

Alternative Use Analysis: Beaman Park to Bells Bend Corridor

A Research Brief by the Ochs Center for Metropolitan Studies

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Executive Summary

The purpose of this research brief is to examine how alternative uses -- tourism, recreational and agricultural -- in the Beaman Park to Bells Bend Corridor could result in economic activity within the Nashville Region. The brief also assesses the intrinsic value of open space as an amenity to residents of Metro Nashville.

The Corridor could become a premier recreation and tourist destination. An area of pristine open space in the midst of the urban landscape, a “third vision” (as opposed to unplanned or high density, clustered developments) envisions a low density residential and agricultural community complemented by environmentally compatible businesses within the Corridor.

The Corridor also has the potential to contribute to economic growth through an agricultural business model that can create value for the Nashville region. The Corridor’s distinct natural resource and locational advantages make it well-suited to increase its share in Nashville’s \$1.3 billion food market. Additionally, its proximity to downtown distribution points such as the Farmer’s Market, specialty markets, and local grocery stores and restaurants all present an opportunity to make the corridor an agricultural center that can serve as a local food source for the city. Finally, its rural setting, its outdoor recreational and agricultural resources, and its historical/cultural background create the potential for the Corridor to become one of the premier open spaces in the Nashville region.

The Corridor’s contributions to Quality of life (QOL) in Nashville also have the potential to impact the region. QOL is now recognized as an important “third wave” approach to economic development, and elements that relate to a location’s natural environment provide a competitive advantage. Considerable evidence suggests that QOL is important for high–technology, research and development facilities, and other knowledge-based firms.

These efforts align with the recently released summary report from the Green Ribbon Committee on Environmental Sustainability, titled *Making Nashville Green*.¹ *Making Nashville Green* contains goals, recommendations, and metrics that will support efforts in enhancing and protecting Nashville’s environmental quality and livability. The “third vision” for the Corridor, if implemented, has the potential to play a significant role in building a culture of sustainability² and protecting natural resources.³ These efforts are also consistent with the Mayor’s commitment, articulated in the annual State of Metro Address, to develop an Open Space Plan for Davidson County. This plan is critical to the

¹ Green Ribbon Committee on Environmental Sustainability. *Making Nashville Green: Summary Report with Goals and Recommendations to Mayor Karl Dean*, April 2009.

² *Making Nashville Green*, Section 1, pp. 8-9.

³ *Making Nashville Green*, Section 4, pp 12-14.

future of the region because, in the Mayor's words, "there are economic and livability benefits to preserving open space."⁴

Depending on which of the different tourism and recreational scenarios is pursued, alternative uses of the Corridor could generate between \$12.8 million and \$23.3 million per year in economic activity, producing between 145.7 and 254.0 jobs. Projected over a fifteen-year time horizon, alternative uses of the Corridor that focus on tourism, recreational and agricultural activity could yield between \$191.6 million and \$348.8 million in monetary value and employment in the range of 2,185.5 to 3,810.0 jobs.

Introduction

In the debate over the future of The Beaman Park to Bells Bend Corridor, much attention has been focused on the potential economic impact of the proposed May Town Center. Yet, the May Town Center development is not the only possible use of the Corridor that can produce economic benefit and value to Metro Nashville. In fact, some economists have noted that "[A]bundant research confirms that open space in urban communities is more valuable to residents and tax collections than most other potential uses of the preserved land."⁵ The preservation of open space in the city is also supported by The Green Ribbon Committee on Environmental Sustainability, an advisory committee established by executive order.⁶

The purpose of this research brief is to examine how alternative uses -- tourism, recreational and agricultural -- in the Beaman Park to Bells Bend Corridor could result in economic activity in the form of increased output, income and employment for the residents and government of Metro Nashville. The brief also assesses the intrinsic value of open space as an amenity to residents of Metro Nashville. Finally, the brief explores the related issue of the fiscal and economic benefits of maintaining tree cover in the corridor.

Depending on which of the different tourism and recreational scenarios is pursued, the alternative uses of the Corridor could generate between \$12.8 million and \$23.3 million per year in economic activity, producing between 145.7 and 254.0 jobs.

Projected over a fifteen-year time horizon (the same used for calculating the economic benefits of May Town Center), alternative uses of the Corridor that focus on tourism, recreational and agricultural activity could yield between \$191.6 million and \$348.8 million in monetary value and employment in the range of 2,185.5 to 3,810.0 jobs.

⁴ State of Metro Address, April 23, 2009. www.nashville.gov/mayor/stateofmetro09.asp

⁵ William W. Wade, "Franklin fails to see tourism dollars in battlefield site," *The Tennessean*, May 10, 2002 accessed at www.energyandwatereconomics.com.

⁶ The Metropolitan Government of Nashville and Davidson County. Karl Dean, Mayor. Executive Order No. 33, June 17th, 2008.

