

Steamboat City and Allied Projects: An Evaluation Of The Economic Impact On Service Delivery Region 12

Prepared for: Compass Group Inc.

**Prepared by: Bureau of Business Research
And Economic Development
Georgia Southern University**

February 2005

STEAMBOAT CITY AND ALLIED PROJECTS: AN EVALUATION OF THE ECONOMIC IMPACT ON SERVICE DELIVERY REGION 12

At the request of Compass Group Inc., the Bureau of Business Research and Economic Development (BBRED) undertook a study to assess the full impact of Steamboat City and its allied developments. This report summarizes the total economic impact on the nine counties in Georgia's State Service Delivery Region 12: Effingham; Bulloch; Chatham; Bryan; Liberty; Long; McIntosh; Glynn; and, Camden.

The project includes several components: a theme park; an industrial incubator and industrial facilities of approximately 200,000 square feet; a total of 1,175,000 square feet of commercial retail space; an additional 138,000 square feet of commercial restaurant space; and, 395,000 square feet of commercial office space. The development will also include construction of 5,000 units of housing. The impact scenario will show the early stage impact of construction followed by the impact of operations. Impacts are estimated out to 2030.

The dynamic regional modeling system, REMI¹ was used to estimate the total impact of the proposed developments. REMI is an ideal tool for modeling this type of project since construction and operations are spread over a period of years. For the purposes of the analysis it was assumed that there were two projects which were net additions to export base of the region's economy: the proposed theme park; and, the proposed industrial incubator. The development of such export base industries in the REMI model will drive the demand for new residential construction and new business investment including new commercial office and retail services. To avoid double counting of residential construction impacts, an analysis excluding residential construction was first estimated and an estimate of the number of residential units constructed to support the growth caused by the expansion of the export base sector was deducted from the estimated 5,000 units to get net additional units to be constructed for the non-economic migrant population. An analysis was then prepared including all development.

Developing the Inputs for the Impact Analysis

Table 1 shows the data employed to model the impact of the theme park. The construction of the theme park and all developments contained in the area designated as CR-7 will occur in 2005 through 2007 with operation of the theme park commencing in 2007. Table 1 also shows the estimates of expected revenues for the theme park for 2007 through 2015. Beyond 2015 expected revenues were increased at a nominal rate of 2.5%. Expected revenues were shown as net new industry sales for the commercial construction and the amusement/recreation industrial sectors in REMI.

¹ The REMI Policy Insight modeling system is a product of REMI, Inc. of Amherst, MA, www.remi.com.

Table 1

CR-7 Construction Cost and Steamboat City Revenues (in thousands)

CR-7 Activity	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2015	FY 2020	FY 2025	FY 2030
CR-7 Construction	\$ 89,401	\$ 174,935	\$ 29,861	\$ 14,149						
Projected Revenue			\$ 39,290	\$ 46,268	\$ 52,186	\$ 56,142	\$ 71,783	\$ 81,215	\$ 91,888	\$ 103,963
Total	\$ 89,401	\$ 174,935	\$ 69,151	\$ 60,418	\$ 52,186	\$ 56,142	\$ 71,783	\$ 81,215	\$ 91,888	\$ 103,963

The estimates of theme park revenues do not include the other expenditures made by visitors to the area. Visitors who attend the theme park may come from the local market area or they may come from the national/international market. The local market area includes: Glynn County; the Colonial Coast; Jacksonville, FL; Savannah, GA; and, the Beaufort, SC/Hilton Head Island area. The impact of these visitors was not included in the estimated impact of visitors. It was assumed that expenditures by visitors at the park from the local market area would be 100% the expenditures they would have made at other venues in the region. This means that it was assumed that theme park expenditures by visitors from the local market area would dollar for dollar displace existing expenditures. Therefore, their expenditures would not represent additional tourism impacts and were not included in the analysis of visitor impacts.

The market analysis prepared for the theme park specifically notes that the project will draw from the national/international market. In fact, the theme park represents new tourism infrastructure in the coastal region. It was therefore, assumed that the 100% of the national/international visitors represent net new visitors.

Table 2 shows the expected expenditures annually by type of expenditure for 2007 to 2015 for net new visitors to the region. For the period between 2007 and 2015 the estimates are based on net new visitors multiplied by average per person per trip expenditures for 2004 as reported by the Travel Industry Association of America. See *Domestic Travel Market Report: 2004 Edition*. Beyond 2015 expenditures were estimated to grow at a nominal rate of 2.5% per year. The estimated visitor expenditures were incorporated into the analysis of the impact of the theme park and were adjusted to exclude the direct expenditures at the theme park that are already accounted for in the expected theme park revenues.

