



**Carolina Meadows
Capital Improvements
Plan**

**Economic Impact
Analysis**

June 17, 2008

The Economic Impacts Of The Carolina Meadows Capital Improvements Plan

Introduction

Founded in 1983, Carolina Meadows is a nationally accredited, not-for-profit continuing care retirement community located on 166 acres in Chatham County, North Carolina. As one of the nation's foremost continuing care retirement communities, Carolina Meadows is committed to providing superior facilities, programs and services to its residents. Recently, the Board of Directors approved a capital improvements plan designed to ensure Carolina Meadows advances into the next decade as a first-class facility to meet the needs of the area. At completion, the improvements will represent an investment of over \$46 million.

35 New Villas for 70 New Residential Homes	\$27,410,000
New Skilled Nursing Facility	11,853,000
New Campus Entry	220,000
New Clinic/Rehab/Offices	4,110,000
New Assisted Living Entry & Parking	210,000
Addition to Residents' Dining	457,000
Addition to Wellness Grill	233,000
New Tennis Courts & Parking Courtyard	1,320,000
New Staff Dining/Grill/Lockers	330,000
New Sales Model/Office	200,000
Total Capital Improvements	<u>\$46,343,000</u>

The greater community of Chatham County will also benefit from this project not only because of the economic impact of this investment and the expanded and enhanced services, but also because the plan includes the relocation and substantial upgrading of the Meadows Soccer Field, expanded parking for the soccer field, and maintenance and improvements on nearby walking trails.

Economic Impact Analysis

Economic impact analysis is conducted by estimating the change in overall economic activity resulting from particular projects or events. For example, a new industry moving into an area creates jobs and fuels business activity thereby increasing business spending and household disposable incomes.

The results of this economic impact analysis describe the impact on jobs and income that the Carolina Meadows Capital Improvements Plan could potentially generate through its direct, indirect and induced impacts. Recognizing the direct impacts of construction investment and permanent job creation as inputs for the IMPLAN¹ model facilitates the simulation of the total economic impacts for the study area.

Study Area

Economic impact analysis is designed to measure impacts of a specific geography, such as a county, a state, or the country. Although the same industry can be examined in each of these

¹ IMPLAN is an input-output model produced by the Minnesota Implan Group (MIG) and is used extensively for this type of analysis throughout the United States.

geographic areas, the results will naturally vary because economies vary by region. Generally as the region increases in size, more opportunities are available for intra-regional spending leading to less leakage outside the region. For this analysis, Chatham County, North Carolina is the study area.

Economic Impacts Defined

Economic growth occurs when the flow of money into a geographic area increases due to the export of goods and services. The *direct impact* of that activity is typically measured by the number of new jobs and income created. Therefore, direct impacts represent the initial economic stimulus. Increased dollars flowing into the area are used to purchase the materials and labor which are consumed in providing the exported goods and services. Some purchases occur locally whereas other purchases occur outside the region. As those purchases occur locally, they generate an increase in local jobs and income yielding an additional economic impact over and above the direct impacts. This inter-industry purchasing is termed *indirect impact*. Material and labor purchases occurring outside of the region represent *leakage* and do not generate local economic impacts.

The final element of total economic impact is the result of employee spending. As in the purchase of goods by companies, employees will spend a portion of their income locally. Expenditures within the area foster more local employment and income. This spending is defined as the *induced impact* of the initial direct stimulus. The total economic impact is the sum of the following.

Direct impacts: the revenue, payroll, and jobs linked to the new economic activity in the study area. For example, when a new business locates within an area, its annual sales, payroll, and employees are direct impacts.

Indirect impacts: increases in business revenues, jobs, and payroll in the study area due to inter-industry purchasing. The purchases by the new business (direct impact event) stimulate cycles of supply-chain expenditures.

Induced impacts: increases in business revenues, jobs and payroll in the study area resulting from employee spending. This spending by the direct employees sets in motion the cycles of spending by all increases in payroll.

