Functional Programming

Functional programming is the process through which an architect/planner/designer attempts to define the specific functional needs of the facility to be designed. This is accomplished by identifying the services offered by the facility, both the users and the providers of those services, the needs of those users, and the potential spatial responses generated by those needs. This is all accomplished by effective give-and-take communication between the client/users and the programmers. (There are many existing techniques available to the programmers, but each situation is unique unto itself, and the more creative and appropriate the programmer's communication technique is, the more useful his information will be.)

After the services, users, their needs, and the potential types of spatial responses are identified, then a square-footage program is developed. This is accomplished by working hand in hand with the client/users to develop sufficient functional area for each of the spatial responses. The following pages are a brief documentation of the programming process used in this project.

User Systems

(Based on three-part division of care)

OUTPATIENT SERVICES

Prenatal Education and Care
Postpartum Education and Care
Home Care

BIRTHING SERVICES

Laboring, Birthing, and Recovering

INPATIENT SERVICES

Normal Care
Postpartum Recuperative Care
Nursery Care

Special Care
Antepartum Care
Postpartum Recuperative Care
Nursery Care (With "Motel")

NEED PATIENT/ FAMILY Oriented		Education	Counseling	Reception	Appointment & Admissions	Intake Interview	Waiting Area	Business Secretary	Examination & Treatment	Diagnostic Facilities	Personal Hygiene	Circulation
USER	Mother	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Infant						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Father (significant Other)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Family	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nursing Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	Medical Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	Professional Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>
	Admin. Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
	Support staff											<input checked="" type="checkbox"/>
RESPONSE		Class rooms Audio-Visual Library Reading Library Education Office	Consultation Rooms Counseling Offices	Reception Lobby Reception Counter	Reception Counter Appointment Desk	Interview Area Finance Office Business Office	Reception Lobby Nursery/Playroom Waiting Room	Business Office	Exam Rooms & Additional Treatment Rooms	X-ray Ultra sound Exam rooms Laboratory	Toilets & Restrooms	Public Corridors, Staff Corridors, & other circulation

USER NEEDS

OUTPATIENT SERVICES

NEED STAFF Oriented		Education	Fetal Monitor Area	Consultation Areas	Work Areas	Sterile Supply	Clean Supply	Soiled Storage	Administration Support	Record Storage	Equipment Storage	Communication Center
USER	Mother		■									
	Infant		■									
	Father (significant) Other											
	Family											
	Nursing Staff	■	■	■	■	■	■	■	■	■	■	■
	Medical Staff	■	■	■	■	■	■	■	■	■	■	■
	Professional Staff	■		■	■				■		■	■
	Admin. Staff	■		■	■				■	■	■	■
Support Staff	■		■	■	■	■	■	■		■	■	
RESPONSE	Conference / Class Rm Staff Library Audio/Visual Library	Fetal Monitor Rooms	Consultation Offices	Prof. Offices Drs. Offices Nursing Offices Nursing Stations Work Areas	Sterile Supply Room	Clean Utility Room	Soiled Utility Room	Administration Offices	Business Office Records Library	Equipment Rooms Wheelchair & Stretcher Storage Areas	Reception Counter, Appointment Desk, Nursing Station	

USER NEEDS

OUTPATIENT SERVICES

NEED		Personal Hygiene	Personal Storage	Eating	Vending &/or Coffee Bar	Gathering (relaxing)	Support Operations	Circulation	Janitorial			
STAFF Oriented												
USER	Mother	■						■				
	Infant	■						■				
	Father (significant) Other							■				
	Family							■				
	Nursing Staff	■	■	■	■	■		■	■			
	Medical Staff	■	■	■	■	■		■				
	Professional Staff	■	■	■	■	■		■				
	Admin. Staff	■	■	■	■	■		■				
	Support Staff	■	■	■	■	■	■	■	■			
RESPONSE		Toilets, Showers & Restrooms	Staff Lockers & Lounges	Cafeteria	Snack Lounge Coffee Lounge Kitchnette	Staff Lounges	Receiving, Custodial & Mechanical Areas	Public Corridors, Staff Corridors & Other Circulation	Janitors Closets & Storage Areas			

USER NEEDS

OUTPATIENT SERVICES

NEED PATIENT/ FAMILY Oriented		Reception	Admissions	Evaluation	Examination & Treatment	Labor	Delivery	Recovery	Emergency O.R.	Scheduled Procedures (C-Sections)	Anesthesia	Gowning Areas
USER	Mother	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Infant		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Father (significant Other)	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	Family	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	Nursing Staff			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Medical Staff			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Professional Staff											
	Admin. Staff											
	Support staff											<input checked="" type="checkbox"/>
RESPONSE		Reception Lounge	Communication Center	Exam Room	Exam Room	Birthing Rooms	Birthing Rooms	Birthing Rooms & Recovery Room	Emergency Operating Room	C-Section & Delivery Room	Anesthesiologist's Office & storage	Dressing Areas

USER NEEDS

BIRTHING SERVICES

NEED PATIENT / FAMILY Oriented		Waiting Areas	Personal Hygiene	Personal Storage	Family Communication	Circulation						
USER	Mother	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Infant				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Father (significant Other)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Family	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Nursing Staff		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Medical Staff		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Professional Staff				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	Admin. Staff					<input checked="" type="checkbox"/>						
	Support staff					<input checked="" type="checkbox"/>						
RESPONSE		Waiting Room Family Alcoves Family Corridor	Toilets & Rest rooms (showers)	Dressing Area Lockers, Family Alcoves, & Birth- ing Room closets	Telephones and intercom systems	Family Corridors Staff corridors & other circulation						

USER NEEDS

BIRTHING SERVICES

NEED STAFF Oriented		Sterile Supply	Clean Supply	Soiled Storage	Drug Storage	Diagnostic Facilities	Equipment Storage	Emergency Equipment Storage	Work Area	Communication Center	Equipment Work Room	Dictation Area
USER	Mother					■						
	Infant					■						
	Father (significant) Other									■		
	Family									■		
	Nursing Staff	■	■	■	■	■	■	■	■	■	■	■
	Medical Staff	■	■	■	■	■	■	■	■	■	■	■
	Professional Staff						■		■	■		■
	Admin. Staff				■		■		■	■		
	Support Staff	■	■	■	■	■	■	■	■	■	■	■
RESPONSE		Sterile Supply Room	Clean Utility Rooms	Soiled Utility Rooms	Drug Cabinets &/or Medication Storage Areas	Laboratory X-ray Sound Exam Rooms	Wheelchair & Stretcher storage & General Storage Areas	Equipment Storage Room	Nurses' Stations	Communication Center & Nurses' Stations	Work Room with Autoclave & Rewrapping Area	Communication Center & Nurses' Stations

USER NEEDS

BIRTHING SERVICES

NEED STAFF Oriented		Medication Prep. Area	Scrub Area	Lounge	Sleeping Areas	Personal Hygiene	Personal Storage	Circulation	Administration Support	Janitorial		
USER	Mother					■		■				
	Infant					■		■				
	Father (significant Other)		■					■				
	Family		■					■				
	Nursing Staff	■	■	■	■	■	■	■	■	■		
	Medical Staff	■	■	■	■	■	■	■	■			
	Professional Staff			■		■	■	■	■			
	Admin. Staff			■		■	■	■	■			
	Support staff			■		■	■	■	■	■		
RESPONSE		Medication Storage & Work Areas	Scrub Areas	Staff Lounge	On-call Rooms	Toilets, showers & Restrooms	Staff Locker Rooms	Staff Corridors, Family Corridors & other Circulation	Administration Offices	Janitor's Closets & sto.		

USER NEEDS

BIRTHING SERVICES

NEED PATIENT/FAMILY Oriented		Sleeping	Eating	Visitation	Inpatient Socializing	Education	Personal Storage	Personal Hygiene	Religious & Spiritual	Waiting Area	Reception & Admissions	Circulation
USER	Mother	■	■	■	■	■	■	■	■		■	■
	Infant	■	■	■	■		■	■	■		■	■
	Father (significant) Other			■		■		■	■	■	■	■
	Family			■		■		■	■	■	■	■
	Nursing Staff			■	■	■		■				■
	Medical Staff			■	■	■		■				■
	Professional Staff			■	■	■						■
	Admin. Staff											■
	Support Staff											■
RESPONSE		Patient Rooms & Nurseries	Family Kitchens Cafeteria Patient Rooms Nurseries	Family Lounges Nursery Lounges Patient Rooms	Family Gardens Family Lounges Classroom Patient Room	Classroom & (Portable Video) Equipment	Patient Room Storage Areas	Patient Room Bathrooms & Restrooms	Chapel & Family Gardens	Reception Lounge Nursery Lounges Family Lounges	Reception Lounge, Admissions Desk & Communications Centers	Public Corridors, Staff Corridors, & other Circulation

USER NEEDS

INPATIENT SERVICES

NEED STAFF Oriented		Admissions	Administration Support	Examination & Treatment Areas	Conference Area	Sterile Supply	Clean Supply	Soiled Storage	Medication Storage & Preparation	Communication Center	Personal Storage	Personal Hygiene
USER	Mother											<input type="checkbox"/>
	Infant											<input type="checkbox"/>
	Father (significant Other)									<input type="checkbox"/>		
	Family									<input type="checkbox"/>		
	Nursing Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Medical Staff		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Professional Staff		<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Admin. Staff	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Support Staff		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSE		Reception & Admissions Area	Administration Offices	Patient Rooms & Examination & Treatment Rooms	Conference Rooms	Sterile Supply Rooms	Clean Utility Rooms	Soiled Utility Rooms	Medication Storage & Work Areas	Communication Centers	Staff Locker Room	Toilets, showers & Restrooms

USER NEEDS

INPATIENT SERVICES

NEED		Eating	Relaxing	Janitorial	Religious & Spiritual	Dictation Area	Equipment Storage	Wheelchair & Stretcher Storage	Circulation			
USER	Mother							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Infant							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Father (significant Other)							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Family								<input checked="" type="checkbox"/>			
	Nursing Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Medical Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Professional Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	Admin. Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	Support Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
RESPONSE		Cafeteria Snack Lounge	Staff Lounges	Janitor's Closet & Storage	Chapel & Gardens	Nurses' Stations	Equipment Storage Rooms & Areas	Wheelchair & Stretcher Areas	Public Corridors Staff Corridors & Other Circulation			

USER NEEDS

INPATIENT SERVICES

Functional Groupings

(Based on User Systems)

OUTPATIENT SERVICES

Perinatal Clinic
Clinic Support
Perinatal Education

BIRTHING SERVICES

Reception Area
Birthing Area
Emergency Support

INPATIENT SERVICES

Normal Nursery
Normal Postpartum Care
Special-Care Nursery
Special-Care Antepartum/Postpartum Care

SUPPORT SERVICES

Cafeteria
Kitchen
Diagnostic and Treatment Area
General Support
Staff Support

OUTPATIENT SERVICES

PERINATAL CLINIC

Exam/Treatment Rooms	Allow sufficient space for examining table, chair, physician stool, writing surface, and counter space with sink. Also allow space for private toilet.	8 Exam/Treatment Rooms @ 180 SF each	= 1,440 SF
Physician/Midwife Office	Allow sufficient space for private work and consultation area. (One office per two exam/treatment rooms.)	4 Offices @ 120 SF each	= 480 SF
Laboratory	Allow sufficient space for counter space with double sink and work area with refrigerator and storage. Also provide space for toilet and venipuncture area.		360 SF
Special Procedures Room	Allow sufficient space for examining table, portable monitoring equipment, work space, cabinet storage, and counter with sink. Also allow space for private toilet.	2 Special Procedures Rooms @ 200 SF each	= 400 SF
Soiled Utility Room	Allow space for linen hamper and cart storage along with cabinet storage, double sink and utility hopper sink.		120 SF
Clean Utility Room	Allow space for carts, cabinet storage, and counter space with small sink.		120 SF
Equipment Storage	Allow sufficient space for storage of all potentially idle mobile equipment.		300 SF
General Storage	Allow sufficient space for storage of general supplies, wheelchairs, stretchers, etc.		300 SF

Nursing Station and Reception Desk

Locate between Clinic exam/treatment areas and public waiting area. Allow sufficient space for clerical work area, medication storage and preparation area, with some general storage along with reception counter.

300 SF

Waiting Room

Allow sufficient space for 30-40 patients with families. Allow for small secluded areas to larger sitting areas that might incorporate back-lit projection booths for audiovisual educational instruction. (Locate next to exam/treatment areas at major public thoroughfare.)

3,000 SF

Net Total for Perinatal Clinic: 6,820 SF

CLINIC SUPPORT

Audiovisual Library	Allow sufficient space for bookshelves, magazine shelves, audiovisual equipment, reading areas, and storage.	500 SF
Nurse Educator's Office	Allow sufficient space for private work and consultation area with record storage. (Locate adjacent to Audiovisual Library.)	140 SF
Pharmacy	Allow sufficient space for work area, preparation area, storage area, and dispensing counter.	500 SF
Pharmacist's Office	Allow sufficient space for private work area with storage and library.	140 SF
Financial Office	Allow sufficient space for financial records area, work areas, and finance officer's office along with general office space and storage.	500 SF
Interview Area	Allow sufficient space for four financial interview booths and work space for clerical staff.	300 SF
Reception Lounge	Allow sufficient space for informal sitting areas for 20-30 people. (Shared with Education.)	1,600 SF

Reception Desk	Allow sufficient space for reception counter and clerical office space and work area.	200 SF
Vendeteria	Allow sufficient space for snack vending machines. (Locate adjacent to Reception Lounge.)	50 SF
Day-Care Nursery and Playroom	Allow sufficient space for separate nursery area for 15-20 infants with separate playroom area for 20-30 children. (Allow for supervision from clerical/reception area.)	500 SF
Public Restrooms	Allow sufficient space for two public restrooms.	360 SF
Medical Records Library	Allow sufficient space for work area.	240 SF
Staff Lounge With Kitchenette	Allow sufficient space for private "getaway" areas along with kitchenette.	150 SF
Staff Conference Room	Allow sufficient space for 10-15 people seated at conference table.	<u>200 SF</u>
	Net Total for Clinic Support:	5,380 SF

PERINATAL EDUCATION

Classrooms	Allow sufficient space for seating of 20-30 people with large demonstration space provided. (Locate near Reception Lobby for use at night and ease of access.)	2 Classrooms @ 250 SF each = 500 SF
Storage Areas	Allow sufficient space for storage of audio-visual equipment, demonstration dummies, etc. (Locate near classrooms.)	2 Storage Areas @ 100 SF each = 200 SF
Consultant Offices	Allow sufficient space for private work area and consultation area along with record storage.	10 Consultant Offices @ 120 SF each = 1,200 SF
Consultation/Conference Rooms	Allow sufficient space for 2-12 people, depending on needs. Allow for large conference table along with storage area. (Locate near Consultant Offices for immediate access.)	2 Consultation/Conference Rooms @ 200 SF each = <u>400 SF</u>
		Net Total for Perinatal Education: 2,300 SF
		Net Total for Perinatal Clinic: 6,820 SF
		Net Total for Clinic Support: <u>5,380 SF</u>
		Net Total for OUTPATIENT SERVICES: 14,500 SF
		Support (5%): 720 SF
		Circulation (30%): 4,350 SF
		Walls (10%): <u>1,450 SF</u>
		TOTAL FOR OUTPATIENT SERVICES: 21,020 SF

INPATIENT SERVICES

NORMAL CARE NURSERY

Nursery Unit	Allow sufficient space (at least 25-30 SF per bassinet) for 8 bassinets, sink, and outlets for oxygen, suction compressed air, and electricity. (Allow for both public viewing on one side and staff viewing on the other.)	8 Nursery Units @ 240 SF each	= 1,920 SF
Suspect Nursery	Allow sufficient space for 2 bassinets with isolation capability (at least 40 SF per bassinet).	2 Suspect Nursery Units @ 80 SF each	= 160 SF
Laboratory	Allow sufficient space for counter space with double sink and work area with storage.		120 SF
Demonstration Room	Access by family needed for breast-feeding and teaching infant care techniques.		120 SF
Formula Storage	Allow sufficient space for separate storage room with small sink.		120 SF
Exam/Treatment Room	Allow sufficient space for examination table, work counter, storage space, and small sink.		120 SF
Charting Counter	Locate so that nurses and physician can observe nurseries while charting.	4 Charting Counters (one each between 2 Nursery Units) @ 20 SF each	= 80 SF
Control Center	Locate at center of Nursery and at major access point for good traffic control and surveillance of Nursery Units.		120 SF
Clerical Office	Locate adjacent to Control Center for use by clerical staff on admissions and records control.		120 SF
Scrub and Gown Area	Locate at major access point. Allow for sufficient space for 6 sinks and storage for both clean and soiled caps, gowns, and masks.		100 SF

Medication Preparation Area	Allow sufficient space for storage cabinets, work counter, and cart storage.	80 SF
Soiled Utility Room	Allow space for linen hamper and cart storage along with cabinet storage, double sink and utility hopper sink. (Provide for dual access from both staff corridor and public corridor if possible in order to prevent cross infection.)	200 SF
Clean Utility Room	Allow space for carts, shelf and cabinet storage along with counter space with small sink.	140 SF
Janitor's Closet	Allow space for utility sink and storage of janitorial supplies.	50 SF
Equipment Storage Room	Allow sufficient space for storage of all potentially idle mobile nursery equipment.	150 SF
Physician Charting Area	Allow space for private work/dictation area. Locate near Control Center.	80 SF
Staff Lounge/Classroom	Allow space for private "getaway" areas along with conference table and group lounging area. (Possibly shared with other staff department such as Administration Unit.)	400 SF

Staff Toilet		120 SF
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Net Total for Normal Nursery:		4,200 SF
Support (5%):		210 SF
Circulation (30%):		1,260 SF
Walls (10%):		420 SF
TOTAL FOR NORMAL CARE NURSERY:		6,090 SF

NORMAL POSTPARTUM CARE UNIT

Patient Rooms

Allow adequate space for sleeping, dressing, and sitting with baby, family and guests. There should be space for personal storage, clean and soiled clothes, and trash containment. Family sitting area should be provided with direct access to family garden.

