# An Assessment and Analysis of *May Town Center: Economic Impact Analysis for Bell's Landing Partners*

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## About the Community Research Council and the Authors

The Community Research Council (CRC) is a not for profit corporation based in Chattanooga, Tennessee that conducts data analysis and policy research. In addition to its work in the Chattanooga area, CRC also works on select projects at the regional and national level.

Dr. William Tharp is a Senior Policy Analyst at CRC. His recent work includes a year long study of the economic impact of the Chattanooga Metropolitan Airport, a detailed analysis of workforce trends and needs for the Chattanooga Area Chamber of Commerce and a soon to be published study of the use of broadband access as an economic development tool by the IBM Center for the Business of Government. Prior to joining CRC, Dr. Tharp was a Finance Officer with the Metro Nashville Office of Management and Budget. He holds his Ph. D. in Urban Affairs from the University of Louisville, has taught as an adjunct at Vanderbilt and currently holds the rank of Associate Professor of Public Administration at the University of Tennessee at Chattanooga.

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## Summary

The May Town Center Economic Impact Analysis (May Town Center Analysis) prepared for Bell's Landing Partners appears to rely on speculation and assumptions that run contrary to the Nashville area's recent demographic and economic history. In order for the projected benefits and tax revenues in the May Town Center Analysis to be realized:

- The Nashville area would have to have 15 years of sustained, constant growth in the local economy and real estate market
- Development phases at May Town Center would have to be inconsistent with the Planning Department's recommendations for what would trigger the Alternate Development Area zoning
- None of the direct new jobs in the office and commercial sectors created at May Town Center would displace jobs already in the Nashville Area
- Trends in employment in the Finance and Insurance, Real Estate and Administrative Support sectors in Davidson County would reverse
- Davidson County would have to double its capture rate of new population in the Nashville Area
- May Town Center's developers would have to pay for all infrastructure costs and all maintenance and operations costs related to new infrastructure
- May Town Center would be able to attract new employers to the region without any tax incentives

Overall, the May Town Center Analysis appears premised on a "field of dreams" approach – if we build it, they will come. In other words, it will succeed because it will be "unique in that if offers the advantages of building a completely new community 'from the ground up' while also benefiting from the surrounding city": of course, these words were actually used to describe the unfulfilled vision of Metro Center nearly forty years ago when it was first proposed.

Specific flaws with the May Town Center Analysis include:

### *Project Phasing Assumptions are Contrary to Project Intent and the Real Estate Cycle*

The assumption that all development will occur in equal phases appears contrary to both the intent of the project and the way that real estate cycles work, not just in the Nashville Metropolitan area but also in virtually every large city. The author of the May Town Center Analysis concedes that "predicting the real estate cycle accurately is impossible. The market will dictate the build out and phasing of the various components. Commercial retail and restaurant space will follow build-out of office and residential development."

### *Historic Office Space Absorption Rates are Ignored*

While it is difficult to predict vacancy rates in 2011, we know that there exists a fair amount of vacant office space in Nashville and that the absorption rate of office space projected for May Town Center would be unprecedented. Despite the author's assertion that "[F]inding tenants to take the office space… will not be a problem," it appears that the analysis relies on the

assumption that office space absorption in May Town Center will sustain at a rate equal to 82% of the MSA rate of absorption for the last eight years.

### *Projections of Residential Growth are Inconsistent with a Recent Decline in Internal Migration and Historic Capture Rate for Davidson County*

The May Town Center Analysis projects that Davidson County would capture 47% of newcomers to the region as a result of the project. In each year since 2000, Davidson County actually experienced negative net domestic migration. Moreover, since 2000, Davidson County has captured just 24% of the overall increase in population in the Nashville MSA.

### *Projections of Growth in Employment Certain Sectors are Inconsistent with Recent History*

In five out of the seven industries where the May Town Center Analysis projects growth, it would represent a reversal of recent employment patterns in Davidson County. The May Town Center Analysis projects growth in Administrative, Fire and Insurance, Real Estate, Restaurants and Retail sectors despite declines in employment in each of these industries since 2001.

### *Infrastructure, Operations and Maintenance Costs are Not Considered in Projecting Tax Revenue*

The May Town Center Analysis does not consider any offset to projected tax revenue benefits. While the author of the Analysis suggests that the developer would be responsible for the cost of a new bridge, the May Town Center Analysis is silent on other infrastructure costs and operations and maintenance costs. For example, the potential cost of operating two new schools would equal 10% of projected tax benefits for the project in the year 2024.

