Creating a True Golf Course Community

Bringing together neighborhood sociability and the greenscape

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# Table of Contents

- Table of Contents  
- Abstract  
- Introduction  
- Problem  
- Assumptions  
- Goals and Objectives  
- Literature Review  
- Analysis of Models  
- Client/User  
- Site Location/Context  
- Inventory  
- Design Requirements  
- Program  
- Analysis  
- Concept 1  
- Concept 2  
- Housing Relationships  
- Final Design  
  - Single Family Detached Housing  
  - Townhomes  
  - Golf Course  
  - Community Space  
  - Par 3 Golf Course  
  - Additional Housing  
  - Roundabouts  
  - Sections  
- Summary  
- Bibliography
Abstract

The comprehensive project presented here displays a new way of designing the golf course community, and the typical modern suburbia. The project focuses on the community and the neighborhood in an effort to influence people to go away from the modern, inwardly focused suburban subdivisions and reconnect with the human and ecological community that surrounds everyone. By exploring how the house works on the lot and how neighboring houses relate to one another, a new type of development has been created incorporating private space for the residents, extensive community space, and the golf course. The interrelationships between each of these elements creates a unique atmosphere that promotes community and personal interaction as well as interactions with the environment and the outdoors in general. Hopefully, this design would get people to reconnect with the environment around them and, therefore, better understand and connect with themselves.

Introduction

Many times today's golf courses and residential sub-divisions are developed together as a so-called "Golf Course Community." However, like many new sub-divisions in suburban America, each lot and house is inwardly focused and in no way promotes a sense of community. Problems exist in these golf course developments between the golf course and residential lot, creating problems with safety, a feeling of security, and a sense of place within the backyard. However in attempting to create a better landscape for the resident, it is essential to consider the golf course and its aesthetic standards along its boundaries.

The main focus for this project is people. Whether looking from the perspective of the golfers, the residents on the golf course, or the larger regional community, everyone's physical and cognitive needs will be met within this project. These needs shall be met through the careful design of the golf course, residential, and community landscape, as well as the relationships between them.
The problem lies with the physical contrast between two opposing landscapes, the golf course landscape and the residential/community landscape and their corresponding uses. The emotionally tied sense of community and neighborhood was also an important element within the project. The residential and community landscape within a golf course development needs some sense of privacy and protection, as well as a sense of personalized space, without separation from the golf course. The golf course landscape, on the other hand, requires a visual congruency throughout the course. The sense of community exists on many levels within this problem. The golf course belongs cognitively to a regional community group and to the community made up of residents living within the housing development adjacent to it. The golf course serves a number of roles as regional node, community center, and community open space, just to name a few.

What is most important is the sense of community between the residents of the housing development and the development of a functional neighborhood. The golf course and surrounding green space helps people to develop a greater sense of community. As with the majority of suburban residential housing developments, most houses built on golf courses are inwardly focused which is detrimental to the sense of community and the feeling of belonging to a neighborhood. An opportunity exists to develop a golf course and residential development along with community based open space and facilities which will provide for the development of a good sense of community for the surrounding residents. An opportunity also arises to develop a design solution that will accommodate and satisfy the needs of the golf course and residential landscapes as well as to tie the two together visually and functionally in creating one successful entity.
Problem

The problem lies with the physical contrast between three opposing landscapes, the golf course, the residential landscape, and the community open space. It involves the corresponding uses of each landscape as well as the physical needs and the emotionally tied sense of neighborhood and community.

Sub Problems

1. The residential landscape and community landscape within typical golf course developments lack outdoor private space, protection, and a sense of personalized space.
2. The public/private continuum is creates conflict in a golf course development with highly public entities (the street and the golf course) enveloping the house and lot. This strains the use of the back yard as it is traditionally thought of as a private space.
3. Typical "modern" subdivisions lack a community and neighborhood feel.

Assumptions

1. A desire for this type of development is present in this area.
2. The market would support a new golf course and residential development in the chosen region.
3. The necessary land can be rezoned accordingly for this development.
4. The market is favorable for the development of moderately priced ($150,000-$200,000) single family detached homes and townhomes/condominiums.
5. The surrounding residential areas desire to be connected to the community facilities within the design.
6. The golf course landscape requires a visual congruency throughout the course.
7. The site shall also serve a number of roles as regional node, community center, and community open space.
Goals and Objectives

The first goal for the golf course community design was to provide a design for a championship level golf course and its associated needs. In developing the course it was to be environmentally sensitive to the existing conditions, such as topography, habitat, and vegetation. Also important was to create an aesthetic unity or common style throughout the golf course grounds. Finally, the design was to allow for residential development to take place around the golf course.