Allow for potential portable nursery/bassinet unit to plug into patient room at alcove. This would allow for 24-hour rooming-in capability with nurse able to see baby and take responsibility for its care when mother sleeps or rests (couplet care).

Patient Room	100 SF
Patient Toilet	60 SF
Couplet Care Alcove	40 SF
Family Area	<u>60 SF</u>
Total	260 SF

16 Patient Rooms per Care Unit
@ 260 SF each = 4,160 SF

Family Lounges

Allow space for family kitchens with complete kitchenettes and private dining area. Also include enough space in lounge for several conversation areas. (Locate away from major public thoroughfares.)

Kitchenette	100 SF
Dining Area	50 SF
Lounge	<u>200 SF</u>
Total	350 SF

2 Family Lounges per Care Unit @ 350 SF each = 700 SF

Community Lounge/Waiting Area

Allow space for sitting areas that encourage social interaction. (Locate near public thoroughfares.)

350 SF

Communications Center

Allow for reception and clerical control desk with applicable office space. Storage should be provided for wheelchairs, stretchers, and equipment. Also provision for drug storage and preparation. (Locate at public access point to unit.)

640 SF

Nursing Substations

Allow for minimum space for work area and dictation area for nurse or nursing team working six patient rooms. Also provide space for temporary record storage. (The "mini" nursing station concept is aimed at freeing-up nurse to see patients and playing down nurse as authority in order to help generate family-oriented atmosphere.)

3 Substations per Care Unit
@ 50 SF each = 150 SF

Soiled Utility Room

Allow space for linen hamper and cart storage along with cabinet storage, double sink and utility hopper sink.

2 Soiled Utility Rooms per
Care Unit @ 160 SF each = 320 SF

Clean Utility Room

Allow space for carts, cabinet storage, and counter space with small sink.

2 Clean Utility Rooms per
Care Unit @ 160 SF each = 320 SF

Janitor's Closet

Allow space for utility sink and storage of janitorial supplies.

2 Janitor's Closets per
Care Unit @ 50 SF each = 100 SF

Net Total per Nursing Unit: 6,740 SF

Support (3%): 200 SF

Circulation (40%): 2,700 SF

Walls (10%): 670 SF

Total per Nursing Unit: 10,310 SF

3 Nursing Units of 16 Patient Rooms Each: x3
30,930 SF

Classroom/Conference Room

Allow space for seating of 20-30 people with large demonstration space provided along with audiovisual equipment storage. (Shared by the three Nursing Units.)

480 SF

TOTAL AREA FOR NORMAL POSTPARTUM CARE: 31,410 SF

SPECIAL CARE ANTEPARTUM/POSTPARTUM UNIT

Patient Room	Allow sufficient space for sleeping, dressing, and sitting. There should be space for personal storage, clean and soiled clothes, and trash containment. (Include a family alcove that could be used by family as socializing area or by staff as isolation alcove if needed.)	<table border="0"> <tr> <td>Patient Room</td> <td>100 SF</td> </tr> <tr> <td>Patient Toilet</td> <td>60 SF</td> </tr> <tr> <td>Family Alcove</td> <td>60 SF</td> </tr> <tr> <td>Total</td> <td>220 SF</td> </tr> </table>	Patient Room	100 SF	Patient Toilet	60 SF	Family Alcove	60 SF	Total	220 SF
Patient Room	100 SF									
Patient Toilet	60 SF									
Family Alcove	60 SF									
Total	220 SF									
Soiled Utility Room	Allow space for linen hamper and cart storage with cabinet storage, double sink, and utility hopper sink.	120 SF								
Communications Center	Allow for reception and clerical control desk with applicable office space. Storage should be provided for wheelchairs, stretchers, and equipment. Also provision for drug storage and preparation. (Locate at public access point to unit.)	250 SF								
Nursing Substations	Allow for minimum space for work area and dictation area for nurse or nursing team working 4-8 patient rooms. Also provide space for temporary record storage. (The "mini" nursing station concept is aimed at freeing-up nurse to see patients and playing down nurse as authority in order to help generate family-oriented atmosphere.)	<table border="0"> <tr> <td>2 Nursing Substations per Care Unit @ 50 SF each</td> <td>=</td> <td>100 SF</td> </tr> </table>	2 Nursing Substations per Care Unit @ 50 SF each	=	100 SF					
2 Nursing Substations per Care Unit @ 50 SF each	=	100 SF								
Clean Utility Room	Allow space for carts, cabinet storage, and small sink with counter space.	100 SF								
Equipment Storage Room	Allow sufficient space for potentially idle mobile equipment and general storage.	100 SF								

Family Lounge

Allow space for passive gathering and visitation of family and visitors with patients and staff along with seclusion and meditation areas.

240 SF

Net Total per Nursing Unit: 2,670 SF

Support (5%): 130 SF

Circulation (35%): 930 SF

Walls (10%): 260 SF

Total per Nursing Unit: 3,990 SF

3 Nursing Units of 8 Patient Rooms each (two antepartum/postpartum units with one "swing" unit of "motel" rooms for mothers with special-care babies)

x3

11,970 SF

Chapel

Allow space for group and individual meditation along with conference area for consultation with clergy.

240 SF

TOTAL AREA FOR SPECIAL CARE ANTEPARTUM/POSTPARTUM CARE: 12,210 SF

SPECIAL-CARE NURSERY

(Open-unit design—large rooms with many patient positions—is the most flexible for allowing future modification when better design and care concepts are developed and is therefore recommended for flexibility and improved overall visual surveillance.)

OPEN NURSERY UNIT

(Locate for natural lighting if possible)

Maximal Care Area	Allow sufficient space for 8 bassinets and work areas (recommend 80 SF per bassinet).	640 SF
Isolation Care Unit	Allow separate space for 2 bassinets and work areas (recommend 80 SF per bassinet).	160 SF
Intermediate Care Area	Allow sufficient space for 20 bassinets and work areas (recommend 60 SF per bassinet).	1,200 SF
Minimal Care	Allow sufficient space for 20 bassinets and work areas (recommend 40 SF per bassinet).	800 SF
Patient Care Support Areas	Allow sufficient space for shared support functions (20 SF per bassinet).	<u>1,000 SF</u>
		Total for Nursery Unit: 3,800 SF

NURSERY SUPPORT

Reception/Waiting Area	Allow sufficient space for reception desk and waiting area.	160 SF
Public Restrooms	Allow sufficient space for two public restrooms.	200 SF
Control Center	Locate at center of nursery and near major access point for good traffic control and proper visual surveillance of nursery.	80 SF

Medication Preparation Area	Allow sufficient space for storage cabinets, work counter, and cart storage.	60 SF
Physician Charting Area	Allow space for private work/dictation area. Locate near Control Center.	50 SF
Clean Utility Room	Allow space for carts, shelf and cabinet storage along with counter space with small sink.	120 SF
Soiled Utility Room	Allow space for linen hamper and cart storage along with cabinet storage, double sink, and utility hopper sink. (Provide dual access from both staff corridor and public corridor if possible in order to prevent cross infection.)	160 SF
Equipment Storage	Allow sufficient space for storage of all potentially idle mobile nursery equipment (including portable X-ray equipment).	140 SF
Demonstration Room	Access by family needed for breast-feeding and teaching infant care techniques.	100 SF
Blood Gas Laboratory	Allow sufficient space for counter space with double sink and work area with storage.	120 SF
Respiratory Therapy and Treatment Room	Allow sufficient space for examination table, respiratory equipment, work counter, storage space, and small sink.	120 SF
Scrub and Gown Area	Allow sufficient space for 4 sinks and storage for both clean and soiled caps, gowns, and masks.	60 SF

Breast Bank Storage Area	Allow sufficient space for separate storage room with small sink and donor's chair.	120 SF
Formula Storage Area	Allow sufficient space for separate storage room with small sink.	80 SF
Janitor's Closet	Allow space for utility sink and storage of janitorial supplies.	30 SF
Conference/Classroom	Allow space for small to large conference and both patient/family education and continuing staff education.	160 SF
Staff Lounge & Toilet	Allow space for "getaway" areas and group areas.	200 SF
Secretarial Area	Allow space for reception, work area, and file storage.	100 SF
Neonatologists' Office	Allow space for private work/consultation area with some storage.	
	3 offices @ 120 SF each	= 360 SF
	Net Total for Special-Care Nursery:	6,220 SF
	Support (5%):	310 SF
	Circulation (20%):	1,240 SF
	Walls (10%):	620 SF
	TOTAL FOR SPECIAL-CARE NURSERY:	8,390 SF
	TOTAL FOR NORMAL-CARE NURSERY:	6,090 SF
	TOTAL FOR NORMAL POSTPARTUM CARE:	31,410 SF
	TOTAL FOR SPECIAL-CARE ANTEPARTUM/POSTPARTUM UNIT:	12,210 SF
	TOTAL FOR INPATIENT SERVICES:	58,100 SF

BIRTHING SERVICES

BIRTHING AREA

(Consists of 2 nursing pods of 6 birthing rooms each, with each pod surrounding a center nursing station/work area.)

Birthing Rooms

Allow adequate space for laboring/delivering and recovering within special birthing bed. Allow space for portable equipment including bassinet. Also allow for personal storage and family sitting areas with potential for isolation foyer with viewing window. Natural lighting and view of outdoors desirable if possible.

Birthing Room	160 SF
Patient Toilet	40 SF
Family Alcove	<u>100 SF</u>
Total	300 SF

6 Birthing Rooms
@ 300 SF each = 1,800 SF

Nursing Station/Work Area

Allow sufficient space for work counter, medication preparation and storage along with gowning areas, scrub-up sinks and equipment storage including wheelchairs and stretchers.

220 SF

Family Corridor

Allow sufficient space for family sitting areas and gardens. Use landscaping to create intimacy and pathways to encourage both walking and social interaction among families.

800 SF

Total Square Footage Per Nursing Pod: 2,820 SF

Net Total for Birthing Area (2 Nursing Pods @ 2,820 SF each): 5,640 SF

RECEPTION AREA

Reception Lounge	Allow sufficient space for both reception and waiting for expectant mothers, family, and friends. A vendeteria and public phones should also be provided.	1,200 SF
Public Restrooms	Allow sufficient space for two public toilets to be located adjacent to Reception Lounge.	400 SF
Reception/Communications Center	Allow sufficient space for reception counter, work area, and communications equipment. (Communications Center acts as coordinator between reception/birthing area and other parts of the facility.)	200 SF
Clerical Office	Allow sufficient space for work area and storage.	100 SF
Evaluation and Exam Rooms	Allow sufficient space for examination table, work counter, storage space, and small sink. (Locate near Reception Lounge, emergency facilities, and birthing areas.)	480 SF
Dressing/Gowning Areas with toilets	Allow sufficient space for dressing areas, cap and gown storage, and personal lockers.	200 SF
Net Total for Reception Area:		<u>2,580 SF</u>

EMERGENCY SUPPORT

Scheduled C-Section Room	22x24 operating/delivery room set aside for scheduled procedures and deliveries.		530 SF
Emergency Operating Room	22x24 operating room reserved for emergency situations.		530 SF
Recovery Room (4 beds)	Allow sufficient space for 4 beds, portable equipment, and storage. (Locate in view of Nursing Station within sterile zone of emergency zone.)		480 SF
Anesthesia Workroom	Allow sufficient space for work area, cabinet with double sink, and separate gas storage area.		120 SF
Equipment Storage	Allow sufficient space for portable equipment including anesthesia equipment. (Locate for access to both sterile and clean areas.)		120 SF
Clean Utility Room	Allow space for carts, shelf and cabinet storage, along with counter space with small sink.	2 Clean Utility Rooms @ 120 SF each	= 240 SF
Soiled Utility Room	Allow space for linen hamper and cart storage, along with cabinet storage, double sink, and utility hopper.	2 Soiled Utility Rooms @ 120 SF each	= 240 SF
Sterile Supply	Allow space for cart storage, cabinet storage, and work area. (Locate for access in both clean and sterile areas.)		200 SF
Scrub-up Area	Allow sufficient space for scrub sinks and work area.	2 Scrub-up Areas @ 40 SF each	= 80 SF

Nursing Station

Allow sufficient space for work desk,
medication preparation and storage.
(Locate between OR rooms and at
center of sterile zone.)

100 SF

Workroom

Allow sufficient space for sterile work
area, flash autoclave, and storage.
(Locate between OR rooms and near
Nursing Station.)

170 SF

Net Total for Emergency Support: 2,810 SF

Net Total for Birthing Area: 5,640 SF

Net Total for Reception Area: 2,580 SF

Net Total for Birthing Services: 11,030 SF

Support (5%): 550 SF

Circulations (30%): 3,300 SF

Walls (10%): 1,100 SF

TOTAL AREA FOR BIRTHING SERVICES: 15,980 SF

SUPPORT SERVICES

DIAGNOSTIC AND TREATMENT AREA

Diagnostic Radiographic Room	Allow sufficient space for radiographic table, view booth, fixed and portable equipment, work space, cabinet storage, and counter with sink. Also allow space for toilet/dressing areas.	2 Diagnostic Radiographic Rooms @ 500 SF each = 1,000 SF
Ultrasound Room	Allow sufficient space for ultrasound table, monitoring equipment (fixed and portable), work space, cabinet storage, and counter with sink. (If possible, allow space for private toilet.)	2 Ultrasound Rooms @ 180 SF each = 360 SF
Dark Room	Allow sufficient space for developing machine, film storage, film "pass-through," and work space. (Locate near or between ultrasound and radiographic rooms.)	100 SF
Work Room	Allow sufficient space for light boxes, film storage, work space with general storage. (Locate next to Dark Room.)	80 SF
Film Library	Allow sufficient space for light boxes, open shelving for film storage, and work area.	100 SF
Radiologist's Office	Allow sufficient space for viewing area, work space, and personal storage.	100 SF
Reception/Communications Center	Allow for reception and clerical control desk with applicable work space. (Locate at center of Diagnosis and Treatment Area and near public access to unit.)	80 SF
Waiting Room	Allow space for seating of 5-10 people.	200 SF
Public Restrooms	Allow sufficient space for two public restrooms.	360 SF
Net Total for Diagnostic and Treatment Area:		<u>2,380 SF</u>

CAFETERIA

Dining Area	Allow sufficient space for several dining areas to accommodate 75-100 people. (Also allow for movable partitions to create private dining/meeting rooms.)	2,500 SF
Serving Area (and cashier)	Allow sufficient space for large serving counter, work area, preparation equipment, and general storage.	400 SF
Trash/Dirty-Dish Disposal	Allow sufficient space for trash receptacles, pass-through window, work area with dish and cart storage.	300 SF
Storage	Allow sufficient space for storage of linen, tables, chairs, etc.	500 SF
Cart Staging Area	Allow sufficient space for temporary storage and distribution of carts.	800 SF
Public Restrooms	Allow sufficient space for two public restrooms with adjoining lounge/waiting areas. (Shared with Education Area.)	400 SF
		<hr/>
		Net Total for Cafeteria: 4,900 SF

KITCHEN

General Preparation Area	Allow sufficient space for food preparation, cooking and baking areas with their respective equipment work space and storage areas.	1,160 SF
Cartwashing and Storage	Allow sufficient space for cartwashing equipment, work area, and cart storage for both clean and dirty carts. (Locate near service elevators.)	400 SF
Dishwashing and Storage	Allow sufficient space for dishwashing equipment, work area, dish storage, and temporary cart storage.	360 SF
Pots and Pans Washing and Storage	Allow sufficient space for sink and scrub area, work area, pots and pans storage along with temporary cart storage.	<u>160 SF</u>
	Net Total for Kitchen:	2,080 SF

SUPPLY

Receiving Office	Allow sufficient space for desk, files, and work area.	120 SF
Cart Storage and Distribution	Allow sufficient space for up to 20-30 carts and work space.	240 SF
Bulk Storage	Allow sufficient space for bulk stores and work area.	1,350 SF
Processed Storage	Allow sufficient space for processed stores with processing work area.	700 SF
Sterile Supply	Allow sufficient space for sterile stores and work area.	600 SF
Linen Storage	Allow sufficient space for clean linen storage and small washer/dryer for some in-house cleaning.	320 SF
	Net Total for Supply:	<u>3,330 SF</u>

GENERAL SUPPORT

Trash Room	Allow sufficient space for trash incinerators, trash chutes, trash storage, work area, and cart storage.	750 SF
Soiled Linen Holding	Allow sufficient space for linen chutes, soiled storage, work area, and cart storage. (Locate near service entrance for linen service pickup.)	200 SF
General Storage	Allow space for general storage of supplies and equipment.	300 SF
Staging Areas and Cart Storage	Allow sufficient space for temporary storage and distribution of carts.	500 SF
Staff Toilets and Lockers	Allow sufficient space for lockers, dressing areas, toilets, and showers.	2 Staff Toilets and Locker Areas @ 350 SF each = 700 SF
Staff Lounge	Allow sufficient space for vendeteria, several sitting, reading, and conversation areas.	<u>200 SF</u>
	Net Total for General Support:	2,650 SF

STAFF SUPPORT

Staff Lockers and Showers	Allow sufficient space for lockers, dressing areas, toilets and showers.	2 Staff Locker and Shower Areas @ 350 SF each = 700 SF
Staff Lounge	Allow sufficient space for vendeteria and several seating, reading, and conversation areas along with "getaway" space.	400 SF
Sleep Rooms (with shared toilets)	Allow sufficient space for sleeping and dressing for one person (for both Birthing Services and Special Care).	8 Sleep Rooms @ 80 SF each = 640 SF 4 shared toilets @ 40 SF each = 160 SF
Linen Storage	Allow sufficient space for sleep rooms' linen storage.	50 SF
		Net Total for Staff Support: 1,950 SF

FAMILY SUPPORT

Greenhouses (with sitting areas)

Allow sufficient space for greenhouse areas with spaces for sitting (along patient route from Birthing Services to Inpatient Services).