Table 2

Visitor Expenditures by Type Outside of Themepark (in thousands)

CATEGORY	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2020	FY 2025	FY 2030
Lodging	\$ 17,774	\$ 18,904	\$ 20,109	\$ 21,385	\$ 22,745	\$ 24,191	\$ 25,727	\$ 27,367	\$ 29,104	\$ 32,928	\$ 37,255	\$ 42,151
Foodservice	\$ 24,654	\$ 26,221	\$ 27,893	\$ 29,663	\$ 31,549	\$ 33,555	\$ 35,686	\$ 37,961	\$ 40,369	\$ 45,674	\$ 51,676	\$ 58,467
Entertainment/Rec	\$ 6,880	\$ 7,317	\$ 7,784	\$ 8,278	\$ 8,804	\$ 9,364	\$ 9,959	\$ 10,594	\$ 11,266	\$ 12,746	\$ 14,421	\$ 16,316
General Retail (1)	\$ 8,027	\$ 8,537	\$ 9,081	\$ 9,658	\$ 10,272	\$ 10,925	\$ 11,619	\$ 12,359	\$ 13,144	\$ 14,871	\$ 16,825	\$ 19,036
Total	\$ 50,455	\$ 53,662	\$ 57,083	\$ 60,706	\$ 64,565	\$ 68,670	\$ 73,031	\$ 77,688	\$ 82,617	\$ 106,219	\$ 120,177	\$ 135,970

In addition to the theme park, industrial facilities are also proposed. Of the 200,000 square feet, a portion will be earmarked for an industrial incubator. The incubator will be organized after the Ben Franklin Technology Partnership. See www.nep.benfranklin.org. Line 2 of Table 3 shows the net new jobs created by the Ben Franklin Technology Partnership between 1991 and 2001 projected as a pattern of development for the

Steamboat incubator for 2007 to 2015. The economy in which the jobs were created is approximately twice the size of the economy in Region 12. It was assumed that the pattern/timing of job creation would mimic that of the Ben Franklin Technology Partnership as shown in Table 3, but would be only half as large in any year.

Table 3
Industrial Incubator Job Creation, Ben Franklin Technology Partnership (USD in thousands)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2020	FY 2025	FY 2030
Benchmark Job Creation	250	294	281	699	596	329	495	395	366			
Projected Job Creation	125	147	141	350	298	165	248	198	183			
Adjusted Wage Bill	\$ 5,238	\$ 6,160	\$ 5,888	\$ 14,646	\$ 12,488	\$ 6,893	\$ 10,371	\$ 8,276	\$ 7,669	\$ 8,676.33	\$ 9,816.48	\$ 11,106.44

The Ben Franklin Technology Partnership reports that the typical job created by the incubator pays 45% more than the average salary for the State of Pennsylvania. To estimate the economic impact of the jobs potentially created by the incubator, the number of expected jobs per year was multiplied by 1.45 times the average annual wage in Region 12. The multiplication by 1.45 adjusts the base gross average annual wage for the region by the 45% premium the incubator jobs are expected to pay. Beyond 2015 it was estimated that the adjusted gross wage will increase by a rate of nominal 2.5% per year. To simulate the impact in REMI the Region 12 gross wage bill was increased by this adjusted gross wage bill for the incubator and distributed by sector based on the distribution of jobs already present in the region. The adjusted wage bill is shown in Table 3.

Tables 4, 5 show the input values for the residential and commercial phases of the development. The estimates of retail sales were based on the number of square feet proposed for development multiplied by the median sales per square foot. The median sales value is sensitive to a project's total square feet. For the proposed project of 500,000 square feet the median sales estimate was \$160 per square foot. For the smaller projects the median sales estimate was \$238 per square foot. Both were in 2004 dollars as reported by *Dollars & Cents of Shopping Centers: 2004*, by the Urban Land Institute. Beyond 2015 sales were assumed to grow a nominal rate of 2.5% per year.