Potential Economic Benefits from Tourism and Recreational Activity in the Corridor

Given its natural beauty, resources, and proximity to downtown Nashville, the Beaman Park to Bells Bend Corridor could become a premier recreation and tourist destination. An area of pristine open space in the midst of the urban landscape, a “third vision” (as opposed to unplanned or high density, clustered developments) envisions a low density residential and agricultural community complemented by environmentally compatible businesses within the Corridor. The “third vision” is also consistent with the recommendations of the Green Ribbon Committee on Environmental Sustainability, which include building a culture of sustainability through various education programs and establishing a “green tourism” program to bolster the City’s reputation of environmental responsibility.⁷ Specific components of this alternate strategy include:

- The creation of a conservation district with conservation easements, designation of properties in the National Register of historic Places, and designation of the corridor as a “heritage area” through the National Trust for Historic Preservation, along with interpretive signage
- The expansion of recreational opportunities through:
 - completion of a greenway along the shoreline of the Cumberland River in the Corridor as specified in the Nashville Metropolitan Government Parks Master Plan
 - establishment of a welcome center with a museum, a farmer’s market, a restaurant, and a recreation center offering kayak, canoe and bike rentals
 - establishment of a designated blueway for kayaking, canoeing and fishing
 - establishment of equestrian trails and boarding facilities
 - establishment of a dedicated bike trail from the southern tip of the Bend to Beaman Park as well as a cross-country trail between the parks
 - Establishment of shorebird ponds in Bells Bend Park for birding
- Development of low-density, for-profit land uses compatible with the character of the Corridor including:
 - a bed-and-breakfast or small scale wellness center
 - a regional conference and retreat center for organizations in southeast region
 - an outdoor performing arts center or amphitheater
 - a network of organic farms

⁷ *Making Nashville Green*, pp. 8-9.

Assuming that this “third vision” is implemented, it is possible to model economic impacts resulting from visitors attracted to the region by one or more activities/attractions. These impacts are modeled to be industry-specific and are assumed to filter throughout the regional economy through indirect and induced effects. The projected impacts are estimates of ongoing operations, and do not include impacts from planning, infrastructure development, or construction. On the other hand, they also do not include potential – relatively minimal – public costs related to the cost of infrastructure and its maintenance to support these developments.

While local park attendance data for the Nashville region are unavailable, the United States National Park Service tracks annual attendance in federal parks for each state.⁸ In 2007, average attendance for all federal parks in Tennessee was 1,574,710. Great Smoky Mountains National Park had the highest attendance in 2007, attracting 9,372,253 visitors. For purposes of the tourism impact model employed in this study, Great Smoky Mountains National Park was treated as an outlier and excluded. Excluding Great Smoky Mountains National Park from the model renders a 2007 park attendance average of 235,817. Based on this estimate, an annual attendance average of 200,000 visitors – approximately 548 visitors per day -- was used for the Corridor in the following impact scenarios.

Table 1. Annual National Park Attendance in Tennessee, 2003-2007

	2003	2004	2005	2006	2007
Stones River National Battlefield	201,576	206,638	206,425	201,016	196,061
Fort Donelson National Battlefield	227,004	228,687	208,687	213,521	233,205
Obed Wild and Scenic River	206,337	242,682	175,800	185,176	182,504
Andrew Johnson National Historic Site	51,910	50,196	48,552	50,701	43,456
Big South Fork National River and Recreation Area	752,140	696,114	699,230	622,807	626,751
Great Smoky Mountains National Park	9,366,845	9,167,046	9,192,477	9,289,215	9,372,253
Shiloh National Military Park	391,346	311,149	315,296	335,657	368,742

Scenario I – Cultural/Historical Hub

Scenario I involves the establishment of the Corridor as a cultural and historical center for the larger region. Operating at full capacity, the Corridor is projected to attract 20,000 visitors for conservation/cultural/historical activities (50% from outside of the region), 150,000 visitors for recreational activities (25% from outside of the region), 10,000 visitors for a conference or retreat (50% from outside of the region), and 20,000 visitors for performances (25% from outside of the region). Given a per visitor daily

⁸ U.S. Department of the Interior, National Park Service at <http://www.nature.nps.gov/stats/park.cfm>.

spending total of \$130⁹, total new spending for this scenario across all activities is \$7,475,00.

Table 2. Scenario I Spending Estimate

Component	Annual Attendance	Export Ratio	Direct Spending
Conservation/Cultural/ Historical	20,000	50%	\$1,300,000
Recreation	150,000	25%	\$4,875,000
Conference/Retreat	10,000	50%	\$650,000
Performance	20,000	25%	\$650,000
Total	200,000		\$7,475,000

Under this scenario, output resulting from the establishment of the Corridor as a cultural and historical center is estimated to total \$13,261,724 annually, including an indirect effect of \$2,103,708 and an induced effect of \$3,683,016. The direct employment effect is projected at 139.5 jobs. The total monetary impact derived from this scenario, including indirect and induced effects, is \$18,344,476. Total employment is projected at 191.1 jobs per year.

Table 3. Scenario I Impact Estimate

	Output	Income	Employment
Direct	\$7,475,000	\$3,173,211	139.5
Indirect	\$2,103,708	\$680,546	18.0
Induced	\$3,683,016	\$1,228.996	33.7
Total	\$13,261,724	\$5,082,752	191.1

Scenario II – Recreational Hub

Under Scenario II, the Corridor would serve primarily as a recreation center for the larger region. Under this scenario, conservation/cultural/historical and conference/retreat activities are driven by local demand (75%). This scenario assumes 75,000 recreation-oriented visits and 10,000 performance-oriented visits from persons residing outside of the region (50% of total visits). Total direct spending is projected to be \$12,025,000.

