Adaptive Golf Course Redevelopment: Identity and Balance

A Thesis Presented for the
Master of Landscape Architecture Degree
The University of Tennessee, Knoxville

Timothy Lysett
December 2014

Copyright © 2014 by Timothy J Lysett

All Rights Reserved.

Dedication

To my wonderful wife Jillian, for her unquestioned love and support throughout all of the trying late nights, rants and mental break downs that have come along the way. You are my rock, I couldn't have gotten this far without you. I love you.

To my parents William and Maryanne and brother Nick, for their continued love and support throughout the years. Despite all the successes and failures that life has brought through these first thirty three years on this fantastic planet, you have always had my back and even when I have been in the most desperate of states, you have motivated me to get back on my feet and keep fighting. I love you all.

To my graduate committee Brad Collett, Avigail Sachs and Curtis Stewart, for all of the hours of meetings, help with revisions and encouragement to trust the process and see it through to the end. You have helped make me a better designer and a better person. Thank you!!

ABSTRACT

Unknown to much of the general public, the golf industry is currently in a state of ongoing retraction. One of the many outcomes of this retraction is the closing of hundreds of golf courses across the country, leaving many residential communities that where designed around these open green spaces lacking an integral part of their identity. The Calusa Country Club Community of Kendall Florida, is one such place.

Like many closed golf courses throughout the United States, Calusa is currently caught in a state of limbo. As the centerpiece of a master-planned residential community developed in 1970, the golf course once served as the identifying amenity for the surrounding community. Today that identity stands in jeopardy as the course is now closed and its current owners intend to redevelop the property. As is typical for many residential golf course redevelopment projects, Calusa's future is clouded by competing stakeholder agendas and legal stalemates, both fueled by the proposed redevelopment's alteration of the physical, social and economic identity of its surrounding community. The current redevelopment proposal seeks to remove the open space that the golf course offers in favor of additional single-family homes. It is at this junction within the ongoing dialog between this project's various stakeholders that this thesis interjects itself with the objective of presenting an alternative plan to that of the proposed redevelopment. This thesis aims to demonstrate the potential for residential golf course redevelopment projects to present balanced outcomes suiting the priorities of its various stakeholders while simultaneously maintaining the identity of the community and its connection to open space.

TABLE OF CONTENTS

Chapter One
The Decline of The Golf Industry **1**
1.1 Indicators of Decline 1
1.2 The Relationship Between Golf and Real Estate, Failure Through Assumption 3
1.3 The Contemporary Critique of the Game, Failure Through Design 7
1.4 The Implications of Cost on the Decline of The Industry 11
1.5 Conclusions 13

Chapter 2
Challenges Posed by Course Closure for Master Planned Golf Communities **16**
2.1 The Loss of Physical, Economic and Social Identity 16
2.1.1 Physical Identity 16
2.1.2 Economic Identity 18
2.1.3 Social Identity 20
2.2 Conclusion 21

Chapter 3
Futures for Closed Golf Courses **23**
3.1 The Agendas of Developers, Cities and Homeowners, a Prelude to Conflict 23
3.1.1 Existing Residents 24
3.1.2 Developer / Property Owner 26
3.1.3 Local Government 27

CHAPTER 4
Golf Course Redevelopment In Action, A Case Study of Conflict **29**
4.1 Case Study : Greenbrier Golf Course, West Palm Beach, FL. 30
4.2 Conclusion 33

Chapter 5
Typical Solutions for The Challenges of Golf Course Redevelopment **35**
5.1 Case Study 1: Red Cedar Golf Course, East Lansing MI. 35
5.2 Case Study 2: Camino Del Mar Country Club, Boca Raton Fl. 40
5.3 CONCLUSION 45

Chapter 6
Adaptive Golf Course Redevelopment, Identity through Balance **46**
6.1 Site Selection Criteria 46
6.2 Site Selection 47
6.3 Site Inventory and Analysis 49
6.3.1 Stakeholder Group Agendas 49
6.3.2 Existing Residents' Agenda: 49
6.3.3 Property Owner / Developer Agenda : 50
6.3.4 Local Government Agenda (Miami - Dade County) 51
6.4 Existing Community Infrastructure 52
6.5 Strategies for Redevelopment 56
6.5.1 Strategies in Action 59

Chapter 7
7.1 Conclusions **73**

List of References **76**

Vita **79**

LIST OF FIGURES

Figure 1 : Championship Golf Course, West Plam Beach FL. 3
Figure 2 : Golf course view from home, Vaquero TX 4
Figure 3 : TPC Sawgrass 17th tee view 8
Figure 4 : TPC Sawgrass 17th Aerial View 8
Figure 5 : Sports Portland Golf Course 16
Figure 6 : Calusa Country Club prior to closure 17
Figure 7 : Calusa Country Club after closure 17
Figure 8 : Clubhouse and outdoor resturant at Springfield Country Club, PA. 21
Figure 9 : Outdoor resturant at Springfield Country Club, PA. 21
Figure 10 : Greenbrier Golf Course Existing Site Plan 30
Figure 11 : Greenbrier Golf Course Redevelopment Plan 31
Figure 12 : Red Cedar Golf Course Existing Site Plan. 35
Figure 13 : Red Cedar Golf Course proposed site plan. 38
Figure 14 : Red Cedar Golf Course proposed zoning plan. 38
Figure 15 : Camino Del Mar / Mizner Trail Community Existing Site Plan. 40
Figure 16 : Mizner Trail Redevelopment Plan. 42
Figure 17 : Mizner Trail Conservation Plan. 43
Figure 18 : State Level Site Selection. 47
Figure 19 : Region Level Site Selection. 47
Figure 20 : Local Level Site Selection. 48
Figure 21 : Site Level Site Selection. 48
Figure 22 : Demographic Survey. 53
Figure 23 : General Zoning and Property Study. 53
Figure 24 : Water Drainage and Flooding Study. 53
Figure 25 : Site Soil Study. 53
Figure 26 : Existing Retail Proximity Study. 54
Figure 27 : Existing Golf and Open Space Proximity Study. 54
Figure 28 : Calusa Community Master Plan 58
Figure 29 : Community Golf Course Design 1 60
Figure 30 : Community Golf Course Design 2 60
Figure 31 : Maximum Single Family Build Approximation to Consolidated Build Plan 62
Figure 32 : Single Family Homes Section 63
Figure 33 : Calusa Commons Section 63
Figure 34 : Site Planting Plan 65
Figure 35 : Greenway Section 65
Figure 36 : Greeway Pocket Space 67
Figure 37 : Greeway Wetland Deck Observatory 67
Figure 38 : Watershed Plan 69
Figure 39 : Bio Swale Detail 71
Figure 40 : Proposed Plant Communities 72

This page intentionally left blank.

CHAPTER ONE
THE DECLINE OF THE GOLF INDUSTRY

1.1 INDICATORS OF DECLINE

Since the year 2000 the golf industry has experienced an ongoing period of recession. For many people, the most tangible outcome of this recession comes in the form of the 643 golf course closings that have taken place nation-wide since 2007 (NGF 2013). The closing of a golf course often comes as a shock for many casual observers of the game. This "surprise factor" mainly has to do with the difference between the public perception of the golf industry as a healthy and successful and the stark truth of an industry in danger.

For the golf industry in the United States, there are three key indicators that we can use to view the health and wellbeing of the game of golf. These indicators are the number of rounds played per year, demand for the game measured by the number of active golfers in the game as a percentage of the total population and the supply of courses measured by the number of courses built versus the number of courses closed during the time frame in question (Beditz & Kass, 2009). The National Golf Foundation (NGF) suggested in its annual State of the Industry report for the 2012 - 2013 season that the percentage of the total net population that plays golf has declined yearly by approximately 2% since 2006 (NGF, 2012 - 2013). This decline in participation may not seem significant when looking at it at face value. However, when one considers that the total current percentage of the American population that plays golf is only roughly 7% (24.1 million), a 2% (482,000) yearly net loss becomes much more significant. As further evidence of this recession, the number of rounds played within the last thirteen years also saw a significant decrease. Roughly 518.4 million rounds of golf where played in 2001 compared to only 462 million in 2013, a decrease of 5.7% (Reitman, 2014).

These figures are alarming for those concerned with the economic stainability of golf's built environment. The NGF reports that since the peak supply year of 2006 when approximately

15,207 courses were in operation, there have been 643 eighteen-hole equivalent golf course closings. This represents a total decrease in supply of 4%. When compared to the average number of golf course openings within this same time frame, between 10 - 20 courses per year, a trend of industry-wide contraction emerges. The NGF forecasts that this trend of contraction will continue until the industry reaches equilibrium between its supply of golf courses and the demand for the game. Specifically, the NGF has approximated that roughly 130 - 160 courses will have to close yearly for at least the next 10 to 11 years in order to bring the industry back to a sustainable balance between supply and demand. Unfortunately, the retraction of the industry is moving far too slowly for many courses to stay profitable. Jim Koppenhaver of Pellucid Corp., one of the premier analytics firms within the game of golf, explained in January of 2014 that " *It took us (NGF) five years to get them (courses) in the ground. It's taken eight years and counting to get them out*," Koppenhaver said. *"Supply reduction was about 1 percent. And the thing I keep saying is we need to be losing 2 to 2.5 percent of our supply a year to get back to equilibrium some time in the next three to five years. So, at the current pace of 1 percent we still have probably another seven to ten years before we get back to the equilibrium we enjoyed back in the mid-1990s when people were relatively happy and prosperous"* (Reitman, 2014).

What all of these indicators amount to at a very wide scale is the imminence of a significant land use issue that will only get worse if the current projections of course closures hold up. With the average amateur golf course encompassing upwards of 200 acres of land, the projected 1,600 closed golf courses required to reach equilibrium nationwide would equate to approximately 320,000 acres of vacant land. To put this amount into context, the total projected land vacancy caused by golf course closures due to the recession of the golf industry could represent as much as half of the total land area of the state of Rhode Island. Considering that many of these golf courses that are projected to close also serve as the primary open space amenity for many residential communities nationwide the issue of land left vacant by their closure broadens even further. What on the surface appears to be strictly a issue of land use now also has elements of

community identity attached to it.

How exactly did the industry get so overbuilt in the first place? In the next section we will explore the three main factors that have contributed to the golf industry's imbalance between the supply of golf courses and the demand for the game namely; the relationship between golf and real estate sales, the typical design and construction methodology of the time and the implications of temporal and financial cost on the game of golf.

1.2 THE RELATIONSHIP BETWEEN GOLF AND REAL ESTATE, FAILURE THROUGH ASSUMPTION

According the National Golf Foundation (NGF), the relationship between golf and real estate began in the 1960's when it is estimated that nearly 18% of the 360 golf courses constructed each year where integrated within real estate developments of some kind. The rationale for this relationship was that golf made for an excellent open space amenity that added value to adjacent properties and aided in the sale of real estate (figure 1). As can be seen in figure 2, the lush manicured environment that golf created was a tempting incentive for many people looking to make a solid long-term financial investment at the time. Jumping ahead to the 1990's, the percentage of golf courses that where part of a real estate developments ballooned to account for nearly 40% of all new golf construction. Peaking in the year 2000, this ten-year constructionist period saw golf's built environment expand to approximately 16,000 golf courses across the American landscape. It is



Figure 1 : Championship Golf Course, West Plam Beach FL. (Google Maps)

estimated by the NGF that at their peak these new courses served and estimated 30 million golfers (Huber 2012, 13).

The explosive growth during the 1990 - 2000 “boom period” was based on a prediction that if the Baby Boomer generation followed the retirement trends of their predecessors, there would not be an adequate supply of golf courses nationwide to meet the estimated demand for the game. Because the potential spending power of this generation was so vast, it was viewed as the essential demographic that must be harnessed in order to continue to grow the game of golf. What resulted from this prediction was a multi-billion dollar promotional campaign entitled the “*Strategic Plan for the Growth of the Game*.” The sole purpose of this campaign was aimed at enticing the Baby Boomer generation to purchase real estate within golf course communities, further perpetuating the growth of the game of golf. This promotional campaign was put into action by the NGF through their Golf Summits: meetings that organized golf’s most prominent leaders and allowed the NGF to present the findings of numerous market studies to promote the growth of the game of golf. It was during these meetings in the mid to late 80’s that the NGF unveiled its plan to change the perception of the game of golf that wasn’t very popular during this time. *“The centerpiece for that plan was a clarion call to build “A Course a Day” from 1990 to 2000 in order for the golf industry to meet the anticipated demand for golf. The slogan of “A Course a Day” was featured in PGA Tour television public service announcements (PSAs) and caught fire with the media. This led to the new perception that there was a great opportunity for profitable investments to be made in the golf industry“* (Huber 2012, 24).



Figure 2 : Golf course view from home, Vaquero TX (Google Image)

To enable the rapid realization of this plan and the sale of golf-oriented real estate, it became common practice for developers during the 1990 to 2000 development period to completely subsidize the construction and daily operation of the golf course within a master planned development until the real estate lots sold out within it. Once a development "sold out" the developer would typically sell the ownership to the golf course to a third party and exit the project. The problem with this business model is that the majority of the courses built during this time frame proved to not be economically sustainable in the long term, creating additional issues down the road (Huber, 2012, 41).

The reasons why golf courses of this era where not economically viable are many. Chief among them was the unofficial design mantra used by residential community developers of the time that "with fame and difficulty comes success " (Huber, 2012, 32). Golf course architecture during the 1990 - 2000's was all about getting the most famous architects, such as Jack Nicholas, Tom Fazio and Pete Dye to constantly "one up" the previous most notable course in an attempt to make the year-end top 100 lists in all of the golf magazines. For the developer, this marketing strategy translated into a desire to continually seek to build the next hot "it" course, further flooding the market with additional golf courses. *"For marketing purposes, the master plan community developers wanted their golf course to be more famous than the next. They believed that is what the real estate buyers wanted, who like the developers, were speculating on the escalating value of the real estate. The conventional wisdom among real estate developers, as reflected in the business literature of that time, supported the notion that famous golf courses that had a reputation for being very challenging to play generated premium real estate sales prices. Also, longer golf courses provided more golf course fairway lots, particularly when the golf holes were laid out in a single file fashion rather than being adjacent to one another to maximize golf course frontage lots that sold for a premium price over interior or non-golf course frontage lots "* (Huber, 2012, 33).

The major problem with this strategy for the real estate developer and homeowner alike came when the housing market folded in 2007. Seemingly overnight the value of many high-margin

properties, including those found within many golf course communities, dropped substantially. As a result many developers where left with sometimes numerous golf courses that they where contractually obligated to maintain but could not afford to do so. This is because in this development model, course operation and maintenance was completely subsidized by revenues from the sale of residential properties and because developers could no longer maintain the same pace of lot sales they had achieved pre 2007. As the availability of mortgage financing became much tighter in a post 2007 economic climate, the demand for the game of golf began to decrease, subsequently lowering the marketability of homes on golf courses. However, while the demand for the game of golf began to decrease, the costs of daily golf course operation did not. For a mid to high-end private course constructed during this time frame, it would not be abnormal to have a required maintenance expense of roughly 1.5 - 2 million dollars annually. A typical crew size for one of these facilities could range anywhere between 10 - 25 people during the off-season to over 40 during the peak season. The majority of these employees are typically hourly workers who will work between 45 and 50 hours per week during the peak season, necessitating overtime pay. Between the water, chemical, physical and mechanical inputs required to maintain a consistent condition, it would not be uncommon for managing superintendents and their assistants to be on the golf course 60 to 70 hours a week during the high stress peak season.

Given these realities of the typical financial cost of golf course maintenance, it's easy to see how the design philosophies of having longer more difficult courses very quickly became economically unsustainable for the developers who where subsidizing these operations within an unfavorable economic climate. Based on studies by Huber and others there were two options that emerged as the most viable for dealing with floundering golf courses in the eyes of many developers. One option the developer had was to continue to subsidize the golf course property out of pocket as long as possible and hope that the real estate market would turn around and allow them to recoup these out of pocket costs by selling more real estate. The second option a developer had was to attempt to sell the now vastly deprecated golf course property at a steep

loss to be free from any further financial obligation. For many, neither option was very palatable. The determining factor in whether they would stay and continue to fund the operation or just sell the property out right often came down to how far along the developer was in selling the available lots in the development (Huber, 2012, 41).

The unchecked, exponential expansion of the game of golf during the 1990-2000 development boom, driven by marketing campaigns to meet projected demand, continued unabated until the 2007 financial crisis hit. The American economy turned upside down and the value of real estate dropped significantly. Suddenly, the golf industry wasn't sustainable because it had tied its vision of the future to subsidies and projections of demand that were no longer attainable. As the demand for the game began to wane so to did the availably of essential financial resources to allow many golf courses to continue to operate. This imbalance of basic supply and demand principles then lead to a drastically overbuilt industry which had no choice but to contract causing hundreds of golf courses nation-wide to close.