Table 4
Total Residential and Commercial/Retail Construction and Commercial/Retail Sales (in thousands)

CATEGORY	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2013	FY 2015	FY 2020	FY 2030
Commercial Const.	\$ 80,023	\$ 181,890	\$ 35,000							
Comm/Retail Sales			\$ 227,913	\$ 268,336	\$ 302,617	\$ 325,553	\$ 377,293	\$ 416,299	\$ 471,004.60	\$ 602,925.71
Total	\$ 80,023	\$ 181,890	\$ 262,912	\$ 268,336	\$ 302,617	\$ 325,553	\$ 377,293	\$ 416,299	\$ 471,005	\$ 602,926

Table 5
Commercial-Retail Baseline Revenue Projection (USD in thousands)

Sector	SQFT	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2020	FY 2030
CR-6	175,000	\$ 28,053	\$ 33,035	\$ 37,260	\$ 40,085	\$ 42,103	\$ 44,224	\$ 46,452	\$ 48,792	\$ 51,252	\$ 57,987	\$ 74,228
CR-7	275,000	\$ 44,083	\$ 51,912	\$ 58,551	\$ 62,990	\$ 66,162	\$ 69,494	\$ 72,995	\$ 76,674	\$ 80,538	\$ 91,122	\$ 116,644
CR-8	500,000	\$ 119,200	\$ 140,371	\$ 158,324	\$ 170,327	\$ 178,903	\$ 187,914	\$ 197,381	\$ 207,328	\$ 217,777	\$ 246,395	\$ 315,407
CR-9	225,000	\$ 36,068	\$ 42,474	\$ 47,906	\$ 51,537	\$ 54,132	\$ 56,859	\$ 59,724	\$ 62,733	\$ 65,895	\$ 74,554	\$ 95,436
TOTAL	1,175,000	\$ 227,403	\$ 267,792	\$ 302,040	\$ 324,939	\$ 341,301	\$ 358,491	\$ 376,552	\$ 395,527	\$ 415,463	\$ 470,058	\$ 601,714

Because of the economic stimulus from the new employment at the theme park, the industrial incubator and the actual construction of those facilities, REMI will estimate both residential and non-residential new capital stock. However, the infrastructure development is designed to accommodate up to 5,000 new housing units, a significant portion of which will be aimed at the retiree market, approximately 4,000 units total. The impact of net in-migration of retirees is simulated at yearly rate of 1,600 over five years starting in 2011. This will total about 8,000 retired migrants by the year 2015, assuming two occupants per unit. It is assumed that vacated units are re-occupied immediately by retired migrants. Construction costs per unit were estimated at \$ 150,000 per unit and the build-out spread over five years from 2011 to 2015. See Table 6.

Table 6 (USD in thousands)

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2020	FY 2025	FY 2030
Construction Sales			\$ 97,875	\$ 97,875	\$ 97,875	\$ 97,875	\$ 97,875	\$ 97,875			
Retiree Migration				1600	1648	1680	1728	1776	240	272	240
Amenity								\$ 48,855	\$ 216,700	\$ 384,545	\$ 552,390

One final element available in the REMI model was employed to estimate the long-term impacts of the structural changes in the region’s economic competitiveness. The REMI model contains an amenity variable that measures the region’s intangible economic attractiveness. A key amenity in an economy is diversity of choices. Both businesses and residential population prefer locations that offer a variety of choices. For businesses the larger the population base and the more other types of businesses in a region, the higher the chance that the business will find the ‘right employee’ for a job and the higher the chance of finding the ‘right supplier’ of inputs. Both of these factors raise productivity and lower costs that in turn increase profitability. For households the value of choice is in variety, e.g. more types of shopping, a greater choice in restaurants diversified medical care options and more types of recreational activities. The collection of projects proposed for Steamboat City and it allied development increase the value of Glynn County as a location for business and residential uses. The impact of this competitive advantage was introduced by making incremental increases in the region’s amenity value. See Table 6.

The Regional Impacts

Table 7 and 8 contain the results of the REMI estimates of the total economic impact when all projects are developed and operated and when all phases of the residential development are completed. All impacts reported are adjustments over Region 12’s embedded growth as projected by REMI. In the first year of the project, shown as 2005, total regional employment will increase by 1,225. There are substantial increases over the region’s expected base of employment in 2006 and 2007 with 3,092 jobs in 2006 and 7,855 jobs in 2007. The big increase in jobs in 2007 over 2006 is due to concurrent construction and the initiation of operations of the theme park, incubator and new retail facilities. There is a small dip in employment between 2007 and 2008 as the infrastructure phase of development slows down.

