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Growth Management Controls and Housing Prices

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Growth Management Controls and Housing Prices
Wharton Undergraduate Research Scholars

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Wharton Undergraduate Research Scholars WH-299-301
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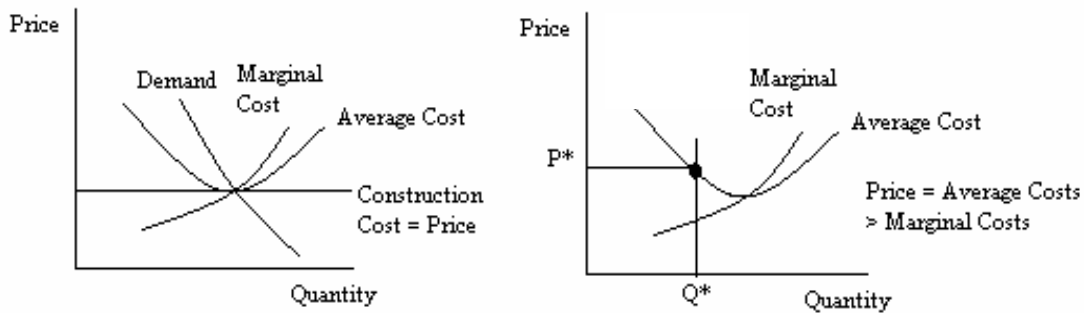
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I. Introduction

Housing Prices

Housing prices are dictated by several factors including, but not limited to, income per capita, prices and rents, construction costs, land prices and density, regulations, programs surrounding the housing in a particular area, and interest rates. In a barrier-free competitive market, a buyer will choose amongst a set of substitutes based on the relative prices of housing. Interaction of buyers and sellers in a particular market will determine the prices of houses in that area and housing type. In an unrestrictive competitive market, housing prices will exist at their marginal cost as in the graph below on the left. Binding supply restrictions lead to less efficient production of housing and housing prices that are higher than the marginal costs to produce as demonstrated in the graph on the right.¹



Recent Housing Price Increases

Housing prices in some major metropolitan areas have increased substantially over the past decade. Inflation, higher per capita income and lower interest rates are a plausible reason for the increase in the demand of housing, but in many metropolitan areas this demand has not been met by adequate supply. Construction costs in areas have

¹ Glaeser, Gyourko, Saks. "Why is Manhattan So Expensive? Regulation and the Rise in House Prices. August 6, 2003.

not increased substantially enough to prevent profitable development in these areas, and oftentimes have actually fallen in real terms. This suggests restrictions may be behind the lack of development in areas where demand for housing is growing and increased prices, as shown in the graph on the right on the previous page.

Research Overview

The Ocala/Marion County Metropolitan Statistical Area implemented the Land Use Code on June 11, 1992 as a result of the Local Government Comprehensive Planning and Land Development Regulation Act of 1985². While Anthony argues that the act has broadly affected the value of housing in the state of Florida, in this paper I argue that the increase in housing is a natural one in the Ocala/Marion County Metropolitan Statistical Area, and not a result of the newly established land development regulations in the state.³

First, I define growth management and the reasoning behind the implementation of such policy in urban areas. I then look at research and methodology previously used in order to document the effects of land use change on housing prices. In general, these studies find the existence of housing price increases as a result of Smart Growth, or growth management acts within the areas. Following the establishment of background information, I describe the Ocala/Marion County MSA and the development approval process that has arisen as a result of the Growth Management Act of 1985. Housing prices and the various factors that may affect their outcomes in the area are investigated in order to provide for later analysis.

² Anthony, Jerry. "The Effects of Florida's Growth Management Act on Housing Affordability" *Journal of the American Planning Association*. Chicago: Summer 2003. 2.

³ Ibid, 1.

In order to test the restrictive nature of the Marion County Land Use Code on development within the area, I used three different perspectives which suggest that there are not binding restrictions to development which would result in increased housing prices:

- Case study analysis of a development in progress within the municipal area which shows that the increased restrictions are not affecting development profitability in such a way as to prevent developers from pursuing the development of new properties and subdivisions
- An investigation and comparison the cumulative percentage increase in building costs and housing prices, showing that the margins between construction and housing costs have actually decreased in the years since Land Use Plan implementation and suggesting the absence of a regulatory tax since the plan was introduced
- A comparison of the increase in households and building permits showing that on average new building permits have increased in-line with the increase in the number of households within the area and that over the past five years building permits have outpaced increases in the number of households, once again suggesting the lack of binding restrictions in development and construction

These analyses all point to the absence of binding development and construction restrictions within the Ocala/Marion County area. If this is correct, then previous research that makes broad statements regarding the increase in housing prices across the state of Florida could be misrepresentative the localities within a state. The broad regulatory authority of development and zoning regulation is derived by the municipality from the state, and therefore the restrictiveness of Land Use Codes would vary across

localities.⁴ Concomitantly, stating housing price increases as a result of growth management control for a number of municipalities across the state results in misleading outcomes.

⁴ Fischel, William A. The Economics of Zoning Laws: A Property Rights Approach to American Land Use Controls. Baltimore: The Johns Hopkins University Press, 1985. 22.

II. Background Information and Past Research

Growth Management Regulation

Over the past four decades, local, regional, and state governments have imposed various types of regulations in an attempt to control urban growth and have that growth pay for itself.⁵ Some argue that this increase in land regulations has resulted from an increased awareness of the environmental, social, and economic effects of new residential development.⁶ Zoning gives community residents the authority to control the use of their environment and public services.⁷ The bulk of control over residential development remains in the hands of local governments and a wide variety of procedures implemented by the locality can be used to control the location, timing, character, and amount of residential development.⁸

Past Research

In many communities there is the recognition that rigid land use regulations and growth controls have maintained housing costs at a level high enough to prevent moderate to low income families from purchasing homes. Many papers have been presented in regard to this problem and several have come up with specific causes for the impediment to development in areas where supply and building costs would dictate otherwise. Glaeser, Gyourko, and Saks, presented, “Why is Manhattan So Expensive? Regulation and the Rise in House Prices”, a thesis in which they argue that land use

⁵Jerry Anthony. “The Effects of Florida’s Growth Management Act on Housing Affordability” *Journal of the American Planning Association*. Chicago: Summer 2003.