Another goal was to provide meaningful residential site development for individual lots. First of all, the relationships of public and private spaces had to be studied. Within the residential design it was very important to move away from the typical suburban subdivision, and the typical practices of designing those sprawling subdivisions on golf courses. The design had to consider privacy, protection/safety, and personalized space. Setbacks were defined for the house from the golf course property as well as from the public rights of way. The design allowed for individual autonomy.

Within the overall design, amenities conducive to developing a good sense of community for residents on the golf course were provided. The design considered opportunities to bring neighbors together through pedestrian walkways and a “front porch” atmosphere. The master plan provided neighborhood parks and open space to be used by the residents.

The final goal was to provide amenities for the larger regional community. The design included amenities to be used by the regional community, such as open space, picnic shelters, swimming pool, etc.
Literature Review

The design for this community came about after the following topics were researched:
- golf course history and golf course design
- residential development associated with golf courses
- residential landscape design
- community planning and design
  - local and regional levels of planning and design
  - local and regional community needs and desires (pertaining to the site)

Residential landscape and development

The residential landscape design provides many opportunities for relaxation, entertaining, and recreation within an aesthetically pleasing, functional site, utilizes existing site features, as well as considers the context and surrounding land uses (Fierceall, 4).

There are various forms of housing and lotting styles that could be applicable to a golf course development - from single family detached to patio homes and townhouses, and Zero lot line, the angled and Z lots (Bookout, 143-164 & Jarvis 75-121). These designs can help conserve land, provide various levels of sense of community, and provide options for potential residents. The inclusion of multifamily housing in addition to single-family within the design can help to market community and provide additional revenue for the developer and the golf course (Phillips, 33).

Neighborhood

According to Keller (1968), the distance between neighbors, both actual and functional, directly relates to the number of times neighbors see each other. The more neighbors see each other and make those casual contacts, the more they converse, get to know each other, and possibly make friendships. This is instrumental to the enhanced feelings of community and neighborhood. In order to create a sense of place and sense of community one should create a theme by using a common architectural style and landscape architecture throughout. The
designer must provide pedestrian friendly access throughout and provide amenities, comforts, and conveniences beneficial to the residents. (Jarvis, 70-72).

When providing for amenities, Jarvis states that it is important to try and maximize existing site features/amenities such as water, wetlands, topography, woods, etc. for the community and the golf course. Within the design of the neighborhood, the community clubhouse can also help to foster the sense of community and should be identifiable, possibly by being placed in a prominent position such as at the main entrance (Bookout, 283). Within the community design, it is important to consider views, vegetation, noise, lighting, and privacy in order to be successful, according to Doble (1991).

The Golf Course Design

Various layout types provide flexibility within the golf course design. Layout types include the core golf course, double fairway, single fairway, double loop, single loop. Par and distance standards, set forth by the USGA, for men and women are important to follow in the design phase. Various types of holes, including Penal, Strategic, and Heroic holes, should be mixed throughout the course according to the expected levels of play on the course. Typical fairway widths, lengths, distance between fairways, green to tee distances, sizes and location of landing areas are also essential to remember in creating the layout for the proposed golf course. Helphand (1995) describes two styles of golf course design that were considered, the links course and the inland forest course.

Elements of the golf course can be used to benefit surrounding residential development and provide safety throughout the golf course. Hazards such as water, sand traps, grass bunkers, and wooded areas can direct golfers away from houses, and as buffers (Muirhead 51). Because most golfers are right handed and tend to “slice” the ball to the right, the relationship of parallel fairways should allow players to slice into the adjacent fairways whenever possible, not into houses or yards (Muirhead, 48). Topography can aid in safety by directing shots and creating barriers and buffers between holes and between lots and course (Muirhead, 52).
Interrelationships

In many current golf course/residential developments the residents have many complaints of hundreds of golf balls landing in their yards each year ("Beauty...", B4)(Neff, 29)("Shanks...", 11). As a result, residents plant trees and hedges, erect huge nets and fences, install bullet-proof windows, and even wear hard hats whenever entering the yard in order to protect their homes, cars, property, and personal safety (Neff, 29). Lawsuits have been filed for thousands of dollars, and golf courses have been paying for damages ("Beauty...", B4). Many courses have been redesigned, or holes changed in order to avoid these damages ("Shanks...", 11). The danger is not limited to the houses and yards, at the Carolina Golf Club, golf balls are regularly mis-hit into the community pool adjacent to the golf course (Neff, 29).

Many of these dangerous areas could easily be avoided in the design phase of the golf course and the residential development. By widening fairways and the golf course property around landing areas or target zones, much of the problem can be eliminated (Hauger, 15). The planting of trees and shrubs at strategic locations along these zones can also help to alleviate the problem ("Beauty...", B4). Setbacks, from the back property line to the house, and around the landing areas should be deeper around the landing areas in order to minimize property damage (Hauger, 15).