⁹ Nashville Convention and Visitors' Bureau, Visitor Intercept Survey, 2007-08.

Table 4. Scenario II Spending Estimate

	Annual Attendance	Export Ratio	Direct Spending
Conservation/Cultural/ Historical	20,000	25%	\$650,000
Recreation	150,000	50%	\$9,750,000
Conference/Retreat	10,000	25%	\$325,000
Performance	20,000	50%	\$1,300,000
Total	200,000		\$12,025,000

Total direct spending resulting from this scenario is \$17,250,000, including \$12,025,000 in output and \$5,225,545 in income. The total estimated direct employment effect is 249.2 jobs. The total projected monetary impact resulting from a recreation-based strategy is \$29,729, 621. Output and income are \$21,426,119 and \$8,303,502, respectively. The total employment effect is 331.8 jobs.

Table 5. Scenario II Impact Estimate

	Output	Income	Employment
Direct	\$12,025,000	\$5,225,545	249.2
Indirect	\$3,384,314	\$1,070,193	27.6
Induced	\$6,016,805	\$2,007,764	55.0
Total	\$21,426,119	\$8,303,502	331.8

Scenario III – Regional Attraction

Scenario III involves the establishment of the Corridor as a local attraction, and assumes low external demand for Corridor activities, especially for conservation/ cultural/historical and recreational activities (10% export ratio). This model also assumes 25% external demand for conference/retreat and performance activities.

The local demand strategy creates export ratios and resulting direct spending estimates much lower in magnitude than previous scenarios. Total direct spending resulting from this strategy is projected to be \$3,185,000.

Table 6. Scenario III Spending Estimate

	Annual Attendance	Export Ratio	Direct Spending
Conservation/Cultural/ Historical	20,000	10%	\$260,000
Recreation	150,000	10%	\$1,950,000
Conference/Retreat	10,000	25%	\$325,000
Performance	20,000	25%	\$650,000
Total	200,000		\$3,185,000

Total projected direct monetary impact resulting from implementation of Scenario III is \$4,582,500, including an estimated direct income effect of \$1,397,500. The direct employment effect is projected to be 60.7 jobs.

The total direct, indirect and induced monetary impact is estimated to be \$7,868,314 – including and income effect of \$2,213,118 and an output effect of \$5,655,196. The total employment effect resulting from scenario III is 82.8 jobs.

Table 7. Scenario III Impact Estimate

	Output	Income	Employment
Direct	\$3,185,000	\$1,397,500	60.7
Indirect	\$866,548	\$280,492	7.4
Induced	\$1,603,648	\$535,126	14.7
Total	\$5,655,196	\$2,213,118	82.8

Potential Economic Benefit of Agriculture in the Beaman Park to Bells Bend Corridor

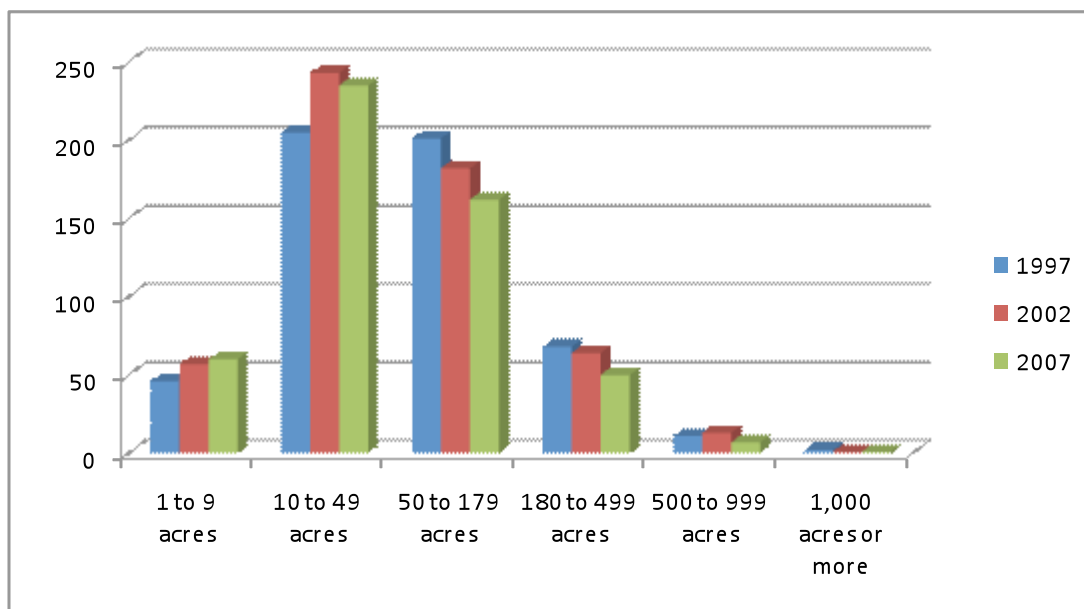
The Beaman Park to Bells Bend Corridor also has the potential to contribute to economic growth through an agricultural business model that can create value for the Nashville region through import substitution, transportation efficiencies, and increased local consumption of agricultural products. A significant proportion of the corridor’s 15,000 acres are viable for crops and livestock, and its proximity to downtown distribution points such as the Farmer’s Market, specialty markets, and local grocery stores and restaurants all present an opportunity to make the corridor an agricultural center that can serve as a local food source for the city. The proposed agricultural use would be consistent with and complementary to the recreation and tourism scenarios outlined above.