⁶ Katz, Lawrence, Rosen, Kenneth T.. *Journal of Law and Economics*. Chicago: Apr 1987. Vol. 30, Iss. 1; pg.

⁷ Nelson, Robert H. Zoning and Property Rights: An analysis of the American System of Land Use Regulation. Cambridge: The MIT Press, 1977.

⁸ Katz & Rosen, 149.

restrictions are the primary reason for the gap between housing prices and supply costs. Interestingly enough, they discovered that the prices in Manhattan are more than twice the cost of supplying comparable housing. They find that land controls are not only enacted by governments, but local residents can have a major say in the future development surrounding their own residence through political involvement and intervention. The paper concludes that the price markup over construction costs is a strong indication of artificial barriers to new construction.⁹

Katz and Rosen investigated the result of urban growth management policy measures in San Francisco. The paper states that prices for housing communities in San Francisco that had experienced growth management control were 20-40% higher than those that had not¹⁰. Dowall and Landis also found that regulations regarding growth control resulted in increased housing prices in California.¹¹ Downs mentions that when San Diego counties five largest cities enacted growth management policies, housing prices increased by 54%.¹² Katz and Rosen find similar results in the San Francisco Bay area and argue that housing prices have increased 17% to 38% as a result of growth control regulations.¹³

Jerry Anthony argues that growth management practices instituted in Florida effectively increased the price and affordability of housing in “The Effects of Florida’s Growth Management Act on Affordability”.¹⁴ He uses a time-series cross section

⁹Glaeser, Gyourko & Saks.

¹⁰Katz & Rosen, 149.

¹¹Dowall & Landis, “Land Use Controls and Housing Costs: An Examination of San Francisco Bay Area Communities” (University of California at Berkeley, Center for Real Estate and Urban Economics, 1981).

¹²Downs, A. (1992). “Regulatory barriers to affordable housing”. *Journal of the American Planning Association*. 58, 419-421.

¹³Katz & Rosen, 149.

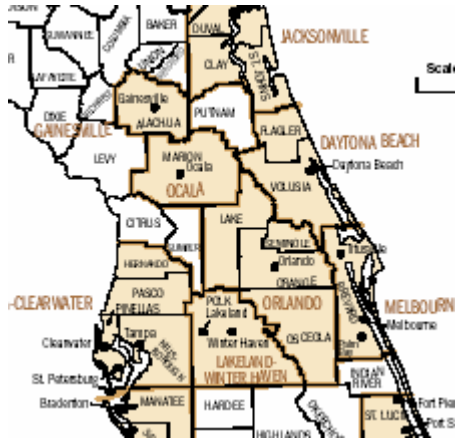
¹⁴Anthony, 1.

multiple regression, considering the affect on housing of various housing and demographic factors as well as federal policies.¹⁵

Research has pointed to several barriers that prevent free competition in the housing market in addition to the ones stated above. Impact fees, building permits and design review standards affect the speed and efficiency with which developers can create new housing and they can increase the overall cost of new development. New requirements for building and difficulties in attaining zoning permits are additional problems that developers may find impede their construction of new housing.

¹⁵ Anthony, Jerry. "The Impact of Growth Management Regulations on Housing Prices." *Policy Brief*. DeVoe L. Moore Center, College of Social Sciences, Florida State University. Issue 2. April 2001. 1.

III. Ocala/Marion County Metropolitan Statistical Area



The Ocala/Marion County Metropolitan Area is located in North Central Florida approximately equidistant from the major metropolitan areas of Tampa/St. Petersburg, Orlando, and Jacksonville. The city of Ocala was named one of the top places to live in 2002 and in the Top 20 for percentage in growth nationwide for metropolitan areas - 2000 U.S. Census a 32.9% growth from 1990 to 2000

Census.¹⁶ Like many of the metropolitan areas in Florida, the rapid urbanization resulting from population growth caused problems which started becoming visible in the early 1970s.¹⁷ Statewide problems included large-scale destruction of wetlands, increased congestion and air pollution, decreased levels of service at various facilities, and other negative effects of urban sprawl¹⁸. For this reason there occurred a comprehensive effort to improve the quality of urban areas and preserve the environmentally sensitive areas in Florida.¹⁹

Florida's Growth Management Act

Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Section 163.3161-3215, Florida Statutes) of 1985, commonly known as the Growth Management Act (GMA)²⁰ requires all local governments to use

¹⁶ United States Bureau of the Census.

¹⁷ Anthony. "The Impact of Growth Management Regulations on Housing Prices." 2.

¹⁸ Urban sprawl is a pattern and pace of land development in which the rate of land consumed for urban purposes exceeds the rate of population growth and which results in an inefficient and consumptive use of land and its associated resources.

¹⁹ Anthony. "The Impact of Growth Management Regulations on Housing Prices." 2.

²⁰ Anthony. "The Impact of Growth Management Regulations on Housing Prices." 2.

comprehensive plans which guide their urban development through the use of Comprehensive Land Use Plans to guide urban development in a way that would promote improved quality of life and preserve environmentally sensitive areas. This act was established in order to guide urban development and discourage urban sprawl; assuring infrastructure was adequate to serve new developments.²¹ Comprehensive plan changes have had to be approved by the state Department of Community Affairs, include regulations regarding growth management, and must be adopted by the local governments through legislative process.²² Marion County adopted the Land Development Code on June 11, 1992.²³ In addition, fireflow²⁴ requirements were added in April of 2000 and July of 2001.²⁵ According to the Marion County government the purpose of this code is to:

“...protect the public health, safety and general welfare while allowing, encouraging and promoting flexibility, economy and ingenuity in the layout and design of subdivisions and land developments, including authority to alter site requirements in order to encourage other practices which are in accordance with modern and evolving principles of site planning and development.”²⁶

²¹ Anthony, 1.

²² Land Development Code, Marion County Florida.

²³ Ibid.

²⁴ “Fire Flow” means the amount of water required to extinguish a fire or stabilize a hazardous incident.

²⁵ Land Development Code, Marion County Florida, Section 8-7.

²⁶ Ibid, I-1.

IV. Data Collection

Qualitative and quantitative information used for interpretation of the impact of development regulation on housing prices was collected from a variety of sources.