1.3 THE CONTEMPORARY CRITIQUE OF THE GAME, FAILURE THROUGH DESIGN

The second key contributor to the decreased demand for the game of golf is how golf courses where designed and marketed during the last great development boom from the year 1990 through 2000. From a design oriented point of view, the marketing strategy employed during this time frame has essentially left the bulk of the golfing public with a supply of golf courses that are too difficult, too time consuming and too expensive to play. Typically, courses constructed during this era where designed with the skill set of a professional in mind, not that of the average amateur. This left the majority of the customer support base for the game incapable of keeping up with its increased difficulty, pushing many of them out of game all-together. As has been mentioned, many courses designed and built during this time where an attempt by

real estate developers and golf course architects alike to create the next hot “it” course. Part and parcel to that process was designing golf holes that where iconic, exceptionally difficult and required unconventional risks to finish the hole.

Examples of this often punishing approach the golf course architecture abound within the landscape of golf. The island par three 17th at TPC Sawgrass in Ponte Vedra Beach, Florida is often one of the most cited and notorious examples of golf course architecture taken to the extreme (figures 3 - 4). Its notoriety is in part due to its high visibility, often being a featured part of the annually televised Players Championship Tournament held on site every year, and in part because it represents the highly penal nature of the contemporary golfing landscape. Designed by Pete Dye and Bobby Weed, this hole represents a true “do or die” situation for the player with no room for error because it is completely surrounded by water. For professionals, this hole is quite appropriate for their typical skill set. However, for the average high handicap amateur, this hole and those like it found elsewhere within the landscape of golf can be an absolute nightmare because they are so unforgiving; surrounded by hazards that leave little margin for error, punishing golfers with lost strokes and balls as a result of errant shots. PGA Professional Phil Mickelson explains speaks further about changes made to the Atlanta Athletic Club’s Highland course during a 2011 press conference *“I think it’s a great site for the PGA. But I also think if you look at the four par threes here, it’s a perfect example of how modern architecture is killing the game, because these holes are unplayable for the member. You have water in front and you have a bunker behind, and you give the player no avenue to run a shot up, and the seventh hole,*


Figure 3 : TPC Sawgrass 17th tee view (PGA.com)


Figure 4 : TPC Sawgrass 17th Aerial View (PGA.com)

where there is not any water; there's a big bunker in front and right of the green, instead of helping the player get it on to the green, it goes down into the lower area, as does the left side. Now, for us out here, it doesn't make a bit of difference, because we are going to fly the ball to the green either way. But it's a good reason why the number of rounds is down on this golf course amongst the membership. And it's a good reason why, in my opinion, this is a great example again of how modern architecture is killing the participation of the sport because the average guy just can't play it " (Huber,2012,37).

From the point of view of a typical high handicap amateur, golf is an extremely difficult game to play. For many, simply making consistent contact with the center of the face of the golf club can be a challenging task unto itself. When one then factors in attempting to navigate the contemporary environment of golf with it's overly long holes and highly penal hazards, the game can quickly devolve into several hours of frustration instead of enjoyment for many golfers. From the point of view of the men's tees, an average recreational golf course will be designed to include:

- Four par 3 holes averaging between 130 - 200 yards each, typically surrounded by or located across hazards (water, tall grass, large elevation changes, sand bunkers). These holes typically require the golfer to hit a high arcing shot directly to the green in the air with little ball spin so the shot lands softly and does not roll.
- Ten par 4 holes averaging between 330 - 430 yards each, typically accompanied by a fairway which may bend right or left, may be boarded by trees or other vertical obstacles, and may vary in width from 40 - 60 yards with occasional sand bunkers or other hazards at key landing distances. Most par 4 holes requires the use of a driver from the tee that carries roughly 200 yards in the air with either left or right ball spin depending on the direction of the hole. From this position an approach shot which carries most, if not all of the distance remaining in the air is typically called for depending on the condition the ball

is lying in from the tee shot (fairway, rough, sand). Ideally many players would look for this shot to have a high arcing trajectory into the green to prevent it from rolling away from the target. Depending on the outcome of this shot a third approach shot may be needed.

- Four par 5 holes averaging between 490 - 550 yards each, typically accompanied by a fairway which may bend right or left, may be boarded by trees or other vertical obstacles, and may vary in width from 40 - 80 yards with occasional sand bunkers or other hazards at key landing distances. Again, much like a par 4 hole, these holes typically require a long drive from the tee, normally in the range of 250 yards plus after the ball lands and rolls out. From this position, if the player wants to shoot for the green for a birdie chance, another long shot is required encompassing the remaining distance to the hole. If the green is not reachable in two shots then the second shot is typically a medium iron shot of roughly two-thirds the remaining distance to the target. All that remains now is a short approach chip or pitch into the green followed by a putt to end the hole.

As one can see, navigating through the contemporary environment of golf course design is no trivial matter. When one adds in the likelihood of a typical amateur to miss-hit a shot into a hazard, playing a round of golf gets even more complicated. One can easily envision how the design philosophy of long, difficult golf courses contributes to the industry-wide issue of decreased demand for the game because the bulk of the golfing public can not play these contemporary courses effectively. If anything, many of these contemporary approaches to golf hole design have aided in escalating the decline of the industry rather than stimulating its growth. The Professional Golfers Association of America (PGA) in conjunction with the United States Golf Association (USGA) has formally recognized this issue within the golfing landscape and in 20XX proposed an alternative to it's traditional rules via its "Tee it Forward" initiative to help alleviate it. Essentially, "Tee it Forward" is an attempt by the PGA and USGA to make golf easier for the majority of the golfing public by incentivizing players to play from the next closest set of tees

to the green from where they would normally play from with no penalty to their score. This initiative effectively shortens a golf course to allow for more opportunities at achieving a better score within regulation. While this initiative has positive intentions, it has been slow to catch on with many golfers due to a more traditional mind-set amongst it's population in addition to the physical constraints of fixed tee box location facing many contemporary courses. While this initiative has been slow adapt on many existing courses, new courses and those that can afford to renovate their existing design look to embrace this concept as the default condition moving into the future.

1.4 THE IMPLICATIONS OF COST ON THE DECLINE OF THE INDUSTRY

While golf course architects and real estate developers often take the lion's share of the blame when it comes to the contemporary critique of golf, equipment and apparel manufacturers are also partly to blame. Many contemporary golf equipment companies continue to develop products that are marketed in such a way so as to make their intended demographic of amateur players think that by purchasing their product, they will instantly hit longer and straighter shots without addressing the fundamental flaws in their swing. The reality is that no product has the ability to turn a bad shot into a good one. Only practice can do that (Crossfield, 2014). However, that is not the message equipment manufactures want their customers to hear. Every year a new line of clubs from every manufacturer hits the shelves promising game improvement in some way. For many players who struggle to play in the contemporary environment of golf, these advancements in technology sound like the answer to help them play better. However, the truth is that because of limitations imposed on these manufactures by the governing bodies of golf, the USGA and RNA, golf club design has been at the very limits of legality for at least the last ten years (Crossfield, 2014). In effect, while slight variations in golf club design have taken place during this time span, a club of a specified loft, lie and length purchased in 2004 will hit a golf ball

just about the same distance as one with the same specifications purchased in 2014. This fact however hasn't stopped manufactures from marketing their products to the contrary, making it feel mandatory for many amateur players to cycle new equipment into their bag on a regular basis. When one then factors in other typical monetary expenses such as greens / club fees, clothing, and incidentals like golf balls, tees, gloves and lessons, the financial cost of the game escalate very quickly.

To further illustrate this point, an example annual budget has been compiled to reflect what an average amateur could spend on golf based on the playing frequency of a "moderate" golfer who plays between eight and twenty-four rounds of golf per year (NGF, 2010). This example budget has been simplified to reflect only those costs a golfer of "moderate" frequency would typically incur to play the game annually. As such, this budget does not include items such as transportation or food costs which can vary greatly depending on a multitude of factors. Additionally, this budget assumes all products purchased are new, of the current model year and of average retail pricing. Golf apparel may not be needed yearly, however it is included as an option for reference. This budget also assumes that the individual in question is only playing at public, daily fee courses.

- Greens fees (8 - 24 outings, average price w/ cart $50 per) : $400 - $1,200
- Golf club replacement (typically replace at least one club a year) : $200 - $400
- Golf incidentals (balls x four dozen, tees, gloves x 4) : $235
- Golf apparel (shirts, shoes, shorts / pants) : $100 - $200
- Golf lesson ($50 each x 2) : $100
- Total Annual Cost of Golf : $1050 - $2150

As defined by the economic law of scarcity, when the cost of something goes up, the percentage of a population that can afford to indulge in that something goes down. This law is applicable to the decline of the golf industry because of how quickly the costs of the game can

escalate verses the availability of discretionary time and monetary resources available to the average golfer. When one considers that the typical American household has an average income of $63,091 before taxes with roughly $58,000 of that amount committed to required expenses, this only allows for approximately 1.8% ($5,091) of an average households income to be spent on discretionary items like golf (Nickel, 2013). Given that an average golfer can spend roughly 40% of their average annual discretionary income on golf alone based on the budget above, the issue of cost can become compounded when one factors in other variables such as time available to play. The element of time is crucial when discussing the cost of golf because it is becoming a major limiting factor for many golfers due to increasing demands on personal time. Increasingly within contemporary society, the demand for instant gratification has never been higher.

When one considers the inherent difficulties of navigating golf's contemporary environment and the frustrations that abound from attempting to do so for many amateurs, the four hours and fifteen minuets required on average to play full eighteen holes in a foursome could be quite steep for many people. As a result of the compound nature of all of these elements of cost combined, the game of golf begins to look less like a sound recreational investment. This in turn contributes to the lower demand for the game that is behind the closing of many golf courses nationwide.

1.5 CONCLUSIONS

Because of decisions made in the mid to late 1980's, the game of golf was allowed to grow exponentially in a very short period of time. While this growth was great for the game during the ten-year span between 1990 and 2000, an inevitable recession was lurking right around the corner due to three main causal issues.

The first and foremost of these issues is the dependency the golf industry placed on its relationship with residential real estate developers and the subsidies they used to create and maintain contemporary golf course communities. While this subsidy based business model was

favored during the development boom of 1990 - 2000, it quickly became unviable as a result of the housing market crash of 2007. After the housing market crash of 2007 many residential golf course community developers found that they could no longer sustain the pace of residential lot sales that once financed the construction and maintenance of the golf course within their communities placing the on going futures of both the golf course and community in doubt going forward.

Additionally, the overly penal design philosophy held by many golf course architects during the 1990 - 2000 development period also greatly contributed to the current state of recession within the golf industry. During this period it was thought by many residential community developers that by having a famous golf course architect design a very difficult golf course within their community that the success of their project would be assured if it made the year end top 100 list found in many golf magazines. While this marketing strategy worked in the short term the resultant glut of nearly unplayable golf courses for the average high handicap amateur has caused the balance between the supply of golf courses and the demand for the game to become unbalanced because it is too difficult for the majority of its support base to play effectively.

Lastly, the ever increasing monetary and temporal costs of playing the game of golf, when combined with its difficulty, has created a recreational environment that many find to be frustrating rather than enjoyable. For much of the financial support base of the game of golf the necessitated financial and temporal cost to play it in its contemporary form is simply not worth it for the minimal enjoyment they receive from it in return. The same decisions that once allowed the game of golf to grow as quickly as it did during the last “boom period” are now responsible for the decline of the industry because it has become too difficult, too time consuming and too expensive to play. Because of this critique, the golf industry is finding it very difficult to keep those on the margins of enthusiasm in the game.

While the industry struggles to keep those who once found it casually enjoyable to play, it is finding it even more difficult to attract new, younger participants to carry the game into the future. Decreases in both rounds played and the percentage of the total population that plays golf since 2007, have caused 643 eighteen hole equivalent golf courses nationwide to close their fairways for good. These closings have created a massive land use problem in their wake, specifically among those courses that where part of a master planned residential community. In the following chapters we will explore the many issues and challenges presented by the closure and redevelopment of a golf course property and see how they relate to the concepts of identity, balance, and redevelopment potential.

CHAPTER 2
CHALLENGES POSED BY COURSE CLOSURE FOR MASTER PLANNED GOLF COMMUNITIES

2.1 THE LOSS OF PHYSICAL, ECONOMIC AND SOCIAL IDENTITY

The research of the National Golf Foundation and many other independent researchers suggests that there is an undeniable link between the evolution of golf course architecture and its relationship with real estate development (Hueber, Danielson, Do and Grudnitski et al). Because of this relationship many golfing communities derive much of their identity from the existence of the golf course within them. As the name "golf course community" suggests, without the golf course, the community in question would fall under a different real estate category entirely. The golf course is such an integral part of the communities that surround them that the health and condition of the course are directly connected to the physical, social and economical well being of the surrounding community. As such, when a residential golf course closes, there are often many issues and challenges to these aspects of a community's identity as a result of the course closure.

2.1.1 PHYSICAL IDENTITY

According to multiple studies by Nicholls and Crompton (2005), Do and Grudnitski (1995) and Laing (1997) there are many factors that contribute to making master planned golf course developments desirable for perspective buyers. In all of these studies, the most common thread of appeal for homeowners who purchased homes within these communities was living in the physical environment created by the game of golf. As can be seen in figure 5, this specific type of environment characterized by lush roughs, closely mown fairways and verdant greens is the heart of the physical



Figure 5 : Sports Portland Golf Course (Google image)

identity of these developments. For homeowners, being surrounded by the views and vistas that accompany living adjacent to or in proximity of the fairway of a maintained golf hole is a large part of the connection they share with the physical identity of their community. However, if for some reason the golf course should close and its condition fall into disrepair, this identity suddenly becomes challenged. This is where the first major issue of identity loss appears: the degradation of the physical environment and the loss of functional open space as a result of the closure of the golf course.

When the green heart of a golf course development stops beating and the golf course closes it's fairways for the final time, it doesn't transform over night and neither does the community. However, as time continues to pass and the golf course condition continues to degrade, the fundamental physical identity of this community changes with it. With enough time, the aesthetics of a closed golf course within a master planned development may transform so dramatically that the course is rendered unrecognizable and their identity as a golf course community is lost entirely. For many homeowners, the physical transformation of their views and vistas that occurs due to golf course closure is often significant because of the sizable financial investment they made in them. To make matters worse for the homeowner, because of the intrinsic relationship that exists between the condition of the golf course and the value of their home, as the golf course condition continues to degrade so to does their home's value.


Figure 6 : Calusa Country Club prior to closure (Google image)


Figure 7 : Calusa Country Club after closure (Author)

2.1.2 ECONOMIC IDENTITY

For residential community developers, the appeal of the union between golf and real estate entirely revolves around the increase to the value of the lots within their developing community that comes from adding an amenity to it such as a golf course (Muirhead & Rando, 1994, 22). Likewise, many homeowners who have purchased homes on golf courses have done so because of the economic value that is added by the golf course to their home. This union between golf and real estate has presented a great opportunity for homeowners looking to make an investment. The economic strategy behind the investor / resident's purchase of a home within a golf course community is typically driven by both short and long term gains. In the short term the resident would have a great home to live in with a beautiful view and access to the golf course community lifestyle. In the long term the resident would be earning equity in a property that already had a built-in value premium that was projected appreciate with time. For many, the ultimate goal of this strategy would be to eventually sell their property on the golf course at a substantial gain compared to what they paid. Investing in one of these properties truly was the "can't miss" strategy of the course building boom between 1990 and 2006. Additionally, it has long been a development best practice technique for residential golf course developers to include a deed of covenant on a golf course property as an additional layer of security for prospective homeowners. Essentially, these deeds act as legally binding promises between a land developer and a potential homeowner that stipulate among other things, the acceptable uses for the golf course property should the business side of the game fail. Typically, many of these deeds will exist in perpetuity allowing the perspective homeowner to not have to worry about losing the value enhancing aspects of residing along side a golf course and further enhancing the "can't miss" investment strategy common at this time.

There have been numerous studies conducted over the years that attest to the low risk nature of the aforementioned investment strategy. The most noted of these studies was the Urban

Land Institute publication by Muirhead and Rando entitled Golf Course Development and Real Estate (1994). In this publication the authors state "*Lots and houses in a golf course community bring higher premiums than comparable lots and houses in a non-golf community.*" Studies such as the ULI publication referenced here informed the choices and development approaches of knowledgeable investors, contributing to the formation of the economic identity of homes within golf course community as low risk economic investments.

With this being said, it stands to reason that the closing of many golf course properties nationwide have brought with them a steep decline in existing housing values for those homes located adjacent to them. This is in fact the harsh reality that many homeowners are finding to be true as many attempt to sell their homes that reside on now distressed or closed golf course properties. The homes that these residents once paid a premium of upwards of 20% for now is worth but a fraction of that cost if it is able to be sold at all (Nicholls and Crompton, 2005). *"At the Mizner Country Club in Delray Beach, Fla., which has an Arnold Palmer golf course[closed in 2011], a lake front home with five bedrooms, a pool and a spa is asking $795,000. It sold for $1.6 million in 2007"* (Keates, 2012). In this example we see the typical symbiotic relationship between the physical condition of the golf course and the health of the economic identity of the surrounding development. In this example, a lot with golf course frontage lost roughly 50% of its value after the course closed.[1]

---

1 This particular case is limited in what it can tell us in terms of other factors which may also contribute to the loss in value of this home, as it is difficult to say whether or not there are other undocumented factors that have assisted in the depreciation of value that this home has seen. However, it would be difficult to argue against the notion that the closing of the golf course in this example hasn't hurt the economic identity of this community, resulting in the decreased value of the homes within it by a substantial percentage.