Davidson County Currently Has a Very Limited Supply of Locally Grown Food

According to the Agricultural Census¹⁰, the amount of farm land in Davidson County has declined steadily from 52,248 acres in 1997 to 41,353 acres in 2007. Of the 515 farms in Davidson County in 2007, 322 farms held 17,410 acres of cropland.¹¹ Less than half of the total cropland, or 7,815 acres, was harvested in 2007. The total market value of harvested crops in 2007 was \$9,745,000, or approximately \$1,247 in output per acre. The remaining 55% of cropland was either used for pasture, left idle, planted with cover crops, or had all crops fail.

The average farm size in Davidson County is 80 acres. Over half of the farms in the County were less than 50 acres, with 46% of farms between 10 and 49 acres.

Graph 1. Davidson County Farms by Acreage, 1997, 2002, and 2007



Just 25% of farm owners in Davidson County reported that farming was their primary occupation, down from 44% in 2002. The net cash income of all farm operators was \$2,019,000, or an average of \$3,921 per farm.

Of the 7,815 acres of cropland harvested in 2007, over 88% was used to grow forage crops, such as grass and hay. Nearly 2% was used for vegetables and less than 1% was used for both orchards and tobacco. Table 2 shows the number of farms and acreage used to produce the four primary crops in Davidson County.

¹⁰ United States Department of Agriculture, National Agricultural Statistics Service. The Census of Agriculture, 1997, 2002, 2007.

¹¹ Total cropland is defined as “cropland harvested, cropland used only for pasture or grazing, cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed, cropland on which all crops failed or were abandoned, and cropland in cultivated summer fallow.”

Table 8. Use of Cropland

	Farms	Acres
Forage Crops	186	6,945
Vegetables	14	150
Tobacco	2	n/a
Orchards	12	43

In 2007, farms in Davidson County sold a total of \$11,569,000 worth of agricultural products. Crop sales accounted for 84% of total sales and livestock accounted for 16%.

Over 300 farms had sales less than \$2,500, while 120 farms had sales totaling between \$2,500 and \$10,000. Just 12 farms had sales totaling over \$50,000.

Graph 2. Number of Farms by Total Sales, 1997, 2002, and 2007

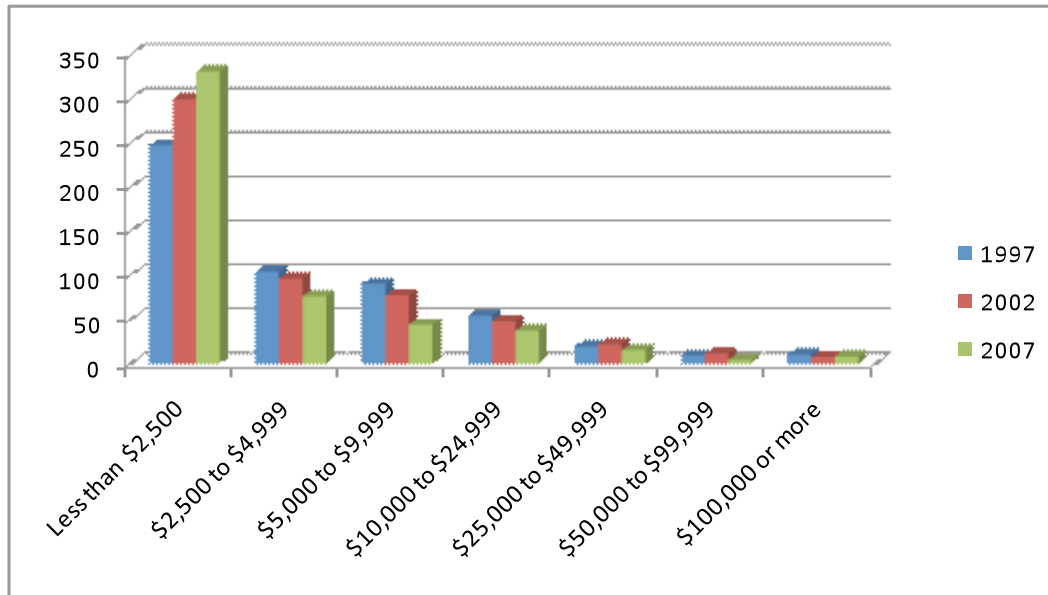


Table 9. Sales from Davidson County Farms, Top Three Commodities, 2007

	Number of Farms	Amount Sold	Percentage of Total Sales
Nursery/Greenhouse Products	22	\$9,323,000	80.6%
Cattle and Calves	180	\$1,328,000	11.5%
Vegetables	14	\$196,000	1.7%

Nursery and greenhouse products accounted for over 80% of sales in 2007. Cattle and calves accounted for over 11% of sales and vegetables accounted for nearly 2% of sales.