Qualitative

To better understand the requirements and procedure for development the local planning department, zoning department, and the Development Review Committee were contacted. Furthermore, interviews with developers provided additional information as to how developers go about developing and the difference in complexity of the development process. The time required and the complexity of the process was established for land use change, zoning changes, design review master plans and infrastructure requirements through a combined interview process with the government and private parties involved.

Quantitative

To find the increased household population, data was compiled from the United States census and census estimates from the years 1988-2002. The number of households was established by using the data and estimates from the census regarding the number of persons per household.²⁷ Historical information on building permits, in order to calculate increased supply in relation to the increased demand from household and population increase, was also found on the United States Census website for the years in question. This data was used in conjunction with an index of housing prices from the OFHEO²⁸

²⁷ (Total population)/(number of persons per household) = Total number of households

²⁸ OFHEO is the Office of Federal Enterprise Housing Oversight. Its mission is “to promote housing and a strong economy by ensuring the safety and soundness of Fannie Mae and Freddie Mac and fostering the vitality of the nation's housing finance system.”

Housing Price Index to see the general direction of housing supply, demand, and the resultant price. Construction costs were established through data provided by R.S. Means Company and Professor Joe Gyourko.

V. Description of Developmental Review Process

Several assumptions were made in the collection of data for the purpose of analysis. It was assumed that all developers are working with vacant acreage in a rural area. It should be noted that if vacant acreage purchased for development is in an urban or urban reserve area fewer steps need to be taken in order to achieve the proper development approval. Appendix 1 provides a graphic description of the process outlined below.

*Land Use Designation Change*²⁹

If a Land Use Designation change (i.e. commercial, industrial, high density multifamily, etc) is needed:

- 1) Land Use Change Application
- 2) Planning Commission Hearing
- 3) County Commission Hearing
- 4) Department of Community Affairs Submittal
- 5) County Adoption Hearing
- 6) State of Florida Approval
- 7) County Commissioners Land Use Change

This process takes approximately 1 to 2 years if successful upon initial application.³⁰ The application is made through the State of Florida Department of Community Affairs and communication thereafter is made through the county planning department. Of the various stages of the entire process (land use change, zoning change, and local development approval) the first one is considered the most difficult. First submission often results in rejection, and due to the fact that the submissions may only be

²⁹ Information regarding the process for Land Use Designation change was obtained from the Marion County Planning department.

³⁰ International Property Services Corp., Realtor. Interview.

made once a year, this significantly increases the carrying cost of land inventory for the developer. After months of negotiations and several trips to the Department of Community Affairs located in Tallahassee, a negotiation settlement may be reached. Then a final adoption hearing is held. Legal and consulting costs for this procedure can range from \$5,000 to \$25,000 depending upon the difficulty of the application, and application fees vary with the size of the property. Difficulties can arise from various causes, but mainly stem from the fact that the government does not believe that the development is in alignment with the managed growth of the municipality. These types of disputes are resolved through mutual concession by both developers and government officials until resolutions can be reached.³¹

*Zoning Change*³²

After proper land use designation is in place, zoning changes are achieved through the local zoning department. The process includes:

- 1) Application-Meeting with Zoning Department and Planning
- 2) Planning and Zoning Committee Recommendation
- 3) Zoning Hearing

This length of this process is approximately three months. The cost is approximately \$1,000 without an attorney and \$2,000-\$5,000 if an attorney and professional consultants are required. Once proper land use is in place, this process usually does not require much financial outlay in terms of consulting and legal fees.³³

³¹ International Property Services Corp., Realtor.

³² Information regarding the process of zoning change was obtained from the Marion County Zoning Department.

³³ International Property Services Corp., Realtor.

*Development Review Process*³⁴

After proper zoning is obtained developers enter the development approval process involving the local Development Review Committee (“DRC”). The following steps take place in order to gain the right to develop a property with proper land use and zoning designation.

- 1) Pre-Application Concept Plan Conference-For the purpose of expediting applications and reducing subdivision and site plan design and development costs, the developer may request a pre-application/concept plan conference. This includes meeting with the DRC and receiving a brief summary of the conference, where the applicant is charged fees for the meeting.
- 2) Concept Plan- The DRC provides input on the formative stages of subdivision, master plan, site plan design, etc.
- 3) Preliminary Plat- Preliminary plat is submitted for review by various departments within the Development Review Committee including but not limited to: County Engineering, Zoning Department, Traffic Engineer, Florida Department of Transportation, etc. for evaluation of general requirements, varying design standards, environmental and conservations standards, development in high recharge areas and KARST³⁵ sensitive areas, and fireflow.
- 4) Development Review Committee-The Development Review takes approximately 30 days to review the items submitted with application and extend recommendation.
- 5) County Commission Meeting- If the developer cannot make a reasonable settlement with the DRC then challenges to their recommendations may be made

³⁴ Information regarding the development review process was obtained from the Marion County Planning Department.

³⁵ Karst is a term that was first applied to a plateau in the Dinaric Alps of Yugoslavia. It has now come to be applied to similar regions throughout the world. Such regions are characterized by the presence of limestone or other soluble rocks, where drainage has been largely diverted into subterranean routes. The topography of such areas is dominated by sinkholes, sinking streams, large springs, and caves. (Indiana KARST Conservancy)

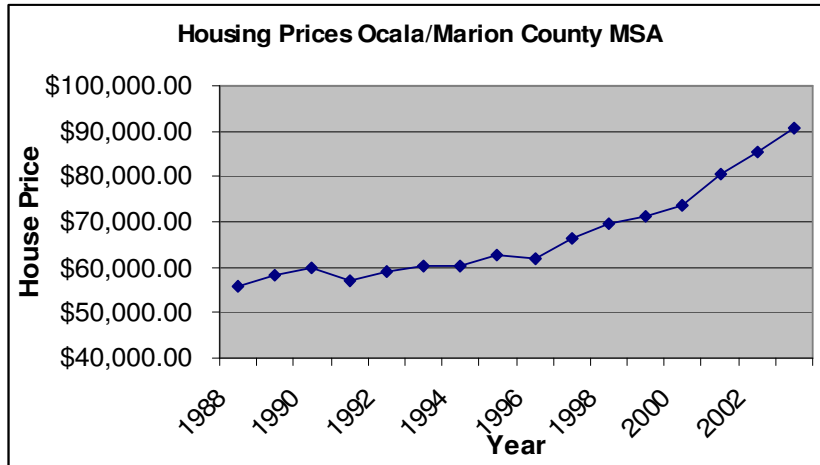
to the County Commissioners. If a resolution cannot be reached with the County Commissioners, then developer may litigate. This rarely occurs.