Golf courses have long been linked with residential developments. However, most have been developed as the typical suburban development that can be located anywhere in the country ("Village...", 28). Many new developments of this type target the high income population with high priced housing (Rudnitsky, 56). These courses are usually located on the outskirts of towns or in the country, away from large population centers causing a lack of golfers and income, causing the golf course and residential development to lose money and eventually close (Rudnitsky, 57). Very few have taken advantage of a chance to provide inexpensive housing on a golf course, a great potential market (Hauger, 13)("Village...", 29). Some golf courses with residential developments have been designed with community ideas in mind. Pinehurst in North Carolina was one of the first to do so. South Riding Golf Course Village has used Pinehurst as inspiration in their design. It has used close building spacing
close to the street, and their human scale to make the community feel less suburban and more like a town ("Village...", 28). This golf course and one in California have used the clubhouses as community centers for social and recreational activities for the golf course and the local community ("Town Nucleus", 60)("Village...", 28).

Analysis of Models

Model 1

This model is from the Farrington Golf and Tennis Club in Decatur, Georgia. It is an apartment and condominium community. The site totals 726 acres and has over 6,000 units. The golf course was designed to conserve land and provide green vistas between housing units.

- Good use of space for the golf course
  - Nice use of double fairways
- Compartmentalized housing
  - Too much separation
  - Lack of neighborhood feel
- Nice location for Clubhouse
  - Minimal connection to residential areas
- Main road creates separation and emphasizes golf rather than residents
Model 2

This master plan is from Palmetto Dunes on Hilton Head Island, South Carolina. It was designed as a resort golf course community and is located on the ocean. It incorporates a waterway system throughout the golf course and residential area.

-Golf course seems tunnelized
   -Golf corridor too narrow
-No unity between housing areas
   -Isolated pockets of housing
-Entrances lead directly to Clubhouse
   -Residents not considered
-No nodes or points of attraction accessible to the residents

Model 3

This master plan focused on creating open space by reducing the lot size compared to a typical subdivision plan. However, the open space is very scattered and does not seem to have much of a purpose. The goal of this plan was to increase real estate values.

-Nice core of golf course
-Sprawling linear housing development
-Massive street system services few homes
-Centralized clubhouse does not relate to residents
Model 4

This plan was designed to include commercial and residential areas along with the golf course. It claims to have an ecological "sanctuary" that surrounds the course, homes, and commercial areas. However, in looking at the plan, the left over space is designated as the ecological sanctuary, like the open space in model 3.

-Everything is separated
-No continuity of spaces
-No connections
-Golfers have long distances between many holes
-Massive dead end road system
-Tried to create "as much frontage as possible"

Model 5

This is the plan of St. Andrews Golf Course in Scotland. It was one of the first golf courses designed and included a small housing area. Today it is one of the oldest and most admired courses in the world.

-Nice grouping of housing
-Many roads-few houses
-Potential for more open space with housing
-Needs better relationships between housing and golf course
Through the analysis of these models the design ideas became more focused, and new ideas were generated for the master planning of the proposed golf course community. Ideas were taken from these models and were used in creating the concepts for the neighborhood and the golf course. Although the models presented were designed for reasons different from what is presented here, they still served the purpose of analyzing relationships and the functionality of existing golf course developments.

**Client/User**

The client for the project is a real estate and golf course developer. The developer wants to design a public golf course along with mid-priced homes and townhouses on the property. The site was to be near a town or city in an established neighborhood. Within the residential development, the developer wanted the design to include many opportunities to develop a neighborhood with a good sense of community and sociability.

Most users of the golf course community will likely be middle to upper-middle income people from central Indiana. Other users will include those interested in purchasing a moderately priced home or renting a townhouse/condominium within the golf course community. Residents in southeastern Indianapolis and surrounding suburbs of all ages will use the community facilities and parks. Finally, golfers from the same region will use the public golf course.
Site Location/Context

The site is located on the southeast side of Indianapolis in Perry Township. It is the eastern half of the land area bounded by Thompson Rd. and Edgewood Ave. To the north and south, respectively, and to the east and west by Five Points Rd. and Arlington Ave. The development is within minutes of the city of Beech Grove and I-465. Employment, shopping, and services are all close to this development within Beech Grove and Indianapolis. Just west on Thompson Rd. begins a series of grocery stores, fast food chains, and strip malls. These continue north onto Emerson Ave.