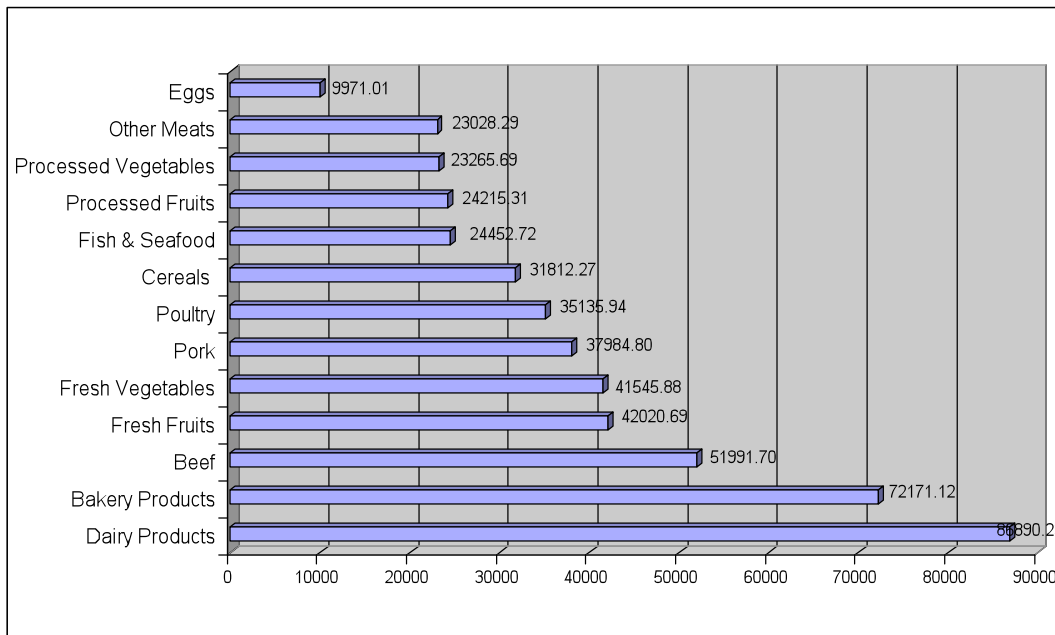
In 2007, 18 farms from Davidson County sold \$55,000 in products directly to consumers. This comprises just over 1% of total sales, and marks a 54% decline in sales from 2002.

Davidson County farms spent \$10,536,000 to produce \$11,569,000 worth of agricultural products, for a net gain of \$1,033,000 in 2007. Over 370 farms in the County reported net losses at an average loss of \$8,218 per farm. There were 138 farms that reported net gains in Davidson County, with an average gain of \$37,084 per farm. The low number of farms reporting gains in 2007 is to be expected, given that most farm owners (75%) in Davidson County did not report farming as their primary occupation.¹²

Davidson County Residents Spend More than \$1 Billion Annually

According to the Bureau of Labor Statistics, the average household in the Southeast spent \$5,659 on food, including \$3,314 on food eaten at home in 2005. In Davidson County, this amounts to an estimated \$1.3 billion total spending on food and \$744,027,270 on food eaten at home.

Graph 3. Total Spending on Food Eaten At Home in Davidson County (\$1,000)



¹² Comparing Davidson County to State and National Trends: A little over half of all farm owners reported that farming was their primary occupation in Tennessee, with just 38% of farms reporting net gains for an average of \$22,249 per farm and 62% of farms reporting net losses at an average of \$6,844 per farm. Nationally, 57% of farm owners reported farming as their primary occupation, with 47% of farms reporting net gains at an average of \$56,679 per farm and 53% of farms reporting net losses at an average of \$13,397 per farm.

Given the large amount of money spent on food each year in Davidson County, even small increases in the amount of food purchased that is produced locally could provide a major economic impact for the County’s economy. Currently, the primary products that are sold locally in the region are eggs, and fresh fruits and vegetables. If consumers were to purchase just 5% of these products from local sources, it could mean as much as \$41 million in direct economic impact for Davidson County’s agricultural economy.

Beaman Park to Bells Bend Corridor Can Increase Local Food Supply to Meet More Demand

The Bells Bend to Beaman Park Corridor could help meet the increasing demand for locally grown food. With approximately 4,000 acres of prime farmland suitable for crops and livestock, the Corridor has the potential to play a major role in the agricultural economy and local food production system in Davidson County. The establishment of a local food production system is supported by the Green Ribbon Committee on Environmental Responsibility, which recommends a fully-funded urban agricultural specialist position within Metro Government. Additionally, the Green Ribbon Committee Report recommends the implementation of a farm-to-school program, which would incorporate locally-grown fresh produce into Nashville Public Schools’ lunch program.¹³

Based on the 2007 Agricultural Census, total harvested cropland -- approximately 7,815 acres -- produced sales of \$9.75 million, \$1,247 per acre.