- 6) Permitting- Receiving acceptance or denial of the challenges made to the County Commissioners regarding DRC recommendations. Once all permitting is completed, the County Engineer can finish the technical infrastructure aspects of the development: water and sewer lines, exact location of roads, utilities, and stormwater management.
- 7) Final Plat Recording - Final plat recording is a public hearing that is often considered a formality in approving various requests.

This process takes approximately 8 months in total, with fees dependent upon the complexity and scale of the project.

VI. Market Changes in the Ocala/Marion County MSA

Housing Price Increases in Ocala/Marion County Florida



Housing prices in Ocala/Marion County have increased significantly since the late eighties. Using a median house price quote from the Ocala/Marion County Chamber of commerce for 1998 and The Office of Federal Housing Enterprise Oversight's House Price Index³⁶, the median home value from 1989 to 2003 was estimated. The graph above indicates that there has been a more significant increase in housing prices in recent years than there has been in the past. Between 1988 and 1995 there was an average annual increase in housing prices of 1.75 percent annually, whereas between the years of 1996 and 2002 the average annual increase in housing prices was calculated at 4.5%.³⁷

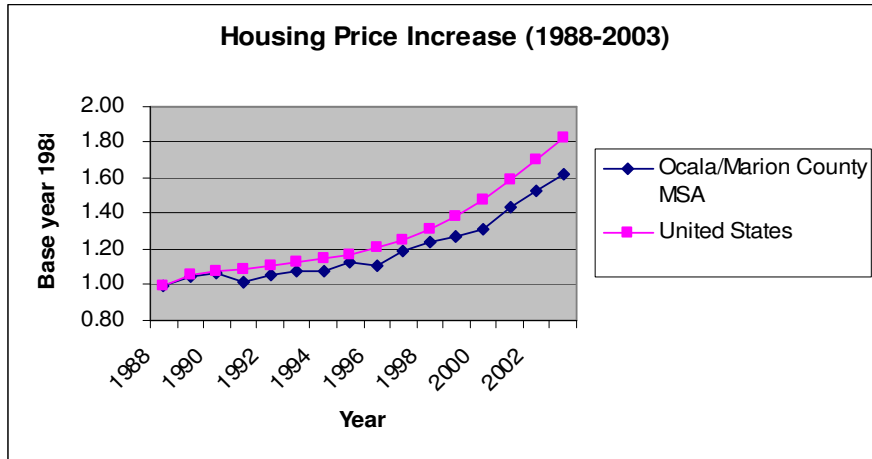
³⁶ The index numbers alone (for Census Divisions and US, individual states, and MSAs) do not have significance. They have meaning in relation to previous or future index numbers, because they can be used to calculate appreciation rates using the formula below. Appreciation between any 2 quarters can be calculated by using the formula:

$(\text{QUARTER 2 INDEX NUMBER} - \text{QUARTER 1 INDEX NUMBER}) / \text{QUARTER 1 INDEX NUMBER}$

Annual numbers can be generated by taking the four quarter average for each year.

(Office of Federal Housing Enterprise Oversight)

³⁷ OFHEO Housing Price Index.



The graph above was created using OFHEO’s Housing Price Index and using 1988 as a base (price in 1988 is equal to 1). A comparison out the increase in housing prices in the United States and the Ocala/Marion County area reveals that while there has been a significant increase the price of housing within the MSA, housing price increases have been greater in the United States as a whole. Hence, factors influencing the increase in housing prices may not be merely local in nature, but national, affecting the price of homes across the country.

Explanation of Housing Price Increase

Perceptions regarding Growth Management

Most entities involved in the development process in this locality attribute this price increase to increased population and increased income and the resultant effect on housing demand. While it has been admitted that developers have experienced a modification of behavior in their choices regarding where and how to develop, significant changes resulting from increased complexity of the development process have not been noticed.³⁸

The Marion County Planning Department asserts that the Comprehensive Land Use Plan

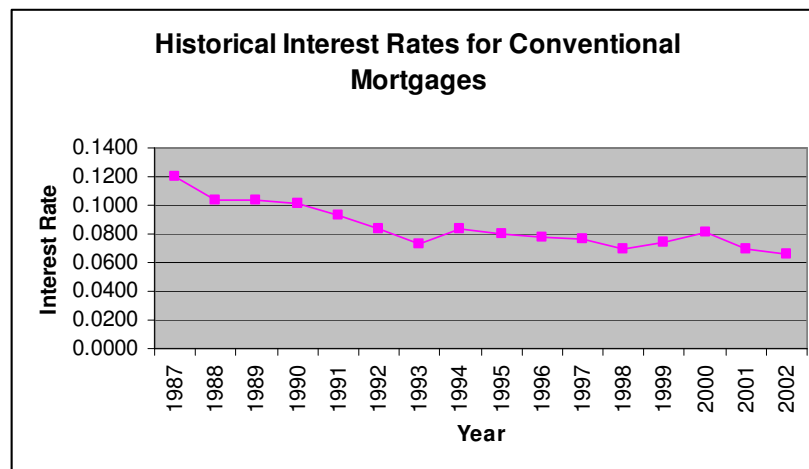
³⁸ Marion County Property Appraiser’s Office. Interview.

and its associated procedures are not a means of preventing development from happening, but a way to ensure that development occurs in conjunction with the plans of the community.³⁹

Increased Household Income

Inflation deflated income has increased by 3.7% over the ten year period between 1990 and 2000 from \$22,368 to \$23,190. In addition, other events have indicated the strong economic factors surrounding the Ocala/Marion County environment. For example, in July of 2001, a report from the U.S. Conference of Mayors ranked Ocala/Marion County among the top 50 metro areas in the country for economic growth. According to the study, Ocala's 103.4 percent economic growth rate from 1990 to 2000 earned it a ranking of 44th in the nation. This was due to the fact that the Ocala area boosted its nominal gross product from \$2.9 billion in 1990 to \$5.9 billion over the period of a decade.⁴⁰