2.1.3 SOCIAL IDENTITY

The third and final aspect of community identity that is typically challenged by the closure of its associated golf course is social identity. Typically, the social identity active within many golfing communities is a by-product of their design and supporting program elements that typically accompany the golf course. Within the context of this discussion, the term social identity refers to the availability of social activities within the community and the mind-set of the individuals residing within the community in relation to the existence of the golf course. This distinction is necessary to maintain an equal level of comparison to the other forms of identity discussed previously.

Fundamental to the design and programming of many golf course communities is the inclusion of a centrally-located clubhouse. The clubhouse in many of these developments is often very multifunctional in nature. In addition to the business offices and pro shop for the golf course, the clubhouse may house any combination of a restaurants, pool, tennis courts, banquet and meeting facilities, card rooms and other social gathering spaces as can be seen in figures 8 - 9. In addition to hosting golf-related events and gatherings, it is not abnormal for the clubhouse to be the site of homeowners association meetings, birthday parties, weddings or gatherings of the local bridge or poker clubs in evening hours. Families may frequent pool and tennis facilities, if available, as part of their recreational routine. As such, the clubhouse often serves as the social center for many golf communities, representing the foundation of its social identity by way of the activities it offers.

Just as the social identity of a community benefits from the economic success of the golf course, it too can also degrade over time if the golf course struggles financially. This is due mainly to how the traditional financial model for many of these communities works. Typically, the clubhouse, restaurant and many of the social activities it provides are financed by membership fees to the golf club. It is not uncommon to find many developments mandating membership to

the golf club as a condition of residency. Typically, when the membership of a private club declines and or vanishes do to the closure of the golf course, the social aspects of these community clubs including the clubhouse also have to close due to their supplementary nature.



Figure 8 : Clubhouse and outdoor resturant at Springfield Country Club, PA. (Google image)



Figure 9 : Outdoor resturant at Springfield Country Club, PA. (Google image)

2.2 CONCLUSION

As we have seen throughout the discussion thus far in this chapter, there are many issues and challenges to the various aspects of a master planned golf community's identity that arise as a result of the closure of its golf course. Nearly all of these aforementioned issues are a by-product of the dependency the community has for the success of the golf course as it's primary defining amenity. When the golf course in one of these communities closes, its physical, economic and social identity degrades over time. In addition, the closure of the golf course typically makes the land the course once occupied vulnerable to the possibility of being redeveloped. This possibility creates an uncertain future for both the vacant golf course land and the identity of the surrounding community alike. If redeveloped, the new owner of the now vacant golf course may or may not be interested in reviving the course going forward, potentially compromising legal agreements between existing residents and the previous ownership of the golf course. In the middle of these

two stakeholders stands the local government. While it is obligated to the safety and well being of its constituency on one hand it is also obligated to the stability and enhancement of its tax base on the other creating further uncertainty for stakeholders on all sides.

CHAPTER 3
FUTURES FOR CLOSED GOLF COURSES

The most common answer to the questions posed to new owners of closed golf courses typically comes in the form of one of two different redevelopment options. The first type of redevelopment attempts to re-establish the golf course as a financially viable entity. This option may include making physical changes to the layout and design of the golf course and/or to the business model for the course and clubhouse. This option typically would also honor any existing covenants between the previous owner and the existing residents as far as providing views to the course. The second option, typically more controversial, reproposes the open land the golf course formerly occupied and develops some or all of it as a different use, commonly new residential or commercial development.

For a land developer, closed golf courses can be prime redevelopment targets because of the often large quantities of contiguous land they typically constitute and the access to existing utility and transportation infrastructure typically found around them. However, the process of redevelopment is not without its own issues and challenges. Existing homeowners, developers and city officials often have competing agendas when it comes to the future of a closed golf course. This chapter will explore these agendas and present several examples of them taken to the extreme to show what can happen if these competing agendas aren't balanced.

3.1 THE AGENDAS OF DEVELOPERS, CITIES AND HOMEOWNERS, A PRELUDE TO CONFLICT

For residential communities containing a closed golf course, the process of re-developing the land the golf course used to occupy can be very difficult to sort through. Within these communities, there are often many differing points of view and priorities that can lead to conflicts between the various parties involved. It stands to reason then that before one can understand

points of contention within these conflicts, one must understand the typical agendas of each stakeholder involved with a redevelopment project. There will be three primary stakeholder groups discussed here. These stakeholder groups are existing residents, a development interest / property owner and a local city government. While other specific situations may have more parties involved, they typically will all have at least some combination of the three mentioned here.

3.1.1 EXISTING RESIDENTS

Beginning with the existing residents, there are several key points that make up the body of this group's typical agenda. Firstly, one of the primary drivers for the agenda for the existing resident is going to be to protect and improve the financial stability of their investment however possible. Existing residents have typically invested large sums of money to live where they do. With the closing of the golf course within their community, that investment has become vulnerable to depreciation.

Secondly, the existing resident stakeholder group typically has some relationship with the game of golf or the open space around their home. These residents are either golfers themselves, have decided to live on a golf course because they share a connection with the environment created by the game, or both. As a result, existing residents typically want to preserve as much of the open space the golf course once occupied around their home as possible. For many existing residents, the open space around their home along with the views they provide are the primary driver to their choice of residence location. The prospect of that open space being redeveloped as some other land use is a very important, controversial topic for this stakeholder group.

In many cases, the provision of views from a residential property to a golf course is legally protected through covenants or other agreements between the property owner and the initial developer. Typically, a deed of covenant will specify the limitations of use that are acceptable for the golf course property as well as specify how long the deed will remain in effect. It is

not uncommon for these deeds to exist in perpetuity, meaning that the land it was placed on is restricted to its specified use permanently. These guarantees are often at the root of the competing agendas between existing residents and developers. The existence or not of such a deed on a closed golf course property can obviously mean a tremendous difference in terms of it's potential for redevelopment. While it is possible for a deed to be removed from a property, it typically necessitates a long and expensive legal process to complete with no guarantee of success. Closely followed by zoning disputes, deeds of covenant are typically the main form of defense a homeowners group or association will cling to when dealing with redevelopment proposals they feel negatively impact their interests.

Lastly, homeowners residing in golf course communities are typically accustomed to having a high quality of life with minimal outside distractions. Alterations to this quality of life, including the prospect of increased local traffic due to a change in the course's land use, outside noise, or actions that may shift the demographic composition of their communities are typically met with resistance.

As we can see here, the typical agenda of the existing homeowner within a golf course community revolves around protecting their economic investment, the provision of open space amenities around their homes, and their quality of life afforded by the golf-course lifestyle. The idea of re-purposing the land the golf course used to occupy can be equated to having to shift their lifestyle away from what they had envisioned when they originally decided to invest in their home. This fact makes the closure of the golf course within their community a significant issue. Because this topic is so controversial for many residents, the redevelopment option that revives the course as an economically viable entity is ideal. This course of action, however, is not always in the economic best interests of the new owner of the golf course property. Existing residents, when mobilized as a collective group, can have strong voice and may wield a tremendous amount of power through the exploratory and permitting phases of a golf course redevelopment project. It is possible for a homeowners group to stall a redevelopment proposal for years while the legal

process slowly works its way through due process. This can mean death for development proposals that are minimally funded, poorly represented or tightly constrained by time schedules.

3.1.2 DEVELOPER / PROPERTY OWNER

The developer / property owner stakeholder group often has a divergent agenda from that of the existing resident. Of the three stakeholder agendas discussed in this thesis, the agenda of the developer / property owner is often the most predictable.

Typically the developer / property owner will be looking to make a profit first and foremost on whatever redevelopment proposal they make for a golf course property. Like the homeowner described previously, this stakeholder group has also invested financially in the golf course property, though often for a different reason. Golf courses are very tempting targets for redevelopment because of the acreage of contiguous land they often occupy and the existing infrastructure that typically already exists around them. As such, there is a typically a higher potential for profitability to be found via the redevelopment of these properties versus other smaller scale, fragmented ventures that may require new infrastructure.

The ultimate goal of this stakeholder group is to develop a marketable product from which it can turn a profit. The plausibility and profitability of a redevelopment project is largely dependent on a developer's ability to deliver product quickly, thus limiting the amount of time between when a developer purchases a property and when they may begin selling or leasing its subdivisions. For many within this stakeholder group, a significant threat to profitability comes in the form of scheduling delays which can negatively impact their ability to break ground or complete a project. While there are many causes for scheduling delays within any redevelopment effort, one of the more prominent sources is conflict between the developer existing residents and/or local government. Conflicts with these other stakeholders groups can often result in protracted

legal battles, among other things, adversely affecting entitlement, permitting, construction and product delivery schedules by causing delays.

The longer a project takes to start or complete, the more financial resources it will require for a developer to carry it on their books, which then cuts into the overall profitability of a project. While a developer or property owner will often desire to accommodate the needs expressed by those parties surrounding their proposed project where they can, the degree of this desire often comes back to how it will affect the scheduling of the project and its eventual bottom line.

3.1.3 LOCAL GOVERNMENT

The last stakeholder group whose agenda we will discuss will be that of a local government. The typical agenda of a local government is often multidirectional in nature. While its ultimate goal is to serve the best interest of its people, that agenda can effectively be broken down into three areas of interest. Firstly, a local city or county government is always concerned with maintaining its tax base. The more tax payers it has within its boundaries, such as land owners and businesses, the more property and income taxes it may collect to fund its capitol budget. As such, part of its typical agenda considers the effect a redevelopment proposal would have on the tax base at large, something that is considered heavily when zoning changes are requested by developers.

Secondly, as part of a local government's responsibility to the their constituency, it will look to maintain any zoning laws it has in force. Local governments utilize various forms of zoning laws to plan and control what land uses co-exist with one another. A property's zoning classification dictates the type of uses that can be built on a given site within a government's jurisdiction. Golf courses are often zoned as "open space" and severly limit the types of uses and structures that may be built upon them. For this land to be converted to alternative uses such as residential or commercial, it must go through a rezoning process in order to permit that alternative future use. The process of rezoning a piece of property typically requires public hearings and approvals

by multiple governmental bodies including planning boards, boards of commissioners and city councils. It is in these venues that the battles between residents and developers are often fought.

This issue of compatibility between adjacent land uses can become a significant point of contention between developers / property owners and existing residents. The first and often most potent defense an existing resident stakeholder group may have against the unwanted redevelopment of a closed golf course often comes down to the issue of compatibility between future land uses, which will be discussed in further detail later in this chapter.

Lastly, a local government may be concerned the infrastructural and environmental implications of redeveloping a golf course. Any additional infrastructure a redevelopment project may require in terms of how much it may need and who is financing its construction and maintenance is of great interest to a local government. Infrastructure needs can become a heavily weighted aspect of the decision making process for permitting committees in areas where the current systems are inadequate or are in need of repair. It is not un-common for a redevelopment project to have to contribute financially to improve civic infrastructure, such as roads, storm water systems, sewer and other utilities that the project will impact in order for their project to gain approval. An example of one such improvement is the requirement to widen and repave several streets leading to a proposed project in order to increase its vehicular capacity and to maintain an acceptable pace of traffic. While this requirement would be an extra expense to the development interest, a local government may require it as part of the process of the redevelopment gaining approval.

In terms of the environment, there may or may not be additional steps a developer must take in order to gain the proper permits necessary to begin construction on a redevelopment project. Depending on the size of the property to be redeveloped, its proximity to sensitive natural resources or habitat of protected species and the condition of the original site in terms of real or perceived brownfield issues, local governments may require additional protections or environmental assessments to be in compliance with local laws.

CHAPTER 4
GOLF COURSE REDEVELOPMENT IN ACTION, A CASE STUDY OF CONFLICT

When examining the topic of conflict surrounding golf course redevelopment projects, it is not uncommon for one of aforementioned stakeholder groups to attempt to completely dominate the interests of the other groups as a way to see it's agenda fulfilled. This attempted domination of other stakeholder groups is often cited as a primary source of conflict between interested parties because it leads to feelings of victimization for the neglected side(s). Typically, these feelings of victimization apply more to the existing homeowner group and developer than to a local government. As a response to these feelings, it is common for residents to seek any means available to stall or stop a redevelopment project until they feel as though their voice has been heard, for a developer to seek to undermine the credibility of the existing residents' case against a project, or for a developer to seek to buy the support of the opposition. Even then however, the simple acknowledgement of the desires of the other parties involved still may not be enough to evoke an equal outcome for all sides.

To better understand the dynamics, potential conflicts and impacts of divergent stakeholder priorities in the context of redeveloping a golf course within a residential golf community, the Greenbrier golf course in West Palm Beach, FL been selected for case study. This particular example was chosen for several reasons. Firstly, the Greenbrier shares a similar physical, economic and social climate to the project site ultimately selected for this thesis. These similarities allow lessons learned to translate directly to the thesis project. More importantly, the Greenbrier also serves as an excellent demonstration for what can typically happen to a redevelopment project when the designers of said project do not employ a truly open and balanced design process that engages the involved stakeholder groups. As we will see through this example, when homeowners feel as though their home or lifestyle is being threatened by some outside influence, they will go to extraordinary lengths to protect their interests.

4.1 CASE STUDY : GREENBRIER GOLF COURSE, WEST PALM BEACH, FL.

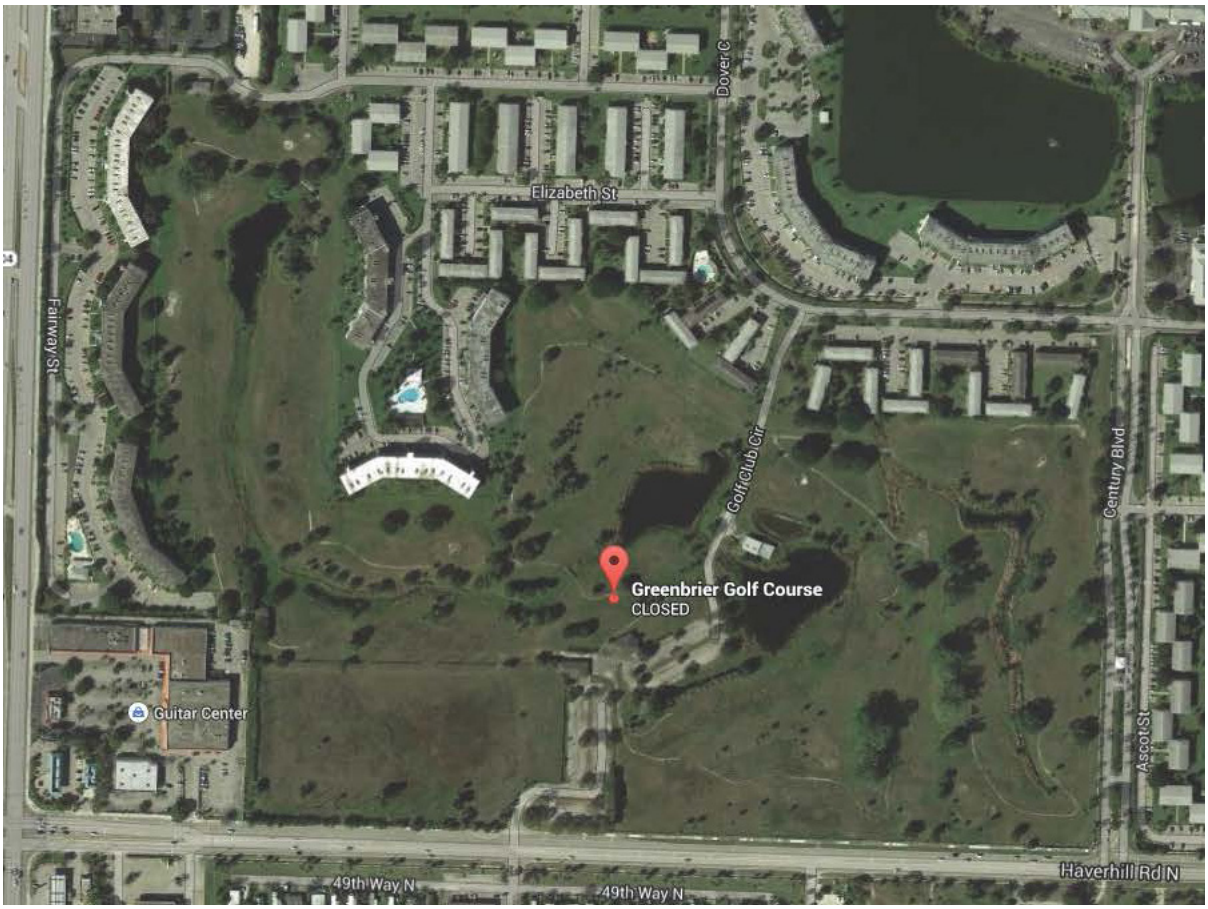


Figure 10 : Greenbrier Golf Course Existing Site Plan (Google image)

The Greenbrier golf course was a privately owned and operated entity prior to its closure in 2009. Located adjacent to a retirement community that partially surrounded it, the course shared only casual ties with these residents at best. There is a history of distrust between the property owners of the golf course and the residents of the surrounding community that forms the foundation for the conflict that was to come though the site's redevelopment process. The conflict between these two stakeholders began to escalate after the closure of the golf course in 2009. Like many golf courses nationwide, its ownership determined that due to a bad economic climate and an overly saturated and competitive marketplace that the golf course was no longer financially viable as a business and had to close. In 2011, it's ownership, wanting to get some return on investment out of the property, privately submitted a redevelopment plan and

formal rezoning request to the city commission of West Palm Beach, Fl. This proposal asked for permission to build 689 residential units and 84,500 square feet of mixed use commercial and office space on the 86 acres they owned, completely developing the site. When the surrounding residents of this project learned of the existence of this proposal the conflict between these two stakeholder groups intensified. The proposed redevelopment fundamentally changed the open space neighboring the existing residents homes, removing many of the cherished views and vistas of the course that were legally protected “in perpetuity” by a deed of covenant. In outrage over the possibility of losing their valued open space, the residents responded by quickly organizing, hiring legal representation and suing the property owners for a violation of the deed of covenant. In addition to official legal action, the residents of this community also staged multiple picket lines on recurring days and have posted large signs around the periphery of the golf course property in protest to its redevelopment.