600 SF

Family Lounges

Allow sufficient space for waiting, sitting, and "getaway" areas for 30-40 people. (Locate at inpatient entrance and elevator lobby.)

400 SF

Net Total Family Support: 1,000 SF

Net Total Staff Support: 1,950 SF

Net Total General Support: 2,650 SF

Net Total Supply: 3,330 SF

Net Total Kitchen: 2,080 SF

Net Total Cafeteria: 4,900 SF

Net Total Diagnostic and Treatment Area: 2,380 SF

NET TOTAL FOR SUPPORT SERVICES: 18,290 SF

Support (5%): 910 SF

Circulation (30%): 5,480 SF

Walls (10%): 1,820 SF

TOTAL AREA FOR SUPPORT SERVICES: 26,500 SF

TOTAL AREA FOR BIRTHING SERVICES: 15,980 SF

TOTAL AREA FOR INPATIENT SERVICES: 58,100 SF

TOTAL AREA FOR OUTPATIENT SERVICES: 21,020 SF

TOTAL ENCLOSED AREA FOR BIRTHING PLACE: 121,600 SF

NEEDED OUTDOOR AREAS

Family Gardens

Allow sufficient space for landscaped gardens with intimate areas for walking with baby and family along with group areas for families to interact together. (Locate adjacent to normal inpatient rooms.)

approx. 18,000 SF

Sundecks

Allow sufficient space for sun terrace with landscaping for patients and families. (Locate adjacent to special inpatient areas.) Could be potential for future expansion area.

approx. 6,000 SF

Functional Interrelationships

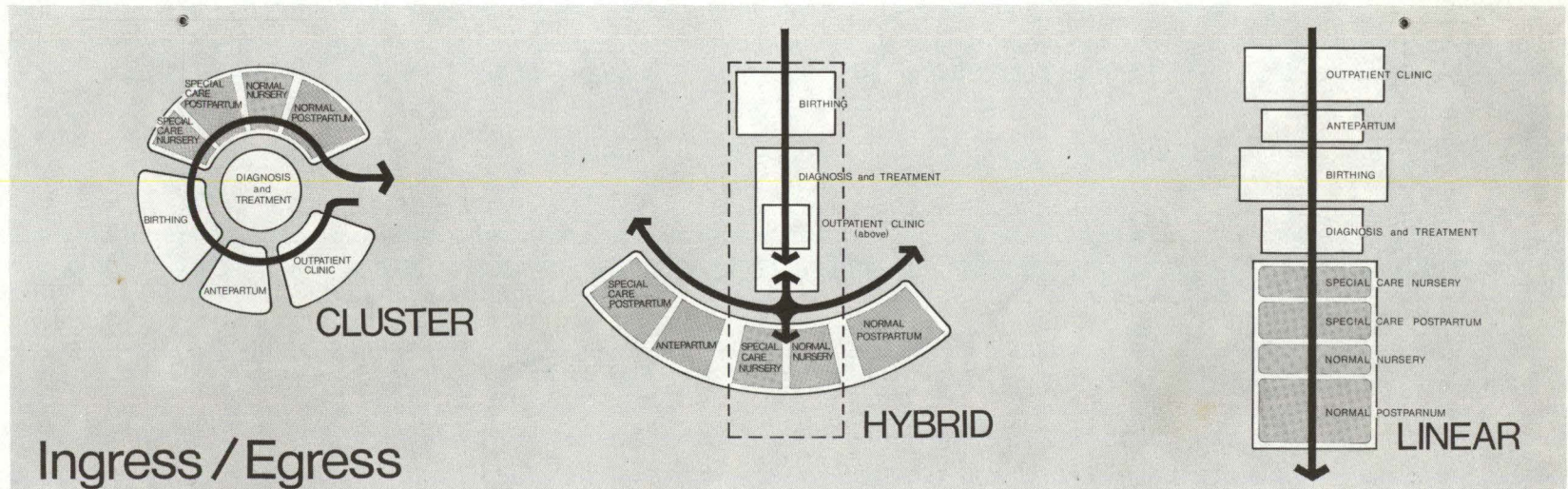
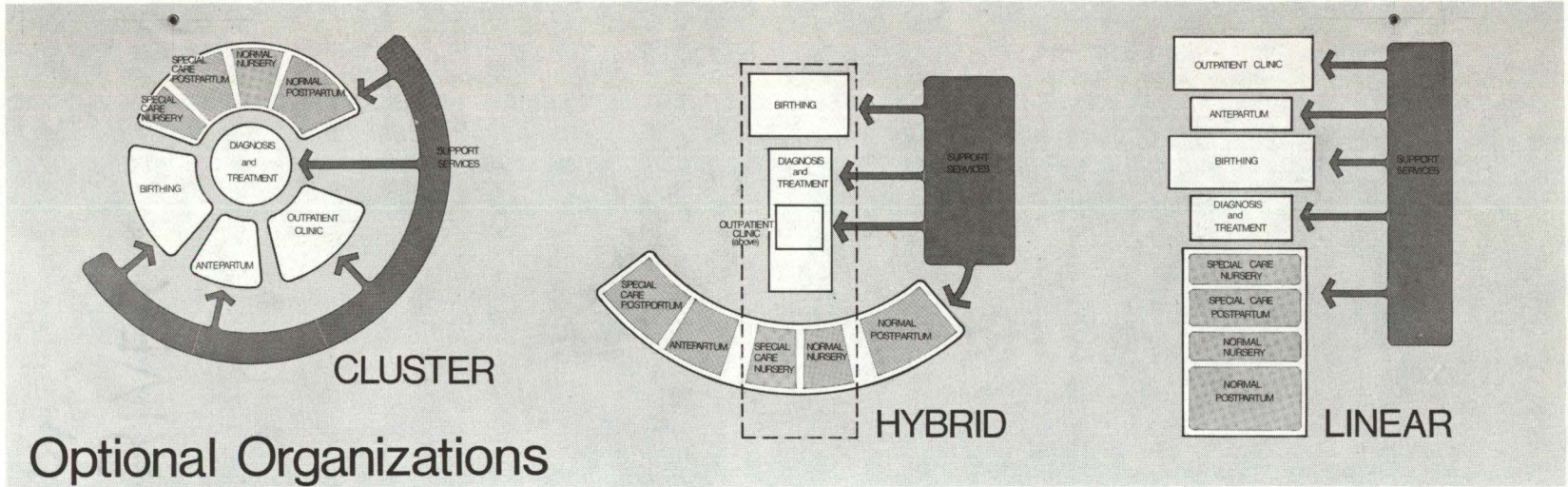
After the spatial programs are defined for all the spaces along with their respective functional groupings, the next step in creating a built-environment program is to define the desired functional and spatial interrelationships between these groupings.

The following page contains a set of drawings depicting the ranges of optional organizations of these functional groupings along with the potential circulation and/or procedural flow through each respective organization.

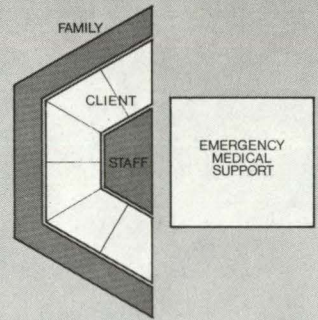
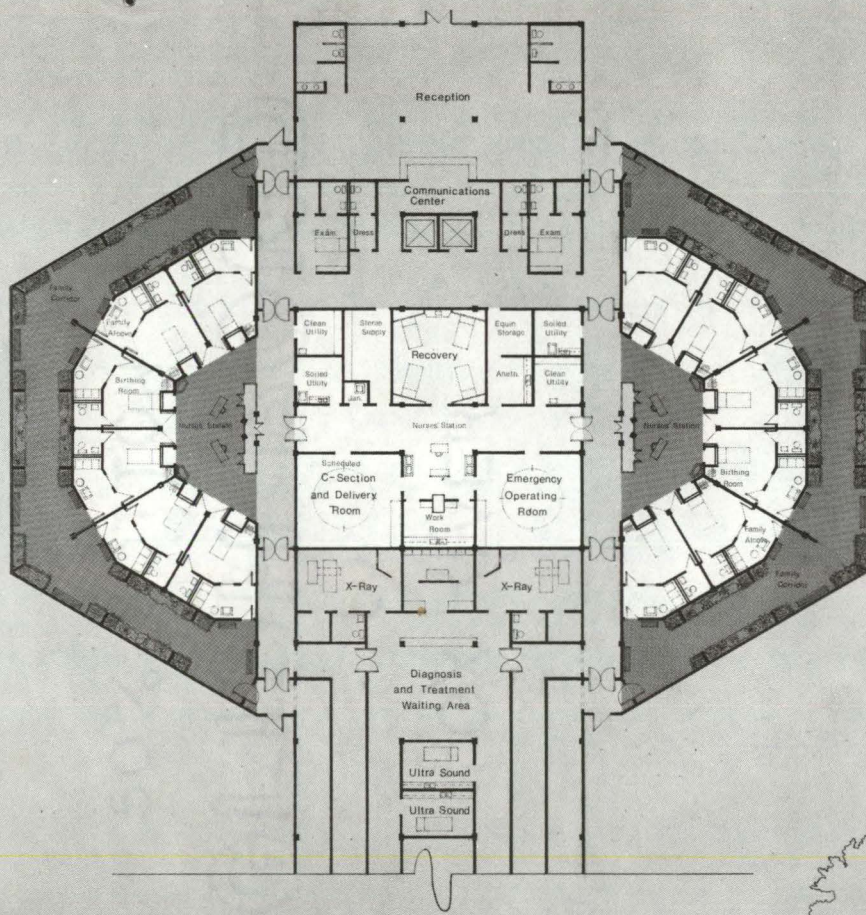
Outpatient Services were defined earlier as a CYCLICAL type of care with scheduled visits, while Inpatient Services were defined as a LINEAR and SEQUENTIAL type of care; therefore, it would appear that a hybrid-type organization would respond best to the needs of both by being simultaneously CYCLICAL and LINEAR in nature.

After a general configuration of the functional interrelationships is established, the next step is to define more specifically the *intrare*relationships within each functional grouping, and subsequently the needed functional relationships within each individual space itself.

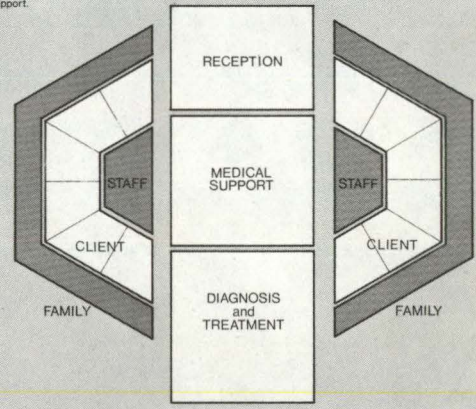
Although this step-by-step procedure is not documented fully here, it was a necessary—and arduous—task that led to the built-environment response that follows.



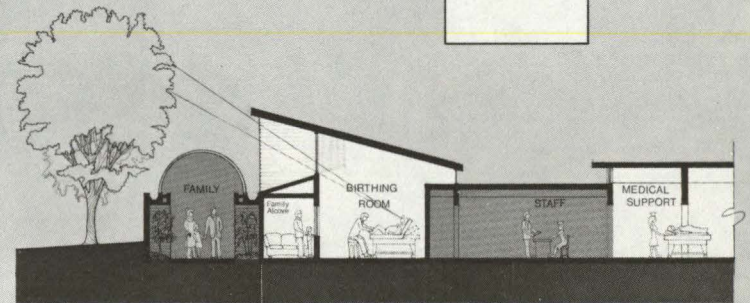
form/function response



ADVANTAGES
STAFF: ease of access and high level of visibility
FAMILY: ease of access, freedom of movement and intimate environment.
CLIENT: family-orientation with comforting knowledge of immediate medical support.



PROBLEM: How to allow for maximum Family Orientation while maintaining maximum Physical Safety?



CONCEPTUAL SECTION

Form / Function

Birthing Area Concept

The main problem in designing the birthing area, shown on the previous page, was how to allow for maximum family orientation while maintaining maximum physical safety.

The design concept was to create a radial-type plan that would put the staff and emergency medical support at the center of the polygon-type plan, with 12 trapezoidal-shaped birthing rooms radiating around these staff and support areas. These would allow for and emphasize the need for: maximum visual access by staff to patients, minimal travel distances between staff and patients, and maximum access by patients and staff to emergency support areas. This is all to provide and maintain maximum physical safety for both mother and child.

Beyond the radiating trapezoidal birthing rooms would be the family corridors and gardens. This would allow for the family to participate without interfering with or being distressed or annoyed by the high technical care in the care area of the polygonal plan. So, in fact, the birthing rooms become sort of a buffer between the specialized, highly technical medical support and the desired family atmosphere of the family corridors.

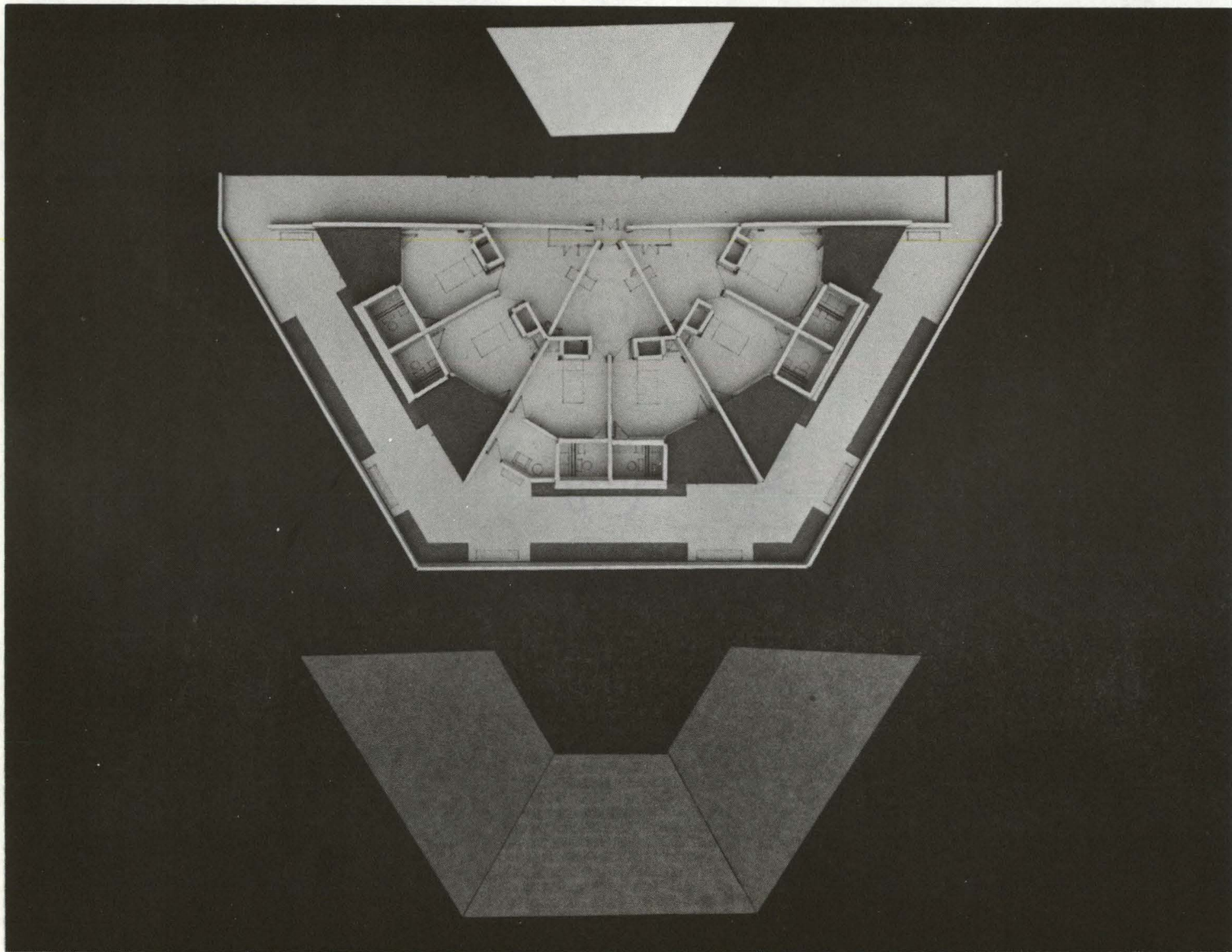
The trapezoidal plan of the birthing room itself is an attempt to reinforce the family atmosphere by focusing the space toward both the family alcove and corridor beyond. The sloping shed roof orients itself both toward the family alcove and corridor, and also to the sky and trees beyond.