Beginning in 2010, the impact of producing the housing for the migrating retiree population creates a second surge in employment, bumping up employment by 1,290 people. The peak of this second surge is reached in 2015 with employment reaching 15,100. The arrival of the retiree population with the associated increase in

Figure 1
Employment- Baseline Forecast and Net Impact

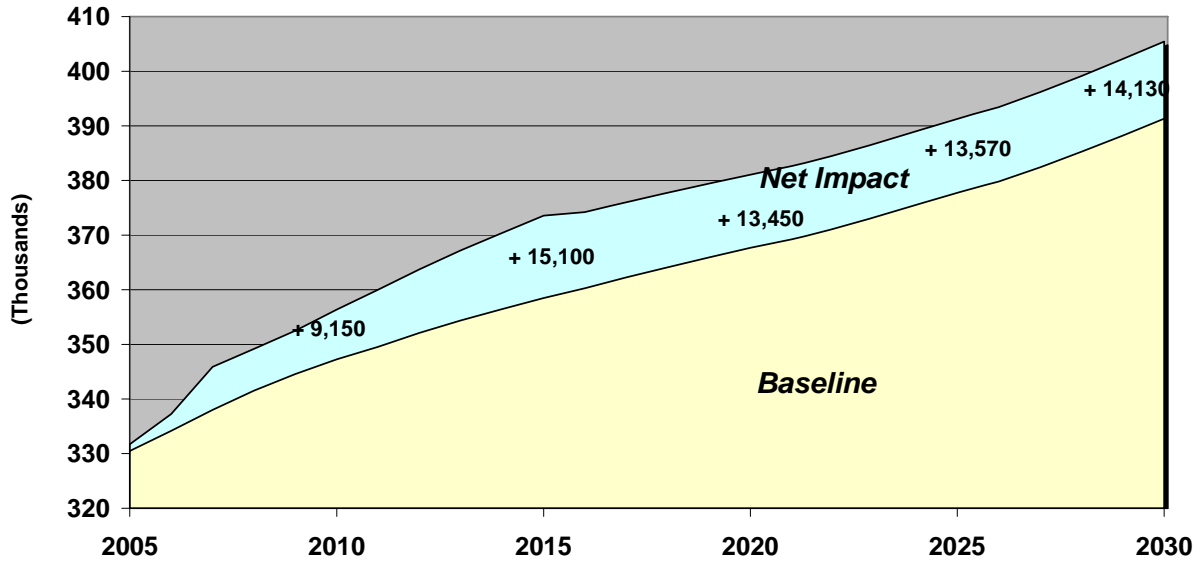
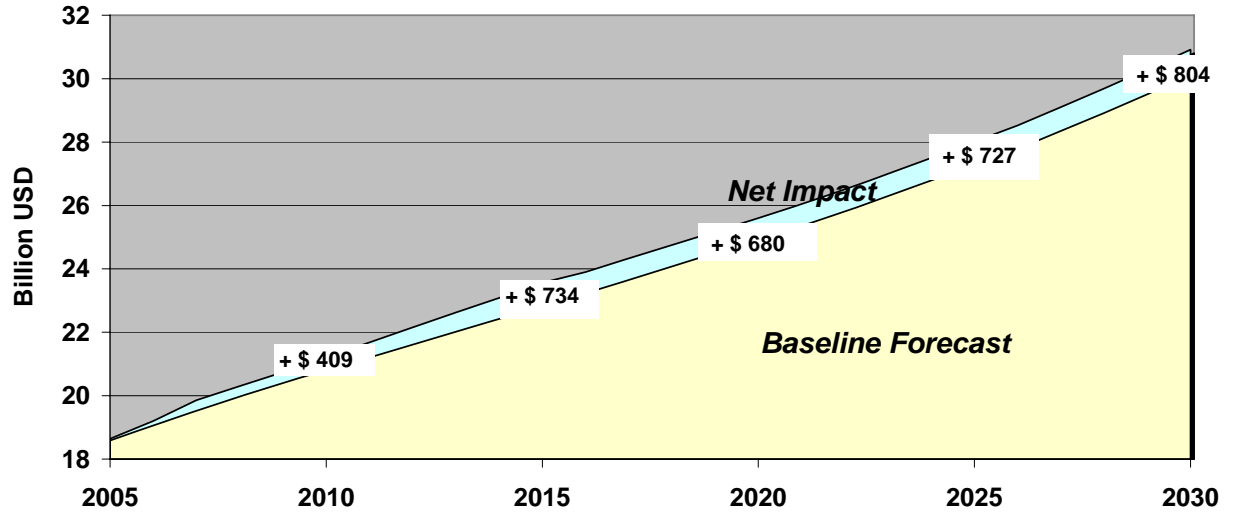