Figure 11 : Greenbrier Golf Course Redevelopment Plan (Google image)

The redevelopment process for this property was set in motion early in 2011. After over a full year of public meetings and controversial debate the county commission eventually sided with the property owner in this case. According to statements made by commission officers after the ruling, last minute concessions made by the property owner to include “a smaller golf course or other golf attraction” within this redevelopment plan as can be seen in figure 11, effectively nullified any deed of covenant restrictions on the closed golf course property, allowing it to be redeveloped.

Despite these concessions however, many existing residents continue to be in opposition to this project. Many have voiced their concerns stating that this redevelopment effort will bring an influx of new people, traffic, noise, crime and potentially flooding to the area. Charles Koppelman a twenty year resident of the neighboring retirement community stated “*It stinks...We bought here with the understanding that we had a beautiful golf course and plenty of open spaces. The word perpetuity means forever, this isn’t over.*”

There are several lessons that can be taken away from this example. Firstly, when one side of a development proposal such as this attempts to dominate the other either by ignoring the needs of the other side or by not giving them a chance to express their concerns or desires, conflicts will arise. Secondly, when such a conflict does arise it can cost both parties drastic amounts of both time and money to attempt to reach a resolution if neither side is willing to meaningfully compromise their position. It has been over five years since the golf course closed and nearly two since the original redevelopment proposal for this site surfaced. During that two year period as many as four public hearings have occurred, each with a considerable price tag to the tax payers of West Palm Beach. While the land the golf course used to represent is scheduled for redevelopment the conflict between these two stakeholders may be far from over as many existing residents have stated a desire to continue to fight this project within the court system in any way possible. Until the day comes when ground can be broken on this project, the land the golf course used to represent will still exist, unmown and uncared for, continually growing and

becoming more unsightly to the existing residents every day. The current property owner will still have to pay property taxes on the land, having no immediate return on their initial investment, and will still have to finance a lengthy legal battle. As far as the county is concerned, on top of having to host meetings and ongoing litigation proceedings, it still has not realized any increase to it's tax base and instead must continue to incur costs to allow the issue to play itself out in court. Even after this issue is finally settled legally, the question will be 'Does anyone truly feel vindicated by whatever outcome is handed down?'

A third major lesson that can be taken from this case is the importance of having an open and balanced planning process for a redevelopment project from the beginning. By being open and balanced, the planning, rezoning and permitting processes may proceed much more efficiently than in this case study, saving valuable resources for all parties involved by being inclusive and allowing each side to provide input into the final design, thus avoiding many of the typical sources for conflict. While balance and openness may not have been able to overcome all potential issues of conflict in this case, it had the potential to minimize many of the issues that have arisen at the Greenbrier.

4.2 CONCLUSION

When one looks at the many differing agenda's above it becomes clear that each stakeholder group has a certain set of priorities it is looking to achieve or maintain when re-developing a residential golf course property. Many of the priorities valued between each of the various stakeholder groups above are in direct conflict with one another. In fact, conflict is often so prevalent within this specific type of redevelopment that it is necessary to explore these conflicts further to understand how when not kept in balance, they can result in long expensive stand offs between the stakeholders. These conflicts can sometimes take years to resolve often resulting in severe delay's or complete postponement of redeveloping a closed golf course property.

As we will see in the following chapter through case study of successful golf course redevelopment, developing a positive environment through an equitable design process is pivotal to the eventual success of the project. When all parties involved feel as though their ideas and agendas are being acknowledged and taken into account, there is less potential for any one party to feel neglected or victimized which leads to less conflict. This then paves the way for ideas and feelings between the various stakeholder groups to be shared and eventually the project to reach completion.

CHAPTER 5
TYPICAL SOLUTIONS FOR THE CHALLENGES OF GOLF COURSE REDEVELOPMENT

As we have seen in the preceding chapter, when there is little or no balance between the associated agendas that revolve around this and arguably all types of redevelopment, costly conflicts often ensue. Within this chapter, we will examine several case studies that present a range of possible solutions to the problems associated with competing stakeholder agendas. Of specific interest to the design of this thesis are how the projects have addressed the problems of impacts to existing housing value and community identity, and have balanced stakeholder agendas within the final redevelopment design.

5.1 CASE STUDY 1: RED CEDAR GOLF COURSE, EAST LANSING MI.



Figure 12 : Red Cedar Golf Course Existing Site Plan. (Google Maps) (Author)

The Red Cedar Golf Course located in East Lansing, MI. Unlike the case study discussed in the previous chapter and those that will follow it later in this chapter, Red Cedar is a closed golf course that it is municipally owned by the city of East Lansing and is not part of a master planned golf community. In spite of these facts, there are valuable lessons to be learned from its redevelopment that may also be applied to courses within golf communities.

The fact that the course is publically owned is important for several reasons. Firstly, instead of the typical existing resident, property owner / developer, municipality agenda arrangement discussed previously, this case broadens the affected stakeholder groups to also include the voting public within the city of East Lansing, making it a public redevelopment project. Secondly, public redevelopment projects are fundamentally different from private projects because they legally require a level of openness during their design and approval phases that allows all that are interested to have their voice heard. In private redevelopment it is not always a given that a developer or property owner will seek the input of those residing around a proposed project. By having the opportunity to impact the design of a project and provide feedback, the likelihood of achieving equity across its design is much greater. In the case of Red Cedar, its development team acquired the public input that was required by the city by hosting a series of three public design charrettes. These charrettes were intense four-hour sessions which split the public participants into teams and allowed them to converse directly with a design professional from the development team about what they would like to see in the final design for the site. At each meeting the design team would present an updated version of the redevelopment plan and allow the public to again break into teams and discuss what, if anything, they would change. According to published local reports, these charrettes occurred monthly from February through April 2012 and had an average public turn out of around fifty people. The public design charrettes in this example represent just one option for how a development team could achieve balance and build consensus through the design process.

While the design process for this redevelopment project is the key factor that makes it

unique, it is not the only aspect of this project that is important. Though slightly different in composition, there are still three clearly defined stakeholder groups associated with this project. While much attention has been paid to the public nature of this project, it is the ability of the design process to satisfy the needs of its stakeholders that is most important.

The documented agenda for the voting public stakeholder group relative to this project revolves around three main provisions. Firstly, before the site can be sold to the developer it must be voted on. In order for the site to become eligible to be voted on the redesign of the site has to be established and agreed to in principle via a public forum. Secondly, as part of the design of the site, a portion of it must remain open to the general public for use. Lastly, any new development on this site must not negatively impact the condition of nearby Red Cedar River to the south. The public also advocated for anything that could be done to improve the river's condition in terms of improving existing infrastructure drainage issues.

In terms of the development team involved in this project, their agenda is much more typical in nature. Like most development interests, this group's primary interest centers around making a profit. Additionally, this stakeholder also aims to develop a quality project so as to expand their company portfolio and further its marketability.

Likewise, the municipality of East Lansing has similarly typical aspirations influencing the three principle elements of its agenda for the Red Cedar project. Firstly, thought not publicly stated, East Lansing has an interest in increasing its tax base. Secondly, it has made publicly documented requests of the developer to aide in improving the existing infrastructure that would service the project. Specifically, through the project the developer must increasing pedestrian friendliness around the site and solving local environmental issues pertaining to the drainage of this and neighboring sites into the Red Cedar River. The last request made by the local government in this case pertains to environmental drainage issues mentioned previously.

In terms of the specific redevelopment solution for this site, it falls in line with the stated agendas of the various stakeholder groups. As can be seen in figures 13 and 14 below, the redevelopment solution for this site is essentially comprised of four distinct districts that overlap into each other. Each district responds to the stated needs made by the various stakeholder groups in a multitude of ways. As an example, the open park district which constitutes the southern portion of the site serves as both a value-added open space amenity for those would reside in the newly created student village or professional town homes while also being open to the public and serving as a natural buffer for the Red Cedar river. The same can be said for the housing and entertainment district. Both serve multiple needs ranging from increasing the profitability and tax base of the site to improving pedestrian circulation via new crosswalks and infrastructure improvements.



Figure 13 : Red Cedar Golf Course proposed site plan. (lansingstatejournal.com)



Figure 14 : Red Cedar Golf Course proposed zoning plan. (lansingstatejournal.com)

This case study is of particular interest to the design of this thesis because it clearly demonstrates the importance and potential impact that balance can have on the outcome of golf course redevelopment projects. Specifically, balance can be seen in this project through the designated functions of each of its four districts. Not only do they bleed over into each other creating continuity within the plan, but they also satisfy the individual desires of the various stakeholder groups without any one of them dominating the plan. In much the same way that balance can be seen in this project, so too can equity. Each district within this design is well

proportioned relative to any other. No single district, or stakeholder agenda, dominates the plan. Considering the various agendas discussed previously, each of the four districts that make up this design are weighted, via their proportional size, fairly well against any other. The largest district in this design, representing roughly 40% of the project's total land area, is the public park at the south of the site which makes sense given the public nature of the project. Additionally, the remaining districts are weighted fairly evenly against each other accounting for roughly 12% each.

While it has taken roughly three years to run its course through the public approval process this project is currently scheduled to break ground in the spring of 2016, bringing an estimated 200 million dollar redevelopment project to the city of East Lansing. In addition, to the best knowledge of this author, this project never entered into any kind of litigation while it was being debated openly by the city council.

Not only does this method of design aide in avoiding conflict related delays but it also aides in the formulation of an arguably better, more well-rounded design which more completely satisfies the needs of all whom the project will impact. When compared with the outcome of the case study discussed in the previous chapter, the benefits of an open design process are clear.

5.2 CASE STUDY 2: CAMINO DEL MAR COUNTRY CLUB, BOCA RATON FL.



Figure 15 : Camino Del Mar / Mizner Trail Community Existing Site Plan. (Google Maps)

The second case study examined in this chapter is the Camino Del Mar Country Club (CDMCC) of Boca Raton, FL. Through this case study we will examine a proposed redevelopment solution centered around the relationship between golf course communities and open space. As we will see, by either supplementing or substituting their golf course with another programmed green space, many of these communities are finding that it is really the connection to the open space, not necessarily the programming of that open space as golf, that is at the heart of their community's identity.

Before we begin to discuss this redevelopment proposal in detail however, it must be noted as a condition of this conceptual redevelopment plan, the homeowners association for this community would purchase the land previously occupied by the golf course. This premise

effectively eliminates the “property owner” stakeholder from the competing agenda dynamics discussed in the previous chapter, thus allowing for maximum amenability towards the priorities of existing residents in terms of redevelopment options. While not possible in every situation, this proposal is pertinent to the design of this thesis because it represents an ideal redevelopment outcome from the existing residents point of view. By understanding what an ideal outcome for a existing homeowner group would look like, one can then synthesize the core values of its design and apply them in the design of other similar redevelopment projects. In addition to serving as an ideal outcome for existing residents, this proposal also further highlights the fundamental importance of open space to these communities.

Since it’s closure in 2005, the property owners of the CDMCC have pursued its redevelopment as a way to profit from the now overgrown and neglected 130-acre parcel that meanders through the Mizner Trail neighborhood of Boca Raton, FL. As part of the process of redevelopment many proposals have been issued by the property owner during the nine-year debate that has raged between property ownership and representatives from the homeowners association of Mizner Trail. A main priority of all of the previous redevelopment proposals has been additional housing units which can be seen in figure 16. The inclusion of these new residences, which has ranged in amount from 600 in early proposals to fewer than 300 in more recent versions, has been the major point of contention with existing residents. The concerns of the existing resident stakeholder group include the removal of views and open spaces, increased noise and traffic and the over-population of their community. As an alternative to the plans presented by the current property owners, the homeowners association for this community has put forth it’s own proposal in an attempt to satisfy the needs of its constituency, the existing residents. As has been mentioned, this proposal by the HOA of Mizner Trail calls for the purchase of the golf course property from the current property owner removing them from the stakeholder dynamic going forward.



Figure 16 : Mizner Trail Redevelopment Plan. (Land Design South) (http://www.supportmiznertrail.com/site-plan/)

As can be seen in figure 17 below, we can derive several things pertaining to the redevelopment goals of the existing residents. Firstly, there is clearly a desire to achieve a very green, minimally invasive approach to the redevelopment of this golf course. This design choice speaks to how highly this community values its open spaces and the physical identity they help to promote. Additionally, it is also clear that programming the open space one occupied by the golf course with active uses is a high priority for these residents. They clearly desire a high degree of functionality for these spaces to further enhance them beyond simply providing a pleasing aesthetic environment. Lastly, the exclusion of any form of golf within this plan begins to speak to its place within this community. This exclusion is atypical for a community that was designed around the game of golf as a main amenity. One possible hypothesis for this exclusion is that while the environment created by the game of golf is quite appealing, it's volatility and continual maintenance costs do not appeal to these residents. In fact, research suggests that in contemporary golf communities it is typical for less than 30% of the residing population to actually

participate in the game (Nichols and Crompton 2005). Nevertheless, it is important to note this exclusion as part of the ideal redevelopment solution proposed by community members.



Figure 17 : Mizner Trail Conservation Plan. (http://unitedbocadelmar.org/)

In terms of fundamental identity, the proposed plan is very similar in context and feel to that of any functioning golf course community, albeit with some aesthetic differences. Underneath these superficial differences lies the same basic idea that large amounts of diverse, programmed and interconnected open space can enhance property value while being form a functioning foundation for a visually pleasing, amenity-based lifestyle. These open space benefits can be realized regardless of whether it is through playing the game of golf, walking on a trail or by passively viewing it through an open window of from one's patio. Because the activity itself is largely irrelevant, what unites these experiences and forms the basis for the identity of the community is actually the existence of the open spaces themselves. Understanding this fact, one can then see why so many communities fight so fiercely to retain as much of their open space as

possible: they are a fundamental part of their community identity.

In conjunction with the feeling of identity typically created by open spaces, there is also an association that exists between the value of a home and it's physical proximity to open space within a residential community. This issue is of particular concern for those homeowners residing on a closed golf course that is facing redevelopment. Contrary to popular belief, the most valuable use for the land the golf course used to occupy in terms of housing values for existing residents is not more new homes. Rather, the maximum value of this open space is typically realized through its retention and redesign. This relationship between value premium and proximity to open space is amplified as the densities of the surrounding built environment and scarcity of other proximate open spaces increase. "*A study of the effect of greenbelts on property values in three different areas of Boulder, Colorado showed that there was a $4.20 decrease in the price of residential property for every foot one moved away from the greenbelt. This suggested that if other variables were held constant, the average value of properties adjacent to the greenbelt was 32% higher than those located 3,200 walking feet away.*" (Crompton, 2007) In this quoted example the greenbelt could be substituted for a golf course with minimal impact to its findings. This is because it is typical for homes that reside on golf courses to have premiums of up to 40% attached to them due to their proximity to open space. (Nichols and Crompton 2005) The point here is that regardless of its programming, all types of open space add value to homes which reside near it. With this in mind, from the perspective of a homeowner one can see the clear value in retaining as much open space as possible within a redevelopment project as it not only protects the identity of the community but it's housing values as well.

After nearly a decade in court the fate of the Camino Del Mar Country Club property is still in limo. After repeated attempts to purchase the property by the HOA of Boca Del Mar the current property owners have elected to retain ownership of the golf course and continue to pursue the

residential redevelopment of the property. In July of 2014 the Palm Beach County Commission decided to allow the development of 252 homes on the 130 acre golf course property. Since that ruling the homeowners association of Boca Del Mar has once again counter sued the development group representing the current property owner in an attempt to repeal the previous ruling. According to local reports pertaining to the on going saga, the current property owner of the CDMCC intends to pursue building permits and start construction even if the existing residents appeal hasn't been fully resolved (Reid, 2014). While this case study is a poor example of conflict resolution within a redevelopment project it is an excellent example of highlighting how important open space is to many golf course communities. The fact that this homeowners association was able to maintain a continuous court battle with a development group for nearly a decade goes a long way to illustrate this point. Additionally, the proposal offered by the homeowners group of Boca Del Mar also serves to illustrate what an ideal redevelopment outcome would look like through the eyes of existing residents.

