TWIN LAKES SENIOR VILLAGE

HOUSING COMMUNITY FOR THE ELDERLY

FIFTH YEAR LANDSCAPE ARCHITECTURE COMPREHENSIVE PROJECT
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Introduction

The issue of retirement communities first came to my attention in the summer of 1990 while serving an internship with Cole Associates. Cole Associates is one of the largest architecture/planning firms in the midwest; my experience there allowed me valuable exposure to the world of design and planning. The retirement community on which I had drafting responsibilities was "Cardinal Village" located in Indianapolis. It was while working on this project that I first became concerned with, and interested in, the unique housing needs of the elderly. I was involved with the many diverse and complex issues associated with retirement developments and the immense task of finding solutions to the present problems of the aged. I have found this to be a enlightening learning experience which has acted as a catalyst in defining the direction of my professional interests and goals.

From further investigation this last summer, I have come to realize how important this issue has become in our society and how it affects me. Many of my relatives, including my grandparents, will be needing some type of health care, or service, in the very near future. I am astounded by the nursing home horror stories which, periodically, appear in the news. This has resulted in a very personal concern regarding the well-being of our nation's elderly.

Therefore, the focus of my comprehensive project was the design of a retirement village responsive to the conventional concerns and issues uncovered throughout my research. This research included the study and visitation of established communities, the review of recent literary resources, and the consultation of advisors. These advisors included elderly couples currently in the market for community housing as well as university faculty. My final prototypical site is a model for future projects which will serve to improve and enhance the quality of life for the elderly resident. I also plan for the eventual publication of my work to increase the public awareness of the aforementioned issues.

The pleasures and happiness which are possible during our twilight years should not be compromised or denied. I am proposing that, through the integration of landscape architecture and an understanding of the needs of the aged, we, as designers, can plan retirement communities which enrich and enliven those fortunate enough to reside in them.
Background

According to the October 1989 issue of Money magazine, over the next ten years the ranks of Americans 65 and older will increase by 12%, while those 85 and older will swell by 42%. As more people live into their seventies, eighties and beyond, more of them will become ill or infirm. Even among those elderly who do not require acute medical care, nearly 60% need assistance to perform the most basic tasks of daily life - paying bills, eating, dressing, bathing (Bane 67). More than one third of people 65 or older, for example, find it hard to climb stairs, or carry a bag of groceries. And presently there are 30 million people 65, or older (King 89).

This growing segment of our population will be forced to make some very serious decisions regarding how they will be spending the rest of their lives. More importantly these decisions could dictate the quality of their twilight years. The majority will either choose to live with relatives, stay with a nursing home, or move into a life care community. In the past two decades, we have witnessed in the U. S. a growing segment of the aged opting not to impose on relatives, or risk the integrity of a nursing home, but rather to invest in a retirement development (Hennon 45).

Until recently, models for living accommodations geared to old people were two: home and hospital. The healthy, if poor enough could live unassisted in housing targeted for the elderly; those needing assistance, if rich enough, could enter nursing homes. Both models, however, proved too simplistic to compass a diverse elderly population with needs ranging from help with shopping, to full-time skilled nursing. To provide arrangements less stringent than the nursing home and more supportive than conventional elderly housing, a middle ground of residential care facilities has evolved that augments shelter with such services as prepared meals, assistance with housekeeping and personal care, and limited medical oversight, in an attempt to match the amount of help residents need with the amount offered. Extended to include the extremes of unassisted living and long-term skilled nursing care, this attempt is the conceptual core of the "continuum of care" espoused by the burgeoning lifecare and continuing-care retirement communities (Gaskie 98).

Life care, continuing care, retirement village, active adult community, mature adult community, are all synonymous and can be generally defined as a development consisting of a configuration of housing units and recreational amenities designed for the 55 and older
community, with some thought given as to how the residents will be cared for as their needs increase. Unfortunately, many of these communities are unsuccessful in providing for the unique lifestyle needs of our growing elderly population, particularly as they age. There are many examples of this unresponsiveness. The separation of acute medical facilities from the rest of the community, or an institutionalized and segregated atmosphere are two common faults of many such housing projects.