The 400 acre (+) area is on the north-west corner of the intersection of Five Points Road and Edgewood Avenue. The area north, south, and east of the site is composed of middle income families and mid-priced residential neighborhoods. An older, established subdivision is south of Edgewood Ave. Within the same block as the site is a small 4-5 year old typical suburban subdivision along with a new subdivision being constructed off of Thompson Rd. West of Arlington Ave. is another older neighborhood. To the east of the site is agricultural land with only a few scattered farm houses. Two schools are located directly west of the site, and include Lutheran High School and a public elementary/middle school.
Inventory

The site is currently occupied by farm land. It has a rolling topography with a change in elevation of about 35 feet from the northwestern corner of the site at the highest point to the lowest point at the southeast corner of the site. Throughout the site are varying depressions and hills. Horn Creek flows south through the southeastern corner of the site and meets Little Buck Creek just before exiting the site. Four smaller streams feed Horn Creek from the west, and one meets it from the east. Another small unnamed stream begins on the south side of the site and meets the Little Buck Creek off site to the south. A large wood lot is centrally located within the site with smaller ones located to the northeast and southwest which surrounds a small pond. All of the wood lots are fairly mature second growth stands with a variety of species. The only other trees on the site are scattered throughout the fields, or exist in fence rows which separate the existing farm fields.
A few farm houses and barns are the only structures located on the site. A few small one lane gravel roads connect the agricultural fields. The small historic Ebenezer Cemetery is approximately one acre in size is also located at the south end of the site. The cemetery dates back to the mid to late 1800’s. It is separated from the site by the creeks coming together and leaving the site.

**Design Requirements**

In order to design a championship level golf course and its associated needs one must be sensitive to the existing conditions, such as, topography, vegetation, etc. The design must create an aesthetic unity or common style throughout the golf course grounds. Finally, within the parameters of the golf course design space for residential development and community facilities must be allotted and planned.

In responding to the goals of residential development the design must include typical landscape designs for individual lots. The designs, to be successful must consider privacy, protection, safety, and personalized space. In order to achieve this, the design should define setbacks for the house from the golf course property. Finally, residential landscape designs must allow for individual autonomy.

The overall design must provide amenities conducive to developing a good sense of community for residents on the golf course. The design must address community needs and perceptions, as well as their desires. It must provide opportunities to bring neighbors
together and provide neighborhood parks or open space to be used by the residents. In order to bring neighbors together one must consider the physical and functional distances between homes, as well as between each front porch and the sidewalk.

The master plan must include amenities for the larger regional community. As with the local community the needs of the residents in the regional community must be identified. Once this is accomplished, one must plan for and design for open space, picnic shelters, swimming pool, etc. In order to make the best use of space within the site, facilities that will be provided shall be used by the golf course, residents, and surrounding community.

Finally, there is a need to look closely at the landscape transition through the residential lot into the community space and the golf course. Typically with residential developments on a golf course, the backyard becomes a semi-public space as golfers wander through the yard, sometimes on golf carts, looking for stray balls. It becomes necessary, then, to provide some private space available to the homeowner.

Program

The client for this project had a number of requirements to be included in the master plan. The requirements can be listed under three categories: the golf course, the community amenities, and the residential development. In planning for the following elements, the client wanted to focus on the residential development in order to promote the sense of community as well as create greenscape linkages to the golf course and the community spaces. Approximately 400 acres were available for development. However, the design of the following program elements only required 260 to 280 acres, which leaves the remaining for future development.

Golf Course

Parking for 250-280 cars
Clubhouse (footprint 5,000s.f.)
18 hole championship course
Practice green and driving range
Cart staging area
Cart paths
Maintenance area ½ acre

Community Amenities
Open space/Community parks - 20+ acres (does not have to be contiguous)
- Parking for 20-30 cars
- Playground
- Open fields
- Wooded areas
- Swimming pool
- Tennis courts
- Basketball courts
- 2 Picnic shelters
- Indoor Exercise facilities
- Rest rooms within the parks
Trail system for walking and jogging (links with cart path in some areas)
- Connect to all points in residential development
- Connect all homes with a sidewalk linking to the trail system
- Natural and Cultural interpretation sites, Indiana Landscape, existing cemetery, creek, wood lot, etc.
- Connect to adjacent neighborhoods

Residential Development
Single family detached homes
- 160 units
- 4 units/acre
Single family attached homes - Townhouse or Condominium
- 100 units
-10 units/acre
Narrow lots
Roads, parkway, sidewalks
Personal greenscape
Public/Private/Public continuum of the greenscape

Once the program was set, the task was to begin looking at how each of the program elements would interact with the site, as well as how the site lends itself to each of the various elements. It was important to discover how the program elements would fit together conceptually and spatially.

Analysis

The site has many opportunities for the development of this type. Most notably, the creeks located on site provide a great amenity for both the golf course and the residential community. From the golf course it provides an opportunity to create a lake for irrigation as well as provide numerous opportunities for challenging water hazards. For the neighborhood and community facilities, it provides good views and a positive existing site feature. At the center of the site are some of the highest points on the site. They provide good opportunities for housing by providing high points for views to and from the houses. Many of the high points are located next to depressions which provide excellent opportunities for the golf course. The vertical separation of the golf course and homes provides an extra measure of safety while providing good views from the homes down to the golf course.