Table 10. Davidson County Cropland Output

Total Farmland	41,353
Total Cropland	17,410
Harvested Cropland	7,815
Output	\$9,745,000
Output per Harvested Acre	\$1,247

Total projected acreage for agricultural use in the Corridor is approximately 4,000 acres. Applying the 2007 average output per acre of harvested cropland to 3,000 of the potentially farmable 4,000 acres, the Corridor could yield \$3.741 million in annual sales.

¹³ *Making Nashville Green*, p.13.

Table 11. Corridor Acreage

Land Use	Acres	Output
Harvested Acreage	3,000	\$3,741,000
Non-Harvested Acreage	1,000	0
Total	4,000	\$3,741,000

Alternative scenarios may be possible. Biodynamic farming is an innovative, intensive method of organic farming that involves the use of a combination of cropland, pasture and forest to create a self-sustaining agricultural production system. Some have suggested that biodynamic crop production can produce sales in the range of \$10,000 per acre.¹⁴ Biodynamic farming, however, requires four acres of pasture for every acre of harvested cropland. Thus, 200 acres of biodynamic crop production in this impact model requires 800 acres designated for livestock.

If the County average output per acre for conventionally harvested crops is applied to the projected acreage for crops within the Corridor, 1,000 acres is estimated to yield \$1,247 of direct output. At a projected yield of \$10,000 per acre, 1,000 acres designated for biodynamic crop production (200 acres used for crop production, and 800 acres used for livestock) would yield \$2 million in output. In total, under this scenario, 4,000 acres used for agricultural production in the Corridor could potentially yield \$13.7 million annually.

Table 12. Corridor Agricultural Productive Capacity by Acreage

Land Use	Acreage	Output/Acre	Total Output
Conventional Crops	3,000	\$1,297	\$3,741,000
Biodynamic Crops	200	\$10,000	\$10,000,000
Livestock	800		
Total	4,000		\$13,741,000

While biodynamic farming has the potential to create output that is much higher in quantity than conventional techniques, the establishment of large-scale farming of this type in the corridor is not a certainty. This analysis therefore assumes the more conservative estimate of \$3.74 million in output annually, derived from conventional agricultural use of 3,000 acres of cropland in the corridor. The total annual direct effect resulting from this strategy is projected to be \$3.79 million, including \$49,608 in labor

¹⁴ Jeff Poppin, www.barefootfarmer.com.

income. Total indirect impacts are estimated to be \$875,422, while induced effects are expected to be \$240,302.

Table 13. Economic Impacts of Corridor Agriculture

	Direct	Indirect	Induced	Total
Employment	49.0	12.2	1.6	62.9
Labor Income	\$49,608	\$138,922	\$60,124	\$248,654
Output	\$3,741,000	\$736,500	\$180,178	\$4,657,678
Total	\$3,790,608	\$875,422	\$240,302	\$4,906,332

In total, this strategy could potentially yield an annual monetary impact of \$4.9 million, including \$248,654 in labor income and approximately \$4.7 million in increased output. The total employment effect is projected to be 62.9 jobs.

The Quality of Life Potential of the Beaman Park to Bells Bend Corridor

While it is possible to model the economic benefits of use of the Corridor for recreational, tourist and agricultural uses, the greatest value may be the result of the impact of preservation of open space on quality of life (QOL) in the region.

The Beaman Park to Bells Bend Corridor has the potential to significantly contribute to Nashville’s quality of life. Beyond the aesthetic dimension, QOL is an important component of economic growth. While Nashville boasts substantial green/open spaces such as Percy Warner Park, Shelby Bottoms, and an extensive greenway system, the corridor’s proximity to the downtown area and the rural setting – with its abundance and range of natural and outdoor recreational resources – present an opportunity to provide an amenity that highly skilled professionals prefer.

Nashvillians recognize the need for more open space. A 2001 survey found that 72% of residents indicated a desire for more open green spaces, more than three-quarters sought more hiking/biking trails and 80% of residents indicated a desire for more nature/environmental education (WB & A Market Research, 2001). The Green Ribbon Committee on Environmental Sustainability also recognizes the importance of open space and environmental quality, as its recommendations are consistent with the “third vision” for the Corridor.¹⁵

The establishment of the corridor as Nashville’s preeminent downtown outdoor setting could greatly add to Nashville’s array of outdoor amenities and augment a QOL that attracts/retains professionals in high-paying, knowledge-based occupations.

¹⁵ *Making Nashville Green*, April 2009.

How Quality of Life Leads to Economic Growth

Quality of life is now recognized as an important “third wave” approach to economic development. In particular, quality of life elements that relate to a location’s natural environment provide a unique and therefore competitive advantage.