Declining Interest Rates



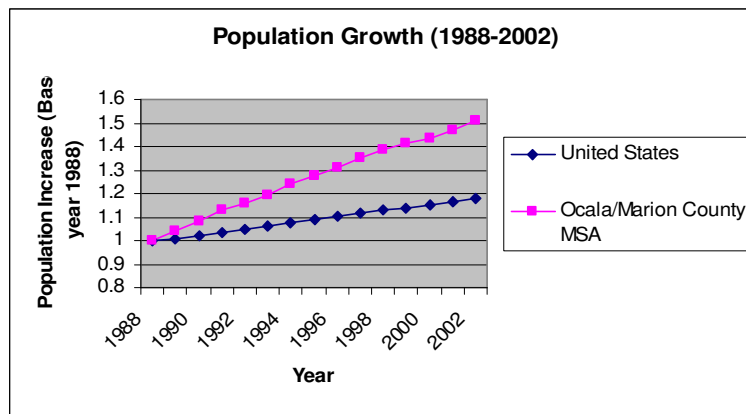
³⁹ Marion County Planning Department. Interview.

⁴⁰ Platt, Herb. "State of the City". *Ocala Magazine*. January 2003.

Interest rates over the past 15 years have decreased significantly leading to an increase in the ability of citizens to purchase homes and/or upgrade to a higher value home. This data was compiled from the online version of the Federal Reserve Statistical Release. Fall in interest rates should stimulate higher market demand and put upward pressure on house prices. This should increase consumption of housing and subsequently demand.

Population Growth

The population in the Ocala Marion County area has increased significantly over the past 15 years. According to the United States Census, in 1988 the population was 180,277 and in by 2002 had increased to 272,553 recording an average annual growth rate of over 3%.⁴¹



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The graph above was created using United States Census population counts and population estimates, setting 1988 as a base year (population in 1988 equal to 1). It shows that while the United States population grew nearly 20% from 1988 to 2003, the population growth in the Ocala/Marion County MSA was more than double the growth of

⁴¹ United States Census. 1990 and 2000.

⁴² Ibid.

the population of the country as a whole. Within Ocala/Marion County specifically, population during the late eighties and early nineties (1987-1995) outpaced the population growth in subsequent years (1996-2002) by over one percent annually.⁴³

Factors that have contributed to continuous population growth in the Marion County region include the affordability of living and various awards and rankings received by the local community, namely:

- 1995 - Fifth Best place to Live in America; Named All American City
- 1998 - 11th Most livable Small City - *Money Magazine*
- 1999 - Top 50 (#36) best Small Metropolitan Area - *Inc. Magazine*
- 1999 - Ocala / Marion County named Horse Capital of the U.S. by U.S. Department of Agriculture
- 2000 - Third most affordable housing in all MSA's in the nation
*National Association of Realtors*⁴⁴

Demographic Shifts

Nearly 32 percent of the Ocala/Marion County population is over 60 which is nearly 20,000 more than the portion of the population that is under the age of 20. The over-60 population has increased 39% since 1990; the over 65 population by 45% percent; and the over 85 by 109%.⁴⁵ This leads to a lower person per household number for the area and the recent development of senior communities⁴⁶, which offer services and amenities demanded by an aging population.

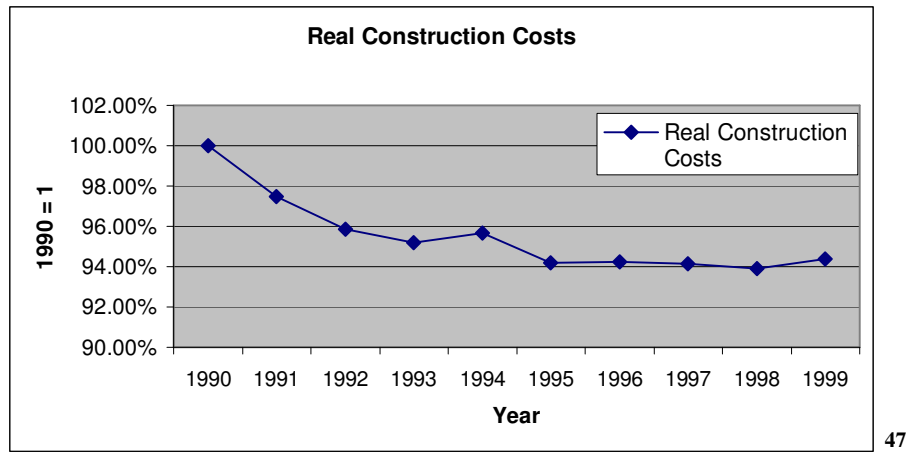
⁴³ Average population growth per annum was calculated at 3.56% and 2.42% for the periods 1987-1995 and 1996-2002, respectively.

⁴⁴ Ocala/Marion County Chamber of Commerce

⁴⁵ Marion County Senior Services.

⁴⁶ An appropriate example of this is the Villages, “an active 55+ adult community” partially located in Southeast Marion County.

Construction Costs



Construction costs in the Ocala/Marion County have not noticed any dramatically significant increase in construction costs of housing. The real costs of housing construction have gone down over the past 10 years, as inflation has outpaced the increased costs of building a home. Real construction costs were calculated using cost per square foot data⁴⁸ for comparable areas within the state⁴⁹ and median house size and house type statistics for the Ocala/Marion County MSA available from the University of Florida's Shimberg Center for Affordable Housing.⁵⁰ These figures were calculated in real terms by dividing by the annual change in CPI as per the United States Census.

⁴⁷ R.S. Means. Residential Cost Data. 19th Annual Edition, R.S. Means Company, 2000 and U.S. Census.

⁴⁸ R.S. Means.

⁴⁹ Tallahassee, Florida was used as a comparable for building costs in this study.

⁵⁰ State of Florida's Housing 2003. Florida Housing Data. Shimberg Center for Affordable Housing. The University of Florida.

VII. Data Analysis

While regression analysis would be the best indicator of the relationship between housing prices, supply (the number of housing units) and demand (the number of households), the data set retrieved did not contain enough points to create a statistically valid analysis. For this reason, alternative forms of analysis were utilized.