### *Projected Tax Revenue Fails to Account for Offsets Due to Tax Abatements*

The May Town Center Analysis also fails to address potential offsets in tax revenue that would result from tax abatements or other incentives. While the site developer might not seek these benefits, it is likely - given recent history - that abatements would be offered to any major employer being sought for the office and commercial uses of May Town Center. According to the author of the analysis, “incentives are an irrelevant cost in evaluating May Town Center.”

The speculation and assumptions underlying the May Town Center Analysis should be familiar to Nashville. Much of the same rhetoric was used to support another project – Metro Center – when it was first conceived almost forty years ago. The parallels between Metro Center and May Town Center are striking. Both developments were planned and touted as a unique, mixed-use complex that would provide job opportunities, housing, recreational activities, and retail/restaurant options to visitors and people that would live and work in a “city within a city.” Clearly, Metro Center did not meet this aspiration. The example of Metro Center neither confirms nor denies the potential for May Town Center, but serves as a cautionary tale that signifies the inherent risks involved in real estate speculation, retail/restaurant ventures, business attraction and residential preference.

## Introduction

The purpose of this paper is to provide a brief assessment and analysis of the Economic Impact Analysis for Bell's Landing Partners. It is not the intent of the authors to conduct a separate calculation of potential costs and net benefits of the project. Instead, to the extent that policy makers are basing their decisions regarding the planned rezoning of the Bells Bend area on the potential for economic development, it is important that they understand the limits of the developer's analysis before them.

The basis for this review is information contained in the February 4, 2008 Economic Impact Analysis for Bell's Landing Partners PowerPoint presentation (May Town Center Analysis) available to the public on the developer's website and publicly released at that time. The analysis was prepared by Dr. William Wade of Energy and Water Economics, a private firm based in Columbia, Tennessee.[1] Upon review of the presentation, the authors sought to obtain Dr. Wade's response to a series of questions regarding the assumptions underlying his findings – first through a telephone interview and then, upon his referral of any questions to the developer's attorneys -- in a detailed four page letter to Dr. Wade and attorneys.[2] Dr. Wade's response is attached as an Appendix in this document.[3] In addition, the authors reviewed local economic data and case studies of the pre-development analyses and realized economic impacts of other, similar projects in the Metro area.

While the May Town Center proposal is not currently before the Metro Nashville Planning Commission, this review – and the questions raised therein – are relevant to the Commission's action on the Scottsboro/Bells Bend Detailed Design Plan. The Plan calls for the creation of an Alternate Development Area, which appears to permit the development proposed as May Town Center. The trigger for development of the area is "a uniquely integrated corporate headquarters/regional center" designed to "meet the public policy goal to continue to enhance and diversify Nashville/Davidson County's employment and tax base."[4] In other words, the premise of proceeding with the adoption of the land use plan is the potential of the economic benefits associated with the May Town Center development or a project like it.

## Speculative economic impacts are based on a speculative development scheme

The May Town Center Analysis is based on speculative assessments as to the scope, timing and nature of economic activity associated with the May Town Center development.

[1] According to the firm's website, Dr. Wade has a Ph D. in Resource and Applied Economics. The firm specializes in "policy and planning issues in the areas of water, energy, natural resources and the environment, and civil litigation."
[2] CRC letter to Dr. Wade is included as Appendix A.
[3] Dr. Wade's response letter is included as Appendix B.
[4] Metro Nashville Planning Department, "Scottsboro/Bells Bend Detailed Design Plan Final Draft", in *Bordeaux Whites Creek Community Plan* (June 24, 2008), 28, 41.