Figure 2
GRP Baseline Forecast and Net Impact (Change in Million USD)



spending begins in 2011. Having assumed a five-year build-out of approximately 4,000 units of retiree housing may overstate the peak impact, but employment drops only slightly after the build-out phase reaching a low of 13,420 in 2022 then increasing to 14,130 by 2030. Overall, as shown in Table 8, employment in the region increases by between 4.21% over the base and then settles to approximately a 4.0% increase in employment over the base by 2030. Figure 1 shows the pattern of growth in base employment and employment created by all projects and phases of Steamboat City and allied projects over the period from 2005 to 2030.

Table 8

Percent Change over Base Growth: Impact All Projects, All Phases; Region 12

VARIABLE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2030
Employment	0.37%	0.93%	2.32%	2.23%	2.30%	2.64%	2.99%	3.30%	3.61%	3.91%	4.21%	3.66%	3.59%	3.61%
GRP	0.30%	0.76%	1.70%	1.63%	1.68%	1.97%	2.25%	2.50%	2.75%	2.98%	3.22%	2.73%	2.67%	2.67%
Pers Inc	0.22%	0.56%	1.18%	1.22%	1.31%	1.59%	2.30%	2.97%	3.64%	4.26%	4.89%	4.61%	4.46%	4.31%
Real Disp Pers Inc	0.20%	0.51%	1.07%	1.08%	1.16%	1.42%	2.15%	2.82%	3.50%	4.13%	4.77%	4.56%	4.50%	4.42%
Population	0.04%	0.13%	0.36%	0.56%	0.74%	0.93%	1.40%	1.86%	2.31%	2.76%	3.27%	4.41%	5.41%	6.13%
Econ Migrants	-169%	-269%	-839%	-670%	-764%	-1372%	6873%	431%	248%	177%	184%	194%	169%	78%
Total Migrants	169%	612%	1001%	760%	523%	415%	786%	451%	339%	279%	271%	139%	112%	60%
Labor Force	0.08%	0.26%	0.72%	1.01%	1.25%	1.52%	1.89%	2.26%	2.62%	2.96%	3.35%	4.10%	4.84%	5.45%
Capital Stock														
Residential														
Act Capital Stock	0.03%	0.09%	0.22%	0.34%	0.45%	0.58%	0.79%	1.05%	1.38%	1.74%	2.13%	3.36%	3.94%	4.19%
Opt Capital Stock	0.20%	0.51%	1.07%	1.08%	1.16%	1.42%	2.15%	2.82%	3.50%	4.13%	4.77%	4.56%	4.50%	4.42%
Non residential														
Act Capital Stock	0.02%	0.08%	0.29%	0.49%	0.68%	0.87%	1.07%	1.28%	1.49%	1.70%	1.91%	2.43%	2.47%	2.33%
Opt Capital Stock	0.23%	0.58%	2.10%	2.15%	2.26%	2.51%	2.81%	3.05%	3.29%	3.50%	3.71%	2.88%	2.37%	2.04%

Table 7 shows that peak rate of change in Gross Regional Product (labeled GRP) occurs in 2007. As with employment this is because in 2007 it was assumed that there would be concurrent construction and initial operation of the theme park, incubator and new retail services. Between 2006 and 2007 the change in GRP above base more than doubles. Figure 2 shows the percent change in GRP due to base growth and the percent change due to the all projects and all phases of Steamboat City and allied projects. By 2015 the region is producing \$733.8 million more in goods and services than it would have with base economic growth and by 2030 the region is producing \$804.1 million more in goods and services than it would have with base economic growth. As shown in Table 8, these represent 3.22 % and 2.67 % higher GRP levels compared to base economic growth respectively for 2015 and 2030.

Economic migration is a measure of how many people will migrate due to the economic opportunities created by Steamboat City and its allied projects. But in addition to the growing attractiveness of the region as a place to work, the area will be marketed to a population that will migrate because of the region's growing attractiveness as a place to live. To capture the impact of these non-economic migrants, net migration of a retiree population was stimulated, shown in Table 6 above. This is shown in Table 8 by the difference in Total

Prepared for Compass Group Inc.

Migrants and Economic Migrants in the period between 2011 and 2015. After 2015, as some of this population dies it is assumed that a person in the same age group replaces them. The combined effect of the two sources of population growth is that by 2030 there will be 44,110 more people living in the region than would have without Steamboat City, all projects, all phases. As shown in Table 8 this is a 6.1% higher population than would result from base growth.