5.3 CONCLUSION

There are many lessons and concepts that can be taken away from these case studies and incorporated into golf course redevelopment projects. While no one project will answer all questions pertaining to the topic of successful golf course redevelopment, each has the ability to provide insight into specific situations. In terms of this thesis, the investigation of these case studies has led to the formulation of two main principles that will guide the development of a hypothetical golf course redevelopment proposal going forward. These principles are the establishment of balance between competing stakeholder agendas and the retention of community identity through the programming of a redevelopment project.

CHAPTER 6
ADAPTIVE GOLF COURSE REDEVELOPMENT, IDENTITY THROUGH BALANCE

6.1 SITE SELECTION CRITERIA

To test the ability of the two guiding principles of identity and balance to be applied to a redevelopment proposal, a hypothetical project site has been selected. The following is a list of specific criteria used to inform the selection of the site.

1. The proposed site must contain a closed golf course.
2. The closed golf course in question must be part of a residential development.
3. The site should only encompass at a maximum, one eighteen hole equivalent golf course not exceeding 200 acres in total area.
4. The community must have a sense of authentic identity connected to the golf course.
5. There must be a clear understanding of the goals and agendas for as many of the associated stakeholder groups surrounding the project as possible.
6. There must also be a clear understanding of the contextual limitations of the surrounding site area that may impact redevelopment decisions. i.e. proximity to competing golf courses, existing infrastructure, ect.
7. Ideally, the bulk of the site would be concentrated in one contiguous landmass. This, however, is not mandatory.
8. Redevelopment has not already begun on the site.
9. The site must be accessible on foot so as to permit onsite investigation by the author.

6.2 SITE SELECTION

According to the 2010 census, there are more golf courses located in the state of Florida on a per capita basis (1 course for every 1,481 residents) than anywhere else in the continental United States. Because of the number of golf courses closing or already closed in Florida and the golf industry in the state's vulnerability to future closures, it serves as an ideal location to find a project site. As we refine the focus of site selection from the wide state level to a more localized county level, the sub region of south Florida from Palm Beach south to Miami meets more of the stated selection criteria than any other localized area. Within this sub region, site selection becomes a matter of locating individual closed golf courses and weighing them against the stated criteria above to find the closed course that is ideal for this project.

As can be seen in figures 18 - 21, the site to be chosen for this project is that of the Calusa Country Club (CCC) located just south and slightly west of downtown Miami in the suburb of Kendall, Florida. The CCC is a closed eighteen-hole golf course encompassing approximately 160 acres and was originally developed as part of a master planned residential community in 1970. It has both a clearly formed identity influenced by the golf course and clearly stated redevelopment agendas by those parties of interest that surround this project. The site is also very accessible on foot and is in one contiguous landmass, making it a highly desirable site for redevelopment study through this thesis.

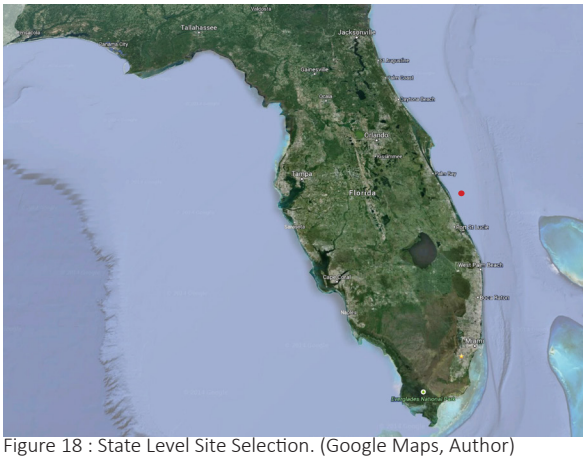


Figure 18 : State Level Site Selection. (Google Maps, Author)



Figure 19 : Region Level Site Selection. (Google Maps, Author)



Figure 20 : Local Level Site Selection. (Google Maps, Author)


Figure 21 : Site Level Site Selection. (Google Maps, Author)

6.3 SITE INVENTORY AND ANALYSIS

In order to better plan and organize this redevelopment project, the inventory and analysis of the existing conditions of this site where divided into two primary categories: stakeholder group agendas and the physical infrastructure/environment of the existing golf course and the surrounding community.

6.3.1 STAKEHOLDER GROUP AGENDAS

There are three primary stakeholder group agendas that pertain to this redevelopment project. These stakeholder groups are as follows: existing residents, property owner / developer and local government. Each of the following agendas have been determined based on a multitude of sources including but not limited to newspaper articles, internet forum discussions, local news casts and personal conversations with associated parties. Within each of the agendas associated with this project, there are both typical and non-typical aspects to their specified agendas. In order to avoid redundancy, the typical aspects of these specified stakeholder group agendas will be mentioned but not discussed in depth. For a full in depth look at the typical aspects to each of these three stakeholder group agendas please see Chapter 3 of this document.

6.3.2 EXISTING RESIDENTS' AGENDA:

Typical Aspects:

- Retain and preserve as much open space on site as possible and the views / vistas which they provide.
- Retain a high quality of life with minimal changes to traffic flows, noise level, population density, ect.
- Protect housing values.

Project-Specific Aspects:

- Retain and improve the identity of the community through the revitalization of its primary open space amenity: the golf course. This community was intimately connected to its golf course as it's primary driver of identity. As such, the Calusa community is largely in full support of its resurrection in some form as long as it can be sustainable.
- Improve general community amenities and allow for them to be accessed publicly. In addition to golf this community would like to see some diversification in how they interact with their open space. The inclusion of walking / biking trails or other family oriented activities would be very welcome. If golf is able to return to this site, the development of a new clubhouse or community center had also been mentioned as desirable. The community at large would also like for as many of the new additions that are included with this redevelopment proposal to be publicly accessible and not locked behind a gate or membership. (Torres, 2011)

6.3.3 PROPERTY OWNER / DEVELOPER AGENDA :

Typical Aspects (assumed):

- Realize the maximum economic return on the purchase of the site possible.
- Avoid as many scheduling delays as possible
- Develop a quality product which will further the marketability of this developers portfolio.

Project Specific Aspects:

- The site for this project was originally purchased by its current land owner for the expressed purpose of redeveloping the land occupied by the then functioning golf course according to local newspaper articles. After its purchase in 2006, the landowner attempted to redevelop the golf course property on two separate occasions but failed to do so each time because he could not obtain the required 75% approval from the surrounding community

as stipulated by the deed of covenant that exists on the property. After the failure of the second attempt at redevelopment the landowner decided to allow the golf course to go fallow and sue the residents of the community in an attempt to remove the deed through the court system. (Eagleton, 2011)

- As will be discussed in more detail in the design intervention section of this document, based on how the site for this project is zoned it can only be redeveloped as either a residential or recreational use. Because of this limitation of use, the developer has stated that their current intention for this site is to convert it into a single-family residential community. As part of this stated agenda the developer is aiming to build as many units on this property as possible. The maximum residential capacity of the redeveloped golf parcel is 653 units based on the application of city and county construction set back standards.

6.3.4 LOCAL GOVERNMENT AGENDA (MIAMI - DADE COUNTY)

Typical Aspects (assumed):

- Maintain and enhance the tax base where possible.
- Maintain or amend any zoning laws pertaining to the site unless proven to not be in the best interest of its citizens.
- Account for any environmental issues pertaining to the site including but not limited to water collection and drainage from neighboring properties, wildlife habitat issues, etc.

Project Specific Aspects:

- Maintain the site as a water collection and drainage location. As will also be discussed in more detail in the following section of this analysis, this site retains off-site storm water runoff, functioning as a major storm water infrastructure for the surrounding community

6.4 EXISTING COMMUNITY INFRASTRUCTURE

In addition to acknowledging and understanding the agendas of each stakeholder group associated with a redevelopment project, gaining an understanding of the existing infrastructure conditions of the proposed project site and its surrounding area is also necessary. Because every site and proposed project is different, each requires an analysis of their existing conditions that is specific to that site and proposed project type. In terms of the existing community infrastructure conditions for this proposed project site, they have been divided thusly:

- Site Specific Analysis :
    - Demographic Survey
    - Zoning and General Information Study
    - Site Drainage and Flood Zone Study
    - Site Soil Survey
    - Surrounding Retail Proximity Study
    - Surrounding Open Space and Recreation Proximity Study

These specific categories and corresponding sub - sections where established as part of a continually evolving analytic process. Beginning with a typical analysis, both the site itself and the surrounding community where studied via a demographic survey and general zoning / property information analysis in order to form a general background for the project. (figure 22 and 23) From these studies several conclusions could be made which would affect the establishment of a foundational framework for the design of this project. Firstly, it was concluded that the community surrounding the project site was a relatively young, economically stable, middles class community with low poverty and unemployment rates. Additionally, when coupled with an interim zoning designation of GU (residential or recreational based on proposal), the potential

for the redevelopment of this site was very high. Because interim zoning designations act more as a placeholder than a firm designation, they can typically be changed based on need. This allows for development interests to present a proposal and if said proposal is in the best interest of the community a formal rezoning of the site can take place.

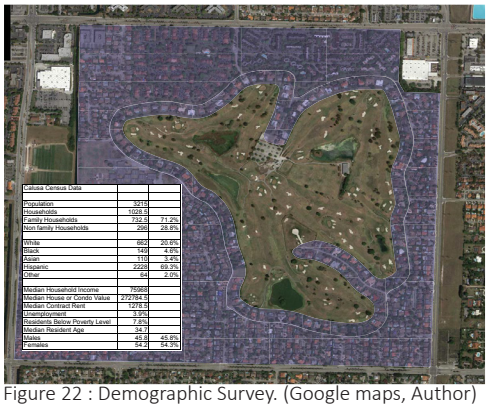
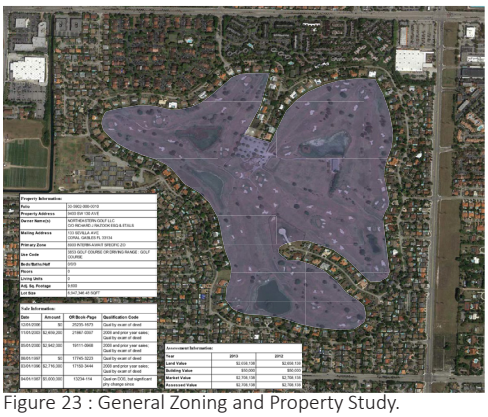


Figure 22 : Demographic Survey. (Google maps, Author)


Figure 23 : General Zoning and Property Study. (Google maps, Author)

The next step in gaining an increased understanding of the context of this site came from relating the information gained from the first series of analyses to the stated agendas from the interested parties. The goal of this comparison was to identify where gaps in knowledge about the site existed based on the stated stakeholder group agendas. Once the specific gaps where determined, additional targeted analysis could take place. The review of stakeholder agendas in this specific case suggested that studies pertaining to site soils, water drainage and flooding, the proximity to surrounding retail and lastly the proximity to existing open space and recreation should be completed. (figures 24 - 27)

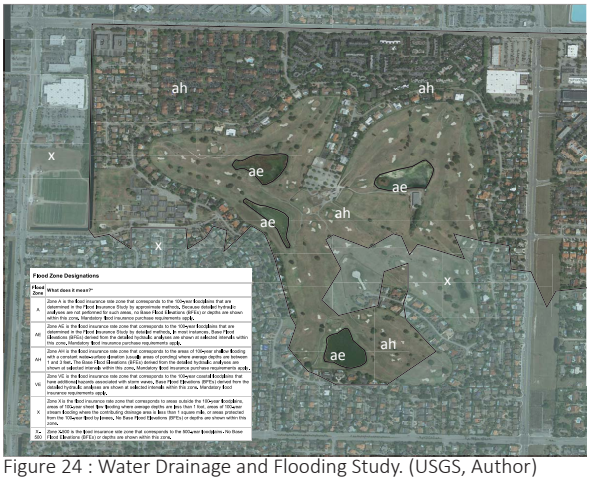


Figure 24 : Water Drainage and Flooding Study. (USGS, Author)



Figure 25 : Site Soil Study. (USGS, Author)

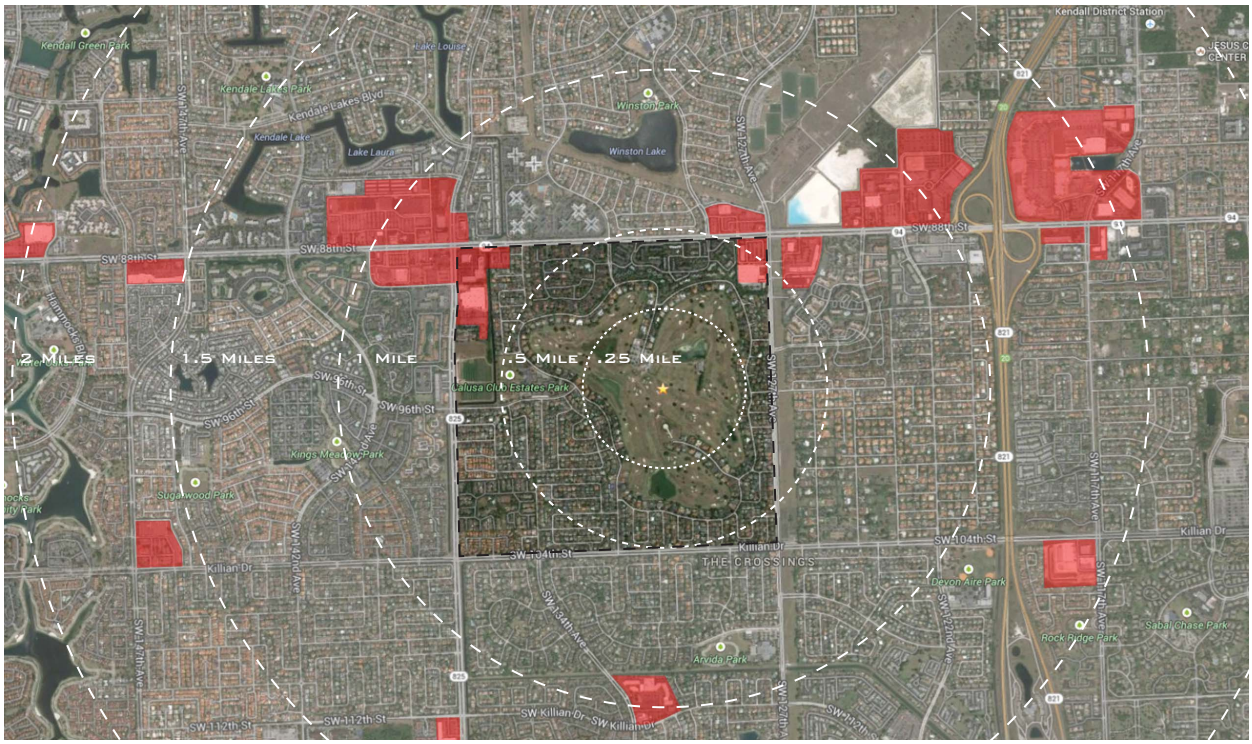


Figure 26 : Existing Retail Proximity Study. (Author)

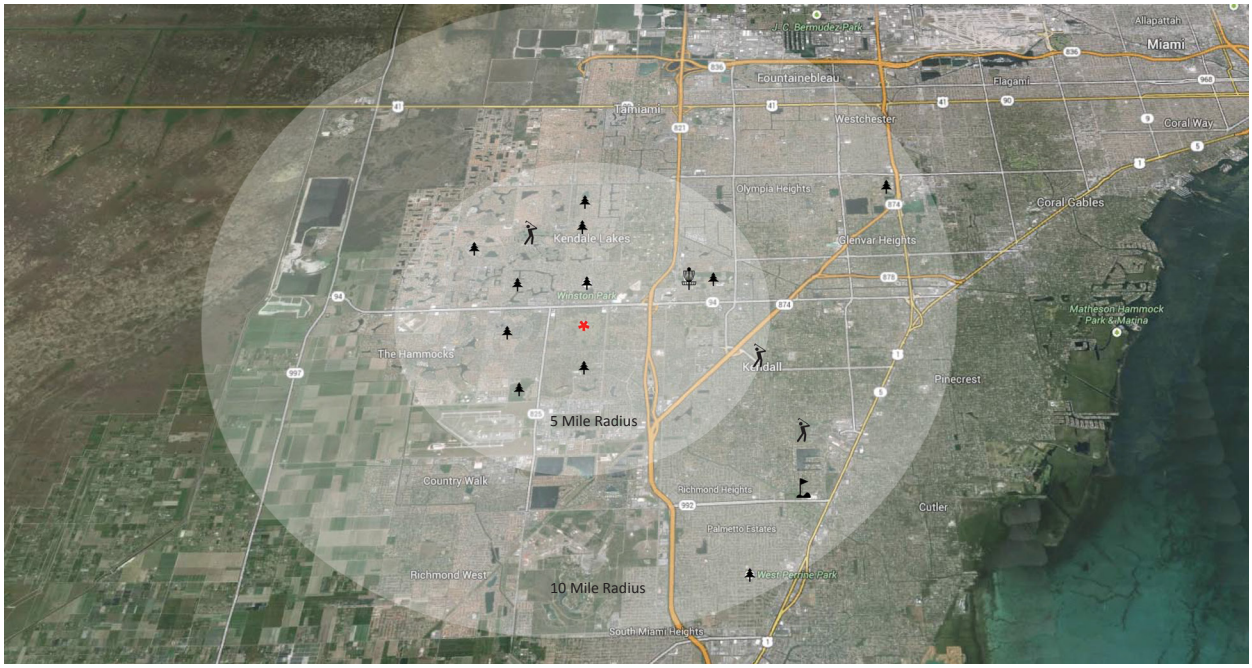


Figure 27 : Existing Golf and Open Space Proximity Study. (Author)

From this new series of targeted site-specific analyses, many conclusions were drawn that helped to provide a more complete picture of the contextual infrastructure conditions which surround this site. Of specific significance were conclusions drawn from the proximity studies of both existing retail and existing open space and recreation opportunities. From these studies it was concluded that the closest neighboring golf course and the new golf course requested by the existing residents should both be able to coexist as long as their target consumer groups where different. Specifically, the target consumer group for the new golf course proposed within this thesis would be those golfers who may be looking for a golf experienced designed with a condensed, less penal approach as opposed to the contemporary design approach previously discussed which could be found at neighboring golf course locations. Additionally, it was also discovered that within the smart growth best practices standard of a quarter mile, there were no existing retail locations within a walkable distance from this community.