Case Study: Irish Acres

Initial denial

Irish Acres is a 300 acre horse farm located in northwestern Marion County. Since 2002 three different developers have attempted a land use change through the State of Florida Department of Community Affairs. Wal-mart attempted an application for commercial land use and invested approximately \$200,000 in fees before being denied application because the county failed to support a fast-tracking permitting application that would have forced the county and the state to review the warehouse project simultaneously.⁵¹

An independent developer attempted a land use change in July of 2003 proposing to build up to four houses per acres on 205 acres and 50 homes on another 50 acres. This development proposition too was denied approval by the Department of Community affairs due to a misalignment with county's ideas of future growth in the area.

New proposition

A local group paid \$1.54 million in October for about half of Irish acres, and has the intentions of purchasing the remaining half for approximately \$2 million in July of

⁵¹ Thompson, Bill. "Irish Acres development wins county's approval." Ocala Star-Banner. December 18 2003.

2004. The developers resubmitted the initial applications for land use change with several modifications in an attempt to gain approval more easily. Under the plan, 75 acres of the property would be designated for one house an acre; an additional 25 acres would be classified for up to four houses per acre.”⁵² The county planning department recently stated that the deal would likely stipulate that any houses there be connected to a centralized water system and that landscaped buffering would border the eastern edge of the property.⁵³

In December of 2003 the Marion County commissioners, by a 4-1 vote earlier this week, forwarded a land use change to the Department of Community Affairs for their consideration of the project.⁵⁴ According to the county’s principal planner, the “DCA should receive the plans before the end of the year.” The agency has up to 60 days to submit their review. County Commissioners will then hold a final vote to change the county’s land use plan.”⁵⁵ The following section is an attempt to proforma the Irish acres development in order to understand the possible impact of the development approval process on the total costs of developing the 300 acre residential community.

Proforma Assumptions

The proforma analysis of this project includes the various costs assumed by the developer and the expected sales of lots over the next 8 years. The development has been analyzed under two conditions, namely: quick approval of land use change by the Department of Community Affairs (*Scenario 1*), and a 2 year lag in the development process due to denial of initial application for land use change (*Scenario 2*). Due to the

⁵² Thompson, Bill.

⁵³ Thompson, Bill.

⁵⁴ Thompson, Bill. “Irish Acres development wins county’s approval.” Ocala Star-Banner. December 18 2003.

⁵⁵ Thompson, Bill. “Irish Acres development wins county’s approval.”

past experience of developers, specifically with this property, the researcher feels that these two situations both have the possibility of occurrence. Both scenarios assume an initial total purchase price of \$3.6 million purchased in two phases: 146 acres purchased for \$1.53 million in October of 2003 with 35% equity investment and 154 acres purchased for \$2.07 million with 30% equity in July of 2004. The project debt is financed at the prime rate of 4%. Both scenarios assume a fixed cost of \$250,000 for installation of water system and underground. In addition, there are costs of \$11,000 per lot (with a total of 220 lots) for other infrastructure including roads, entrance, and landscaped buffering. Engineering costs total \$104,000 and survey costs are \$16,000. Costs for environmental approval are \$1,500. A miscellaneous expense of \$1,000 per lot is assumed for other costs that occur outside of those previously mentioned. Sales in both scenarios are assumed at an average of \$50,000 per lot or \$36,765 per acre. The first phase (90 lots) is expected to sell out evenly over a four year period and the second phase (130 lots) is expected to sell out evenly over a four year period.

The difference between the two proformas is the in which the development approval process occurs. Scenario 1 assumes quick approval of land use change, zoning, and development approval process. From initial property purchase to the beginning of sales there is a time lag of merely 13 months due to simultaneous actions in the with the Department of Community Affairs and the Marion County Planning Department. Legal fees total \$9,000 spread over two years and relevant application fees totaling \$6,200 occur in 2004.

Scenario 2 assumes an additional two-year lag in land use change approval which results in a shift in the point in time in which groundbreaking can occur. From initial

property purchase to the beginning of sales there is a time lag of 34 months as zoning and planning approvals cannot be completed without proper land use. Legal fees total \$19,000 spread over two years and relevant application fees totaling \$17,800 occur between 2004 and 2006.

Proforma Results (Refer to Appendices 1 and 2)

Net present value⁵⁶ (NPV) calculations for the Irish Acres development project were completed for both scenarios with the following assumptions regarding discount rates:

- Cost Discount Rate: 2% - Due to the fact that equity outlay is more certain than the projections for revenues.
- Sales Discount Rate: 12%- A higher discount rate is used for the cash inflows due to increased variability from expectations.

The NPV of Scenario 1 totaled \$1,779.16 (thousands) while the NPV of Scenario 2, totaled \$761.45 (thousands). The two differing assumptions resulted in a \$918.55 (thousands) in net present value. Internal rate of return⁵⁷ for Scenario 1 was 37.36% while Scenario 2 was 28.74%. Showing that while the total NPV was negatively affected the profitability of the project remained intact despite difficulties in development approval.

A closer look at the additional costs incurred during a difficult approval process shows that while legal and application fees are increased, the main increase in outlay

⁵⁶ NPV. The present value of an investment's future net cash flows minus the initial investment. If positive, the investment should be made (unless an even better investment exists), otherwise it should not.

The formula is $NPV = -I + \sum^n \frac{CF_t}{(1+r)^t}$

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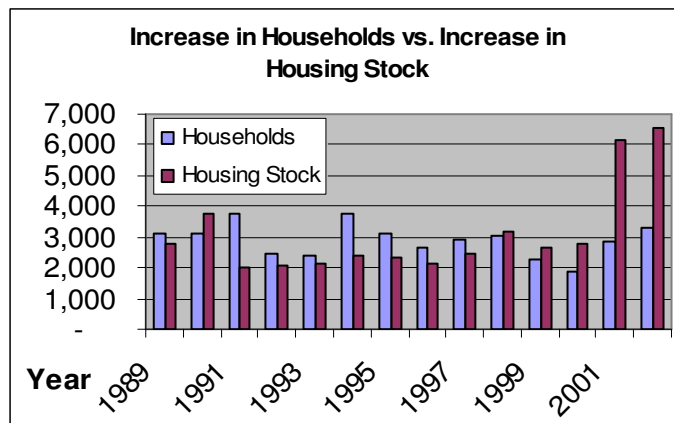
⁵⁷ Internal Rate of Return. The rate of return that would make the present value of future cash flows plus the final market value of an investment or business opportunity equal the current market price of the investment or opportunity.