Bradshaw and Blakely refer to first-wave strategies as “smokestack chasing ... dominated by programs designed specifically to attract manufacturing firms from old industrial areas to growing regions, such as the South or West”.¹⁶ These programs were supply-side strategies in that they functioned to subsidize production of high-demand goods within established industries. Such supply-side strategies have continued to be frequently implemented policies, as most state and local economic development funding is still directed towards these types of strategies.¹⁷

During the late 1970s and early 1980s, a marked shift in state and local economic development policy began. As federal intergovernmental revenue to localities began to decline, local officials increasingly had to turn to nonfederal revenue to fund economic development initiatives. These policies “represented a shift away from conventional economic development orientations toward market-based, or entrepreneurial, approaches”.¹⁸ State and local governments began to focus economic development efforts on an expanded array of business types and activities. These strategies focused on retaining and expanding existing firms rather than firm recruitment, and were characterized by “indirect types of firm-level assistance, such as creating new businesses, increasing investment capital, developing incubators, or providing technical assistance to help local businesses grow or expand”.¹⁹ Second-wave strategies therefore represent an approach that emphasizes innovation and involves a higher degree of government involvement in the decision making process. Instead of simply offering subsidies, such strategies focus on business development over the long term by providing services that help firms tap evolving markets and technologies.²⁰

According to Bartik²¹, a third wave of economic development policy has emerged. Third-wave strategies are not meant to replace first- and second- wave approaches, but are designed to augment them by combining them into an aggregate strategy. Such

¹⁶ Bradshaw, T. and E. Blakely. “What are ‘Third-Wave’ State Economic Development Efforts? From Incentives to Industrial Policy”. *Economic Development Quarterly* 13:3 (August 1999), p. 231.

¹⁷ Ibid, p. 164.

¹⁸ Clarke, S. and G. Gaile. “The Next Wave: Postfederal Local Economic Development Strategies”. *Economic Development Quarterly* 6:2 (May 1992), pp.187-198.

¹⁹ Bradshaw, T. and E. Blakely (1999), p. 230.

²⁰ Bartik, T. J. *Who Benefits from State and Local Economic Development Policies?* (Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 1991).

²¹ Bartik, T. and R. Bingham. “Can Economic Development Programs Be Evaluated?” In *Dilemmas of Urban Economic Development: Issues in Theory and Practice*, ed. Bingham, R. and R. Mier (Thousand Oaks, CA: Sage Publications, 1993).

strategies represent an effort at building globally competitive industries through policies that foster business collaboration and place-based location strategies.²²

Third-wave strategies have become prevalent as the emphasis of economic development programs has shifted away from the earlier practice of offering subsidies to attract firms to a region. This has been attempted directly through forming partnerships with institutions such as universities and high-technology firms, and indirectly through improving the quality of life and the human capital of a given area.

As an economic development strategy, public investment in QOL strikes a balance between the imperative of firm attraction and the need to address community demands for local amenities. In this situation, economic development expenditures become a long-term investment in the community.²³

Gottlieb²⁴ suggests that the impact of QOL on firms is indirect. Firms themselves do not benefit from amenities and QOL, but seek out high-amenity areas to satisfy the demands of their potential workforces. QOL is most important for firms that rely on the production of knowledge rather than access to raw materials, land, labor capital, transport costs, and utility rates.²⁵ While Gottlieb (1994) found environmental quality to be the highest-ranking QOL factor for both high-tech and non high-tech firms, considerable evidence suggests that QOL is important for high-technology, research and development facilities, and other knowledge-based firms that have factors in production that are not location-specific. QOL is also important as a location factor for small businesses that value a location in close proximity to the residence of the owner and management.²⁶

Since skilled professionals are highly mobile and desire amenity-rich areas²⁷, they evaluate potential residential locations based on QOL factors rather than wage rates.²⁸ Knowledge workers not only gravitate to areas with a high quality of life, but reinforce the local QOL advantages by “advocating policies to improve local schools, upgrading

²² Bradshaw, T. and E. Blakely (1999), p. 231.

²³ Gottlieb, P. “Amenities as Economic Development Tools: Is There Enough Evidence?” *Economic Development Quarterly* 8:3 (1994), pp. 270–285.

²⁴ Ibid.; Gottlieb, P. “Residential Amenities, Firm Location and Economic Development.” *Urban Studies* 32:9 (1995), pp. 1413–1436.

²⁵ Segedy, J. “How Important is ‘Quality of Life’ in Location Decisions and Local Economic Development?” *Dilemmas of Urban Economic Development: Issues in Theory and Practice*, ed. Richard, B. and R. Myer (Thousand Oaks, CA: Sage Publications, 1997), p.47.

²⁶ Salvesen, D. and H. Renski. *The Importance of Quality of Life in the Location Decisions of New Economy Firms* (Chapel Hill, NC: Center for Urban and Regional Studies, 2002).

²⁷ Malecki, E.J. “The R&D Location Decision of the Firm and Creative Regions—A Survey.” *Technovation*, 6 (1987), pp. 205–222; Malecki, E.J., and S. Bradbury. “R&D Facilities and Professional Labour: Labour Force Dynamics in High Technology.” *Regional Studies*, 26:2 (1991), pp. 123–136.