The central wood lot is a nice site feature which can be used to a certain extent without destroying its integrity. The wood lot will be a nice setting for nearby homes, and can provide excellent golf opportunities and views. It is visible from all of the surrounding streets and will provide a good background for all views upon entering the site. It also offers an opportunity for the community open space and park system.
A few ingress and egress points were identified. Main entrance opportunities were discovered to the north and south of the site. Both were located across the street from existing drives leading to neighboring subdivisions. The east side of the site also had an opportunity for an entrance point just north of where Horn Creek crosses Five Points Rd. All had the opportunity to be utilized for the developing neighborhood and the golf course clubhouse.

Opportunities were found to exist on all sides of the site to connect to existing neighborhoods. This occurred in a variety of ways. For example, some of the neighboring areas had the opportunity for connections to the walking path system. They could be connected through views and the use of open space.

The cemetery was an interesting amenity located on the site. It provided some cultural and historical context to the new development. The opportunity arose to connect the cemetery with an interpretive trail system to be constructed in association with the community open space/parks.

The analysis led to defining the portions of the site to be developed immediately. This area includes the southwestern portions of the site including Horn Creek, Little Buck Creek, the large central wood lot, and much of the elevation changes located within the overall site.
Concept 1  

*Intertwining*

The first concept entitled "Intertwining" began organizing the program elements on the site with the elements interacting with one another throughout the site. The concept strongly considered the inventory and analysis as well as the models previously discussed.

The residential area in this concept consisted of two large units located centrally within the site. Most of the residential area was located in the area of rolling topography above Horn Creek. This location allowed for outward views toward the perimeter of the site across the golf course. The separation of the residential spaces allowed for a good amount of frontage on the golf course. Two entrance roads from Five Points Rd. and Edgewood Ave. access the housing areas first, and then the golf course. This helped to place more emphasis on the residential neighborhood than on the golf. However, it could cause excess noise and traffic that the residents would encounter. In this concept the residential areas were well connected to the central clubhouse, the community parks, and the golf course. Opportunities also existed within the concept for a series of small community spaces to be linked throughout the residential areas.

The golf course in the intertwining concept wrapped around the perimeter of the site and between the two housing areas. It also took advantage of the creeks and the steeper terrain. Small ponds would be located on the course in the depressions and at the tributaries of Horn Creek. They provided a good aesthetic for the course and the residents, and added a level of challenge for the course. The clubhouse was located at the southeast corner of the existing central wood lot.

The community spaces were well placed in this concept which took advantage of the existing site features. For example, the larger area was located almost entirely within the central wood lot. This would allow for a good use of the wooded area with picnic areas and trails without affecting the integrity of the wood lot. The smaller community area takes advantage of the small cemetery on the south side of the site. These areas had the potential to be linked through a series of pathways. However, with the layout of the golf course, it would
become a fairly circuitous route. An interpretive pedestrian trail could link various points within the site including: the cemetery, the wood lots, the creeks, the old barns, etc.

The extra land area in this concept could be utilized at a future time for either golf course expansion or possibly for the expansion of the residential areas. For the current plan, though, it could provide extra topsoil where needed, as well as a buffer if the final plan begins to need more space.

**Concept 2  \** \*Unified Spaces\*

The second concept entitled "Unified Spaces" also relied heavily on the inventory and analysis as well as the previous models and concept one.

The residential area in concept two was one large unified area. Like the previous concept it took advantage of the rolling terrain and the outward views across the golf course. The concept provided for three entry roads which allowed for easy access to both the clubhouse and the housing area. This helped to alleviate a lot of the traffic through the neighborhood to the clubhouse for the golfers, as compared to concept one. The community space and the clubhouse could be accessed easily from all points in the neighborhood. Although the clubhouse was not centrally located, it could still be accessed through the community space by the southernmost residents. As with the previous concept, there was an opportunity for a small scale community space system throughout the residential area.

In the "unified spaces" concept, the golf course wrapped entirely around the residential area at the perimeter of the site. This allowed for the golf course to be one large green corridor around the site. This took advantage of the variety of terrain throughout the area while taking full advantage of the steeper areas. The spacing within this concept seemed much more relaxed and allowed for larger ponds on the golf course and adjacent to the residential area. The routing system of the golf course also seemed much easier with two
loops of nine holes going out from the clubhouse in opposite directions. The clubhouse was located just north of the existing wood lot.

The community spaces within the concept provided a good variety with good connections. The large central community space was similar to concept one in that it took advantage of the existing wood lot and was easily accessible by the residents. It was adjacent to the clubhouse. A smaller community space was located adjacent to the cemetery as in concept one. In addition, another small space was located at the northeast corner of the site and houses some existing old barns. Connections between the community spaces were very good because of the golf course routing. All spaces could be accessed through fairly short walks.