The spending cycles continue until leakages from the area (spending on goods and services outside the area) eventually end the cycle. The well-known *multiplier effect* projects the aggregate amount of *local buying and selling* that will occur. The ratio of the *total* (direct, indirect and induced) to *direct* determines the multiplier. Multipliers typically become larger as the geographic area increases in size.

The estimates in this report are presented in constant dollars (2008) and assume no inflation during the buildout period. This assumption applies to all estimates in the analysis including: property values, incomes, sales, construction materials, etc. The constant dollar approach is commonly used in impact analysis to avoid the inherent complications in forecasting rates of inflation, which vary by industry sector, and interpreting results expressed in inflated dollars.

Construction Period Impacts

The economic impacts from the construction phase of the Carolina Meadows Capital Improvements Plan are expected to occur over two years for the villas (residential units) and five years for the other facility improvements. The estimated cost of the capital improvements, \$46.3 million, was provided by Carolina Meadow's architect, Calloway Johnson Moore & West, P.A.

Annual levels of output, labor income and employment will vary with the pace of construction over the buildout period. No permanent job creation is assumed.

TABLE 2 Construction Period Impacts				
<u>Annual Impacts</u>	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<i>Villas</i>				
Output	\$13.7M	\$2.4M	\$1.9M	\$18.0M
Employment	144	24	19	187
Labor	\$4.5M	\$806k	\$481k	\$5.8M
<i>Facility Improvements</i>				
Output	\$3.8M	\$704k	\$597k	\$5.1M
Employment	47	7	6	60
Labor	\$1.5M	\$242k	\$155k	\$1.9M
<u>Cumulative Impacts</u>	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<i>Villas – 2 Year Buildout</i>				
Output	\$27.4M	\$4.9M	\$3.7M	\$36.0M
Employment	287	49	38	374
Labor	\$8.9M	\$1.6M	\$963k	\$11.5M
<i>Facility Improvements – 5 Year Buildout</i>				
Output	\$18.9M	\$3.5M	\$3.0M	\$25.4M
Employment	236	36	31	303
Labor	\$7.3M	\$1.2M	\$776k	\$9.3M
<i>Total</i>				
Output	\$46.3M	\$8.4M	\$6.7M	\$61.4M
Employment	523	85	68	676
Labor	\$16.2M	\$2.8M	\$1.7M	\$20.7M
M = million k = thousand				

As seen in Table 2, it is estimated that there will be 523 direct jobs created from the cumulative construction activity with another 85 jobs created as an indirect effect. 68 jobs result from the induced effect for a total of 676 jobs generated during buildout. Direct labor income for the buildout period will exceed \$16.2M. Cumulative indirect labor income of \$2.8M and cumulative induced labor of \$1.7M are combined with the direct labor income result to arrive at \$20.7M which represents the cumulative labor income impact in Chatham County during the construction period.

Ongoing Impacts

In addition to the impacts from the construction activity, Chatham County will also experience permanent economic activity generated by the new Carolina Meadows employees associated with the facility improvements. Today, Carolina Meadows is one of Chatham County's largest employers with 420 personnel on staff. Management estimates 14 new employees will be hired as the various facilities are completed with an annual payroll cost (excluding payroll taxes and benefits) of \$421,000.

The annual Chatham County economic impacts generated by the existing Carolina Meadows employees as well as the new Carolina Meadows employees are presented in Table 3.

TABLE 3 Permanent Annual Economic Impacts – Carolina Meadows Employment				
	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<i>Existing Employees</i>				
Output	\$20.3M	\$2.3M	\$4.4M	\$27.0M
Employment	420	30	44	494
Labor	\$11.3M	\$673k	\$1.1M	\$13.1M
	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<i>Future Employees From Facility Improvements</i>				
Output	\$676k	\$79k	\$145k	\$900k
Employment	14	1	2	17
Labor	\$421k	\$22k	\$38k	\$481k
	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<i>Total Future Carolina Meadows Employees</i>				
Output	\$21.0M	\$2.4M	\$4.5M	\$27.9M
Employment	434	31	46	511
Labor	\$11.7M	\$697k	\$1.2M	\$13.6M
M = million k = thousand				

As shown above, the 14 new direct employees will generate a total labor income impact on Chatham County of \$481,000 including indirect impacts of \$22,000 and induced impacts of \$38,000. At buildout, Carolina Meadows' workforce of 434 will produce total labor impact of \$13.6 million in Chatham County.