It is these developments with which this project is concerned. The specific site design, planning, social, and economic flaws hindering the responsiveness of many conventional adult communities has been identified through research. As a result, new innovative design principles have been formed to guide the solutions to the defined problems. These solutions have been integrated onto a site through the design of a site plan and related amenities.

Presently, the housing being sought, which this project was designed towards, holds the promise of fostering both the self-image of independence to which even the frailest people cling, and its' reality, by minimizing excess disabilities caused by environmental obstacles and providing unobtrusive aids to movement and perception without relying on their use. Such housing will not, however, be blazoned with an "E" for elderly. And since comfortable surroundings for the old, also are more comfortable for younger people, it holds the added promise of attracting a flow of the young-old to balance a project's age profile (Spicker 67).

There are several issues which have been addressed specifically. The community conveys a neighborhood atmosphere, which feels like home, not an institution. The residents will feel like they are an active part of society and in control of their lives, not like they are being taken care of. The site plan proposes amenities which will provide for the residents' more essential needs, to insure that they are confident, secure, comfortable, social, and possess a sense of well-being in terms of their future. An integral part of this well-being involves the assumption of a long term health care program readily available and guaranteed. A comprehensive, active adult village has been designed that may serve as a prototype for communities which wish to be responsive to the needs of the elderly; a community whose residents will be happier and more secure in their future.

The final prototypical site may be used as a model for future projects and serve to improve and enhance the quality of our senior years. The eventual publication of this work is intended to increase the public awareness of the aforementioned issues. The pleasures and happiness
which are possible during our twilight years should not be compromised, or denied.
Programmatic Statement

There are many design goals for this project set forth by current elderly housing and design literature such as Diane Karstens' "Site Design and Planning for the Elderly" which will be integrated into the programmatic statement. These goals will be separated into five categories: perceptual goals, physical attributes, amenities and detailing, design guidelines, and assumptions. It was this criteria which formed the communities final design.

The perceptual goals portion of the program is concerned with the emotional well-being of the residents and the essence, experience, and aesthetics of the site.

The development will be aesthetically pleasing and comfortable. The design will be natural, the landscaping will be soft, serene, organic and inviting. The community will incorporate a continuous care philosophy which will adjust to the needs of the residents as they age. Through the developments' design the residents will acquire a 'sense' of:
  * community - will feel they're a part of a neighborhood.
  * security - both of their property and their health.
  * individuality - of their housing areas (cottage, condominium, apartment) and individual properties.
  * 'home' - a place they want to spend the rest of their lives.
  * being an active part of society - not segregated from "normal people".
  * independence - not institutionalized, but rather alive, active, and in control.

The physical attributes section of the program specifically dictates the number and type of major design elements which will be used on this site for this community. The figures have been extracted from existing successful retirement communities, literary resources, and resulting design interests of the project manager. The retirement community will consist of:

132 total acres
220 units (60 cottages, 60 condos, 100 high-rise apartments)
1 clubhouse
1 swimming pool
10 shuffleboard courts
3 tennis courts
1 fragrance gardens
1 security gate
340 residents
2 ponds
2 miles of walking trails
1 mile of biking trails
2 management/maintenance buildings
1 commercial center; grocery, barber shop, drugstore, bike, scooter, sailboat rental
1 personal garden plot area

The amenities and detailing portion of the program is simply a listing of specific elements which are presently foreseen as being essential to this project and are assumed to be used if not graphically presented. These amenities and details consist of:

VEGETATION
*low level planting or high-branching trees for ease of visibility
*planting at grade or in raised planters

VEHICULAR CONCERNS
*sign to identify entry, visible from distance
*transit stops
*seating/waiting area with cover, newspaperstands etc. at drop-off
*wide turning radii
*drives and boulevards 20-foot width each way
*strong street lighting
*stops clearly marked
*parking; wide stalls and turning radii
*overhead cover for drop-off areas
*handicap parking

PEDESTRIAN CONCERNS
*security and accent lighting along walkways
*slope 2.5-5% maximum
*special paving to define areas
*non-slip, non-glare paving
*use of grip-rails and grab-posts where applicable
*seating choices undercover, in shade, and sun
*detailing to suggest extent of area for personalization
*no low-level protusions or edging
*rest stops with seating and shade every 200 feet
*goals enroute (mailboxes, etc.)
*major walks 6 ft., minor walks 5 ft. minimum
*drinking fountains
*lawn to meet pavement at grade
MISCELLANEOUS OUTDOOR AMENITIES
*elevated fragrance gardens
*storage areas near gardens
*amenities to attract wildlife
*bicycle racks

The design guidelines section of the program consists of design requirements and goals, and specific ways in which to satisfy those requirements, which are essential to the retirement communities success. This section represents the 'heart' of the program.