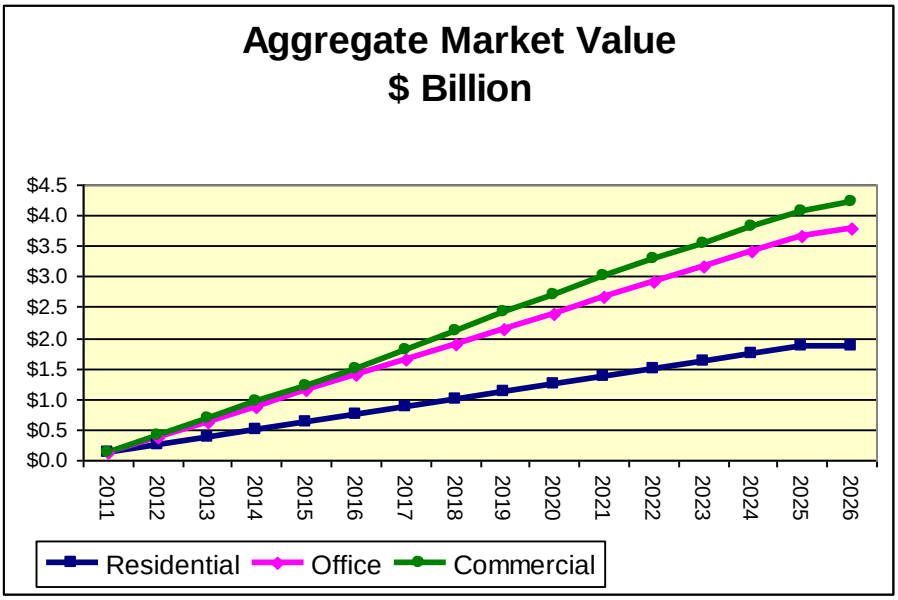
While the developer of the proposed May Town Center project has outlined a project plan, there are no specific, construction ready plans or specific, identified tenants for the development. As a result, any economic impact analysis would be based on speculation. In the case of the May Town Center Analysis, however, it appears that the analysis is not only speculative but based on assumptions that are contrary to historic patterns of development and current and reasonable absorption rates for the new office, commercial and residential space that has been proposed.

The projected economic impact of the project is based, in substantial part, on a full build-out of the project during the 2011-2026 time period. A longer build-out period would produce less short term economic impact. Because some of the impact is based upon multipliers of direct economic activity, the phasing of the project would also affect the total impact. The longer it takes to phase in some of the development, the lower the overall amount of economic impact.

For example, if an analysis supposes a phase in of residential activity in Years 1 through 10 of a project, when in reality residential development does not take place until years 10 through 15, there will be less cumulative economic activity and fewer jobs created.

The May Town Center Analysis appears to be based on phases of equal size in office, residential and commercial development on an annual basis. Employment, migration and tax projections also appear to be based on this assumption.

Aggregate Market Value – May Town Center Analysis




Source: Energy and Water Economics, Economic Impact Analysis for Bell's Landing Partners, 2008

### *Project phasing assumptions ignore project intent and the real estate cycle*

The assumptions for the build-out appear contrary to both the intent of the project and the way that real estate cycles work, not just in the Nashville Metropolitan area but also in virtually every large city.

The implication of the Planning Department recommendation is that any development of May Town Center would only occur if there existed an opportunity to attract a major new corporate employer that would house headquarters at the site. Thus, a more realistic analysis of projected development impact would delay commercial and residential impacts. Commercial development and residential development would only occur in later phases of the project, and, therefore, might not be fully realized during a 15-year time horizon.

Demand and supply of office space in the Nashville Metropolitan Area – as in most urban areas – is not constant. Real estate supply and demand depend considerably on national and (to a greater extent) local economic conditions. Both the need for new office space and the likely per square foot price would depend on these larger market forces.

In most urban areas, increases in demand for space, crated by local market conditions, usually spurs new supply. Frequently, however, supply outpaces demand creating a glut in supply as demand cyclically declines. As the next phase of the cycle occurs, the glut in supply is eliminated by the new demand.

Delays in residential development would significantly affect tax revenue projections. Under the May Town Center Analysis, fully 40% of projected revenue is from property taxes, sales taxes and fees from families. Those revenues are projected to start in 2012 – just as new office space is coming on line. Delays in the residential component – or if the residential component was never built – would dramatically reduce revenue. These delays in build-out, and delays in the resulting impacts, are entirely possible given historical market conditions in Davidson County and the larger Nashville region.

While these points appear to be ignored in the May Town Center Analysis, they are conceded in Dr. Wade's letter to the authors:

> *"The occupancy absorption is set up in equal phases as a method of simplifying the model. An equal build-out is a reasonable placeholder because predicting the real estate cycle accurately is impossible. The market will dictate the build-out and phasing of the various components. Commercial retail and restaurant space will follow build-out of office and residential development.*"(emphasis added)[5]

### *The May Town Center Analysis is inconsistent with historic office space absorption Rates*

While it is difficult to predict vacancy rates in 2011, we know that there already exists a fair amount of vacant office space in Nashville and that the absorption rate of office space projected for May Town Center would be unprecedented.