Local Taxes Generated

Property Taxes

The implementation of the Carolina Meadows Capital Improvements Plan will generate additional property and sales taxes for Chatham County. Although Carolina Meadows is a tax exempt organization, it pays both real and personal Chatham County property taxes. In fact, Carolina Meadows ranks second on the listing of Chatham County's largest taxpayers.

Upon completion, the \$46.3 million investment will produce annual real property taxes of approximately \$303,000 for Chatham County and \$32,000 annually for the North Chatham Fire District. Based on discussions with the Chatham County Tax Appraiser's Office, it is reasonable and conservative to assume the construction cost investment of \$46.3 million will approximate the assessed value. The aforementioned real property tax estimates were calculated based on the FY09 approved property tax rate of 0.653% for Chatham County and 0.07% for the North Chatham Fire District.

The non-residential portion of the facility improvements will require new furniture and equipment which will be classified as personal property for assessment purposes. Estimating the potential assessed value of these assets is beyond the scope of this report, but they represent additional tax base for Chatham County.

Local Option Sales Taxes

New sales tax revenue will also be generated for Chatham County as a result of the Carolina Meadows Capital Improvements Plan. Currently, Chatham County receives local option sales taxes from four sources.

- Article 39: One cent on every dollar, distributed to the county directly based on the delivery of the goods.
- Article 40: One-half cent on every dollar, collected in a statewide pot and

- distributed to counties based on proportionate population. 30% must be spent on school capital or debt.
- Article 42: One-half cent on every dollar, collected in a statewide pot and distributed to counties based on proportionate population. 60% must be spent on school capital or debt. As part of the Medicaid Relief legislation, the distribution method will convert to delivery of goods basis in FY10.
- Article 44: One-half cent on every dollar with 50% distributed to counties based on delivery of goods and the remaining 50% distributed based on proportionate population. In conjunction with the Medicaid Relief legislation, this one-half cent tax will be phased out in full FY10.

Due to the pending sales tax changes, this analysis is limited to the potential impact of Articles 39, 40 and 42 sales taxes.

The proposed Chatham County FY09 budget estimates Article 40 sales tax revenue to be \$3.1 million. The North Carolina State Demographer estimates Chatham County's population, for sales tax distribution purposes, to be 59,243 resulting in per capita FY09 revenue of \$52.87. Applying this per capita rate to the 140 new residents anticipated in the 70 new Carolina Meadows residential units (2 persons per unit x 70 units) will generate additional Article 40 sales tax distributions to Chatham County of approximately \$7,000 (140 residents x \$52.87). Of this total, about 16%, or \$1,000, will be distributed to the municipalities based on proportionate population and Chatham County will receive the remaining 84% or \$6,000.

At this point, it is difficult to accurately estimate the potential impacts from the Article 39 sales tax. Although the disposable incomes of Chatham County residents are estimated to be relatively high, consumer spending surveys of the residents have not been performed to determine the amounts and locations of household purchases. Furthermore, although many retail spending dollars are currently leaking out of Chatham County into adjacent counties, this trend is expected to decline over time as more commercial property is developed in the county.

To provide a rough estimate of the potential Article 39 sales tax revenue from existing and future Carolina Meadows residents assuming fully competitive retail offerings in Chatham County, we used the U.S. Bureau of Labor Statistics (BLS) *2005-06 Consumer Expenditure Survey Table 30, Consumer Units With Reference Person Age 65 and over By Income Before Taxes*. By applying appropriate percent-of-income indexes developed from this table to estimated household incomes for comparable retirement communities, we derived an estimate of the potential Chatham County retail household spending for the Carolina Meadows independent living residents. Table 4 reflects the results.