With the site specific analysis completed, a complete body of contextual information now existed relative to the expressed agendas of each associated stakeholder group of this project. Through the attainment of this body of information it was possible to begin programming and constructing the strategic framework for the design of this project that will enable the aforementioned guiding principles to be applied.

6.5 STRATEGIES FOR REDEVELOPMENT

Following the complete inventory and analysis of the Calusa Country Club community, a series of methods/strategies where established to satisfy the guiding principles of retaining community identity and balancing competing stakeholder agendas. These strategies where based on discovered opportunities and constraints from the inventory and analysis phase, lessons learned from case studies and the desire to balance the stated agendas of the various stakeholder groups associated with this project. The strategies used in the redevelopment of the Calusa Community Country Club include:

1. Reintroduce a sustainable form of golf that directly addresses the contemporary critique of the game and the need for identity within this community.
2. Retain as much open space as possible on site by consolidating the built footprint of the developers redevelopment proposal as much as possible.
3. Buffer the sight lines of existing periphery residents as much possible to retain and enhance their identifying connection to the open space within this site.
4. Program a variety of diverse publicly accessible uses into the retained open space within this site.
5. Minimize the need for additional physical infrastructure on site where possible.
6. Develop a rainwater collection and storage strategy that retains the site's capacity to handle runoff originating from it and neighboring properties where possible.
7. Maximize the potential for environmental peacemaking within this project by showcasing and educating users to south Florida's endangered native ecosystems.

As can be seen in figure 28, the golf course redevelopment plan proposed in this thesis enhances the sense of identity within the Calusa community of Kendall, Florida through the balancing of the various stakeholder group agendas associated with this project, the reintroduction of golf within this community, the retention and programming of much of it's open space, the inclusion of a native plant pallet and a minimization of additional physical infrastructure needs. This proposed plan is designed to not only meet the needs of all of the stakeholder groups involved with this project but exceed them where possible. As a alternative to the maximum development plan issued by the current property owner, this master plan consolidates the necessary built foot print of said proposal into a centralized location which preserves much of the open space this community identifies with so deeply. It then carefully evolves the historic identity of this golf course community into a richly diversified, amenity centric experience with an abundance of publicly accessible activities and open spaces. Whether it be through playing community golf, disc golf, walking or biking on the greenway or enjoying any one of a variety of observation areas found throughout the site, there is something for just about everyone in the new Calusa.

In addition to its open spaces, this proposal also introduces new built assets into the Calusa community as well. Through the newly created Calusa Commons mixed use residential and retail development, a vast array of options exist for the individual looking to make Calusa their forever home or their afternoon get away. Along the central axis of this new development exist various opportunities for walkable shopping and dining experiences including the addition of a brand new golf and community center at it's west most terminal end. Radiating outward from the eastern end of it's central axis are numerous housing options of various configurations. Currently there are three different single family floorplates of various sizes in addition to both attached single family and condominium alternatives.

Lastly, this thesis also responds to environmental issues such as rainwater collection and native habitat preservation. Through the inclusion of bio - swales populated with semi aquatic native plant species, much of the surface run off from localized rain events can be handled

naturally without the need for additional underground infrastructure. In conjunction with the inclusion of bio swales within this project it also supports the extrapolation of this concept to include several specific native ecosystems to the south Florida region. These environments help to not only ground this project firmly in the south Florida landscape but also serve to further diversify the experience of moving throughout the site as the environments change at regular intervals based on location.



Figure 28 : Calusa Community Master Plan (Author)

6.5.1 STRATEGIES IN ACTION

1) Reintroduce a sustainable form of golf that directly addresses the contemporary critique of the game and the need for identity within this community.

The Calusa Country Club was considered by many to be the heart of this community and the predominant form of its identity. When one considers that the amenity of golf served as the foundation from which the remainder of the surrounding community was designed in 1970, it was only natural to include it as a foundational part of the redevelopment strategy for this site. With that being said however, it was discovered through the iterative design of this project that there was not enough physical space to include a traditional eighteen hole golf course on this property given

the other program elements determined necessary to balance the agendas of the other stakeholder groups. This limitation, when coupled with the contemporary critique of the game of golf, has lead to the design of a golf course and golfing experience that is unique in many ways. By utilizing the template of “executive” golf as it’s design foundation - a nine hole, par three golf course with traditional hazard elements in it’s design - much of the traditional physical environment and experience of the game of golf could be retained on a smaller scale. By retaining these elements, the authenticity of the identity of this community could be retained in a more sustainable fashion.

Calusa Community Golf Course Design

Traditionally, golf course architecture and design can be divided into three major themes, Penal, Strategic and Heroic. These themes attempt to describe the arrangement of the elements (tee, hazards, fairway, green) of a golf hole and show the proper path one should take to reach the green. Within the penal design theme the participant is forced to confront a hazard with no option to play around it. This theme is the oldest of the three and represents the most basic of challenges. The strategic design theme is in many ways the converse of the penal theme. It is typified by careful shot placement opportunities through positioning the ball around a hazard instead of facing it directly. Lastly, within the heroic design theme one essentially merges the two previous themes into one. This theme is typified by presenting the participant with the option for a high risk, high reward shot selection while maintaining the ability for the participant to follow a safer path if they so desire.

Tees	1	2	3	4	5	6	7	8	9	
Blue	171	287	138	290	133	248	215	294	176	1932
White	159	256	126	279	126	236	204	282	164	1832
Men's Par	3	4	3	4	3	4	3	4	3	31
Red	129	215	116	246	120	206	180	255	154	1616
Ladies' Par	3	4	3	4	3	4	3	4	3	31

Penal Element -

Strategic Path -

Heroic Path -

Water -

Native Area -

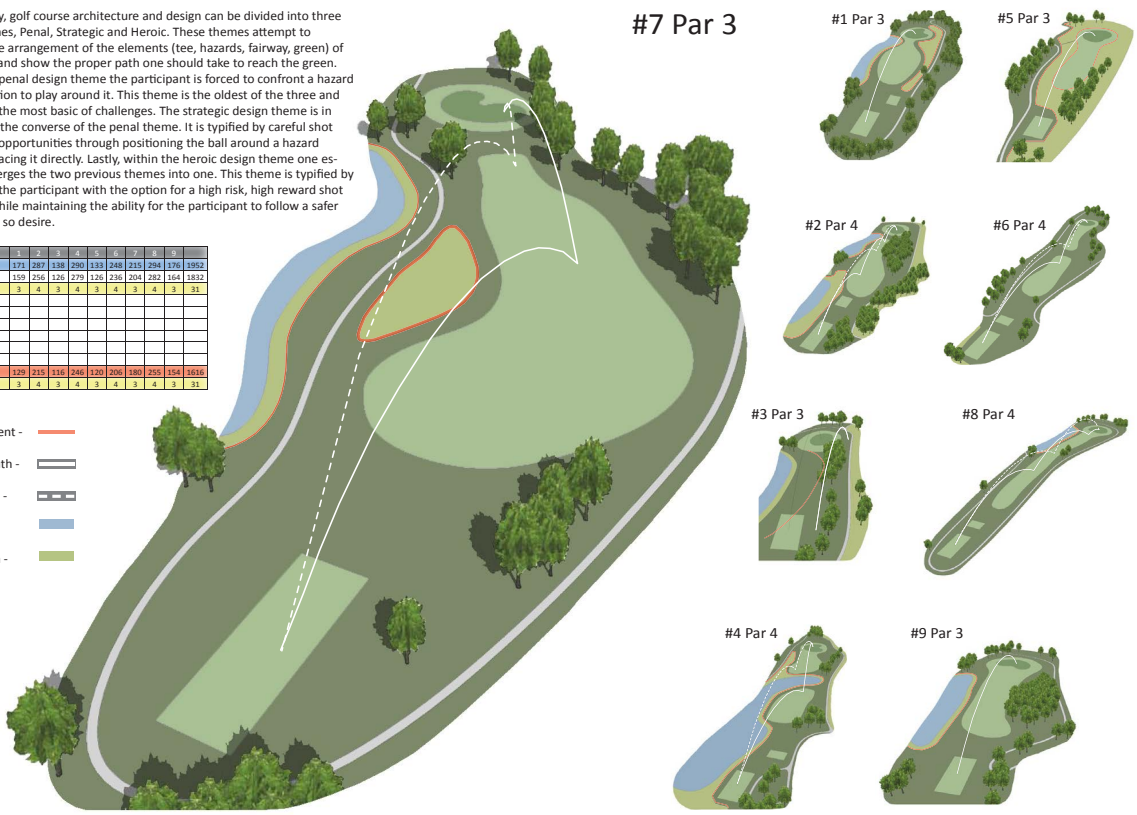


Figure 29 : Community Golf Course Design 1 (Author)

The Driver Effect

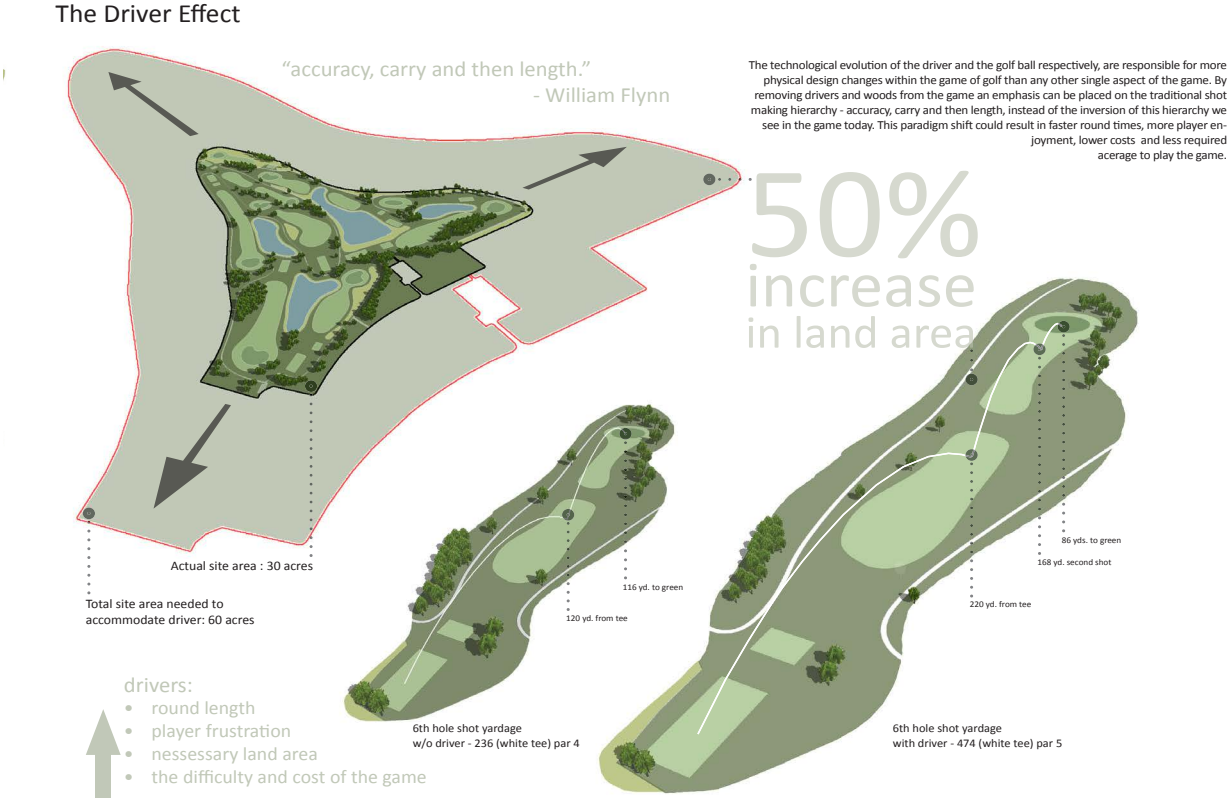


Figure 30 : Community Golf Course Design 2 (Author)

As can be seen in figures 29 - 30, instead of simply applying a traditional “executive” template to this project, it’s foundational concepts - par three layout, hazard elements, quick to play, affordable, low maintenance cost - were retained but redesigned to promote a more forgiving, enjoyable, “community golf” experience that could be shared with anyone regardless of skill level. To accomplish this goal, frustrating elements of the game such as sand bunkers, water and other heavily penalizing hazards where either removed or were designed in such a way that they could be optionally avoided if so desired. This allows the participant to approach each hole in a variety of ways and typically always allows the participant to safely “bail out” if need be, lessening the frustration of the game. Additionally, the design of this golf course attempts to remove another layer of frustration held by many amateur golfers by removing the need for a driver to be able to play it. In order to accommodate golfers of all skill ranges the approach distances and angles from the tees are highly variable so as to allow the green to be easily reachable with short irons when attempted from the near tees, or with a longer iron or hybrid club when played from its longest tee locations. Due to it’s smaller footprint and the selection of FloraTex™ hybrid Bermuda grass which requires a fraction of the amount of water typically consumed by conventional species, it should be completely possible to maintain the entire golf course property with as few as five employees making it highly sustainable.

2) Retain as much open space as possible on site by consolidating the built footprint of the developers redevelopment proposal as much as possible.

It has been the stated intention of this stakeholder group to covert this project site into a single family residential development in order to achieve a maximum return on it’s original purchase price. Figure 31 shown here, approximates this maximum development scenario. Through this maximum development plan, we can see that completely developing this property could result in the construction of up to 653 units after code-required spacing between units and

proper right of way widths are taken into account. While this maximum development scenario does much to achieve the goals stated by the owner / developer, it does very little for the interests of any other groups associated with this project, specifically those of existing homeowners.

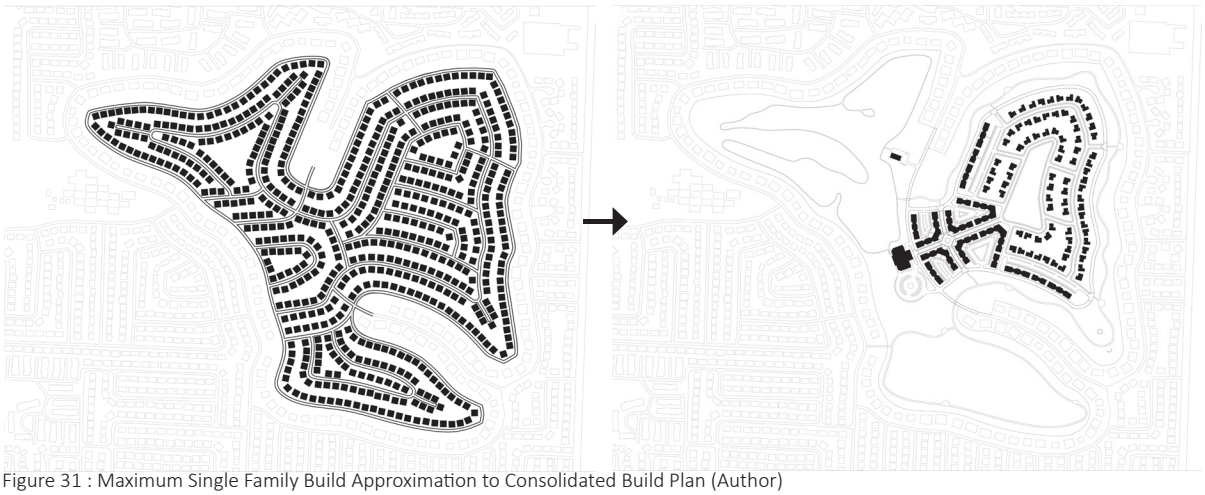


Figure 31 : Maximum Single Family Build Approximation to Consolidated Build Plan (Author)

In order to facilitate a more balanced and equitable solution to the redevelopment of this site, the proposed maximum development plan referenced above must be redesigned. Through the inclusion of various types of residential housing including 90 attached single family, 80 detached single-family units and 292 multi-family apartment or condominiums, a consolidation of the built footprint of this proposal can take place (figure 32). In so doing it then becomes possible to retain much of the open space within this site without sacrificing the total number of units to be constructed. This mixed-use density approach achieves the same 464 residential units on only 44 acres of land that the full build out scenario achieves utilizing the full 160 acres of this site. As a result of this alternative building proposal, a maximized return on investment for the owner / developer can be realized all while preserving much of the identity of the community at the same time.