[5] Letter from Dr. William Wade to Dr. William Tharp, July 14, 2008, p.3 (hereafter William Wade Response Letter).

In 2007, there was more than 4.2 million square feet of office space available in the Nashville market – with nearly one-third in the Central Business District. [6] During the course of the year, 1.4 million square feet of new office space was absorbed.

Nashville Area Vacancy and Absorption Rates, 2006-2007

| Area | 2006 Vacancy | 2006 Available | 2006 Absorption | 2007 Vacancy | 2007 Available | 2007 Absorption |
|---|---|---|---|---|---|---|
| Central Business District | 11.4% | 1,186,000 | 213,000 | 11.3% | 1,107,000 | 305,000 |
| Airport North | 17.8% | 862,000 | 237,182 | 15.3% | 623,000 | 218,000 |
| Airport South | 27.7% | 599,000 | 29,000 | 17.3% | 460,000 | 189,000 |
| Green Hills/Music Row | 2.7% | 192,000 | 47,000 | 6.3% | 137,000 | -20,000 |
| Metro Center | 6.7% | 99,700 | 28,000 | 8.4% | 108,000 | -21,000 |
| Rivergate/North Nashville | 7.1% | 72,000 | 47,500 | 17.2% | 84,000 | 34,000 |
| West End/Belle Meade | 3.5% | 156,000 | 130,000 | 2.3% | 98,000 | 44,000 |
| Brentwood | 9.1% | 629,000 | 137,000 | 6.6% | 405,000 | 230,000 |
| Cool Springs/Franklin | 8.1% | 434,000 | 650,000 | 8.1% | 370,000 | 431,000 |

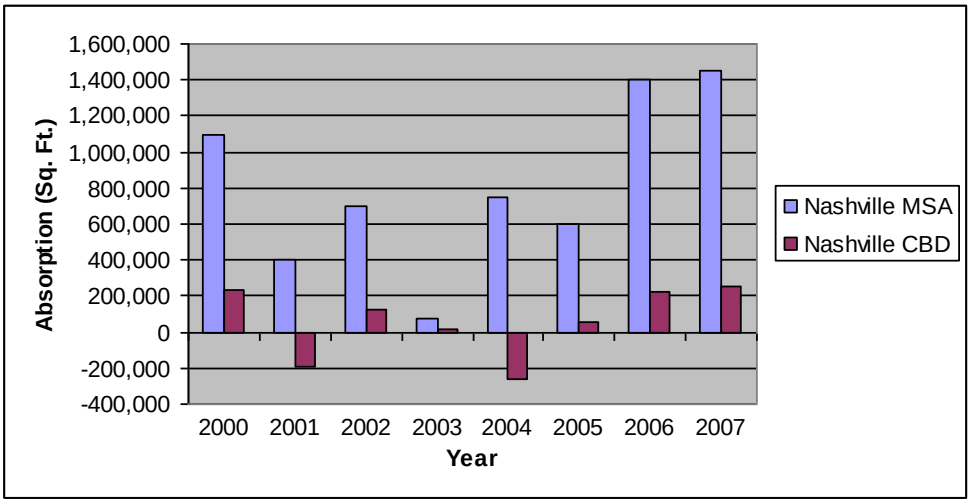
Source: Collier's International, *Commercial Real Estate Report*, 2008.

Since 2000, absorption rates in the Nashville market[7] have fluctuated greatly, while absorption rates in the Nashville CBD have been either extremely low or negative in four of the last eight years. The May Town Center Analysis projects absorption of 10 million square feet of office space over fifteen years at May Town Center and is premised on an assumption that the project will fill office space at a rate of 666,666 square feet a year. If it did, May Town Center would absorb the equivalent of 82% of the average annual absorption rate of the entire Nashville urban market for the last eight years. And, it would do so consistently over the fifteen year period of the project.

[6] Figures taken from Colliers International, *Commercial Real Estate Report (*2008).

[7] Discussion of the Nashville market include all counties within the Nashville Metropolitan Statistical Area (MSA). The MSA, as defined by the federal government, includes Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson and Wilson counties.

Annual Absorption, Nashville MSA and CBD, 2000-2007




Source: Collier's International, *Commercial Real Estate Report*, 2008.