The increases in total population results in an increase in school age population. The population age 18 and younger increases over the base growth by 93 in 2005 rising up to 1816 over base growth by 2009. By 2015 those age 18 and younger increase to 5183 over base growth. In 2030 the region will have 13,820 additional people age 18 or younger. *Note this is a regional effect. Not all of the school age population will be living in Glynn County.*

In REMI when a regional economy grows, the model estimates how much additional housing and business investment is required to support growth. In the case of residential housing, REMI estimates the equilibrium amount of new housing required by the increase in population and the increase in the income that population has available for housing investment. This is labeled as Optimal Residential Capital Stock. REMI then calculates how much of the desired, or optimal, new residential housing can be built in a given year. This is shown as Actual Residential Capital Stock, which is an important measure of the region's wealth. As long as the desired or Optimal Capital Stock is larger than the Actual Capital Stock the region will continue to generate new investment in housing. New business investment in plant and equipment is modeled similarly except that new business investment depends on new employment and new GRP. As with Actual Residential Capital Stock, Actual Non-Residential Capital Stock is an important measure of the region's wealth.

The economic growth resulting from the proposed development projects stimulates the demand for new housing by \$51.1 million in 2005. Between 2005 and 2009 the growth of the demand for housing and the associated increase in the residential capital stock is caused by the economic stimulus associated with the theme park, the net new visitor expenditures, the net new jobs associated with the industrial incubator and the net new jobs in retail services. The desired residential capital stock reaches \$322.6 million in 2009 with Actual Capital Stock expanding to \$90.6 million. Beginning in 2010 the active residential building phase of the proposed project begins and is shown by the large increase in actual residential housing stock between 2009 and 2010. Between 2010 and 2015 actual residential housing stock is increased as shown in Table 6 above. By 2030 Actual Residential Capital Stock has increased to \$1.3 billion with a remaining gap of \$518 million to be filled beyond the forecast horizon. Overall the region will be wealthier by 4.2% or \$1.3 billion compared to the base growth.

The pattern of development is the same for new business investment. The investment in new business capital stock between 2005 and 2009 is all due economic stimulus associated with the theme park, the net new visitor expenditures, the net new jobs associated with the industrial incubator and the net new jobs in retail services. Desired non-residential capital stock increases to \$427.9 million above the base growth and actual non-residential capital stock increases by \$85.1 million. The gap between desired and actual non-residential capital stock increases through the residential build-out phase in 2017 and thereafter gradually the gap closes until the difference between actual and optimal business capital stock is only \$127 million. The region will have

Prepared for Compass Group Inc.

accumulated addition business capital stock of \$375 million by 2030.

Impact on Glynn County

The above are all estimated region-wide economic impacts, but can anything be said on the basis of the analysis here about the impact on Glynn County specifically? At the time of this analysis, a separate model of Glynn County was not available and it would be inappropriate to simply apportion the above forecasts based on Glynn County's current share in the regional economy since Steamboat City and the allied projects will likely increase the Glynn County share.

The most tangible way to assess the economic impact of the Steamboat City and allied projects is to recognize that most of the gains in residential capital stock and business capital stock will occur in Glynn County. This means that the majority of the increased wealth will accrue to Glynn County. It is not unreasonable to expect that \$1.3 billion increase in wealth associated with the new residential capital stock and the \$375 million increase in wealth associated with new business capital stock will all accrue to Glynn County. See Table 8.

Further, it should be expected nearly all of the direct jobs associated with Steamboat City and its allied projects will be Glynn County jobs. We estimate that the industrial incubator project alone will result in 1,855 new manufacturing/technology jobs.² See Table 3. Other direct jobs will be associated with the theme park and tourism expenditures that will be concentrated in Glynn County. Unfortunately the estimation method makes it difficult to extract the number of expected direct jobs for these economic activities.

Finally as noted, the impact on the number of school age children is a region wide impact and with the current model the exact impact on Glynn County cannot be determined. However, it should be noted that while most of the increase in wealth in the form of new residential capital stock and new business capital stock will accrue to Glynn County the majority of the housing will be occupied by an older and retiree population which will have a minimal impact of schools.

² Please note the jobs estimate is direct jobs from the industrial incubator project. These direct jobs will of course spin off other jobs, but these cannot be disentangled from the regional impact analysis.