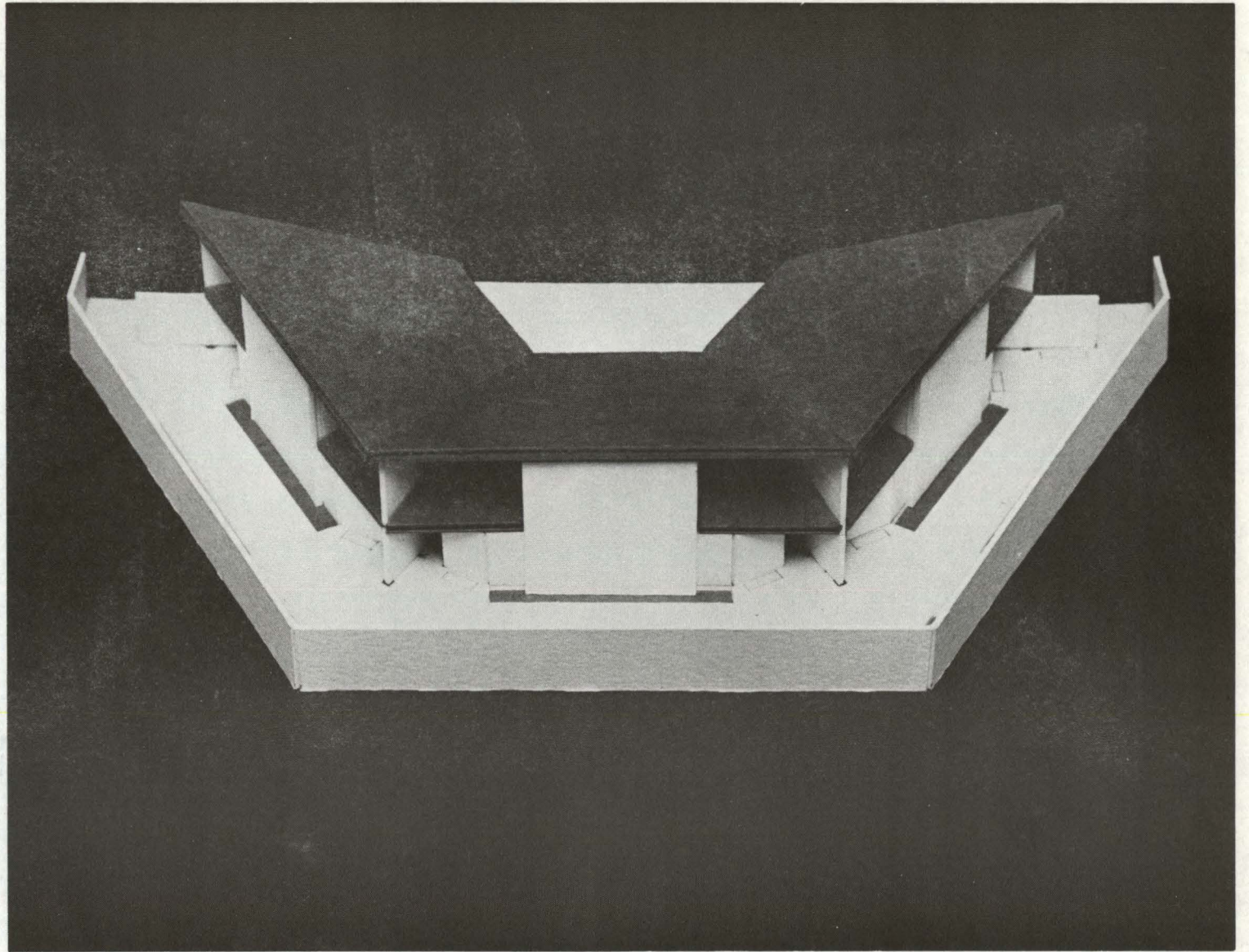
The addition of the family alcove allows the birthing room suite to have total flexibility in procedural approaches. It can be left open to the birthing room so as to act as additional space to the birthing room. Or it can be closed off and the mother may choose to view the family through the viewing window and/or vice versa. If more privacy is desired, the viewing window may be curtained closed.

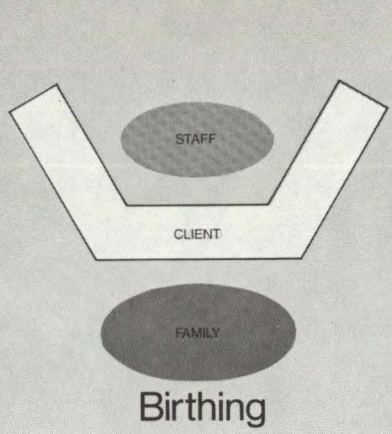
The clerestory windows above the birthing room provide a view to the trees and sky. This, too, can be closed off if desired. However, the trees, clouds, and stars could be pleasing focal points for the mother during labor if she so desires.

It is important to note here that for the purpose of realism, along with the client's desire to attain Level III Perinatal Care licensing status with this new facility, a great deal of bed support area was required in addition to the clinic, education, and birthing areas.

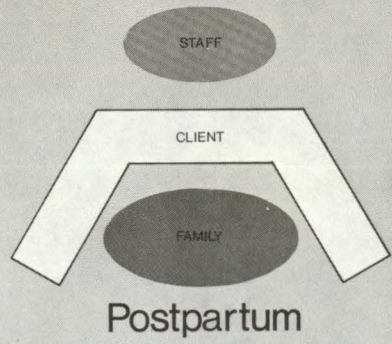
It is, however, possible in the advent of new licensing legislation to suggest that neighborhood Birthing Centers that screen their clients carefully could, in fact, use the birthing rooms of this concept for laboring, delivering, recovering, and through partial recuperation. This would allow the mother and child to go home in 24 hours or less. In such a case, it would be possible to eliminate the need for any support beds or nurseries from that building program, as long as an emergency referral center was available for potential complications.







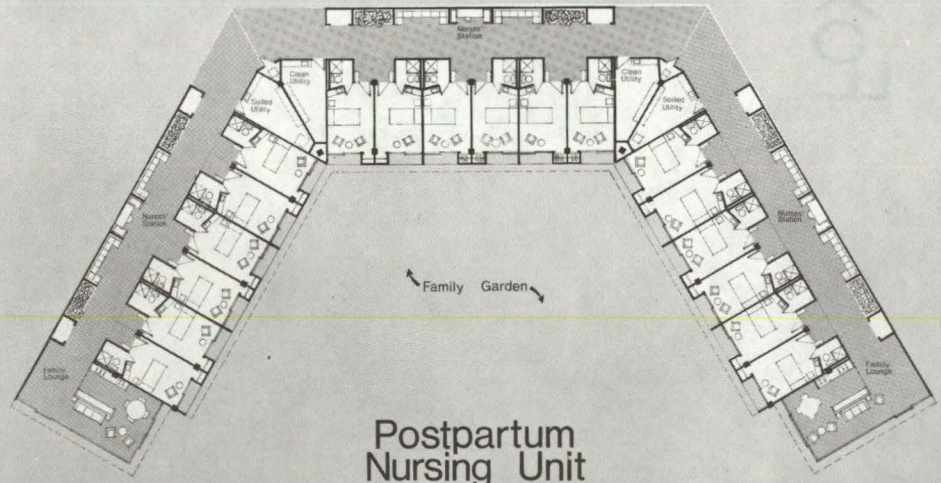
Birthing



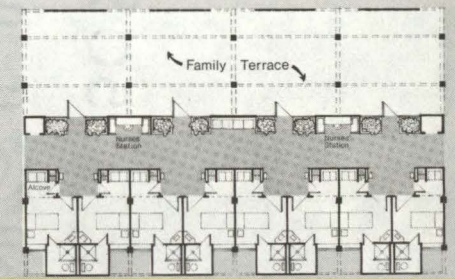
Postpartum



Special Care



Postpartum Nursing Unit



Special Care Nursing Unit

Form / Function

Nursing Unit Concepts

The drawings on the preceding page demonstrate the synthesis of postpartum and special-care nursing functions into architectural form.

Given the polygonal form of the birthing area, it seemed appropriate to take the same form but orient its function differently for the postpartum area. Instead of the staff being oriented at the focal point of the polygonal shape with the family on the outer edge, the family is now the focus of the polygon with the staff at the edge.

The arms of the polygon form a protective enclosure for a family garden that is provided to encourage ambulation by the mother with her child and social interaction both within and between families. (It is felt by many perinatal health-care providers that ambulatory exercise helps to expedite the healing process.)

The family alcoves of the birthing area are now family sitting areas that are oriented toward the family gardens in an attempt to help encourage its use and to turn the family's focus toward the healing process (both physiological and psychological healing). It is felt that other families interacting with each other can encourage and enhance each individual family's involvement in the birthing experience.

It should also be noted that the staff's role is visually softened by the use of "mini" nursing stations that serve 6 beds each, with larger communication stations for every 18 bed units. This approach should allow the nurse to interact freely with the clients/families and to become more of a nurturer in encouraging family participation.

Because the physical dangers are remote in the normal postpartum area, the emphasis is placed on the importance of the family experience and less on the medical support.

Because the Special Care area (both antepartum and postpartum) is involved more with potential physiological problems or dangers, its emphasis is somewhere between the medical preparedness of the birthing area and the increased family emphasis of the normal postpartum area. The formal response chosen is just that: a form that is between the enclosed arms of the birthing area's polygonal form and the open arms of the normal postpartum area's polygonal form—a neither open nor enclosed form; a simple rectangle.

Since the Special Care client (mother or child) requires the support of both medical staff and family, the plan is oriented so that staff and family interact together off of a common corridor and then interact with the client. The family alcoves of the birthing area are now replaced by family alcoves that can be closed off for isolation rooms if and when needed.

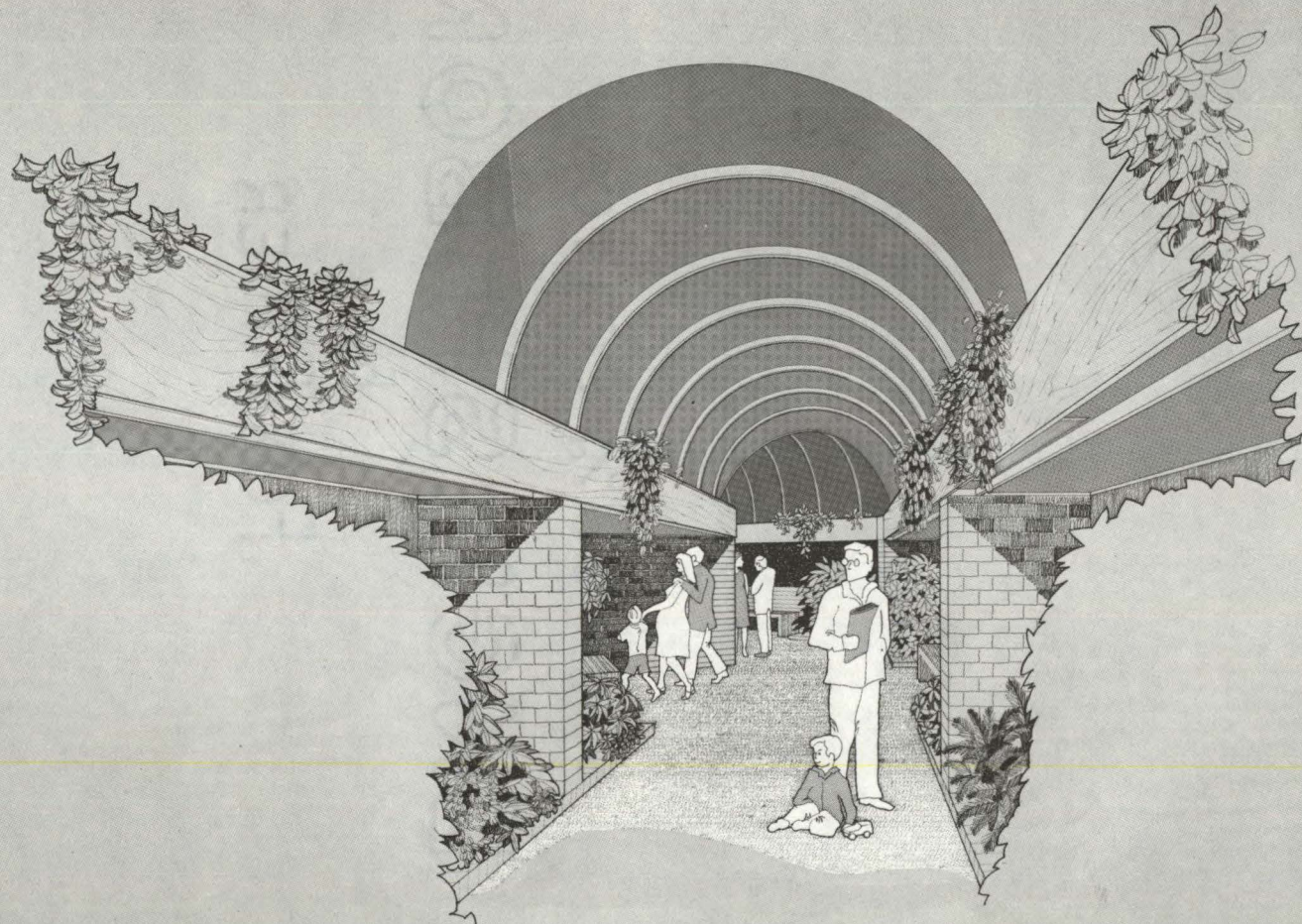
Again, the medical staff is visually deemphasized by "mini" nursing stations, allowing the staff to attain better interaction with the families and improved visual and physical access to the client.

A family terrace is provided for "getaway" space for both families and staff. It could also be used for future expansion area for new special-care beds.

These forms were then combined with the necessary support areas (nurseries, education services, clinic services, dietetic services, etc.) and applied to the specific constraints of the site chosen. The synthesis of these variables (which is demonstrated in the following drawings) begat the following built-environment response:

BIRTHING PLACE, an environment conducive to family-oriented perinatal care.

design proposal



birthing place

AN ENVIRONMENT CONDUCIVE TO FAMILY-ORIENTED PERINATAL CARE

A Terminal Project
Byron Edwards Fall, 1980
Health Care Facilities Planning and Design Studio

Since Saint Francis Hospital phased out its obstetrics services, the bulk of Greenville Hospital System's perinatal services are now offered at Greenville General Hospital on Mallard Street. To meet this growing community responsibility (estimated 5,000 births a year in 1987), there is a separate need for larger and more up-to-date facilities.