Of course, except for construction, a similar amount of economic activity would be generated if new tenants were recruited to fill currently vacant space in other parts of Davidson County, including the Nashville CBD. The May Town Center Analysis appears to assume – without any stated basis for the assumption – that none of the office space at May Town (and none of its office jobs) will come from firms currently located in Davidson County. If this assumption were inaccurate, the projected economic activity and new jobs estimates would be reduced and May Town Center would have a negative impact on vacancy rates, especially in the CBD.

Absorption assumptions also appear not to consider potential competing sites in Davidson County and the Nashville MSA. Nearly one million square feet of new office space is about to be completed in the CBD, with the 338,000 square foot SunTrust Plaza and the 500,000 square foot Pinnacle Building at Symphony Place. Additional development projects in the county include The Avenue in Murfreesboro (810,000 square feet), Hill Center in Green Hills (200,000 square feet), and The Streets of Indian Lake in Hendersonville (405,000 square feet). Additional downtown office space will be made available as a result of Nissan America's decision to vacate 240,000 square feet and AT&T's movement to Franklin (leaving an entire 500,000 square foot, Class A Building vacant in the downtown area).[8] The McCrory Creek Business Park would provide 2.7 million square feet of office, retail and commercial space: it has already been approved by the Planning Commission and is under consideration by the City Council.

Given the premise of the "uniqueness" required for a developer to trigger the provisions of the Alternate Development Area land use provisions, any delay or lag in the development of office space is likely to result in a lag in the development of new commercial and residential space.

Commercial development may also be limited by competition regionally. A $100 million redevelopment plan for Bellevue Mall, if approved, would replace 800,000 square feet of underutilized space with 1,200,000 square feet of open-air retailers, restaurants and pedestrian-

[8] Grubb and Ellis Research. *Office Market Trends: Nashville* (First Quarter, 2008).

friendly office space. And, in Brentwood and Cool Springs/Franklin, 2007 vacancy rates for commercial property were 8.1% and 9.1% respectively.

All of these factors lead to the conclusion that the assumptions underlying the timing and phasing of the May Town Center development are probably unrealistic. As a result, those assumptions would appear to result in an overstatement of the economic benefits of the project.

## The assumption that the development will be a "game changer" and will spur the attraction of new firms and the migration of new residents is contrary to recent economic and demographic history in the metropolitan area.

The rationale for the assumptions related to timing and phasing of the development – and the related economic impacts – is that the proposed May Town Center would be a "game changer." In other words, it would attract an extraordinary influx of new firms and new residents to the County.

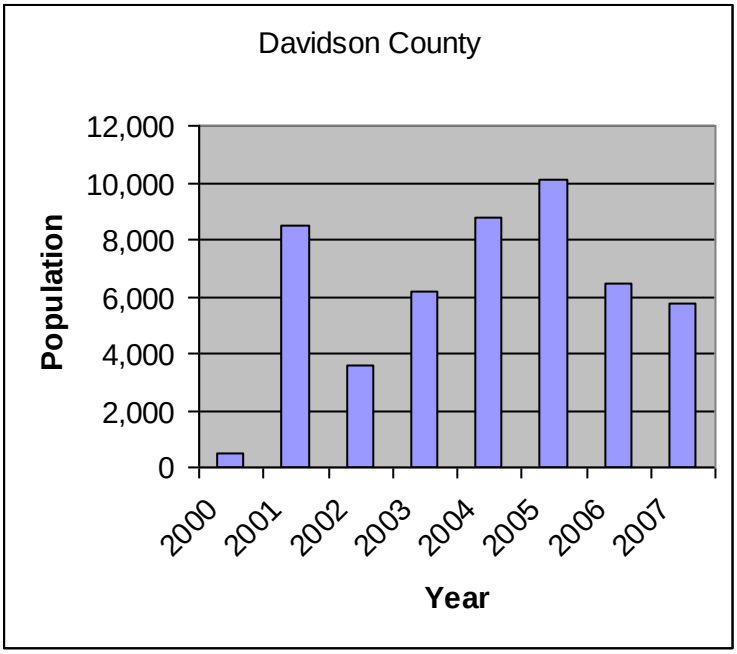
This assumption is contrary to the recent economic and demographic history of the metropolitan area. It also assumes that May Town Center would not only allow Davidson County to capture its fair share of new development in the region, but that it would allow the County to overtake development in other parts of the region.

In other words, irrespective of other competitive advantages and resident and business choice factors, the developers of May Town Center suggest that the development would be a "silver bullet" in the efforts to grow population and jobs in Davidson County.