Additionally, this alternative proposal also addresses issues of walkablity and amenity diversity buy including a mixed-use retail area and new community center as part of the development plan. These inclusions help to address the aforementioned issues by adding another

layer of centrally-located, conveniently accessible amenity options to the growing list already featured within this plan. Both of these additions are well within a walking radius of a quarter mile allowing for any one residing in this community to have access to small-scale retail opportunities without having to use their car. (figure - 33)

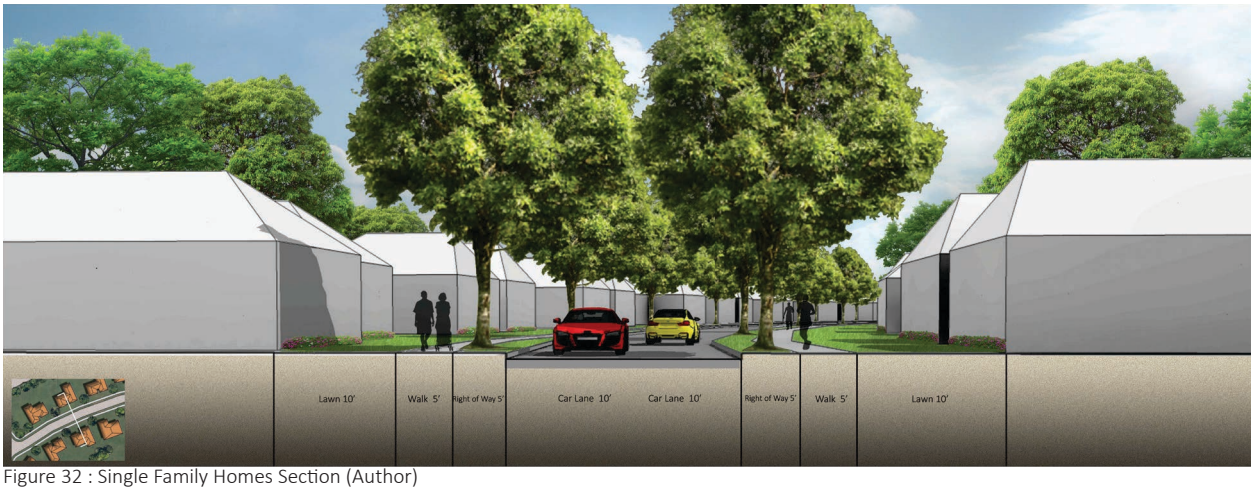


Figure 32 : Single Family Homes Section (Author)



Figure 33 : Calusa Commons Section (Author)

3) Buffer the sight lines between new residential development and existing periphery residents as much possible to retain and enhance their identifying connection to the open space within this site.

Given that residential development of some kind will be included as part of the give and take balance between the stakeholder group agendas within this project, screening these new residences from the view of existing homeowners becomes an issue of great concern. In order to preserve the feelings of connection to open space and identity currently enjoyed by the existing community, and extensive linear greenway system containing native planting environments of a minimum width of one hundred and fifty feet have been included between existing and proposed residential areas of this project as can be seen in figures 34 - 35. These native planting environments will be designed in such a way so as to emulate various native plant communities and wildlife habitats typical to south Florida. While the primary goal of these environments is to help insulate the new residences, they also double as a greenway system. This greenway system serves as a publically accessible amenity that enhances and diversifies the living experience of both new and existing homeowners. A primary feature of the proposed system is approximately two miles of walking/jogging trails and observation spaces that vary in design according to their corresponding environments. In addition to the aforementioned walking trails and observation spaces, the proposed native planting environments will also include other programmed features such as a series of water collecting bio-swales that wind their way throughout the site collecting storm water runoff. Through the development of these proposed native planting environments, it is the goal of this design to enhance the identity of this site by allowing both exiting homeowners and new residents alike to foster and enjoy a connection to its open space amenities that are unique to south Florida.



Figure 34 : Site Planting Plan (Author)



Figure 35 : Greenway Section (Author)

4) Program a variety of diverse publicly accessible uses into the retained open space within this site.

In conjunction with design guideline three above, a top priority of the proposed design was to provide a variety of publicly accessible open space amenities. Within this proposal there are a multitude of open space options to choose from including nine hole community golf, disc golf, the greenway, wildlife observation areas (figures 36 -37), central park community playground and lastly the community sports field. The reasons for the establishment of this priority are as follows.

Firstly, having a diverse array of amenities within this proposal was an expressed desire of the existing residents that neighbor the Calusa Country Club site. Given that designing with balance was also a guiding principle for the design of this project, the inclusion of variety within the programming of the sites activities and green spaces accomplishes both of these goals.

Secondly, achieving diversity in the selection of available activities within a residential community has proven to be excellent for generating and maintaining a sense of camaraderie within it (Francis, 2014). By having a diverse set of activities to engage in within walking distance to one's home, many of the barriers that would otherwise prevent individuals from engaging in these activities are removed. Once outside and engaged, the probability of meeting other like-minded individuals increases. This fosters the interactions and feelings of togetherness that increases the sense of social identity and the potential quality of life within the Community. Typically, in the contemporary era of suburban sprawl, knowing and relating to ones neighbors is becoming more and more rare. By having a diverse array of immediately accessible venues for activities to engage in, this trend can begin to be combated.

Lastly, having a diversity of open spaces around one's home is excellent for resale values. As proven by many studies referenced in this thesis including John Crompton's study from 2007 entitled The Impact Of Parks And Open Spaces On Property Values, there is a distinct connection between the value of a home and it's proximity to open space. By diversifying these open spaces a



Figure 36 : Greeway Pocket Space (Author)



Figure 37 : Greeway Wetland Deck Observatory (Author)

community is never in danger of being too dependent on any one to maintain increased property values. This is in many ways a direct response to the residential golf course craze that engulfed the 1990 thru 2000 residential development cycle. As a result of the over-dependency on golf that was proliferated by this development trend, more communities are looking toward diversification as a way to protect themselves from similar value fluctuations in the future.

These are just some of the many reasons why having a diversity of open spaces is beneficial to a redevelopment project. Between traditional golf, disc golf, the greenway system, the various observation spaces and the mixed use area found in the Calusa Commons section, there is something for everyone to potentially enjoy within this proposal.

5) Minimize the need for additional physical infrastructure on site where possible.

As a direct by-product of design strategy two mentioned previously and design strategy six to be discussed next, this approach to design attempts to minimize the impacts of adding additional physical infrastructure to an established residential community. This proposal reduces the amount of impervious area created by new roads, sidewalks and surface parking by 26% when compared to the maximum build out scenario. By reducing the need for new roads and other impervious surfaces, the need for additional under ground storm water management and water / sewer lines can also be minimized, benefiting all of the associated stakeholder groups in some way (figure 38).

From the existing homeowners' perspective, the act of constructing the necessary physical infrastructure to support a redevelopment project such as this equates to several months of near constant disturbance in some fashion. Whether it be through the added construction traffic moving in and out of the neighborhood or the noise created by the actual development process itself, there will be a fairly significant impact felt by those residing around the construction of this project. By reducing the upfront infrastructure for the project, the duration of such inconveniences and their associated impacts to everyday life for existing residents would be minimized.

In terms of the developer of this project, the reduced need for physical infrastructure directly translates into a savings of time and financial resources. The less infrastructure there is to be constructed, the cheaper the project becomes in terms of total development and planning costs and the amount of time required to construct it. This then leads to a savings on construction costs that typically translates to higher profits for the developer.

Lastly, The impact on county government is much the same as it is for the developer in terms of benefits to reduced infrastructure needs. A reduction in overall cost to the county for the installation and maintenance of this proposal may be realized due to the reduced construction timeline requiring fewer on-site inspections, and the reduced scale of new infrastructure that they would need to maintained. Typically, anywhere a municipality can save money they will which leads to a savings for them and the general taxpayer.

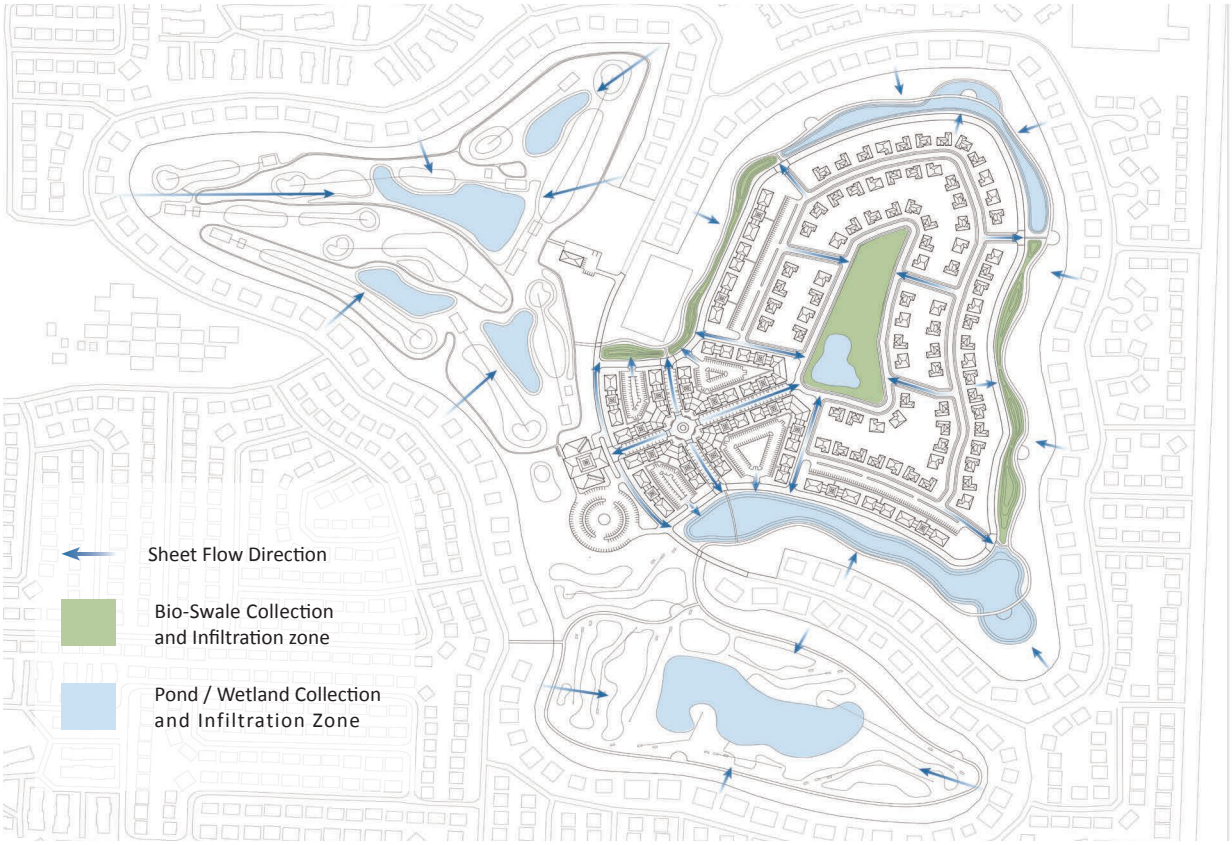


Figure 38 : Watershed Plan (Author)

6) Develop a runoff reduction, rainwater collection and storage strategy via the establishment of bio-swales that help to retain and enhance the site's existing capacity within this role.

This design strategy helps to minimize the need for additional storm water management infrastructure. Specifically, this proposed design reduces the amount of impervious surfaces and additional underground storm water sewers and other associated gray infrastructure by roughly 26% when compared to alternative max build development scenarios. Reducing impervious surfaces minimizes the need for storm water infrastructure in the first place. As can be seen in figure 39, bio-swales function in much the same way as surface rain water drains to manage unavoidable runoff. From the roadway, storm water sheet flows into a designed inlet curb cut that then channels the runoff into a swale of varying depths. From here the rainwater collects in the base of the swale where the processes of infiltration and evaporation occur as well as and the uptake of storm water by the population of native semi-aquatic plants that are planted within the swale. Through these natural processes the contaminants conveyed by storm water is biologically filtered and removed from the runoff.

In addition to helping to alleviate the need for additional drainage sewers, these bio-swales also aide in the establishment of the various native ecosystems included with this proposal. By providing a fairly constant source of water to these surrounding environments, the need for additional investments such as an irrigation system to maintain these plants is not necessary, furthering the infrastructural efficiency of the proposed design.

7) Maximize the potential for environmental place making within this project by showcasing and educating users to south Florida's endangered native ecosystems.

The last design strategy that influenced the design of this redevelopment proposal was established from a desire to achieve a unique sense of environmental identity and balance within this project. It was determined that the inclusion of specific ecosystems native to south Florida was an ideal way to achieve this goal. Not only are many of the included ecosystems symbolic of this region, but they are all fundamentally important to the function and balance of the natural

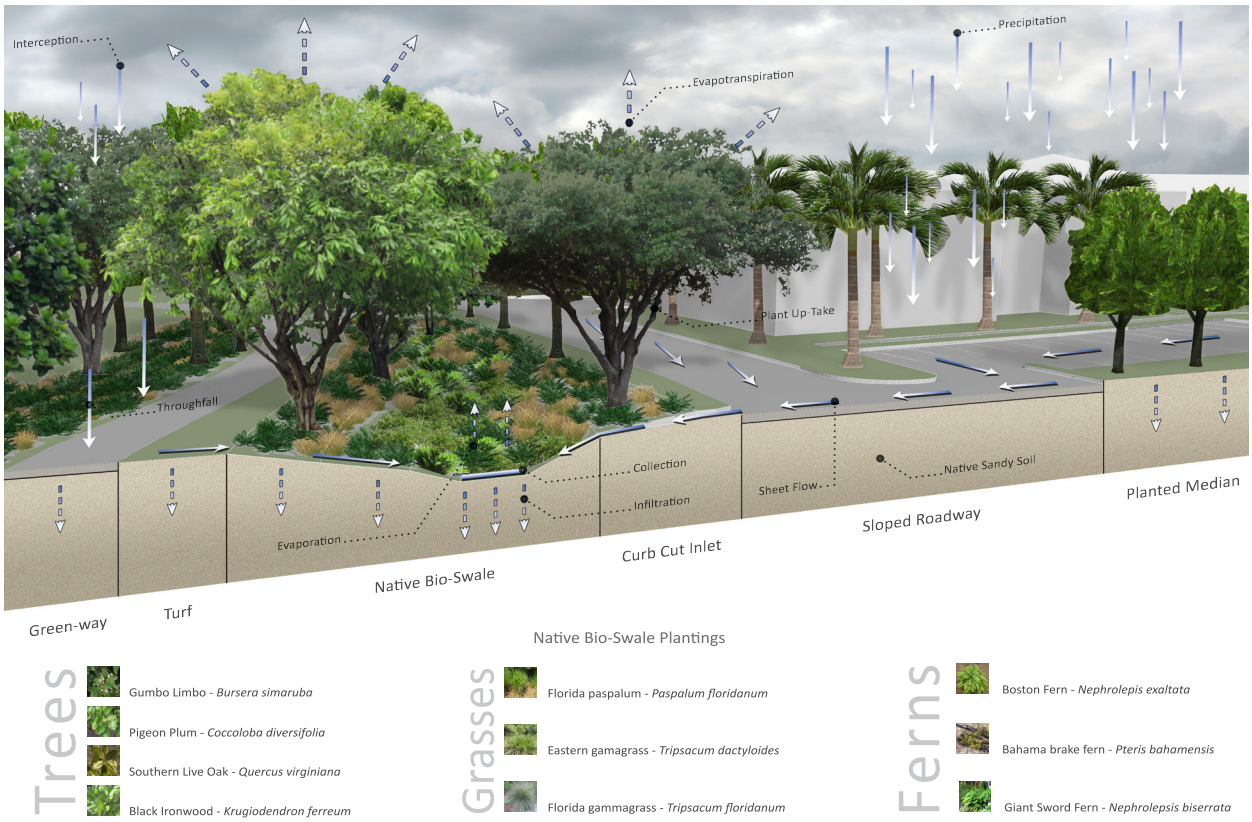


Figure 39 : Bio Swale Detail (Author)

world as well. Sadly, these native environments are slowly disappearing human development continuously encroaches into them.

This proposal showcases these ecosystems as an integral part of contemporary development as can be seen in figure 40. By utilizing them as both iconic signifiers of place as well as elements of sustainable community aesthetic, they play a large role in the formation of both balance and identity within this site. The native plant community types included in this proposal are as follows :

- Fresh Water Marsh
- Wet - Dry Prairie
- Lawns including golf course turf
- Hardwood Hammock

In terms of site identity, these ecosystems are so specific to the south Florida region that their inclusion creates an indelible relationship between the user, the site and the broader region. Furthermore, the utilization of these native plant pallets in the sequential way which they are found within this project creates a ebb and flow as one moves through them. This ebb and flow experience is intended to allow the participant to see how codependent these various ecosystems are on one another and how their inclusion within this project allows it to feel distinctly Floridian.