Safety and Security:
Safety and security are important attributes of this project. To help facilitate a safe and secure environment, the design should promote comfort, ease of access, and environmental negotiability. Frequently used areas should be visible from places frequented by staff and residents. Intimate and public spaces should be located for physical protection, between 3 walls, buildings etc., and clearly defined. Ease of access also includes transitional areas for physical and psychological comfort. Transitional areas should incorporate seating, views, protection from weather, and a human scale.

Spatial Planning:
Because the elderly may have trouble with orientation and wayfinding the site will be designed with their needs in mind. The overall plan will be simple, obvious and clear. The major elements will be identifiable. These elements or areas will be arranged in hierarchies. Directional and locational aids will be used, possibly incorporating color-coding, signage and other orientation aids. Major landmarks must be highly visible. The plan will encourage socialization, sensory stimulation, and environmental comprehension. The residents will be able to 'claim a space'. An area's particular use and users should be clearly defined. Most spaces will have a connection to ongoing activities.

Predictability of Space and Control:
To encourage an easy understanding of the site, some things need to
be clearly defined, which are; public outdoor areas, areas for residence use only, spaces for private or intimate use, and areas that belong to a cluster. The use of landscaping and detailing may help suggest certain areas. A formal landscape will be used for the entrance and public use. An informal landscape will be used for areas for residents use only. The size of areas may suggest use. Multipurpose will should be avoided.

Spatial Preferences-Socializing, Mastering, and Claiming:
Spaces should support social interaction. Some spaces should easily be claimed by residents. Smaller spaces are more preferred by elderly because they are more easily negotiated and mastered. Spaces must not be isolated from action. An attempt will be made to create a series of smaller spaces. Where larger spaces are necessary smaller sub-areas can be subtly incorporated. The vertical scale should be minimal. Areas will have definite boundaries suggesting the extent of an area to reduce ambiguity.

Sensory Stimulation and Environmental Comprehension:
To discourage the elderly from reducing their dependence on the environment, their surroundings should be sensorially loaded including tactual, visual, and auditory stimuli. A balance between the high level of detailing and degree of uniformity must be established. Tactual clues are more easily read. Because of the yellowing corneas of the elderly yellows, reds, and oranges are most easily seen. Night lighting is essential. Sounds of lower pitch and greater intensity are most easily heard by the elderly. (i.e. street crossing buzzers etc.)

The assumptions section of the program simply identifies the breadth of detail the project will encompass. It is assumed that this project is only concerned with the outdoor physical planning and design of the community, with exception to previously mentioned areas of interest. This project will result in a masterplan designed at 50 scale. Due to the scope this project some amenities/elements will not be graphically represented but assumed (i.e. lighting, minor seating, paving patterns, directional signage etc.).
Site Analysis

The site is located in Muncie, Indiana, sixty miles north-east of Indianapolis. It is located in the eastern portion of Muncie, on the north side of SR 332, between the intersections of 500W and 600W. The site is surrounded by farmland.

Presently the 132 acre site consists of mostly farmland with two stands of trees totaling 38 acres. A small creek runs from the north-east corner of the site to the southern border. The entire site is relatively flat. The only views or noise factors which need to be addressed are those associated with SR 332. Soil types associated with the site are compatible for building.