### *Projections of residential growth are inconsistent with a recent decline in internal migration in Davidson County*

The May Town Center Analysis projects that the project will be responsible for the migration of more than 70,000 new residents between the ages of 25 and 55 to the Nashville MSA over a fifteen year period. Of those internal migrants, the May Town Center Analysis – for the purpose of estimating both impact and tax revenue – assumes that 46.9% of new residents in the MSA will live in Davidson County. Without counting children, May Town Center alone is projected to be responsible for population growth of 2,212 persons per year In Davidson County.

Davidson County Population Increase, 2000-2007




Source: U.S Census Bureau, Federal-State Cooperative Program for Population Estimates, 2000/2007

Since 2000, Davidson County experienced an overall growth rate of 8.6%, which is slightly ahead of population growth in the state: by comparison, Rutherford and Williamson Counties led the region in growth with increases of 31.5% and 29.7% respectively. Davidson County's population grew at a rate of 7,000 residents per year.

Population Growth, Selected Nashville MSA Counties, 2000-2007

| | Population Estimate 2000 | Population Estimate 2007 | Growth |
|---|---|---|---|
| Tennessee | 5,703,415 | 6,156,719 | 7.9% |
| Cheatham County | 36,098 | 39,112 | 8.3% |
| Davidson County | 570,350 | 619,626 | 8.6% |
| Dickson County | 43,352 | 47,366 | 9.3% |
| Robertson County | 54,824 | 63,333 | 15.5% |
| Rutherford County | 183,570 | 241,462 | 31.5% |
| Sumner County | 131,157 | 152,721 | 16.4% |
| Trousdale County | 7,309 | 7,727 | 5.7% |
| Williamson County | 128,086 | 166,128 | 29.7% |
| Wilson County | 89,267 | 106,356 | 19.1% |

Source: U.S Census Bureau, Federal-State Cooperative Program for Population Estimates, 2000/2007

Overall, population in the Nashville MSA grew from an estimate of 1,317,592 in 2000 to 1,521,437 in 2007 – a gain of 203,845 residents. Thus, Davidson County captured only 24% of the total growth in the MSA.

For the projections in the May Town Center Analysis to be realized, Davidson County's capture rate of new residents would have to virtually double its overall capture rate of population growth in the 2000 to 2007 period.

A more detailed examination of recent population trends in the Nashville Area calls the assumed capture rate of new residents into further question. Since 2000, Davidson County population growth has been driven by natural increase (the net birth rate, or births minus deaths) and international migration: on the other hand, population growth in outlying counties has been driven primarily by domestic (or internal) migration.

Components of Population Growth, Selected Nashville MSA Counties, 2000-2007

| | Natural Increase | International Migration | Internal Migration | Net Migration |
|---|---|---|---|---|
| Cheatham County | 1,464 | 61 | 1,841 | 1,902 |
| Davidson County | 28,254 | 19,082 | -19,823 | -741 |
| Dickson County | 1,657 | 46 | 2,685 | 2,731 |
| Robertson County | 3,089 | 917 | 5,131 | 6,048 |
| Rutherford County | 14,723 | 2,372 | 43,185 | 45,557 |
| Sumner County | 5,475 | 1,169 | 16,230 | 17,399 |
| Trousdale County | 18 | 64 | 423 | 487 |
| Williamson County | 8,430 | 1,648 | 29,962 | 31,610 |
| Wilson County | 4,078 | 332 | 13,540 | 13,872 |

Source: U.S Census Bureau, Federal-State Cooperative Program for Population Estimates, 2000/2007

In each year since 2000, Davidson County actually experienced negative net domestic migration, significantly reducing net overall migration. Thus, to achieve the projection in the May Town Center Analysis, Davidson County would have to completely reverse the current trend in internal migration.

Davidson County Components of Population Growth, Annual Estimates, 2000-2007

| | **2000** | **2001** | **2002** | **2003** | **2004** | **2005** | **2006** | **2007** |
|---|---|---|---|---|---|---|---|---|
| Internal Migration | -1,294 | -3,504 | -7,224 | -3,892 | -2,075 | -1,064 | -263 | -507 |
| International Migration | 800 | 3,041 | 2,952 | 2,551 | 2,383 | 2,408 | 2,482 | 2,465 |
| Net Migration | -494 | -463 | -4,272 | -1,341 | 308 | 1,344 | 2,219 | 1,958 |
| Natural Increase | 936 | 3,867 | 3,732 | 3,499 | 3,972 | 4,296 | 4,191 | 3,761 |

Source: U.S Census Bureau, Federal-State Cooperative Program for Population Estimates, 2000-2007

### *ft Projections of growth in employment and firms in certain sectors are inconsistent with recent history*

Initial job creation resulting from May Town Center would result from actual construction – although the May Town Center Analysis projects that a majority of construction related employment would actually occur outside of Davidson County.