²⁸ K. Morgan and A. Sayer. *Microcircuits of Capital: ‘Sunrise’ Industry and Uneven Development*. (Cambridge, UK, 1988).

recreation and cultural amenities”.²⁹ While skilled workers may be attracted to areas with high QOL and amenities, it is likely that highly mobile, knowledge-oriented firms may follow. These firms often face skills shortages and have a critical need for specialized skills in an increasingly knowledge-based business environment (Herzog and Schlottman, 1991; Malecki and Bradbury, 1991; Lyne, 1988).³⁰ Other companies have ownership/ leadership that prefer amenity-rich areas. For these reasons, firms are drawn toward areas that have qualities that attract highly skilled professionals (Harding, 1989).³¹

Place-related QOL advantages are also non-replicable. Tax benefits and other programs are incentives and inducements to firm location that any jurisdiction can provide. QOL based on place, the natural environment, creates a competitive advantage: not every potential site location for a new or expanding firm can offer the benefits of the Beaman Park to Bells Bend Corridor.³²

Qualitative Assessment of Open Space and Tree Cover

The Bells Bend to Beaman Park Corridor is one of the largest sources of tree cover and open space in the urban core. The Beautification and Environment Commission of Nashville Metropolitan Government has officially recognized the importance of tree cover to the city by forming the Metro Tree Advisory Committee (MTAC). MTAC assists in educating the community and agencies of the Metropolitan Government regarding the value of trees and proper techniques for the planting, maintenance and removal of trees. MTAC’s proposed Tree Management Plan³³ (TMP) estimates the total value of Davidson County’s trees to be \$3.8 billion annually by providing benefits such as:

- Reducing heat gains and air conditioning demands by 40-80%
- Reducing street level particulates by up to 60%
- Sequestering 22.8 million tons of carbon per year
- Reduce noise pollution by up to 50%
- Trapping 50-100% of run-off sediment

²⁹ Segedy, J. (1997).

³⁰ Herzog, H. W. J., and A. M. Schlottman (1991). “Metropolitan Dimensions of High–Technology Location in the U.S.: Worker Mobility and Residential Choice.” in *Industry Location and Public Policy*. ed. Herzog, H.W.J. and A. M. Schlottman (Knoxville, TN: The University of Tennessee Press, 1991), pp. 169–189.; Malecki, E.J. (1987); Lyne, J. (1991). “U.S. Work–Force Woes Limiting Many Corporate Facility Location Choices” *Site Selection Handbook* (August) 722–728.

³¹ Harding, C. F. (1989). “Location Choices for Research Labs: A Case Study Approach.” *Economic Development Quarterly* 3:3 (1989), pp. 223–234.

³² The recent decision of Volkswagen to locate its North American production plant in Chattanooga is instructive. While a wide array of tax and other benefits were provided to induce Volkswagen to locate in Tennessee, company officials cited the intangible benefits as decisive: “Chattanooga is an excellent fit for the Volkswagen culture, having an exceptional quality of life and a long manufacturing tradition... In the beautiful green landscape of Tennessee we’ve found the ideal home...”

³³ Metro Tree Advisory Committee, *Managing Nashville’s Urban Forest*, June 2008.

- Capturing 80-85% of phosphorous, nitrogen and other elements in run-off water
- Reducing up to 4,000 gallons of storm water runoff per tree annually

Alternative Use Impact – Aggregate Assessment

The Beaman Park to Bells Bend Corridor has distinct natural resource and locational advantages that make it well-suited to increase its share in Nashville’s \$1.3 billion food Market. Similarly, its rural setting, its outdoor recreational and agricultural resources,

Table 14. Aggregate Annual Impacts

	Output	Income	Total	Employment
Agriculture	\$4,657,678	\$248,654	\$4,906,332	62.9
Tourism -Scenario 3	\$5,655,196	\$2,213,118	\$7,868,314	82.8
Total	\$10,312,874	\$2,461,772	\$12,774,646	145.7
Agriculture	\$4,657,678	\$248,654	\$4,906,332	62.9
Tourism -Scenario 2	\$21,426,119	\$8,303,502	\$29,729,621	331.8
Total	\$26,083,797	\$8,552,156	\$34,635,953	394.7
Agriculture	\$4,657,678	\$248,654	\$4,906,332	62.9
Tourism -Scenario 1	\$13,261,724	\$5,082,752	\$18,344,476	191.1
Total	\$17,919,402	\$5,331,406	\$23,250,808	254.0

and its historical/cultural background create the potential for the Corridor to become one of the premier open spaces in the Nashville region.

Depending on which of the different tourism and recreational scenarios is pursued, these alternative uses of the Corridor could generate between \$12.8 million and \$23.3 million per year in economic activity, producing between 145.7 and 254.0 jobs.

Table 15. Aggregate Impacts, 15-Year Time Horizon

	Output	Income	Total	Employment
Agriculture and Tourism, Scenario 3	\$154,693,110	\$36,926,580	\$191,619,690	2,185.5
Agriculture and Tourism, Scenario 2	\$391,256,955	\$128,282,340	\$519,539,295	5,920.5
Agriculture and Tourism, Scenario 1	\$268,791,030	\$79,971,090	\$348,762,120	3,810.0

Projected over a fifteen-year time horizon, alternative uses of the Corridor that focus on tourism, recreational and agricultural activity could yield between \$191.6 million and

\$348.8 million in monetary value and cumulative annual employment in the range of 2,185.5 to 3,810.0 jobs.

The “third vision”, then, represents an alternative strategy for development of the Corridor that emphasizes a low-impact business model based on agriculture, tourism, entertainment, and recreation. In the aggregate, an analysis of this alternative approach indicates a potential to create economic value for the region while maintaining the rural character of the Corridor.