Spending Category	Existing 391 Units	Future 70 Units	Total
Food at home	\$ 1,275,587	\$ 228,366	\$ 1,503,953
Food away from home	806,230	144,338	950,568
Household operations	319,006	57,111	376,117
Household supplies	281,091	50,323	331,414
Household furnishings	684,206	122,492	806,699
Apparel and services	443,645	79,425	523,070
Vehicle net outlays	1,164,023	208,393	1,372,415
Gas and motor oil	737,810	132,089	869,899
Other vehicle expenses	933,048	167,042	1,100,090
Medical supplies	84,545	15,136	99,681
Entertainment	882,931	158,070	1,041,001
Other	813,640	145,665	959,305
Total	\$ 8,425,762	\$ 1,508,449	\$ 9,934,211

By assuming 60% of these potential Chatham County retail purchases represent taxable sales and by applying the 1.5% sales tax rate (1 cent Article 39 and one-half cent Article 42), we

prepared the following table which reflects local option sales tax possibilities in Chatham County by Carolina Meadows residents. As previously discussed, 16% would be distributed to the municipalities and 84% distributed to Chatham County.

TABLE 5 Article 39 Sales Tax <u>Potential</u> Resulting From Estimated Consumer Spending By Carolina Meadows Independent Living Residents Assuming Fully Competitive Retail Offerings			
	Existing <u>391 Units*</u>	Future <u>70 Units</u>	<u>Total</u>
Retail Spending	\$ 8,425,762	\$1,508,449	\$9,934,211
Assumed Taxable %	60%	60%	60%
Taxable Sales	\$5,100,000	\$900,000	\$6,000,000
Article 39 and 42 Potential Sales Tax	1.5%	1.5%	1.5%
	\$76,000	\$14,000	\$90,000
Chatham County	\$64,000	\$12,000	\$76,000
Municipalities	\$12,000	\$2,000	\$14,000

*A portion of this consumer spending occurs in Chatham County today.

Corporate/Community Citizenship

Carolina Meadows is a very active, socially conscious community with many of the residents involved in at least one volunteer activity. The groups benefiting by their volunteerism include:

- Older adults within Chatham and Orange Counties
- Chatham County Schools
- Children with mental, emotional or developmental disabilities in Chatham and Orange Counties
- Nonprofit Agencies within Chatham County

In fact, these volunteer hours of time and talent exceed 3,000 hours per year based on the results of a recent informal survey. Financial contributions are just as generous. Individual contributions by Carolina Meadows residents to support needs in the County exceed approximately \$100,000 annually with 50% of the gifts to the United Way alone.

Furthermore, the Organization has provided annual community grants of \$120,000 to local nonprofit agencies. Some of the beneficiaries of the grants include: Central Carolina Community College, Chatham County Together, Chatham Outreach Alliance, Chrysalis Foundation, Deep River Mediation, Joint Orange County Alliance, Family Wellness and Recovery, Hispanic Liaison of Chatham County, and NC Rural Communities.

Fiscal Impacts

Estimating the fiscal impacts of the Carolina Meadows Capital Improvement Plan is beyond the scope of this study; however, incremental cost impacts are expected to be minimal since the project will not generate additional public school children, and peak hour traffic impacts are expected to be minimal.

Methodology

This study estimates the economic impacts of the proposed Carolina Meadows Capital Improvements Plan on the Chatham County, North Carolina economy. The methodology used in this study is the IMPLAN regional input-output modeling system developed by MIG, Inc. of Stillwater, Minnesota. IMPLAN models incorporate the most recently data available (2006); however, all results have been adjusted to 2008 dollars.

IMPLAN was developed by MIG, Inc. as a cost-effective means to develop regional input-output models. The IMPLAN accounts closely follow the accounting conventions used in the "Input-Output Study of the US Economy" by the Bureau of Economic Analysis (1980) and the rectangular format recommended by the United Nations.