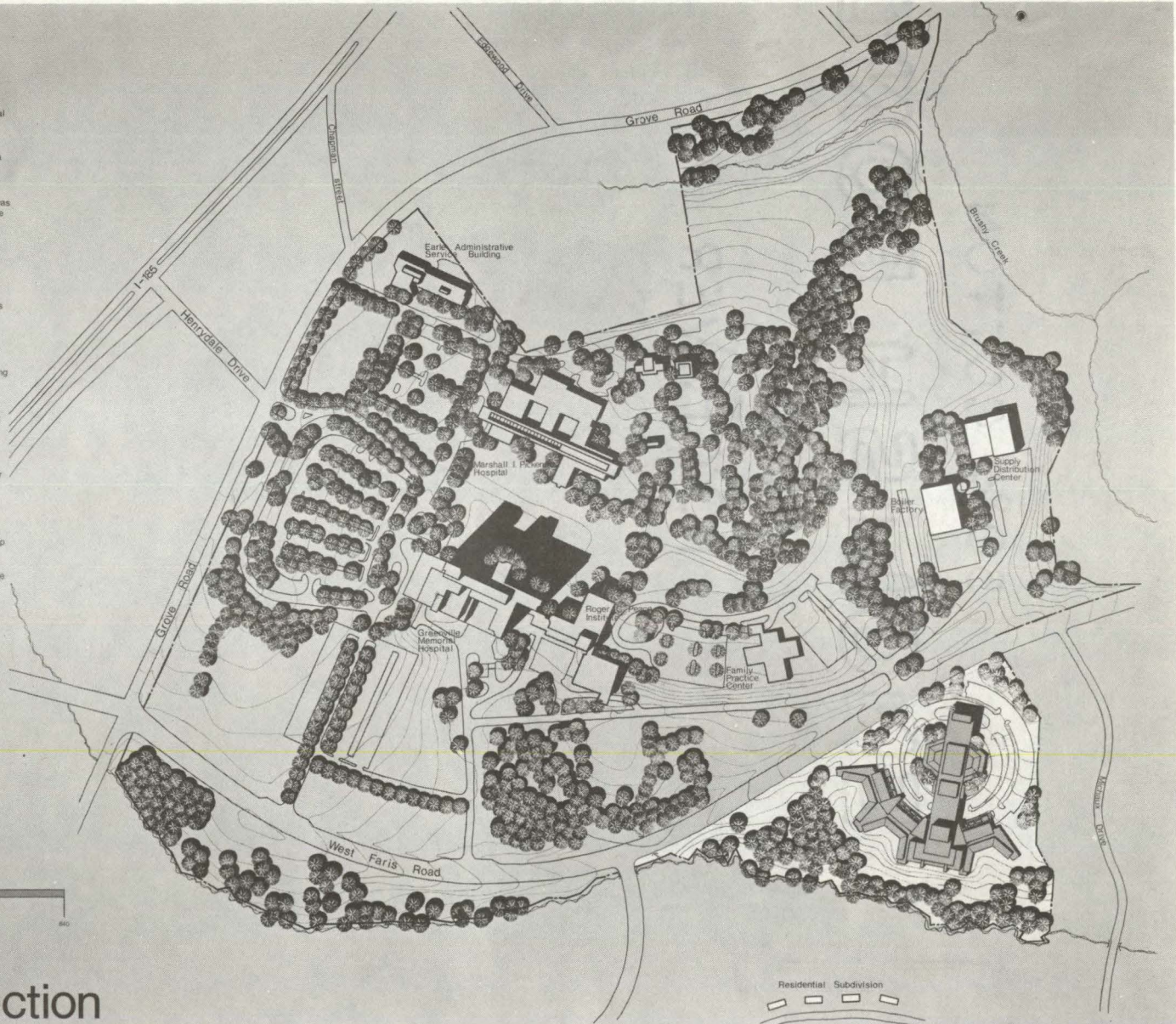
The proposed site for a new and larger facility was chosen at the Greenville Hospital System's Grove Road complex. The reasons for this particular site were:

- Present ownership of property already belongs to the Greenville Hospital System.

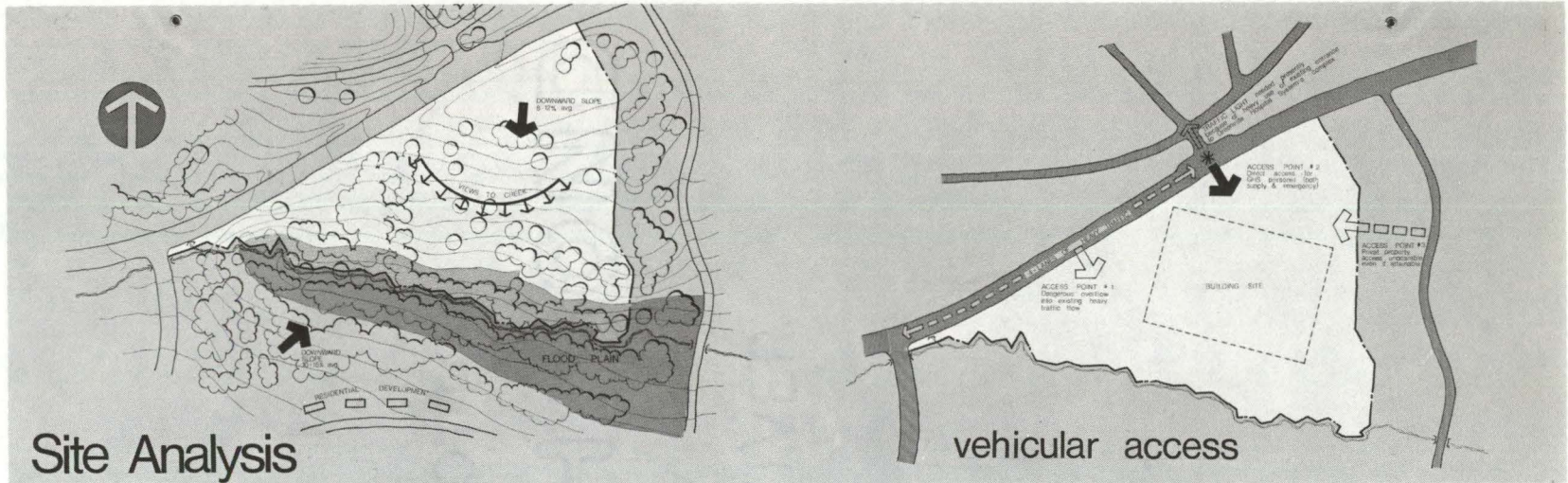
- Given the need to separate 'wellness' from 'illness' both psychologically and physically, this property has the advantage of appearing to be totally separated by the busy four-laned West Faris road, while still being 'connected' and supplied by both the Hospital System's Boiler Factory and Supply Distribution Center.

- The southern exposure of the site's slope provides good solar orientation in the winter while heavy deciduous vegetation provides needed shade in the summer.

- Both the heavy vegetation and the creek that runs along the bottom of the site help to create a relaxed and informal site character while providing needed privacy from West Faris road on one side and the residential subdivision on the other.

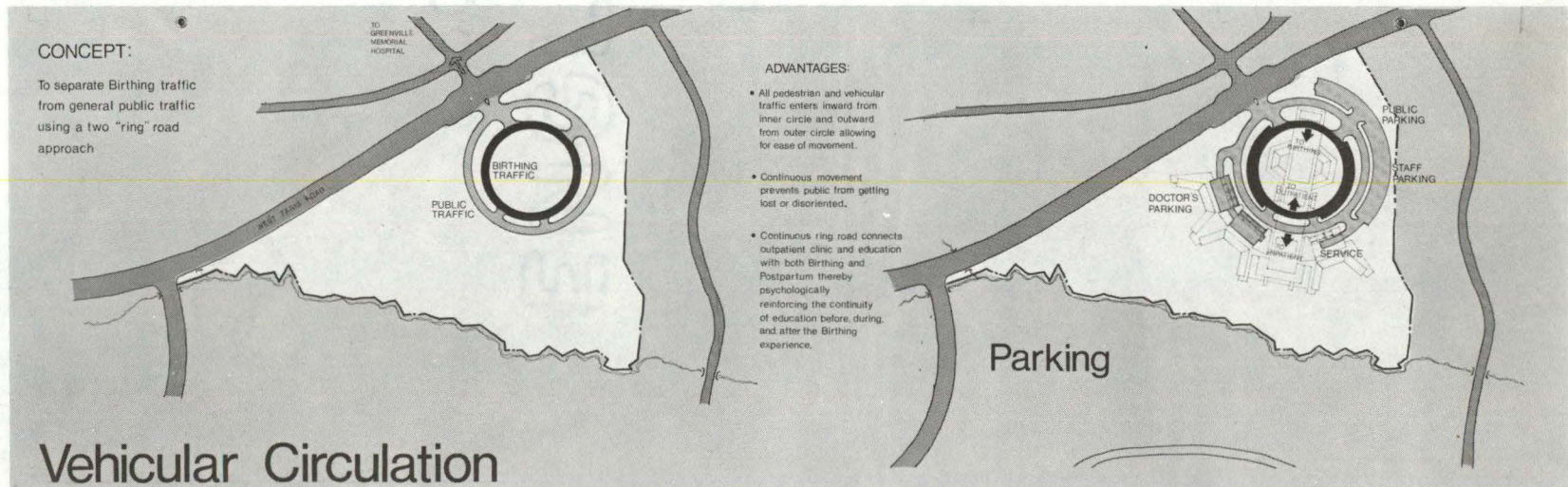


Site Selection



Site Analysis

vehicular access



Vehicular Circulation

Parking

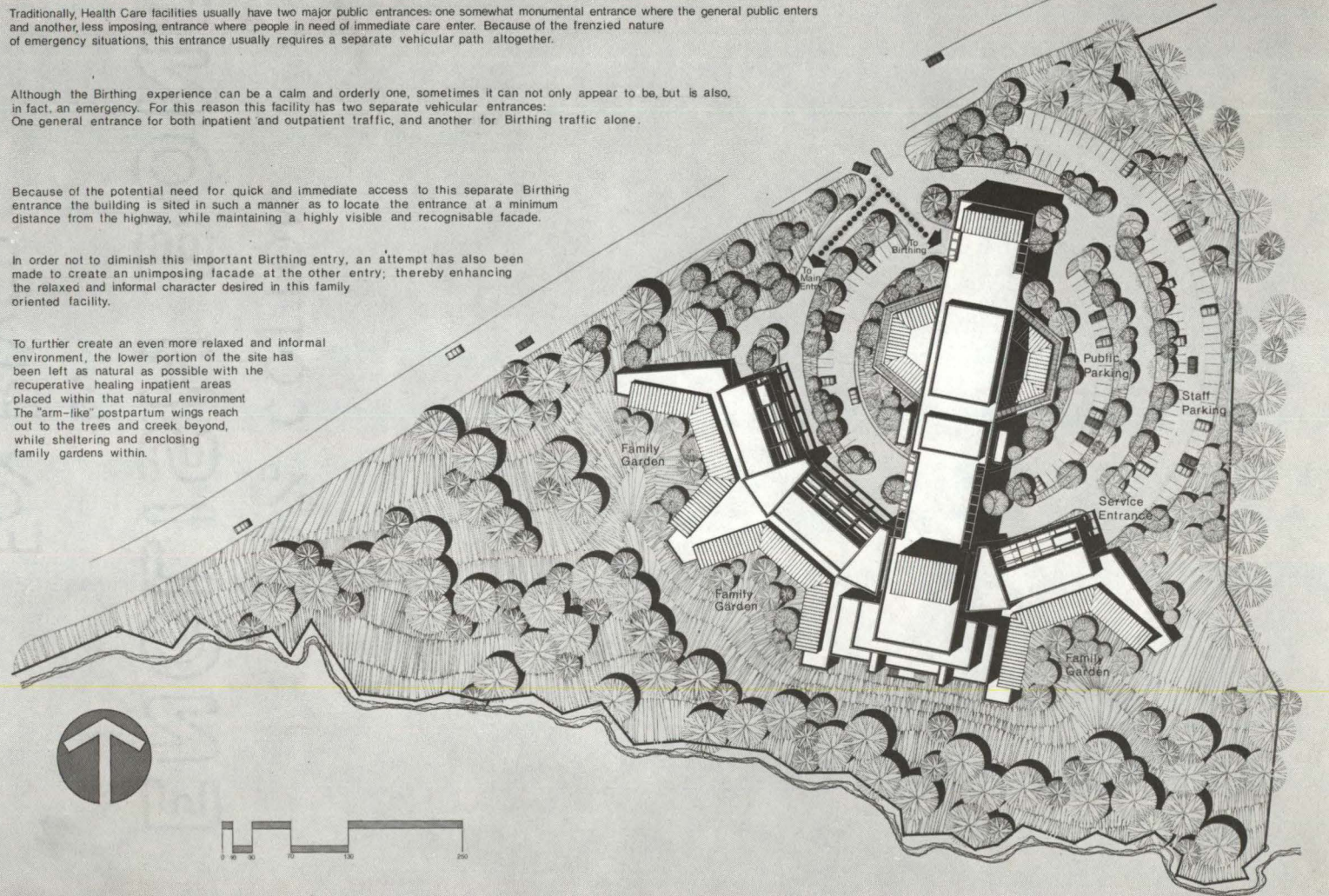
Traditionally, Health Care facilities usually have two major public entrances: one somewhat monumental entrance where the general public enters and another, less imposing, entrance where people in need of immediate care enter. Because of the frenzied nature of emergency situations, this entrance usually requires a separate vehicular path altogether.

Although the Birthing experience can be a calm and orderly one, sometimes it can not only appear to be, but is also, in fact, an emergency. For this reason this facility has two separate vehicular entrances: One general entrance for both inpatient and outpatient traffic, and another for Birthing traffic alone.

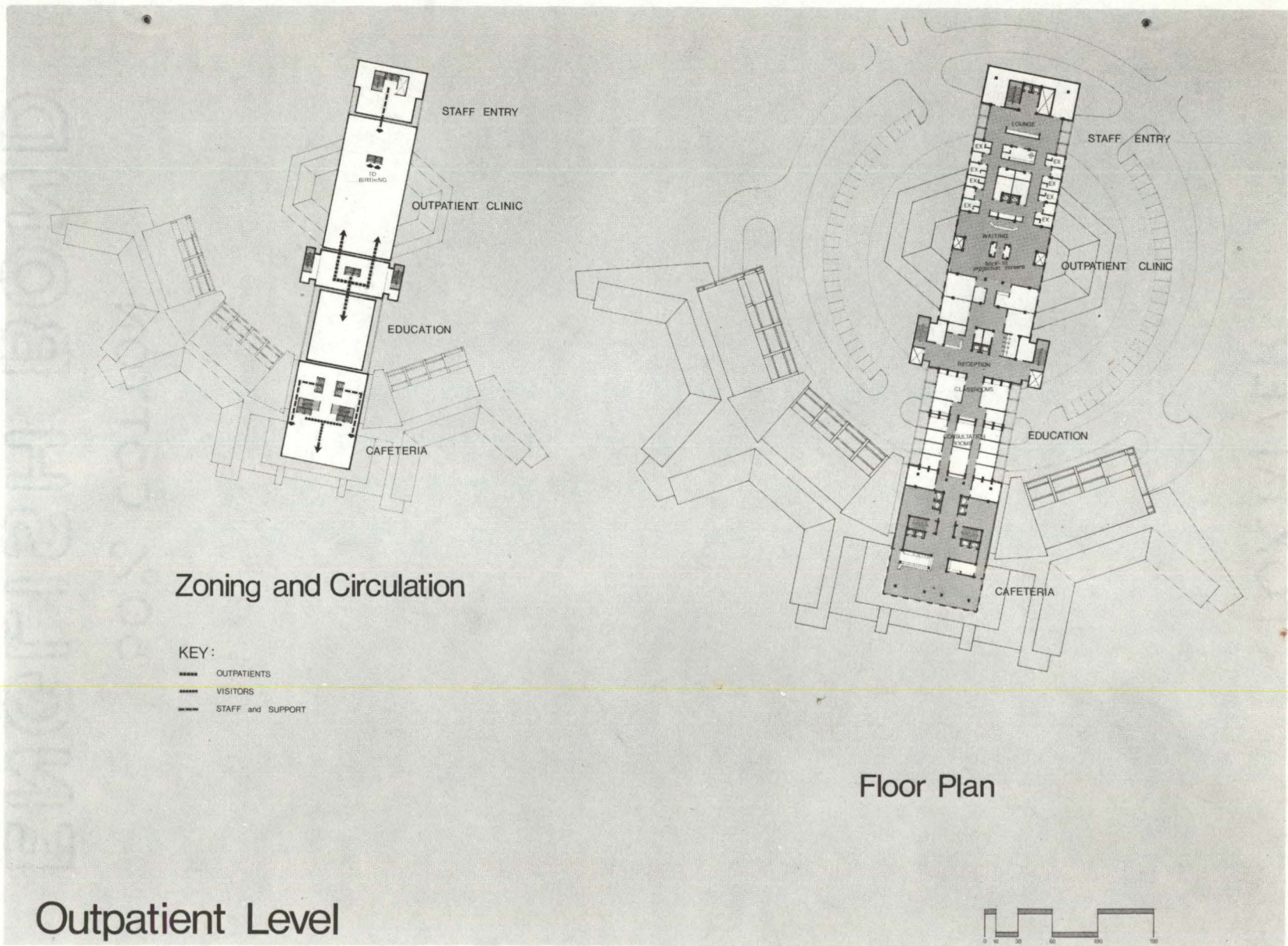
Because of the potential need for quick and immediate access to this separate Birthing entrance the building is sited in such a manner as to locate the entrance at a minimum distance from the highway, while maintaining a highly visible and recognisable facade.

In order not to diminish this important Birthing entry, an attempt has also been made to create an unimposing facade at the other entry; thereby enhancing the relaxed and informal character desired in this family oriented facility.

To further create an even more relaxed and informal environment, the lower portion of the site has been left as natural as possible with the recuperative healing inpatient areas placed within that natural environment. The "arm-like" postpartum wings reach out to the trees and creek beyond, while sheltering and enclosing family gardens within.