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comes from the increased carrying cost resulting from additional interest payments on debt used to purchase the property and lagged sales estimates. Additional costs incurred due to increased fees totaled nearly \$20,000 (thousands), but additional interest expense had a NPV of \$177,470 (thousands). These additional costs were mitigated by the fact that infrastructure investment were incurred and discounted from a later date. The total increase in costs equals \$99,150. In addition, carrying costs resulting from a two-year lag in expected sales resulted in a difference of \$918.55 (thousands).

Housing Starts and Increased Households

Housing starts in the Ocala/Marion County region have not subsided as a result of the implementation of the Land Use Code in 1992. The table below shows the annual increase in the number of households - calculated through census estimates for number of persons per household and population increase from 1989 to 2003 – and the number of building permits each year from the United States Census data on housing.

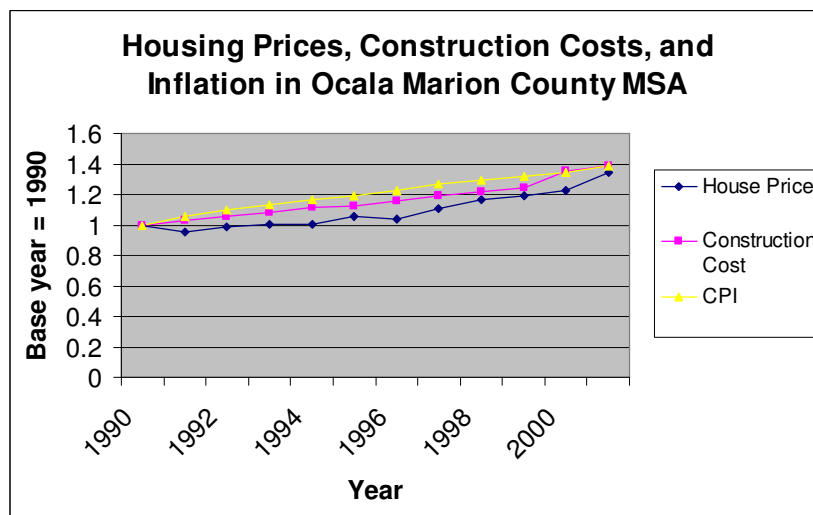


The graph above indicates that increases in housing stock have more or less kept pace with the increase in households within the MSA and that over the past five years

housing stock increases have outpaced the increased number of households. This data suggests that there is an absence of binding supply constraints on housing production within the Ocala/Marion County MSA.

Regulatory Tax

Glaeser, Gyourko, and Saks use the term “Regulatory Tax” to reflect the increase in costs imposed by regulatory restrictions. The tax is defined as equal to the difference between the market price of a housing unit and the marginal cost of that unit (without government barriers).⁵⁸ Since the Marion County Land Use Code was implemented in June of 1992, any regulatory tax increases should present themselves as an increased difference between the marginal cost to produce, and the market price of housing units during the time period after land use regulation implementation.



The cumulative increase in both housing prices and construction costs were calculated using previously mentioned data using 1990 as a base year. In the

⁵⁸ Glaeser, Gyourko & Saks, 8.

Ocala/Marion County MSA construction costs increased at a faster rate than the housing prices over the same time period. There has been a decrease in the difference between market prices and marginal cost, suggesting that there is no binding restriction on development in construction within the area. If there were such restriction, the gap between costs and prices should have widened as a result of the Land Use Plan, but in reality it shrunk. Once again, the evidence suggests that the Growth Management Act and Land Use Code have not resulted in supply constraints and the increase in housing costs.

VIII. Conclusion

States and municipalities impose growth controls in order to curb the negative externalities of urban growth. Past research indicates that the implementation of growth controls and Smart Growth plans have caused increases in the price of housing within numerous metropolitan areas. Since the start of the Growth Management Act and the Marion County Land Use Code the Ocala/Marion County MSA has witnessed an increase in the price of housing.

While the increase in the price of housing has not been as substantial as the United States as a whole, it was the intent of this paper to investigate whether the land use regulations had played a part in the changes in housing prices within this region. Three methods were used to suggest that the regulation had, in fact, not contributed to increased housing prices within the area, namely:

- Proforma analysis of developer's costs
- A comparison of housing starts and the increase in households
- Investigation of the existence of a "Regulatory Tax"

Anthony suggests in "The Impact of Growth Management Regulations on Housing Prices" that the increased complexity and difficulty in the land development regulatory environment in Florida has raised the price of the average single-family home by about 3.5%.⁵⁹ This paper on the other hand argues that at least one metropolitan area in the state of Florida has not witnessed increased housing prices as a result of growth management regulation. As this type of regulation is implemented at the local level, the varying degree of stringency in regard to development policy should result in different housing

⁵⁹ Anthony, Jerry. "The Impact of Growth Management Regulations on Housing Prices." 2.

outcomes in areas where the regulatory environment is different. Therefore, to make a generalized statement about a state made up of numerous local governments does not give an accurate picture of the relationship between growth regulation and housing prices. While there may be some areas that have experienced increased prices as a result of regulation, for others this is not the case, and any broad statements regarding the relationship between control measures and prices will overestimate for some areas (i.e. the Ocala/Marion County MSA) and underestimate for others.

Future research as an extension of this project could involved a differentiation of those areas that have experienced increased housing prices as a result of the State of Florida Growth Management Act from those that have not. Additionally, investigations into the reasons for which certain areas do not experience significant housing price increases would be beneficial in future efforts to develop urban areas effectively and decrease the negative environmental, social, and economic effects of population growth and urban development.