The IMPLAN Input-Output Model mathematically describes commodity flows from producers to intermediate and final consumers. Purchases for final use (final demand) drive the model. Industries producing goods and services for final demand also purchase goods and services from other producers. These other producers, in turn, purchase goods and services. This buying of goods and services (indirect purchases) continues. Leakages from the region eventually stop the cycle.

The IMPLAN input-output model mathematically derives the indirect and induced effects. The resulting multipliers describe the change in output for every regional industry caused by a one-dollar change in final demand for any given industry. The notion of a multiplier rests upon the difference between the initial effect of a change in final demand and the total effects of that change. Total effects are the direct effects plus indirect effects, plus induced effects. Direct effects are the production changes associated with initial final demand changes. Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly effected industries. Induced effects result from the household expenditures from the directly or indirectly generated labor income.

In essence, the multipliers estimated by this methodology represent the consecutive rounds of buying and selling that ripple through an economy. To produce one dollar of new product, employees must be hired and paid. The wages paid to these workers will then be spent on goods and services, such as food, gasoline, clothes, housing, etc. within the region and outside the region. As these cents are spent, they become income to the recipient, and the spending continues over and over again. The induced effect is the cumulative amount of spending.

The economic activity of the project also requires intermediate inputs to be purchased such as electricity, raw materials, transportation services, labor etc. These expenditures become income to the recipient and pay for the purchases of raw materials, labor, etc. They, in turn, are then spent over and over again in the economy. Purchases made from outside the region are considered "leakages" from the economy. The consecutive rounds of selling goods and services continues until these leakages from the region end the cycle. The indirect effect is the cumulative amount of such spending.

The IMPLAN databases consist of two major parts: national-level matrices and tables and economic and physical data at the county and/or state level. The national matrices are used with regional data to create a regional model.

The following national-level matrices are included with each IMPLAN database.

1. The *National Absorption Table* is a coefficient form of the National Use Table derived by dividing each element of the Use Table by the respective industry's total dollar output. The resulting Absorption Table shows how an industry spends each dollar of outlay on goods and services to produce a dollar of output. Each column is an industry's production function reflecting the proportions of commodities used to produce one dollar of output.

2. The *National Byproducts Table* is a coefficient form of the National Make Table derived by dividing each element by the Make Table row (industry) totals. Each industry can produce more than one commodity. The Byproducts Tables shows what percentage of an industry's total output each commodity represents.
3. Deflators are used to adjust values from one time period to another.
4. Margins split a purchaser price into the appropriate producer values.

The local economic data in an IMPLAN database include Industry Output, Employment, Value Added and Final Demands. The value-added components are employee compensation, proprietors' income, other property type income, and indirect business taxes. The final demands components in the initial Final Demands Table are personal consumption expenditures, state and local education and non-education purchases, federal military and non-military purchases, inventory purchases and capital formation. Regional data is applied to the national matrices to create a set of regional accounts.

General Engagement Assumptions

This economic impact analysis is not a budget or forecasting document and is not intended to depict a definitive course of action. Moreover, economic impact analysis is not designed as a space or facility-planning document. Many assumptions underlying impact analysis are affected by policy decisions which, if modified, would affect the overall results.

This study is based on estimates, assumptions and other information developed by Miley, Gallo & Associates, LLC from its independent research effort, consultations with the client and its representatives, and primary and secondary sources. We have utilized sources that are deemed to be reliable but cannot guarantee their accuracy. Moreover, estimates and analysis are based on trends and assumptions and, therefore, there will usually be differences between projected and actual results because events and circumstances frequently do not occur as expected, and those differences may be material. No responsibility is assumed for inaccuracies in reporting by the client, the client's agent and representatives, or any other data source used in preparing this study.

This report is based on information that was current as of June 17, 2008, and Miley, Gallo & Associates, LLC has not undertaken any update of its research effort since that date. We have no obligation, unless subsequently engaged, to update this report or revise this analysis as presented due to events or conditions occurring after the date of this report.

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