Site Concept

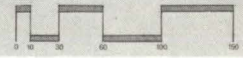


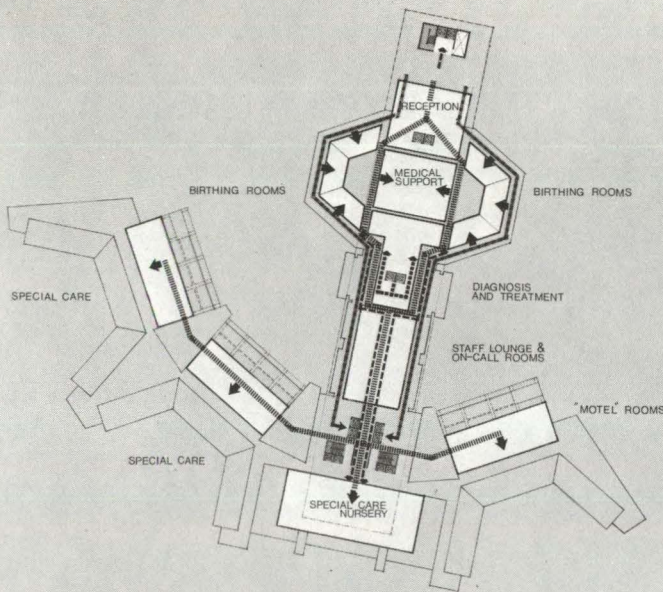
Zoning and Circulation

- KEY:
- OUTPATIENTS
 - VISITORS
 - STAFF and SUPPORT

Floor Plan

Outpatient Level

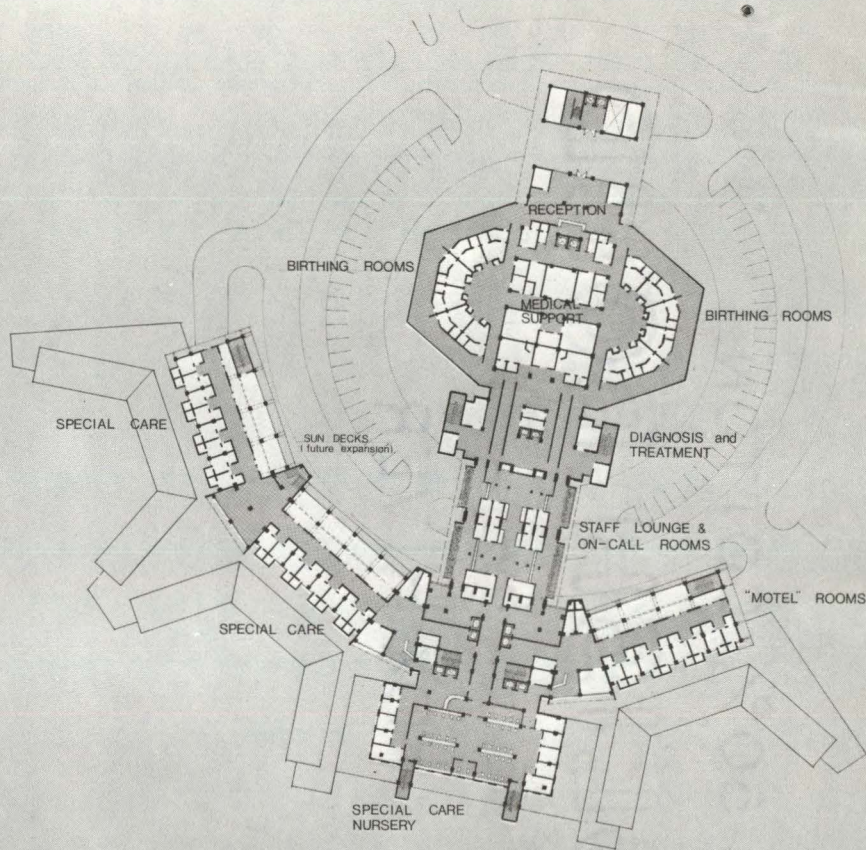




Zoning and Circulation

KEY:

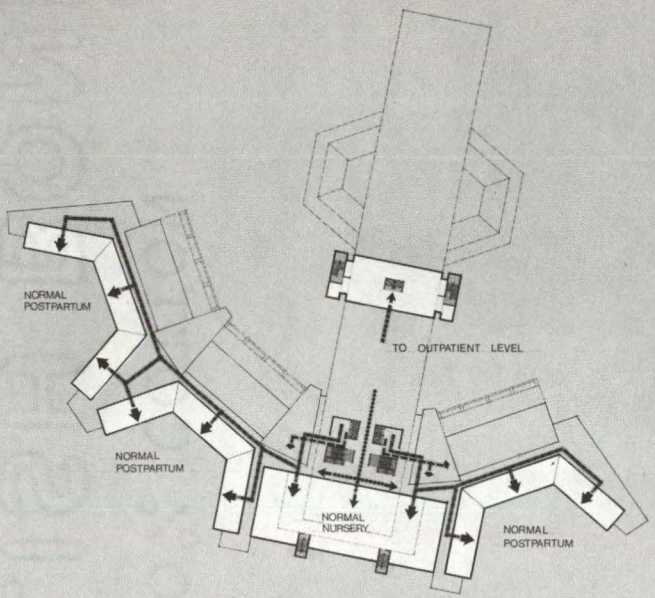
- OUTPATIENTS
- WELL PATIENT and FAMILY
- ILL. PATIENTS
- PUBLIC
- STAFF and SUPPORT



Floor Plan

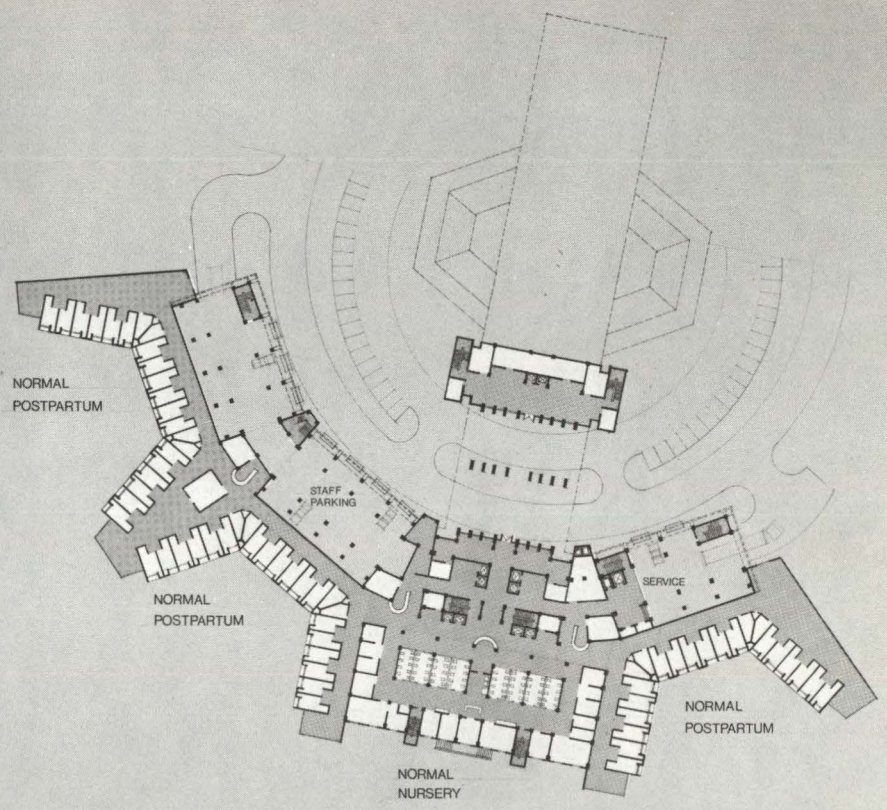
Birthing and Special Care Level





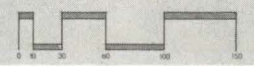
Zoning and Circulation

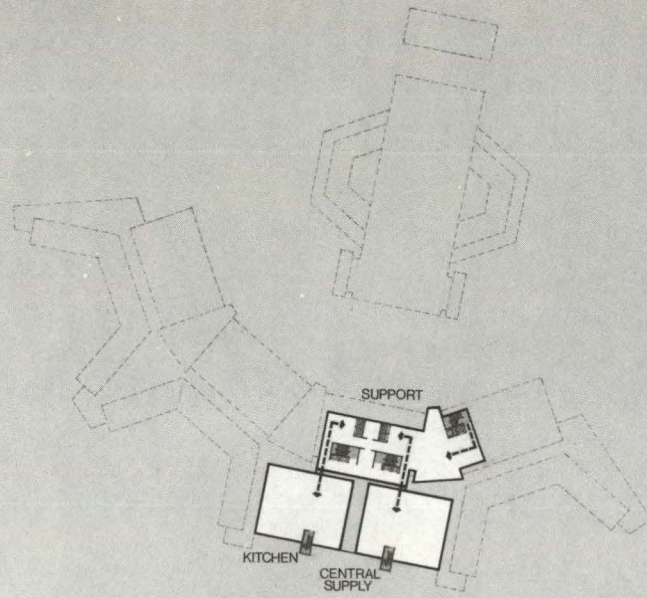
- KEY:
- OUTPATIENTS
 - WELL PATIENT and FAMILY
 - VISITORS
 - STAFF and SUPPORT



Floor Plan

Postpartum Level

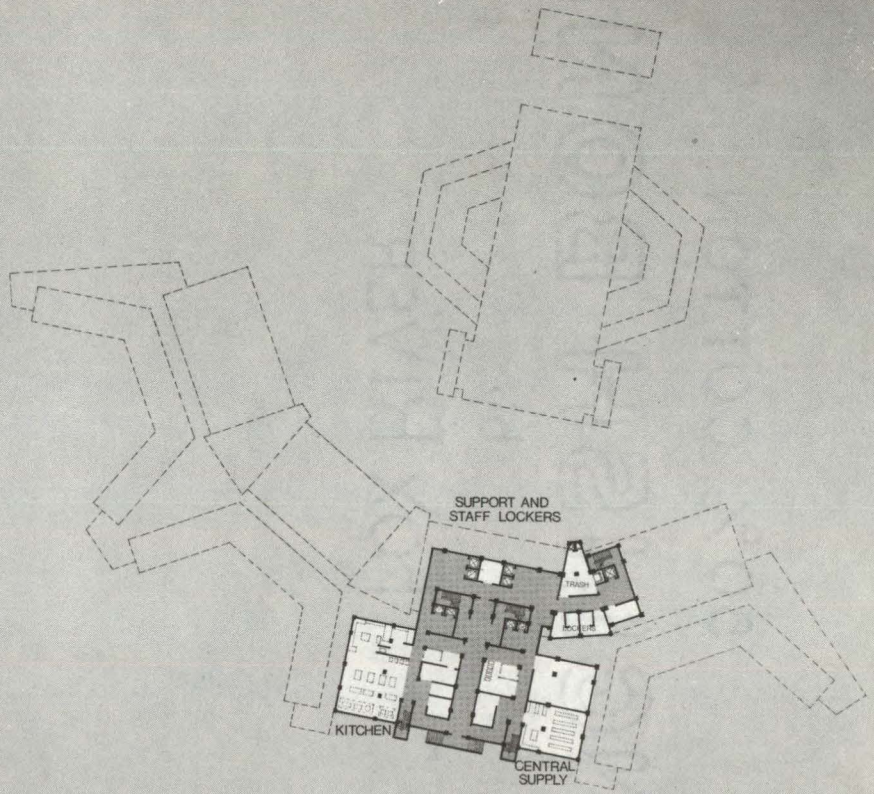




Zoning and Circulation

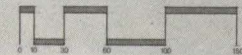
KEY:

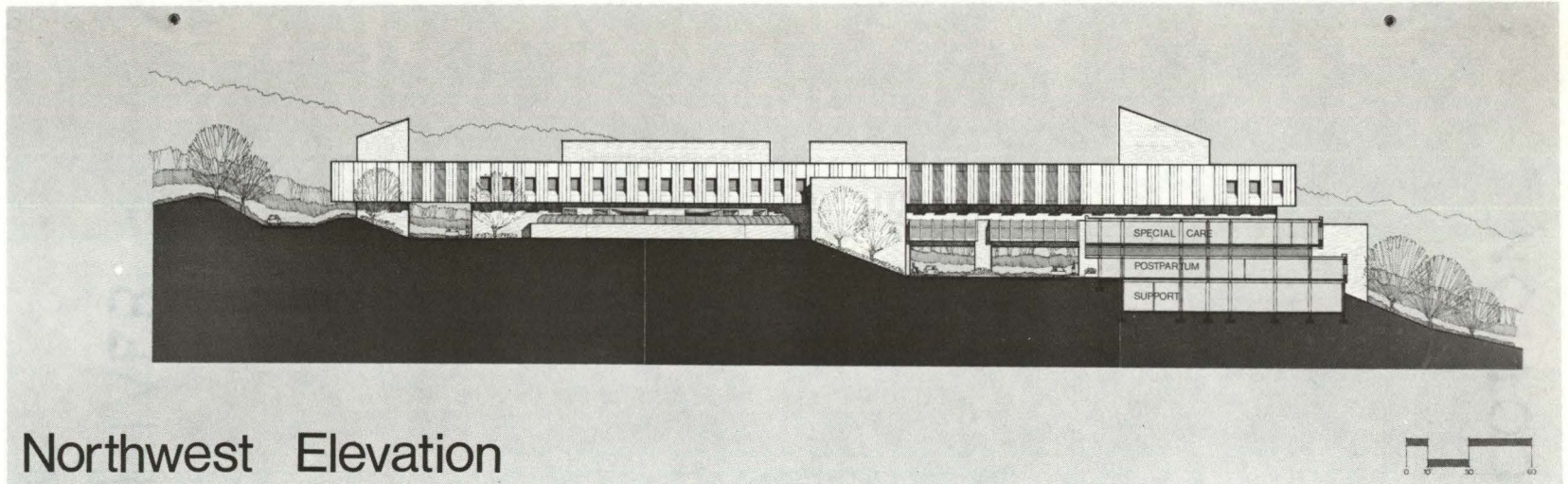
--- STAFF and SUPPORT



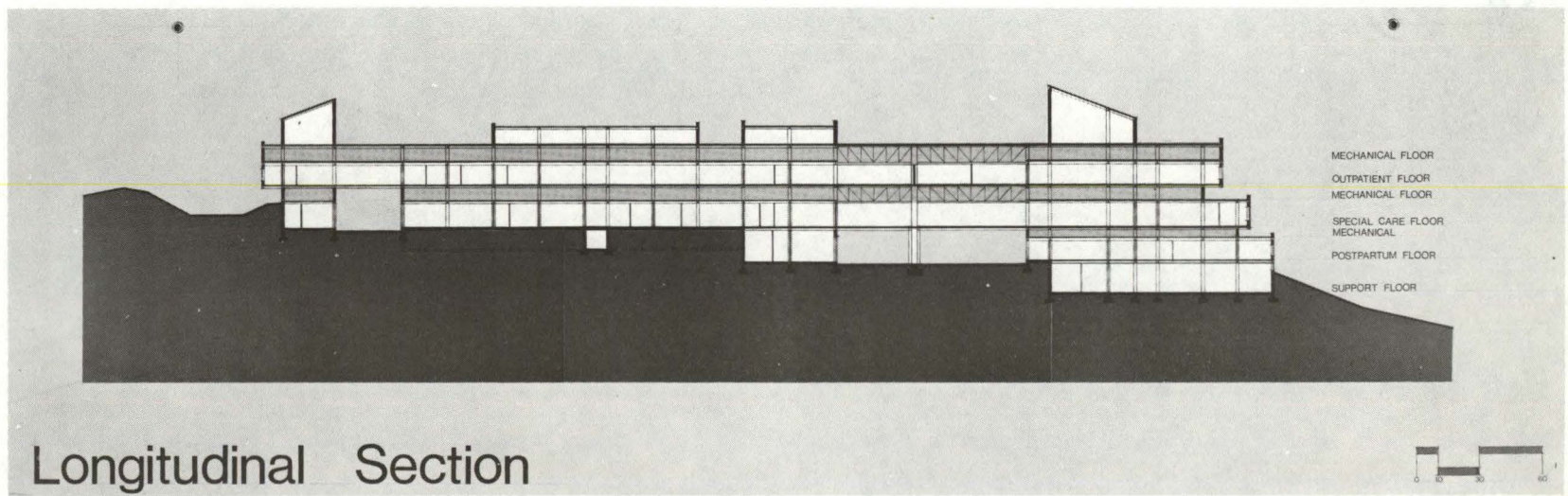
Floor Plan

Support Level

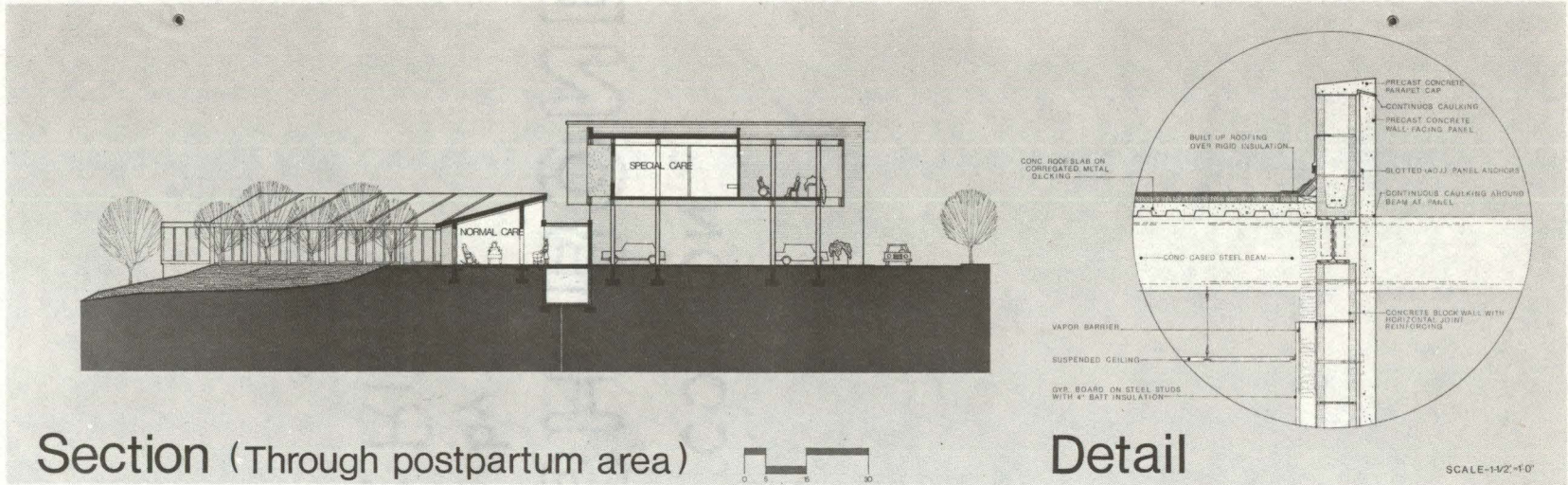




Northwest Elevation



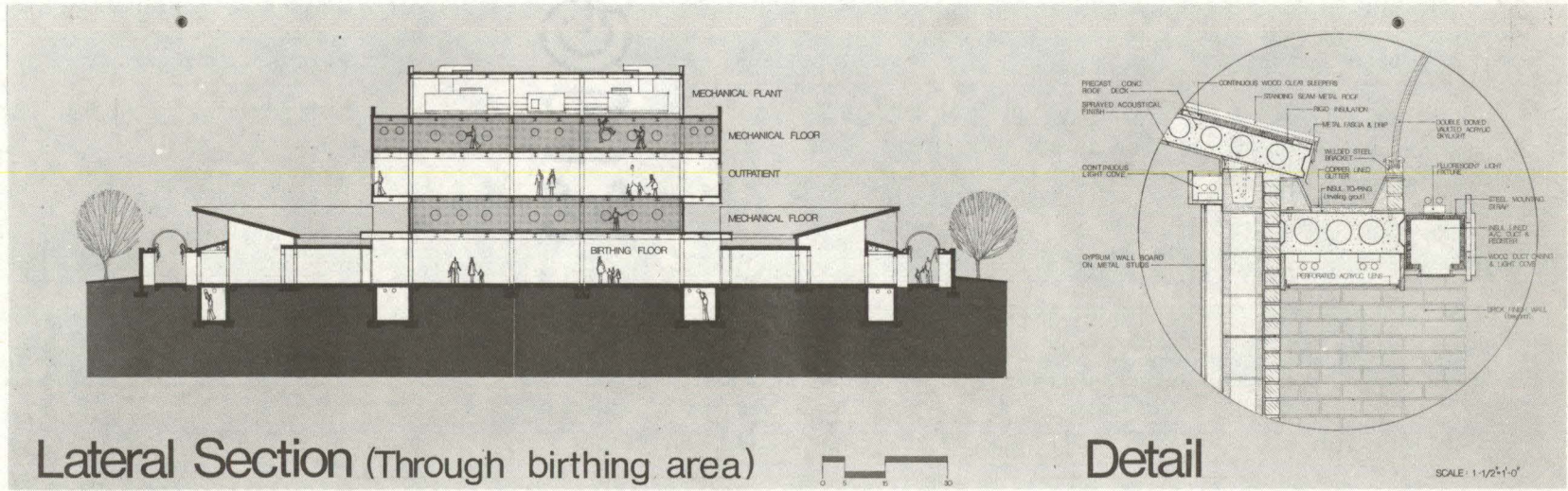
Longitudinal Section



Section (Through postpartum area)

Detail

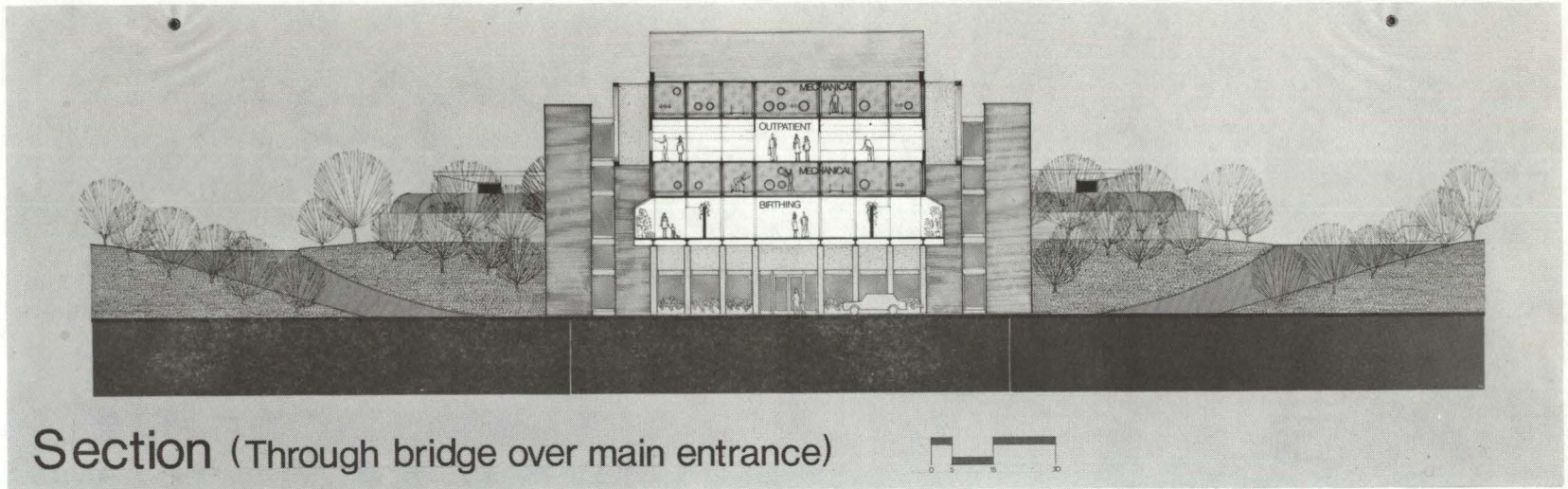
SCALE: 1/2"=1'-0"



Lateral Section (Through birthing area)

Detail

SCALE: 1/2"=1'-0"

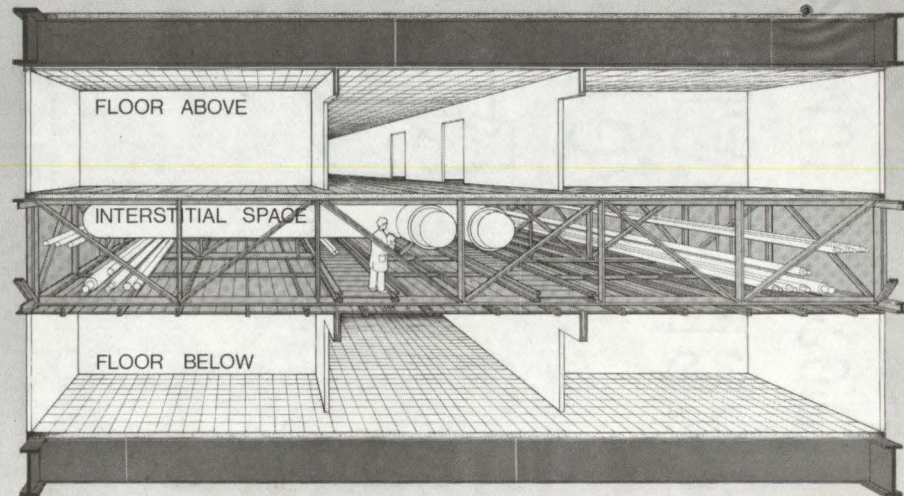


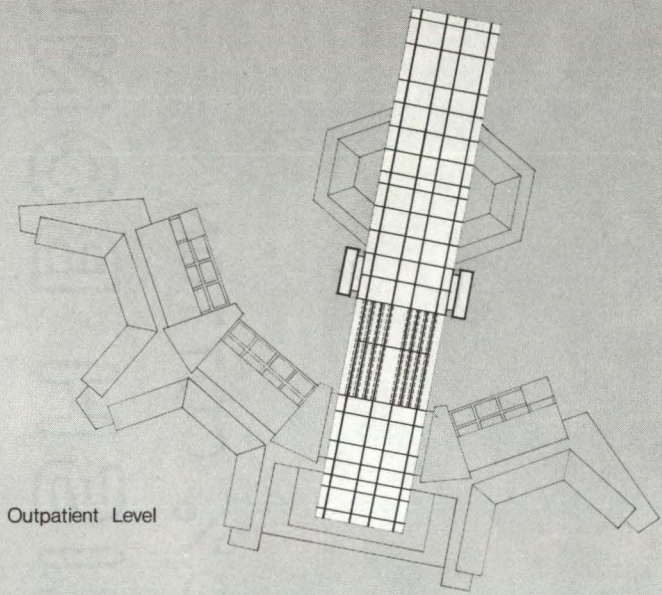
ADVANTAGES OF USING INTERSTITIAL MECHANICAL SPACES BETWEEN FLOORS

- Regular servicing of mechanical systems permitted without interfering with normal functional activity on floors above and below.
- Allows for expansion and/or renovation of mechanical systems while minimizing interruption of activities on floors above and below.
- Flexibility in expansion and/or renovation of floors above and below by minimizing construction time within those areas.

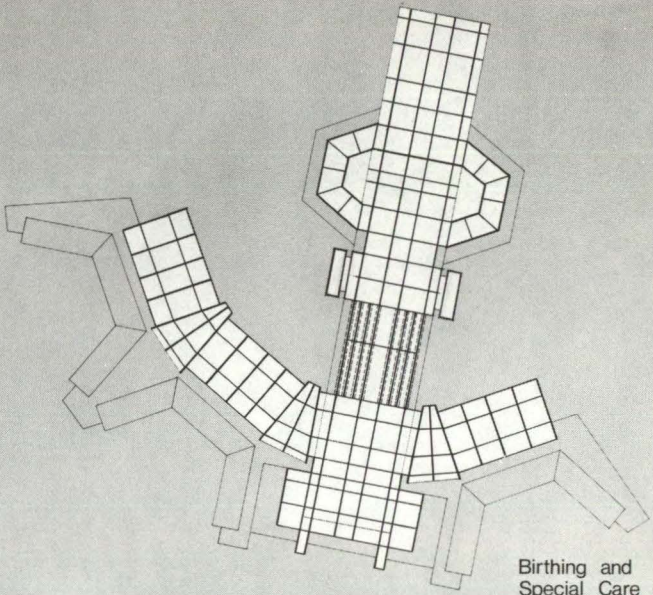
FLEXIBILITY!

Mechanical Concept

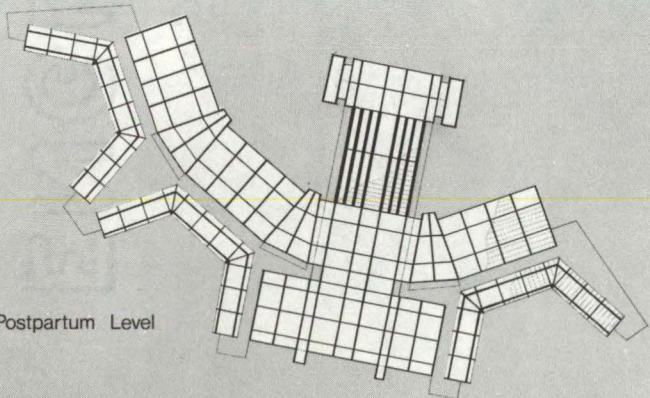




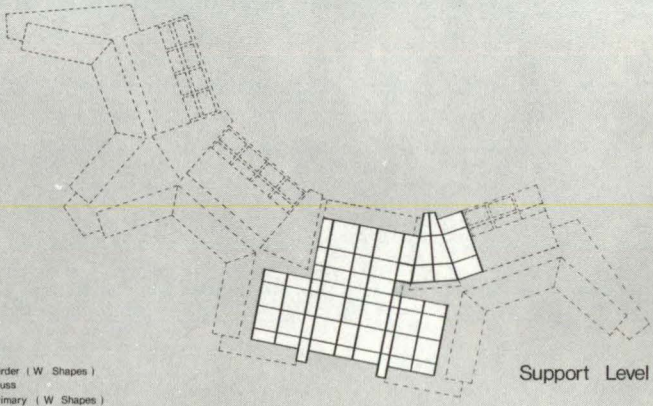
Outpatient Level



Birthing and Special Care Level



Postpartum Level

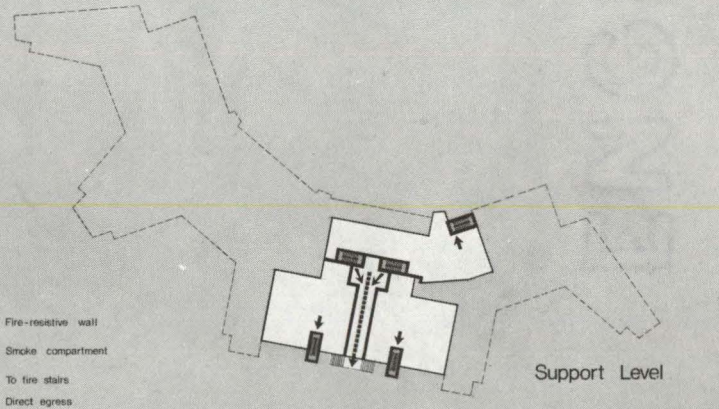
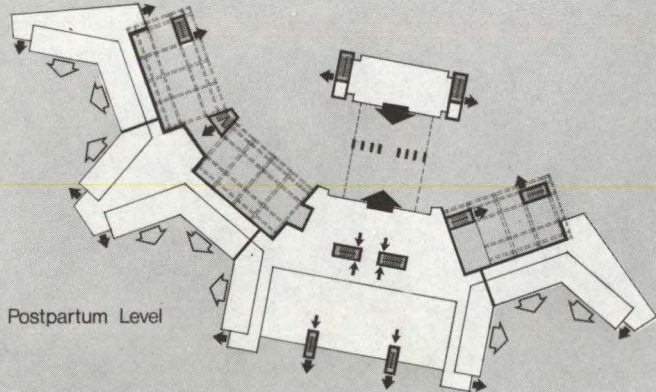
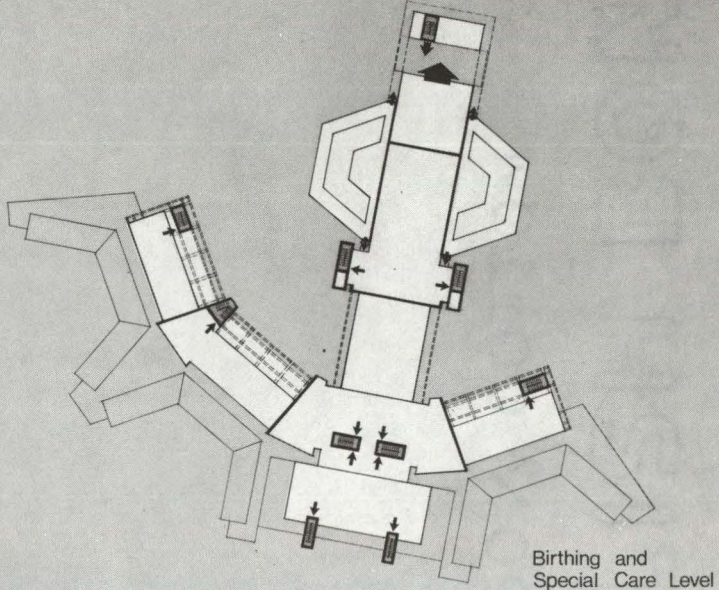
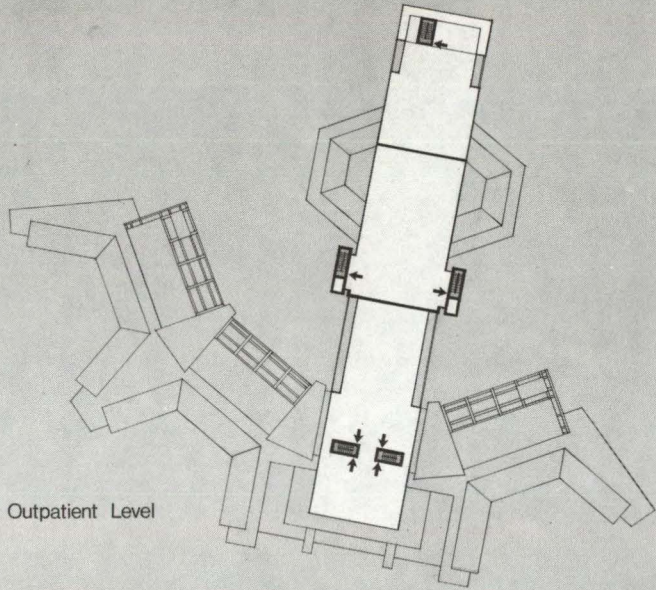