Lastly in terms of balance, because the environments specified in this project are native to this region, they have an inherently high level of stainability and lower maintenance requirements when compared to planting approaches that favor non-native plants. This allows for the creation of an environment that is beautiful, environmentally balanced and economically efficient.

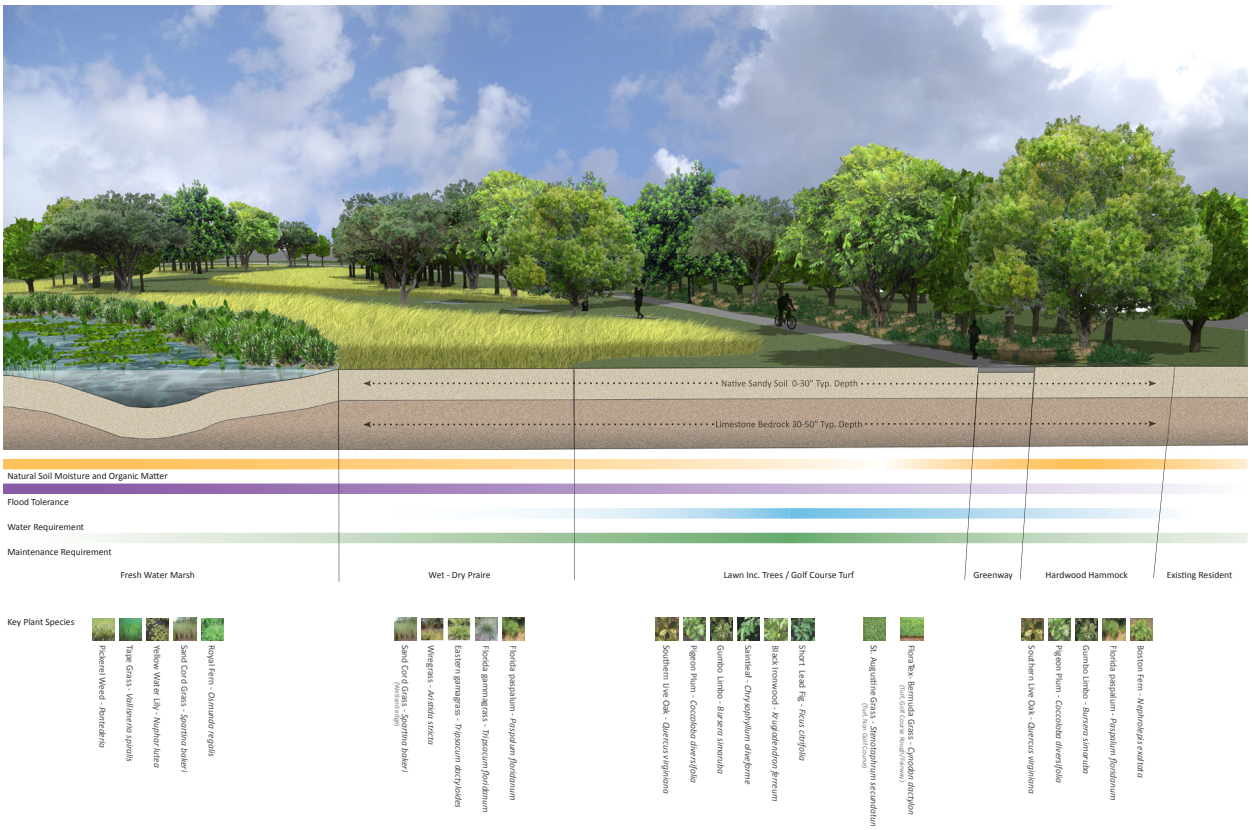


Figure 40 : Proposed Plant Communities (Author)

CHAPTER 7
7.1 CONCLUSIONS

As is typical for many residential golf course redevelopment projects, the Calusa Country Club faces issues of competing stakeholder agendas and the loss of the physical, social and economic identity of its surrounding community as a result of its closure. The redevelopment plan proposed in this thesis addresses these issues and challenges in various ways.

In terms of physical identity, this plan retains and enhances the historic residential golf course identity of Calusa through the consolidation of the maximum build scenario proposed by the current property owner into a centralized location, preserving much of the open space this community identifies with so deeply. The alternative redevelopment plan proposed by this thesis programs much of this open space to provide a richly diversified, amenity-centric community living experience. Included as part of this living experience is public access to nine hole community golf, disc golf, walking or biking trails and access to any one of several observation areas which are carefully placed within a series of natural, native environments found only in south Florida. Additionally, through the programming of much of its open space and the insulation of a proposed new residential district, many of the issues pertaining to a loss of views for existing residents as a result of this proposal have also been addressed through its design.

The consolidation of the built footprint proposed by the current property owner's maximum build scenario also serves to retain and enhance the social and economic forms of identity within this project as well. Through the minimization of additional physical infrastructure needs, the retention and programming of much of its open space, the construction of a new community center and small scale mixed use shopping district and the inclusion of additional housing options, the economic and social needs of the various stakeholder groups have been met and exceeded where possible within this alternative proposal.

In terms of balance between the various stakeholder group agendas within this

redevelopment project, each stakeholder group should find that many of the typical and project specific needs expressed in section 6.3 have been respected by this thesis proposal. However, while it was a primary guiding principle of this thesis to not allow any one stakeholder agenda to dominate any other, it could be argued that the resultant master plan contained within this thesis has a special consideration or weighting toward the existing homeowner group which makes it inherently imbalanced.

The issue of balance within a redevelopment project was an aspect of this endeavor that I still have questions about, and what defines balance in golf course redevelopment projects so as to enable them to move forward would be an excellent starting point for additional research. The question I personally feel has yet to be answered by this thesis is whether or not it possible to provide “perfect” balance between the agendas of stakeholders within a redevelopment project of this size? The project’s success or lack there of along the lines of achieving balance could only be determined in a real-life redevelopment proposal, permitting and implementation process. Based on the findings from the research and design of this project and the inherent subjective nature of the question, I would say that no, at this time it is not possible to provide “perfect” balance within a redevelopment project of this size and complexity. With this being said, just because I don’t feel as though “perfect” balance between stakeholder agendas is possible to achieve, it shouldn’t prevent one from attempting to get as close as possible to that goal when dealing with multiple competing agendas within a design effort. While it may not always be the path of least resistance, attempting to design with balance often allows one the opportunity to view an issue from multiple differing perspectives often improving the final product and may be the only circumstance under which a redevelopment project is able to move forward. In terms of this thesis, I feel that stepping back and attempting to view an issue as large and complicated as the redevelopment of a residential golf course from different angles provided me with additional perspectives that proved invaluable when creating my final vision for the resultant master plan.

All told when considering my original thesis statement of aiming to demonstrate the potential for residential golf course redevelopment projects to present balanced outcomes for the needs of its various stakeholders with respect to the identity of the surrounding community, I feel that this thesis was largely a success. While I don't feel that the outcome of this project achieved "perfect" balance with regards to the agendas of all of its stakeholders as mentioned above, I do feel like it gets close enough to allow all of the stakeholder groups to feel some amount of satisfaction in the proposed outcome. I also feel that this project succeeds in retaining and enhancing the identity of this residential community by not only retaining the foundational image of golf as its identifying amenity, but by also enhancing physical, social and economic forms of identity through the diversification of its supplementary open spaces and the inclusion of a native plant pallet, each of which add value to the surrounding community.

LIST OF REFERENCES

Adams, Barney. “Why Have Golfers Left the Game? (Part 4).” GolfWRX. N.p., 10 July 2014. Web. 22 Dec. 2014. <http://www.golfwrx.com/219819/barney-adams-why-have-golfers-left-the-game/>.

Avalon club house view. Digital image. Avalon Golf and Country Club. N.p., n.d. Web. <http://www.avalongolf.com/aboutus/course-tour/>.

Balaskovitz, Andy. “CityPulse by Wehaa.” CityPulse by Wehaa. CityPulse, 15 Aug. 2012. Web. 22 Dec. 2014. <http://npaper-wehaa.com/citypulse/2012/08/15/#?article=1653183>.

Beditz, J.F., and Kass J.R. (2010). Golf Business Update. National Golf Foundation: Jupiter, FL.

Calusa Country Club Prior to Closure. Digital image. Travel Stuff. N.p., n.d. Web. <http://www.thetravelstuff.com/florida/miami-things-to-do-1.html>.

Chen, Elaine. “Bad Economy For Golf Courses Puts Pressure On Owners Of Fairway-View Homes.” Bad Economy For Golf Courses Puts Pressure On Owners Of Fairway-View Homes. WLRN Miami Herald, 4 Dec. 2012. Web. 22 Dec. 2014. <http://wlrn.org/post/bad-economy-golf-courses-puts-pressure-owners-fairway-view-homes>.

Clubhouse and outdoor resturant at Springfield Country Club, PA. Digital image. Philadelphia N.p., n.d. Web. <http://www.phillymag.com/philadelphia-wedding/2013/07/18/springfield-country-club-grows-wedding-space-outdoor-expansion-tavola-restaurant-bar/>

Crompton, John L. “Impact Of Parks & Open Spaces On Property Values.” Impact Of Parks & Open Spaces On Property Values. Department of Recreation, Park and Tourism Sciences Texas A&M University, Winter 2007. Web. 22 Dec. 2014. <http://www.cprs.org/membersonly/winter07_propertyvalues.htm>.

Crossfield, Mark. “Do All Golf Clubs Preform The Same.” YouTube. YouTube, 16 Dec. 2014. Web. 29 Dec. 2014. <https://www.youtube.com/watch?v=MrVIAu4xu80>.

Danielson, M.N. “Profits and Politics in Paradise – The Development of Hilton Head Island.” (1995).Columbia, SC: The University of South Carolina Press.

Do, A.Q. and Grudnitski, G. “Golf Courses and Residential House prices: an Empirical Examination.” (1995).Journal of Real Estate Finance and Economics, 10(3), 261–270.

Eagleton, Nancy. “Calusa Country Club Plan Has Homeowners Divided.” Kendall Gazette. N.p., 18 Apr. 2011. Web. 22 Dec. 2014. <http://www.communitynewspapers.com/kendall-gazette/calusa-country-club-plan-has-homeowners-divided/>.

Francis, Mark. “How Cities Use Parks for ... Community Engagement.” How Cities Use Parks for ... Community Engagement. American Planning Association, 2014. Web. 22 Dec. 2014. <https://www.planning.org/cityparks/briefingpapers/communityengagement.htm>.

Gerena, Glenn. “Growing the Game of Golf | Hospitality Law Check-In.” Hospitality Law CheckIn. GREENBERG TRAURIG, 26 Nov. 2012. Web. 22 Dec. 2014. <http://www.gtlaw-hospitalitylawcheckin.com/clubs/growing-the-game-of-golf/>.

Golf course view from home Vaquero TX. Digital image. N.p., n.d. Web. <(http://tours.tourfactory.com/tours/tou.

asp?t=691114)>.
Greenbrier Redevelopment plan. Digital image. Our Village in West Palm Beach. N.p., 11 Oct. 2012. Web. <http://village-blog-and-chat.blogspot.com/2012/10/reflection-bay-site-plan-modified-nine.html>.
Hoffman, Kimberly, Esq. “Plan B for Your Golf Course: Protecting and Pursuing Development Rights.” GolfBizWiki.com. N.p., 7 Oct. 2013. Web. <http%3A%2F%2Fwww.golfbizwiki.com%2Fbin%2Fview%2FHome%2FPlanBForYourGolfCourseProtectingAndPursuingDevelopmentRights>.

Hueber, David, “The Changing Face of the game and Golf’s Built Environment” (2012) All Dissertations. Paper 972.
http://tigerprints.clemson.edu/all_dissertations/972

Laing, J. R. “The Good Life. Why Golf‘s Prospects are Dimming.” (1997) Barron’s, G5–G8, April 21

Muirhead, D., and Rando, G.L “Golf Course Development and Real Estate.” (1994) Washington, D.C.: ULI-the Urban Land Institute.

Mizner Trail Redevelopment / Conservation Plan. Digital image. United Boca Del Mar. N.p., n.d. Web. <http://unitedbocadelmar.org/>.

Mizner Trail Redevelopment Plan. Digital image. Support Mizner Trail N.p., n.d. Web. <http://www.supportmiznertrail.com/site-plan/>

Nathan, Greg. “Newsletter - November 2012 - Mayor of Crazy Town Blog: Blaming Time, Money and Difficulty - ENOUGH ALREADY!!!” Newsletter - November 2012 - Mayor of Crazy Town Blog: Blaming Time, Money and Difficulty - ENOUGH ALREADY!!! National Golf Foundation, 01 Nov. 2012. Web. 22 Dec. 2014. <http://ngfdashboard.clubnewsmaker.org/Newsletter/49rs9g3p7k21dki6crabzi?a=6&p=687675&t=61175>.
National Golf Foundation and McKinsey and Company. “Strategic Plan for the Growth of the Game.” (1987).Jupiter, FL.

“Newsletter - February 2013 - 2012 Golf Course Openings & Closures Update.” Newsletter - February 2013 - 2012 Golf Course Openings & Closures Update. National Golf Foundation, 01 Feb. 2013. Web. 22 Dec. 2014. <http://ngfdashboard.clubnewsmaker.org/kz4mj71697xwnwhpbmrcr1?email=true&a=2&p=1012685&t=43825>.

“Newsletter - July 2013 - Closed Golf Courses - What Happens After the Final Shot Is Played?” Newsletter - July 2013 - Closed Golf Courses - What Happens After the Final Shot Is Played? National Golf Foundation, 01 July 2013. Web. 22 Dec. 2014. <http://ngfdashboard.clubnewsmaker.org/Newsletter/1b1i03gvky9?a=3&p=1684865&t=44975>.

NGF Pyramid of Influence. Digital image. NGF Dashboard. NGF, Aug. 2010. Web. <http://ngfdashboard.clubnewsmaker.net/www.clubnewsmaker.net/ngfdashboard/e_article00181354964e4.html?x=b11,0,w>.

Nicholls, Sarah, and John L. Crompton. “Why Do People Choose to Live in Golf Course Communities?” Journal of Park and Recreation Administration 23.1 (2005): 37-52. Web.

Outdoor resturant at Springfield Country Club, PA. Digital image. Springfeild Country Club N.p., n.d. Web. <http://springfieldcc.net/gallery/tavola/>.

Red Cedar Golf Course Redevelopment plan. Digital image. LSJ.com. N.p., 14 Aug. 2014. Web. <http://www.lansingstatejournal.com/article/20120814/NEWS01/112270004/Development-plan-Red-Cedar-Golf-Course-parcel-includes-more-parkland>.

Red Cedar Redevelopment Districts. Digital image. EastLancingInfo.org. N.p., 28 Aug. 2012. Web. <http://www.eastlansinginfo.org/content/movement-red-cedar-golf-course-redevelopment>.
Reid, Andy. “Century Village: Golf Course Development Fight Prolonged When Palm Beach County Commission Vote Ends in Tie.” Sun Sentinel. N.p., 25 Jan. 2013. Web. 22 Dec. 2014. <http://articles.sun-sentinel.com/2013-01-25/news/fl-golf-course-development-fight-20130124_1_development-fight-century-village-golf>.

Reid, Andy. “Palm Beach County Commission Approves Building Homes, Shops on Closed Century Village Golf Course.” Sun Sentinel. N.p., 01 Mar. 2013. Web. 22 Dec. 2014. <http://articles.sun-sentinel.com/2013-03-01/news/fl-century-village-golf-decision-20130228_1_andrew-waldman-mizner-trail-golf-fairways-llc>.

Reitman, John. “Construction, Play, Number of Golfers Decline in 2013 - News - News.” TurfNet.com. N.p., 31 Jan. 2014. Web. 22 Dec. 2014. <http://www.turfnet.com/page/news.html/_/construction-play-number-of-golfers-decline-in-2013-r249>.

Torres, Armando. “Calusa Crisis.” Corner of Kendall and Mystreet. N.p., 28 Mar. 2011. Web. 22 Dec. 2014. <http://kendallcorner.blog.com/calusa-crisis/>.

TPC Sawgrass Tee Image. Digital image. PGA. PGA.com, 11 May 2011. Web. <http://www.pga.com/17th-hole-tpc-sawgrass-island-unto-itself-players-championship>.

TPC 17th aerial view. Digital image. PGA Tour. PGA.com, 4 May 2014. Web. <http://www.pgatour.com/news/2014/05/05/sawgrass-course-gallery-player-insights-hole-by-hole.html>.

VITA

Timothy Lysett was born in Geneva, New York in 1981 and lived in Perry Hall Maryland for twelve years. In 1997 he moved to Fallston, Maryland and after a short three and a half years graduated from Fallston High School in 2000. After working for several years in the golf course industry as a greens keeper, he enlisted in The United States Army as an infantryman in 2003. While on active duty, he was injured during a training exercise prior to his first deployment overseas which resulted in his honorable discharge from service in 2004. After his discharge, he relocated to Knoxville, Tennessee with his family and enrolled at the University of Tennessee where he graduated with a B.S. in Landscape Design and Construction in 2009. Seeking to continue his education, he enrolled in The Landscape Architecture Program at the University of Tennessee, graduating with a Master of Landscape Architecture Degree in December of 2014. Timothy plans to purse both landscape and golf course architecture while working for a design firm that specializes in those pursuits.