**Housing Relationships**

After the spatial demands of the program elements were figured and the concepts were developed, there was a need to look closer at the smaller scale house and lot. It was important to develop a good understanding of how the house would work on the lot in order to deal with the public entities on both sides of the lot, and how private space would be accomplished.

The first thing that was looked at was the size of the lot and house. With the intent being to try to increase the sense of community, it was decided that the lot would be somewhat narrow and deep. This would bring the houses closer together as well as force them to be oriented with the front of the house toward the public areas and the sidewalk. Through various vignettes and studies it was decided that the lots would be approximately 60'x130' while the footprint of the houses would be approximately 30'x60'.

Within these parameters, the orientation of the house on the lot was studied. The dilemma here was in deciding which of the public spaces would engage the “front” of the house, the street or the golf course/community space. In trying to create a better feeling of
community within the development as well as create strong linkages with the golf course, it was decided to orient the homes facing the most public space, the golf course or community space. The street, then, became somewhat less important as it serviced the rear of the lot. In the final design it would have sidewalks and some street trees in order to maintain some importance, to create visual connectivity, and to keep it from becoming an alley.

Zero lot lines were also studied in order to create a unified private space in the yard. By placing the house within a few feet of the established lot line, the small back yard and tiny side yards were joined into one larger unified space. Combining evergreen and deciduous trees and shrubs into the landscape design of the yard along with eliminating windows on the facing side of the neighboring house, a very nice, private space can be created.

Physical House to House Relations

**Final Design**

After looking at individual homes and clusters of lots, the design moved back to the master plan level drawing from the inventory, analysis, and both concepts. The first concept of "Intertwining" was the most influential in the development of the master plan. Clusters of housing were laid out, small community spaces were developed, and townhouses were placed into the design. As the housing was being developed the golf course began to take shape in response to the housing layout. Finally, the larger community spaces were designed and connections throughout the master plan were refined.

Beginning at the south entrance of the site, the short, landscaped entry drive leads to a landscaped roundabout which connects to the largest residential loop shown on the master plan in cream (see drawing at left or appendix A for the master plan). This grouping of housing contains 93 single family detached homes and 10 townhouse units containing 83 individual townhomes. The homes on the outside of the loop face out onto the golf course while the interior homes face the designed community green.
containing a small pond and a children's playground. All of the intersections in this area are landscaped roundabouts.

The easternmost road continues north out of the residential area between holes 1 and 2 of the golf course and along the existing central wood lot. At the north end of the wood lot, which contains a nature trail, there is a small park to the left with a swimming pool, volleyball courts, and a playground. The clubhouse and parking lot for the golf course are to the right.

North of this area is the second cluster of housing. This area contains 42 lots and three townhouse units containing 28 individual units. This area is connected to the eastern entrance to the site which provides additional access to the housing area as well as direct access to the clubhouse and golf course. Just off of the entrance is another small park area with tennis and basketball courts and two existing barns on the site. The golf course wraps around the two central housing clusters and the central wood lot.

This core area was designed first and for the most part satisfies the program requirements set forth earlier in the project. With this area finished, two large areas of land were left available on the west and north sides of the site. At this point it was decided to implement some extra amenities that would benefit the developer and the community. On the west side of the site two new areas were designed, a par three golf course and an expansion of the southern wood lot to develop another interpretive nature trail. These areas provided good connections to the neighboring schools and residential areas. On the north side of the site, additional housing was implemented along Thompson Rd. and around the corner along Five Points Rd. This provided 58 additional homes and 32 additional townhouse units. The total of housing for the entire development grew to 193 single family detached homes and 143 townhouse units.

**Single Family Detached Housing**

The single family housing was designed according to the decisions made earlier in the design process. The design utilized zero-lot line and landscaping to create a more usable space with privacy in the yard. As was mentioned earlier, the front of the houses will be facing the most public space, the golf course or community space, and will have a front porch.
facing that area. Narrow lots have been designed in order to bring neighbors closer together physically which makes contacts between neighbors more likely. This also emphasizes community rather than individual by keeping the house narrow rather than sprawling outward trying to show off each individual house.

The project also included the design of two prototypical landscape designs. The designs give a hint of the variety and individuality that can be incorporated into the landscape design while providing privacy within an outdoor living space. The first design is a more formal design utilizing hedges and evergreens to shelter the rectilinear patio space. Groundcover and perennials further enhance the patio space. The front of this model also uses a rectilinear geometry and a variety of plants to draw attention to the front porch. The second model is much more informal while still providing privacy and a nice aesthetic. The patio area is curvilinear and utilizes a buff colored flagstone for the paving material. A combination of deciduous and evergreen trees and shrubs help to create the private space. Perennials, groundcover, and ornamental trees provide visual interest in the informal setting. Around the front porch, the casual landscape design continues. Plant material similar to that used in the patio area will be used around the porch.