May Town Center Analysis - Construction-Related Employment

| Area | Average Jobs/Year | Percentage of Construction Related Employment |
|---|---|---|
| Davidson | 912 | 27.2% |
| Rest of MSA including Dickson & Sumner | 1,935 | 57.6% |
| Rest of Tennessee | 511 | 15.2% |
| TOTALS: | 3,358 | 100% |

Source Data: Energy and Water Economics, Economic Impact Analysis for Bell's Landing Partners, 2008

But, by 2026, the May Town Center Analysis projects that the project will result in 41,563 direct, new jobs in Davidson County. New jobs are projected to be concentrated in the following sectors of the economy:

May Town Center Analysis – Office, Commercial, Retail and Restaurant Employment

| Industry | Employment |
|---|---|
| Administrative | 15,200 |
| Professional | 11,400 |
| Financial and Insurance | 5,700 |
| Real Estate | 3,800 |
| Retail | 2,850 |
| Management of Companies | 1,900 |
| Restaurant | 713 |

Source Data: Energy and Water Economics, Economic Impact Analysis for Bell's Landing Partners, 200

Overall, from 2001 to 2006, private sector employment growth in Davidson County has largely been stagnant, increasing by only 1.6% over this time period. At an industry level, however, there has been considerable variation – with significant growth in certain industries and decline in others.

Davidson County Employment Growth by Industry, 2001-2006

| Industry – Davidson County | Employment 2001 | Employment 2006 | 2001-06 Employment Growth |
|---|---|---|---|
| Total | 367,585 | 373,374 | 1.6% |
| Construction | 18,376 | 19,022 | 3.5% |
| Manufacturing | 33,152 | 27,278 | -17.7% |
| Wholesale Trade | 23,073 | 22,897 | -0.8% |
| Transportation/Warehousing | 17,974 | 18,982 | 5.6% |
| Information | 13,336 | 11,995 | -10.1% |
| Finance/Insurance | 20,447 | 18,677 | -8.7% |
| Retail Trade | 48,267 | 47,741 | -1.1% |
| Educational Services | 15,345 | 19,947 | 30.0% |
| Health/Social Services | 45,505 | 51,388 | 12.9% |
| Arts, Entertainment, Rec | 5,353 | 6,429 | 20.1% |
| Real Estate/Rental/Leasing | 7,350 | 7,305 | -0.6% |
| Professional/Technical Svcs. | 19,347 | 22,567 | 16.6% |
| Mgmt of Companies and Enterprises | 2,506 | 4,965 | 98.1% |
| Administrative/Waste Services | 39,284 | 33,798 | -14.0% |
| Accommodation and Food Services | 14,314 | 13,987 | -2.3% |

Source: U.S. Bureau of Labor Statistics, QCEW Database, 2001/2006

In five out of the seven industries where the May Town Center Analysis projects growth, it would represent a reversal of recent employment patterns in Davidson County. While increases in Management of Companies and Professional/Technical Services employment would be consistent with recent history, administrative, finance and insurance, restaurant, retail and real estate employment all declined between 2001 and 2006.

Comparison of May Town Center Analysis with Historic Growth by Industry

| | **Projected New May Town Center Jobs** | **Employment Growth 2001-2006** |
|---|---|---|
| Administrative | 15,200 | -14.0% |
| Professional | 11,400 | 16.6% |
| Finance and Insurance | 5,700 | -8.7% |
| Real Estate | 3,800 | -0.6% |
| Retail | 2,850 | -1.1% |
| Management of Companies | 1,900 | 98.1% |
| Restaurant | 713 | -2.3% |

Source Data: Energy and Water Economics, Economic Impact Analysis for Bell's Landing Partners, 2008

If nothing else, the assumption that there would be no displacement effect – in other words that the direct jobs created at May Town Center would not replace jobs already existing in the region – is called into question by these trends.