The following facts and assumptions have been determined regarding this site:
* The site is within 10 miles of a hospital, fire department and other emergency services
* The proximity to I-69 makes it convenient for loved ones to travel to the site
* The Muncie community and commercial districts are easily accessible from and to the site
* Site specific details like soil types, topography, wind patterns etc. are compatible with the retirement communities' design

It is important to understand that this site was chosen for its nearness to the project manager and the availability of relevant data. Likewise the flat topography and attractive woodlots suggest great potential for a scenic housing community. The openness of the site provides for a large degree of flexibility in the communities design.
Conceptual Evolution

The philosophy of continuing care which this project is adopting hinges on the establishment of varying levels of health assistance. Each level is designed according to the assistance required by its user group. For instance the first levels are appropriate for the more independent, active resident and the last level accommodates the needs of the more infirm, ambulatory user. Some continuing care communities have as many as seven levels of care, others as few as three. For this project three levels of assistance have been defined.

Level One consists of both residential and recreational amenities suited for healthy, physically active, independent residents. This user group will mostly be between the ages of 55 and 70. This independence consists of both transportation and daily activities such as dressing, eating, and shopping. It is important to understand not all elderly require supervision or care as stereotypes might suggest. Likewise this continuing care community is not just for the infirm person but for the healthy resident who recognizes their future needs, and is concerned that these needs be met. It is for these people that Level One is appropriate.

The area which will be referred to as Level Two is designed and planned towards people requiring moderate assistance in everyday living. This user group's needs will be satisfied through services such as community transportation, a cafeteria, emergency medical assistance on site, dressing and shopping assistance, etc. The Level Two layout is simple and easily comprehensible. This decreases the potential for residents to become disoriented, a common problem among the elderly.

Level Three will provide services and housing for the most dependent and infirm of the residents. Full medical staff and facilities are associated with this area. This site will serve the function of a hospital or nursing home without being segregated from the community. It is this facility which encourages a feeling of security in all the residents regarding their long-term health needs and requirements. There is no reason for an uncertain future for the aged when pondering where and how these requirements will be met.

How these three levels interact was another major consideration in this communities design. According to "Site planning and Design for the Elderly" there is a certain psychology associated with the interaction of the three levels. It may seem obvious that the Level Three resident has a need to feel an active part of the community, rather than segregated as many communities do. Unfortunately many of the more independent
residents associate the Level Three facility with death or dying. The challenge is to some how buffer Levels One and Two from Level Three without segregating Level Three from the community as a whole.

The solution is a central recreational area where all three levels may interact. This is arranged so that all three levels have direct access to the central area, but do not encroach upon it. Level Three may be buffered from levels One and Two through vegetational screening or distance, but will always have direct and open access to the center of activity and socialization. Likewise Level Three is not visually forced upon the other residents and may be associated with the pleasant amenities surrounding it, rather than death or dying. (see Fig. 1)

![Figure 1](image)

Just as Level Two's layout is simple and clear, so is the organization of the major areas and amenities of the community. This again decreases the likelihood that a resident may get lost or disoriented. Clear planning at this scale is also very helpful to the visitor or resident travelling by automobile. Making the site clear and simple increases the potential for the more intimidated resident to utilize the site, thus a greater feeling of independence and security. (see Fig. 2)
The communities road system circumscribes the site itself to focus the site inward and decrease the instance of the road intruding on the inner community. This design has the added benefit of negating any need for a pedestrian to cross the road. Every area of the site is accessible to residents walking or in wheelchairs, reducing substantially the potential for vehicle-pedestrian accidents.

Final Conceptual Diagram and Masterplan

Now that the general plan of the community has been established and explained, the specific elements of the site and their location will be addressed. The site has been planned at 50 scale and the level of detail represented here reflects the large scope of the design. The community has been divided into the major areas, elements and amenities and explained below.

The Entrance

At the 600 West juncture is a sign announcing the community. A drive leads from 600 north to the entrance of the site. This road crosses the existing creek twice in a series of lazy curves. Near the communities entrance the road straightens out into a formal configuration.
The entrance area is located at the northern tip of the community where the user has a choice of turning left, right or continuing forward. At this four way stop a security gate checks all in coming vehicles. This gate ensures that unwelcome vagrants will not gain access to the community, as well as facilitating a sense of security in the residents.

From this vantage point there is a clear view to the Pavilion building which acts as the focal point of the entrance. Most people from the Muncie community, prospective residents, and visitors will be headed to this Pavilion area. The road to the Pavilion building is lined with trees becoming a boulevard accented with three small fountains along the median. This formal design not only identifies the entrance area but differentiates it from the more private residential areas.
Level One

This primarily residential area is dominated by a series of cul-de-sacs. Cul-de-sacs have been identified as being an especially attractive road layout to the elderly because they are associated with security and neighborhoods.