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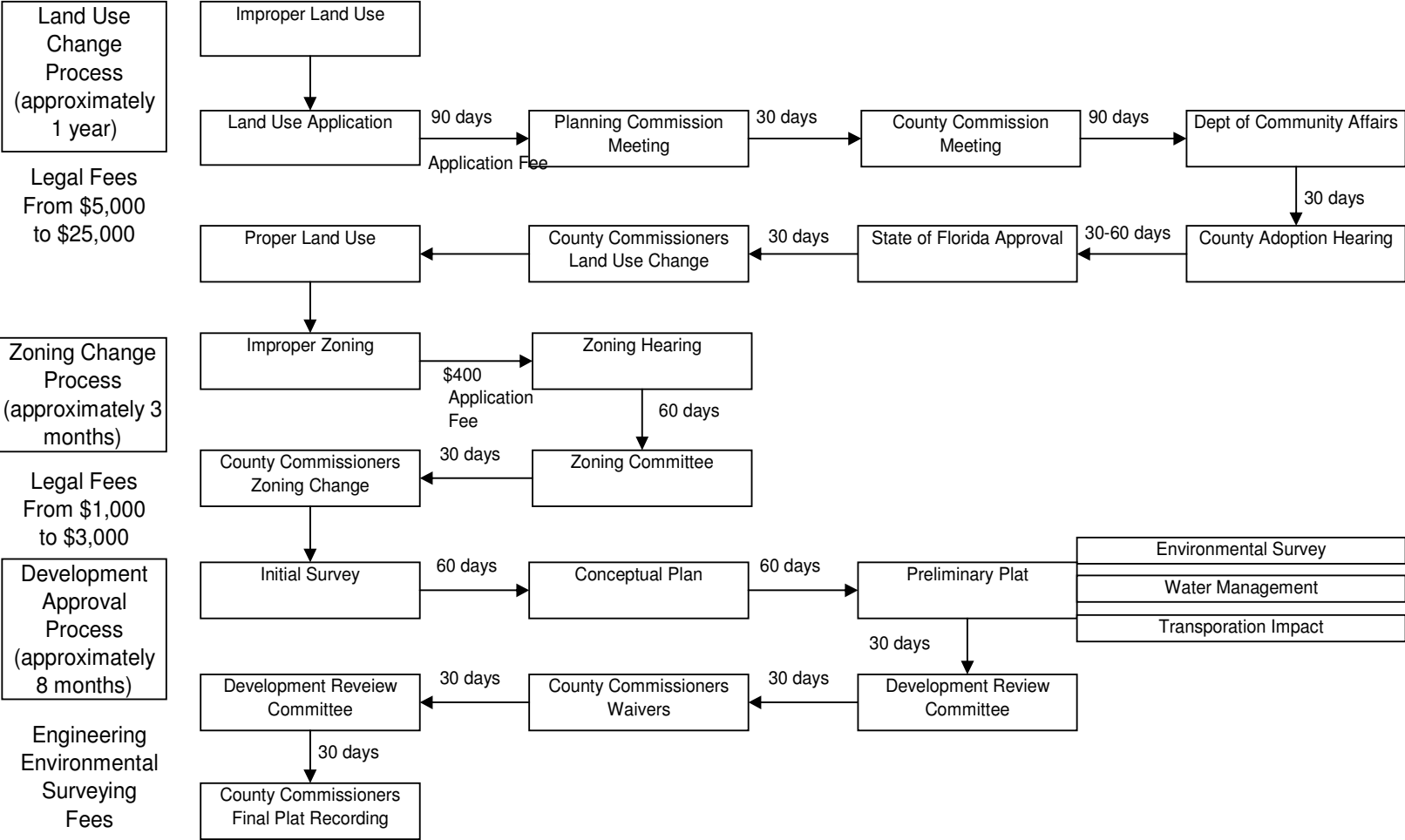
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Appendix 1: Real Estate Development Process Marion County, Florida



Appendix 2: Irish Acres: Preliminary Proforma Analysis

		2003	2004	2005	2006	2007	2008	2009	2010
Property Purchase	Equity Investment	536	621	0	0	0	0	0	0
	Debt	995	2443.5	2443.5	943.5	0.0	0	0	0
Development Process									
	Attorney Fees	5	4						
	DCA/Planning		5.8						
	County Zoning		0.4						
	Survey		16						
	Environmental Engineering	1.5	104						
	Water and Sewage Infrastructure		102	148					
			990	1430					
Miscellaneous Expense			90	130					
Sales				1500	1500	1500	1625	1625	1625
	Phase I								
	Phase II								
Interest Expense		9.945	97.74	97.74	37.74	0	0	0	0
Debt		995	2443.5	943.5	0.0	0.0	0.0	0.0	0.0
Cash Outflows		552	2031	1806	38	0	0	0	0
Cash Inflows		0	0	1500	1500	3125	1625	1625	1625
Cashflows		-552	-2031	-306	1462	3125	1625	1625	1625
Cost Discount Rate		2%							
Sales Discount Rate		12%							
NPV Costs		\$4,229.65							
NPV Sales		\$6,008.81							
Project NPV		\$1,779.16							
IRR		37.36%							

Appendix 3: Irish Acres: Preliminary Proforma Analysis

		2003	2004	2005	2006	2007	2008	2009	2010	2011
Property	Equity Investment	536	621	0	0	0	0	0	0	0
Purchase	Debt	995	2443.5	2443.5	2443.5	2443.5	944	0	0	0
	Attorney Fees	5	5	5	4					
	DCA/Planning		5.8	5.8	5.8					
	County Zoning				0.4					
	Survey		16							
	Environmental	1.5								
	Engineering		104							
Development	Water and Sewage				102	148				
Process	Infrastructure				990	1430				
Miscellaneous Expense			90	130						
	Phase I					1500	1500	1500		
Sales	Phase II						1625	1625	1625	1625
Interest Expense		9.945	97.74	97.74	97.74	97.74	37.74	0	0	0
Year End Debt		995	2443.5	2443.5	2443.5	943.5	0.0	0.0	0.0	0.0
Cash outflows		552	940	239	1200	1676	38	0	0	0
		0	0	0	0	1500	3125	3125	1625	1625
Cash Flows		-552	-940	-239	-1200	-176	3087	3125	1625	1625
IRR		28.74%								

Cost Discount Rate	2%
Sales Discount Rate	12%
NPV Costs	\$4,328.80
NPV Sales	\$5,090.26
Project NPV	\$761.45
IRR	28.74%