Support Level

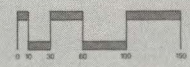
- LEGEND:
- Girder (W Shapes)
 - ▬ Truss
 - ▬ Primary (W Shapes)
 - ▬ Secondary (S Shapes)
 - ▬ Tertiary (J Shapes)



Framing Plans



- LEGEND:
- Fire-resistant wall
 - Smoke compartment
 - To fire stairs
 - Direct egress
 - Direct egress from patient rooms
 - Major entrances/exits



Fire Safety

FOX RIVER

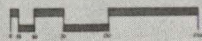
CRISTINA BOND
40% COTTON PAPER

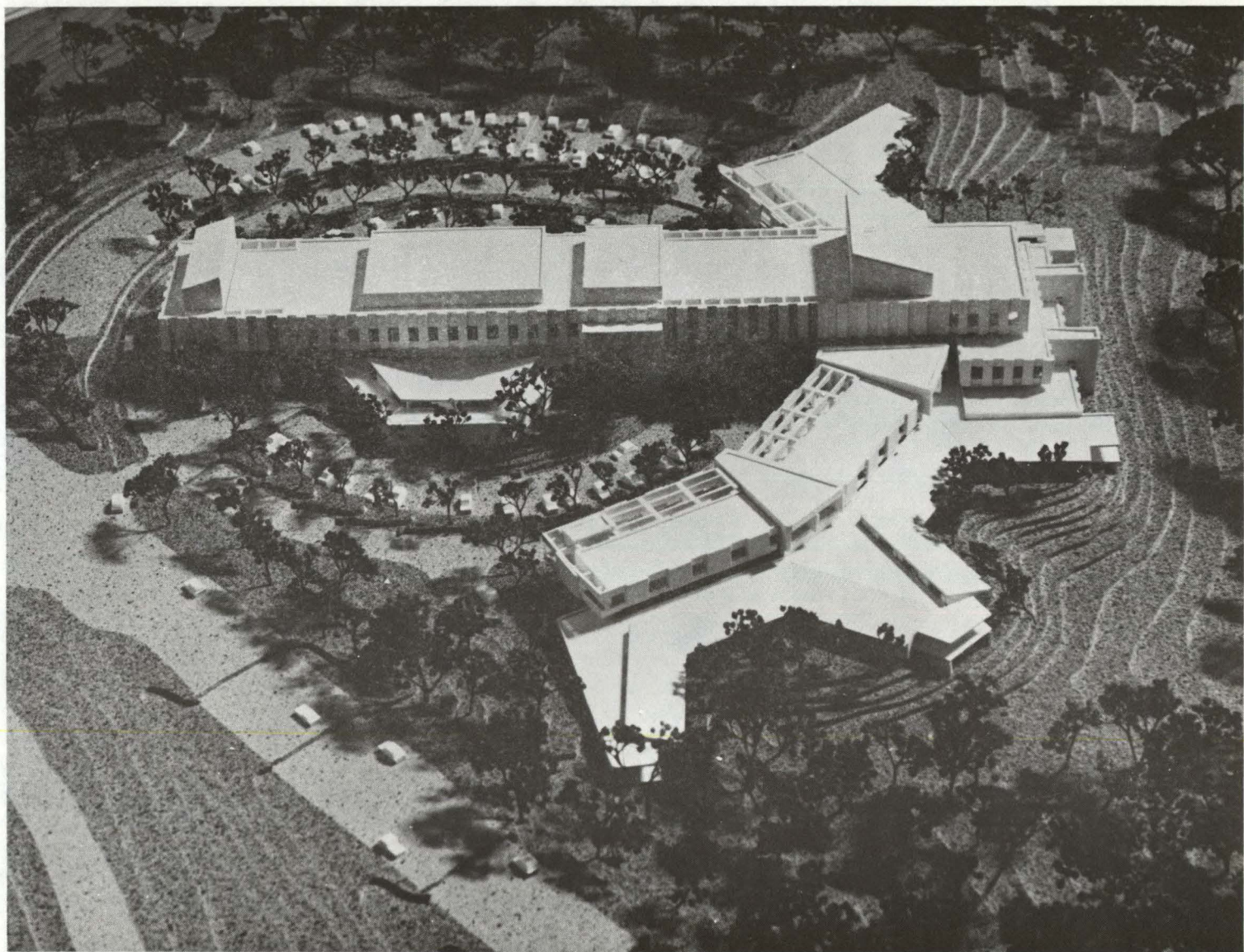


birthing place

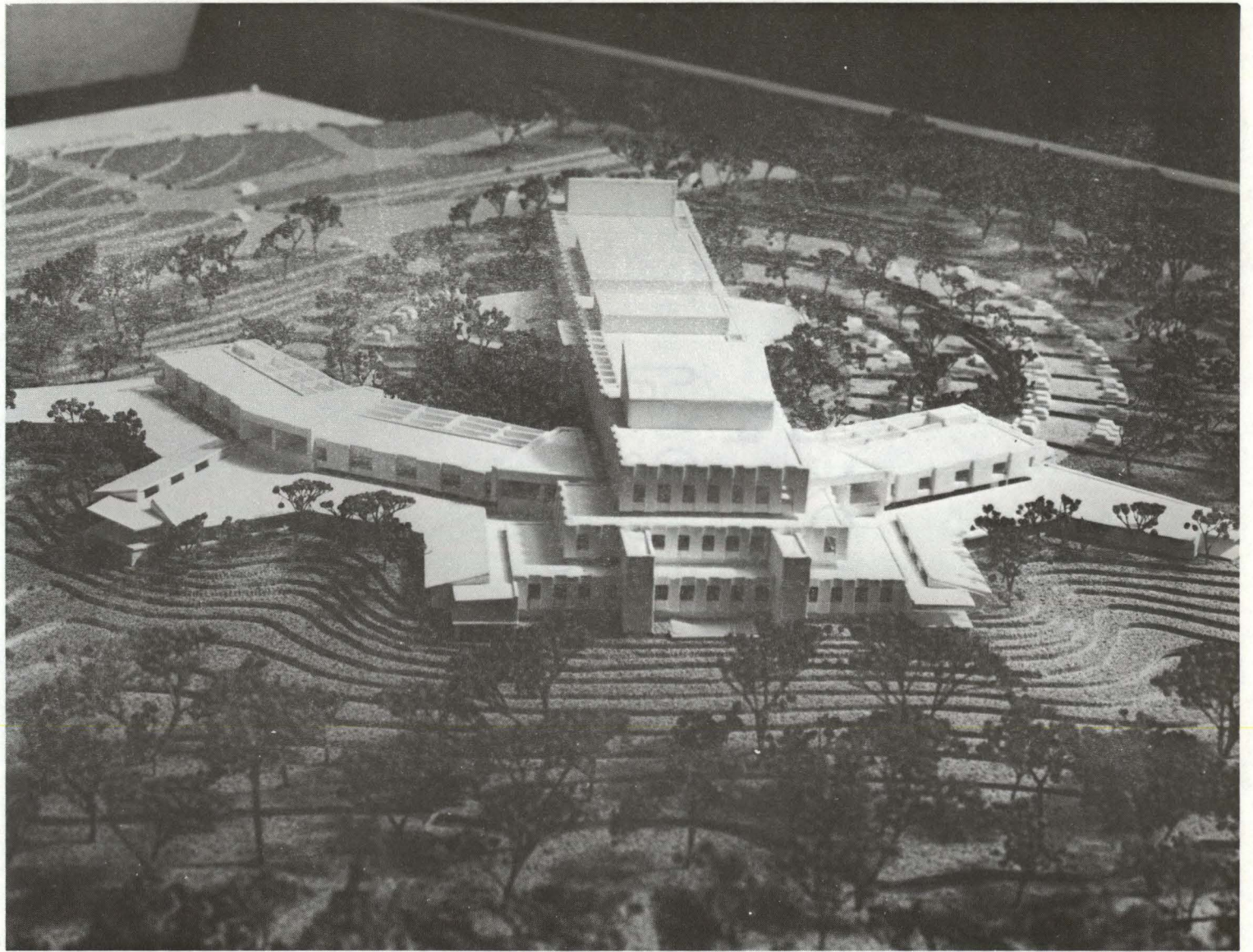
AN ENVIRONMENT CONDUCTIVE TO FAMILY-ORIENTED PERINATAL CARE

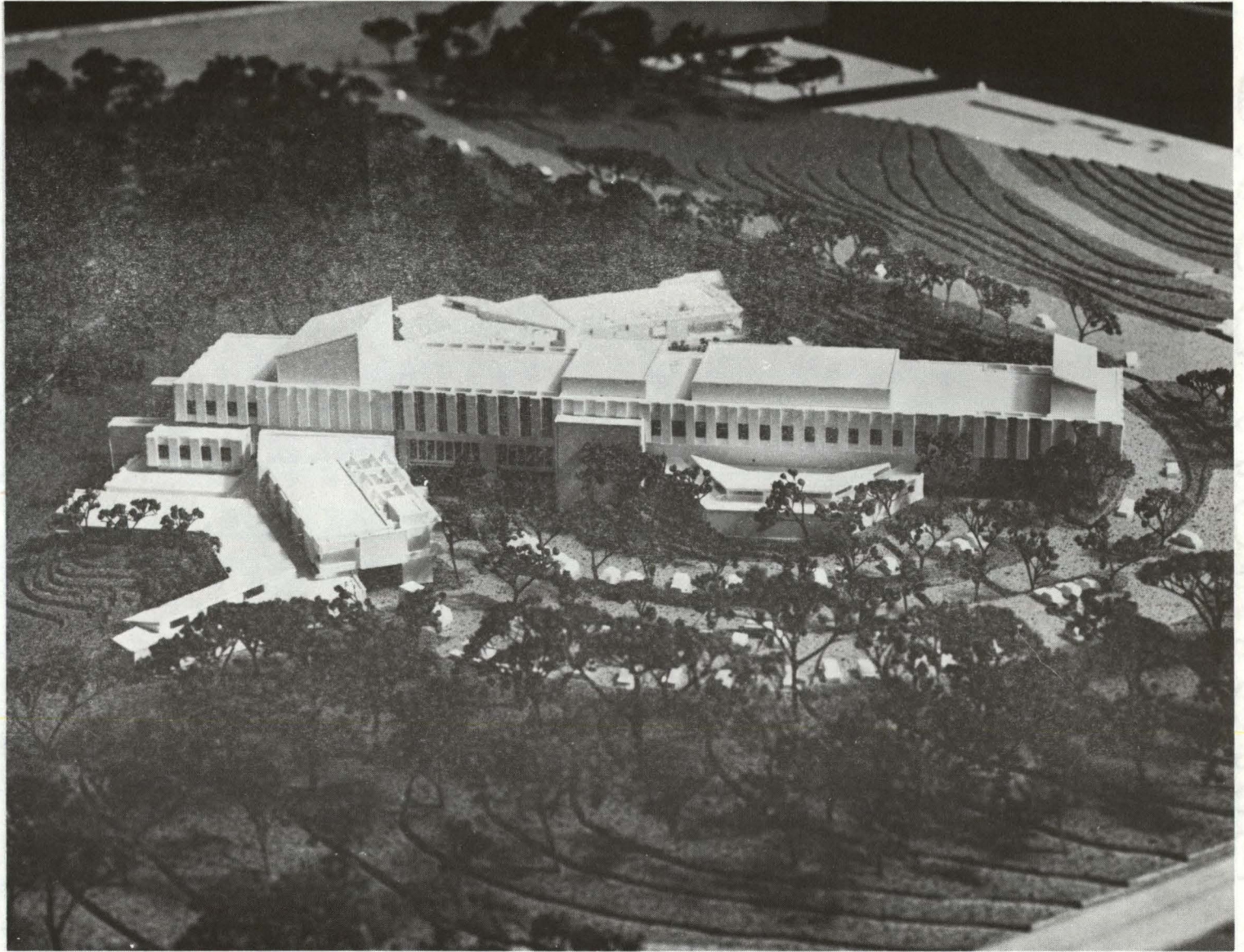
TERMINAL PROJECT Fall 1990 — Beth Edwards, Health Care Facility Planning and Design Studio











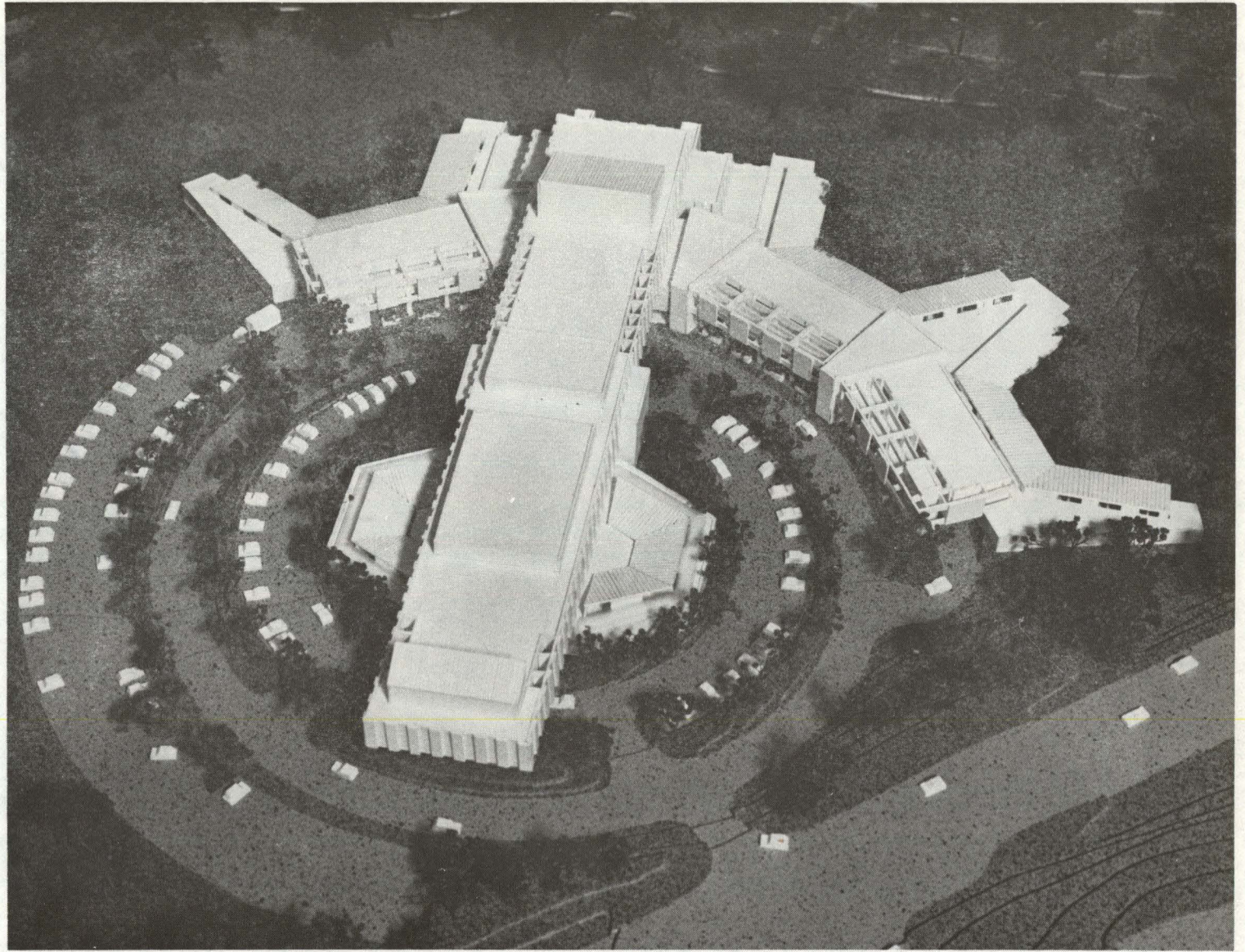
FOX RIVER

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50% COTTON
ENGINEERING

ENGLISH BOND



LIST OF FOOTNOTES

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2. Bing, E. and Barad, G. *A Birth in the Family*, Bantam Publications, May 1973.
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4. "Meeting Consumers' Demands for Maternity Care." Proceedings of a Conference for Nurses and Other Health Professionals. Seattle, Washington, 1972.
5. Interprofessional Task Force of Women and Children, Joint Position Statement on *The Development of Family-Centered Maternity/Newborn Care in Hospitals*, June 1978.
6. Regionalization Bulletin, American College of Obstetrics and Gynecology, May 1975.
7. Barnes, E.F., *Ambulatory Maternal Health Care and Family Planning Services – Policies, Principles, Practices*. American Public Health Association, 1978.
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- Moyle, Billie, R.N., Personal Communication. Assistant Administrator of Oconee Memorial Hospital, Seneca, South Carolina.
- Nicholson, Meredith A., R.N., Personal Communication. Associate Professor of Obstetrics, College of Nursing, Clemson University, Clemson, South Carolina.
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