The roads are lined with one story duplexes. These duplexes were chosen because having a neighbor directly next door increases a feeling of security as well as encouraging socialization. The ample yards surrounding the houses are to be designed and cultivated by the residents as they wish.

Between the cul-de-sacs are open, informal, courtyards. These courtyards consist of paved walks which connect the backyards of each house to the rest of the site. The courtyards contain both smaller intimate spaces for private use and larger open areas for public use and social gathering. These spaces are defined by shrubs and tree groupings.

Between the residences and the central area of the community are three tennis courts. These courts will primarily be used by the residents of Level One. The courts also help define the boundaries of Level One. The other boundary markers are the personal garden plots to the west and the tree buffer to the east. Boundaries define the area to the residents enabling them to identify it as their own. The entire area suggests a neighborhood, community, and is designed to encourage social interaction.

Level Two

This area is made up of small rows of condominiums and one management facility. The condominium units will each have a front yard and a back yard. The front yard extends fifteen feet from their doorway to the sidewalk. This area is theirs to plant and add amenities as they wish. Personalizing their front yards with bird baths and shrubs reinforces a sense of home, as well as individuality. The back yard contains a patio fifteen feet deep with an additional ten feet to the sidewalk. This patio and yard again is for there design and decoration. The patio not only serves as an outdoor sitting, eating, area but a chance to watch and talk to the neighbors passing by. If the resident wishes a more private area they can plant shrubs or even a fence along the patios border. Between the patios of the individual units themselves will be a fence.

The condominiums are arranged so that courtyards are formed and accessible via the backyard of the unit. The courtyards consist of seating areas, trees and shrubbery. This vegetation forms both intimate and public spaces. These courtyards encourage socialization through their shared spaces design and relationship to the unit patios.
Section at Level Two Unit

The management facility houses not only personnel but a cafeteria, meeting areas, and offices. The front of this building connects the parking lot to the rest of the area through a drop-off area. Drop-off areas are in many cases the focus of activity in retirement communities. This drop-off area consists of an overhang, seating area and bollards. The overhang is needed in case of inclement weather, or extreme sun. The seating area is important because these are prime people watching areas, which accounts for their popularity. The seating should be slightly set apart from the drop-off so as not to be intrusive. The seating area is also partially covered by the overhang so the users have a choice of sun or shade. Bollards are being used instead of a curb for easy wheelchair access. This type of accessibility is common throughout the community.

Section at Drop-off Area
The parking insures no one need walk more than 200 feet to their unit. And like the rest of the site twenty percent of the parking is handicapped parking.

The very southern edge of this level contains a personal garden plot area. These ten by ten plots are to be used by Level Two residents interested in doing their own gardening. In most present retirement communities there is an obvious need for gardening facilities, this being a pleasant passive activity for the elderly. The grid pattern of the plots encourages impromptu socialization.

Besides the garden plots, the Level Two area is adjacent to the lake and the Pavilion area. These boundaries along with the more rigid design of the area help define the extent of Level Two.

**Level Three**

This area is dominated by a three story nursing/residential facility. This building not only houses the more infirm residents in apartment style quarters, but also houses a full medical staff and facilities. Likewise many recreational and socializing amenities are available within the building.

A large building was chosen for this level because of its obvious efficient and safe qualities. Because the majority of continuing care facilities opt for such a facility this project has chosen to design the community with such a structure in the program. Unlike many communities this building is not overtly hidden away or segregated from the senior village but within easy access of all the major amenities.

To the west of the building is located a large open deck area. This deck is for sitting watching and socializing. From the deck the lake and fragrance garden are clearly visible and accessible. The Level One tennis courts are also within watching distance for the avid tennis spectator.

Between the major Level Three deck and the tennis courts is a smaller, more intimate deck surrounded by flower beds and shrubs which is an excellent place for the two levels to relax and socialize.