They are located in the three clusters on the site described earlier. Within the larger clusters, the homes were grouped into smaller clusters of approximately 10-16 houses per group. This was done to promote the sense of neighborhood and enhance the larger community through bringing the neighbors closer together, thus promoting more opportunities for people to meet and develop personal contacts within the community. Grouping the homes into smaller clusters also allowed for the intermingling of townhouses within the housing clusters which added some variety to the layout and enriching the community. Many houses face onto the golf course providing a good connection between the residential and golfing communities. However, there are many homes that face the community spaces located throughout the site for those that prefer not to live on the golf course. All homes were designed to have easy access to all of the amenities within the community, including the golf course, community greens, parks, and interpretive nature trails.
Townhomes

With seventeen buildings containing 143 residential units, this community provides many opportunities for those who prefer not to own a home while enjoying maintenance free, affordable living within the development. The units themselves are 20’ x 40’ with a second story which are divided to allow for 1, 2, and 3 bedroom townhomes. Each unit has a private patio that faces out onto the golf course or community green.

Golf Course

The championship golf course designed on the site is a double loop system with a par of 71. In laying out the course and designing each hole, the relationship of the course to the housing was very important to consider. It was important in the design to look at views from the homes to the course as well as from the course to the houses. A great deal of consideration was also given to the protection of the homes from errant shots. For this reason it was important to maintain a minimum of 200 feet between the fairways and the homes. All of the holes were also designed keeping in mind the slice (a ball that curves to the right), which is the most common miss-hit shot by golfers. Because of this, all of the holes adjacent to housing were aligned so that a sliced shot would go away from the houses. Further protective measures were also taken to prevent property damage. In case of errant shots hit to the left (hook), trees were strategically placed in order to deflect the miss-hit shot without sacrificing the views of the course. Sand bunkers, ponds, and stands of trees were also placed in order to influence the way that golfers planned their shots, further protecting the houses. It is impossible to eliminate any possibilities of property damage, but these measures help to reduce the risk significantly.

The clubhouse is located centrally on the site with 252 parking spaces available. The parking lot contains 10’ medians throughout allowing for extensive planting to break up the large amount of pavement needed. A landscaped entry circle also connects the parking lot with the clubhouse. Adjacent to the clubhouse is a cart staging area, a large practice green,
and a 280 yard driving range. A maintenance area is located on the south side of the site with a large storage building (60'x150') on approximately 2 acres.

The front nine begins just south of the clubhouse with an easy 180 yard par three along a tree line (note: all distances are from the middle tees). Crossing the road, the second hole is a straight 445 yard par 4 that travels between the central wood lot and the main housing cluster. The third hole goes south and is a par 5, 490 yards. Number 4 is a dogleg left, par 4 310 yards. The fifth is a 470 yard par 5 that doglegs left around a large pond separating the fairway from the houses. Crossing the road, number six is a 360 yard par 4 that doglegs left. Number 7 is a long 200 yard par 3. Eight is a short but tricky par 4. The 310 yard dogleg right has the players cross the large lake on their second shot to a difficult green with bunkers and water to the left. The ninth hole is a fairly straight 340 yard hole returning to the clubhouse. The back nine begins with a dogleg right 380 yard par 4 with bunkers off the tee and surrounding the green. The 11th is a long 515 yard par 5 that angles to the right on the second shot. Crossing the creek is the 185 yard par 3 twelfth. Thirteen is a straight-away par 4 of 360 yards. Par 3, 14 is just over 200 yards, slightly uphill to a large green protected by bunkers to the right. Fifteen is a 340 yard dogleg right to a narrow green. The 16th is another long par 5, 520 yards angling to the left for the approach to the green. The 17th hole is an easy 350 yard straight-away hole through the trees. The par three 18th is only 160 yards but is very well protected by 4 large bunkers. A short walk or ride across the street leads back to the clubhouse and parking lot.

The cart path provides easy access to all of the holes. It also becomes part of the recreation trail throughout the site and links up in many places to the smaller community spaces and interpretive nature trails in the wood lots.

**Community Space**

The community spaces were very important to the design of this residential golf development. These spaces are integral to helping to create the feeling of neighborhood and community. The spaces range from large wood lots and recreation parks to a interpretive nature/recreation trail system and the more formal community greens. Working together,
each of these elements provide for numerous recreational opportunities and help foster community interactions.