To the south of the building is a group of trees to screen the building from the Level One houses. On the east side of the building is a large parking lot for the many medical and managerial employees as well as visitors. This building entrance has a drop-off area similar to the one at Level Two. To the north of the building is the large forested woodlot for hiking and picnics.

**Pavilion Building**

The Pavilion building is the place where all commercial, indoor recreational and other related amenities are found (i.e. a chapel, grocery
store, drug store, beauty shop, barber shop, spa, billiards room, indoor pool, meeting hall e.t.c). This is the major place for the outside community and residents to intermingle. Most areas will be open to the public. The front of the building again has a drop-off area. The architecture is grand and formal, announcing this building as the most important and public structure on the site. The boulevard leading up to the entrance reinforces this statement. The Pavilion also functions as the main office building. This building is accessible from every level in the community. The distance between the levels and the building correspond with the abilities of that levels users. Because this building is the architectural focus of the site, it is surrounded by the major outdoor amenities.

The Pavilion Deck

This concrete deck spans the length of the Pavilion and is another 50 feet wide. The deck contains both a pool and five shuffle board courts. The pool is half wading pool because wading is a safe and easy form of exercise for the more frail resident. The deep end accommodates both the more adventurous resident as well as the welcome Muncie user.

The shuffleboard courts not only provide a popular sport among the aged but are prime socializing areas. The deck also has a variety of seating, from fixed to umbrella tables. An overhang is available along the building to provide shade for those residents wishing it. Like the Pavilion building, the deck is the main recreational and social gathering amenity. The deck is equally accessible from all residences and represents the core or heart of the community.

Section at Pavilion Deck
Fragrance Garden

The Fragrance Garden is located on the east side of the lakes, between the Pavilion building and Level Three. Situated here it acts as a connector and transition between the Pavilion and Level Three. This again encourages mingling with the Level Three resident. The garden also has a nice view of the lake from this location.

![Section at Fragrance Garden](image)

The garden itself consists of elevated planters and wide (8-10 feet) walkways. The gardens are elevated so as to be accessible to the wheelchair user and resident who has trouble bending over. The wide walks make it possible for a wheelchair user to stop and appreciate the flowers without blocking the path for other wheelchair users or pedestrians.

The garden will be planted with a variety of colorful, wildlife attracting vegetation. This vegetation is in the form of flowers, shrubs and, ornamental trees. More colorful and fragrant plants are needed in this community to compensate for the possibly declining senses of the residents. The wide walkways and series of seating areas provides for socializing. This is a valuable and pleasing amenity to the community which not only encourages socialization but can be appreciated in solitude.

The Twin Lakes

The two lakes located at the center of the development are shallow and stocked with fish. The lakes are shaped so as not to interfere with access to the Pavilion. Where the walkways come to the waters edge handrails insure no one falls in. The walks are set back eight feet from the waters edge every where else so as not to tempt the less able resident to investigate the lake. The lakes give the site a serene natural atmosphere which tends to please and relax the elderly resident. The flatness of the lakes also makes the entire community clearly visible.
again assisting in orientation.

**Woodlot**

The woodlot is made up of entirely existing vegetation. This mature forest is beautiful to walk through and offers a diversity of experiences. Besides the existing succession of vegetation, two clearings complete with picnic shelters and tables are available within the woods. The entire woodlot area is intertwined with paved walking and biking trails. These trails are looped so the user has a choice of distances to travel, ranging from a couple hundred feet to a mile.

This natural and attractive area is appealing to both the nature loving resident and the outside community, another opportunity for socializing between residents and Munciites. Because most residents of this community will be from the midwest, it is important for them to see landscapes which are familiar to them, thus reinforcing the comfortable feeling of home. The Woodlot area is not only a recreational amenity but a possible connection to the past for the nostalgic Midwesterner.
Conclusion

This project succeeds where many communities fail in recognizing the unique needs of the elderly. The major goals set forth in the program (security, independence, etc.) have been addressed and functionally met. This project by no means attempts to solve all the problems associated with elderly housing but draws attention to those issues and suggests some viable solutions.

As a landscape architecture project this community physically expresses how landscape architects can apply their skills and talents to solve a variety of social and economic ills plagueing our society. The profession of landscape architecture is no longer one of gardens and parks but includes ethical and philosophical challenges as well.
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