The Community Greens are located within the housing developments. They provide an opportunity for people to live in the community without being on the golf course. They also provides a great deal of green space to be used by the residents. The community green also serves as a common feature throughout the development that connects the community. The green allows a lot of opportunities for neighbors and all residents to meet and get to know each other, furthering the feelings of community and neighborhood. They provide many opportunities to the residents through the open fields, ponds, a playground, and miles of tree lined sidewalks. These all allow for many activities that could not take place in a typical suburban housing development or in the small yards of the residents. They allow for informal field sports such as frisbee, touch football, soccer, and kite flying. The sidewalks allow for shaded walking with no interference from vehicle noise or traffic. All of these benefits are located in close proximity to all of the residents within the community.

The trail system throughout the community provides miles of recreation and interpretive nature trails. It is easily accessed by all of the homes within the community as it passes by all of the perimeter homes and connects to all of the community greens. Passing through the golf course, wood lots, and community greens allows the user to do, see, and experience a wide variety of spaces within the Indiana landscape. Interpretive stations along the trails would offer educational information about the different spaces the trails meet. These include some of the existing barns on the site relaying the history of agriculture in the area, the Ebenezer cemetery displaying the human history from which the area developed, the wood lots, existing ponds, the creeks, and the rolling topography speak of the natural history and systems that act on the site.

Two main park spaces were incorporated into the master plan. The larger of the two is located in the center of the site within the central wood lot. It contains parking for 30 cars, a large swimming pool, 2 sand volleyball courts, 3 picnic shelters, and a large playground. The playground was designed into the existing wood lot and takes advantage of the natural setting. It allows for varied activities for the children as it is located within the wood lot. Typical play structures are not incorporated into the playground, all of the structures have
been custom designed to interact with the trees and the slopes present on the site. All of these features will be available to the residents within the community, and will welcome any visitors from outside of the community. The other park is located on the east side of the site adjacent to the entry road and Five points road. It contains parking for 32 cars, 2 tennis courts, 2 basketball courts, and 2 existing barns. The barns' interiors have been redesigned to include restrooms, picnic tables, and open rooms for community meetings or other gatherings. Both parks are linked to the nature trails that are located throughout the site in order to promote walking rather than driving to the parks.

Par 3 Golf Course

As was mentioned previously, additional amenities were incorporated into the site beyond what was called for in the original program. An 18 hole Par 3 golf course was added on the west side of the site. This will allow beginning golfers as well as those that do not have time to play the full course the opportunity to play and work on their short game. The siting of the par 3 course is very convenient to the neighboring schools as well. This would help to promote the game of golf to younger children and allow them to learn the game under easier circumstances than on the regulation course. The holes range from 100 to 190 yards and help the golfer to develop his/her irons, chipping, and putting.

Additional Housing

Additional housing beyond the program requirements were placed at the north end of the site. This addition added 58 homes and 32 townhomes to the totals within the core areas of housing. Within this area, half of the houses are facing the golf course, and half face the street. Those facing the street are set back over 100 feet from the road and are buffered from the street by tree plantings. All of these homes and townhomes are connected to the trail system through a loop that runs adjacent to the lots. Roundabouts are used in this area also, rather than four way stops. A small park-like space was designed at the northeast corner of this addition with quiet sitting spaces and landscaping.
Roundabouts

Roundabouts were used extensively in this design rather than stop signs at intersections. This created a much more attractive intersection with fewer conflict areas between cars and cars/pedestrians. The diagrams to the left from Landscape Architecture Magazine compare the number of conflict points between the roundabout and the 4 way intersection. The diagrams show that the number of conflict points are tremendously reduced when the roundabout is used. According to the article from which the diagrams were borrowed, the roundabout costs less to construct than the conventional stop sign intersection.

The roundabouts successfully slow traffic and provide a much nicer visual transition through the community. They allow the greenscape to be carried through the community rather than stacking homes up to the intersection as most subdivisions do. This helps to open up views to the Community Green and to the golf course.
Sections

Two sections were completed to help describe the relationships of the house and lot to the surrounding land uses, the street, the golf course, and the community spaces/greenscape. The first section shows a north/south cut through the street - house - golf course in the large cluster of housing at the south end of the site. It displays the typical relationship of the house to the golf course including the topographic changes and the spacing between the two land uses. It also shows the relationship of both to the recreation/nature trail.

The second section cuts through the golf course - house - green space - house - golf course/park. It relates an north/south cut through the central area of housing. It also shows some of the typical relationships from house to house, from the house to the green space, and from the house to the golf course.
Summary

This project provided an in-depth design for developing a true “Golf Course Community.” By looking at the relationships between the golf course landscape and residential landscape and between the various levels of community and what the golf course had to offer in terms of creating a better sense of community, new standards and ideas could be develop in order to help future golf course/residential developments. It can apply to the design and development of other sub-divisions, community design, and in areas where two opposing landscapes with different needs and aesthetic values are developed adjacent to each other. The project is one of very few community oriented golf course developments and one of even fewer golf courses developed with mid-priced housing.
Appendix A: Master Plan and Associated Drawings
Bibliography

Texts
Periodicals

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