## The May Town Center Analysis fails to address potential costs of the project related to the construction and necessary upkeep costs of

## certain infrastructure and does not account for potential offsets to attract new firms (e.g. tax abatements).

Any consideration of the economic impact of the proposed May Town Center development needs to account for potential costs related to the project. For example, the Planning Department report indicates that the trigger of the Alternate Development Area would also require construction of a bridge to Bells Bend. Published reports suggest that the developer of May Town Center is now considering a bridge linking Old Hickory Boulevard to Centennial Boulevard and Briley Parkway near John C. Tune Airport.

While Dr. Wade's response indicates that "[T]he developer has stated that no Metro funds will be used for the bridge."[9] The May Town Center Analysis does not, however, consider any offset to projected tax revenue benefits based on the cost of upkeep of the bridge or other accompanying infrastructure. For example, residential development for 5,000 new households would likely generate a need for new schools, a new firehouse and other service related infrastructure.

Even if the developer bore responsibility for all infrastructure construction costs, there would be future costs related to operations. Presumably, these costs would be born by Metro Nashville and would reduce the net tax benefits of the project.

As an example, the creation of 5,000 new households in May Town Center would presumably create demand for at least two new schools by 2024: currently, the Metro Nashville system maintains 126 schools for approximately 277,000 households in its coverage area. According to Metro Nashville Schools, total local spending – property tax and local option sales tax – on public education operations and maintenance was $394,975,800, or approximately $3.1 million in current dollars per school building. Two new schools would result in $3.1 million in new annual operating costs by 2024, offsetting almost 10% of the projected new tax revenue in the May Town Center Analysis.

The May Town Center Analysis also fails to address potential offsets in tax revenue that would result from tax abatements or other incentives. While the site developer might not seek these benefits, it is likely – given recent history – that abatements would be offered to any major employer being sought for the office and commercial uses of May Town Center.

In his letter to the author, Dr. Wade dismisses these potential costs as "irrelevant" and a "moot point."[10] This ignores what could be a significant offset to projected tax revenue. Metro Nashville has a history of providing incentives to bring new business to Nashville including:

- The Tennessee Titans' National Football League Franchise relocated to the Nashville area after being granted below-market rent and right of first refusal on a $292 million stadium (excluding bond interest), a $15 million practice facility in Metro Center and a waiver of responsibility for all capital expenses associated with the stadium.

[9] William Wade Response Letter, p. 7.
[10] William Wade Response Letter. July 14, 2008, p.11.

- Dell Computers, Inc. built a new manufacturing facility in the Nashville region after the company was offered $166 million in incentives to build 550,000 square feet of office space on land east of Nashville International Airport. Incentives included a 40-year tax abatement and local government assistance with workforce development (applicant processing, training, etc.) though the Mayor's Office/Nashville Career Advancement Center.

- Verizon relocated to Franklin, Tennessee after accepting an offer for a 40% tax abatement advanced jointly by Williamson County and the City of Franklin.

- Williamson County offered Nissan a 47% property tax abatement worth $32 million and land financed with $15 million from the City of Franklin.

Without commenting on the benefits of these past incentive deals, history simply suggests that it is a virtual certainty that any firm being induced to come to May Town Center would seek some form of financial incentives from the local government which would reduce projected tax revenue. The May Town Center Analysis fails to take this into account at all.

## Metro Center is an example of another "game changer" development proposal that failed to meet projected economic impact.

The parallels between Metro Center and May Town Center are striking. Both developments were planned and touted as a unique, mixed-use complex that would provide job opportunities, housing, recreational activities, and retail/restaurant options to visitors and people that would live and work in a "city within a city". Clearly, Metro Center did not meet this aspiration. The example of Metro Center neither confirms nor denies the potential for May Town Center, but serves as a cautionary tale that signifies the inherent risks involved in real estate speculation, retail/restaurant ventures, business attraction, and residential preference.

- In May 1971, developers announced a $500 million, privately financed combination of "industrial, residential, recreational, cultural and commercial complexes to form a single, integrated community" – Metro Center.[11] The proposed development included:

- $40 million worth of residential units: 1,500 on 150 acres, a source of housing for people employed in corporations located within the development

- 150 acres for recreational and cultural use: $10 million for recreational facilities and $300 million for cultural, educational and governmental programs

- 300 acres for technological-industrial use: $300 million

[11] The Nashville Tennessean. Huge Metro Center Coming: $1/2 Billion Community Announced. May 16, 1971.

- 200 acres required for commercial development to support the rest of the site
- A 40,000-seat, domed stadium that could serve the Nashville universities and attract national sports events to the city
- Utilization of Lower Nashville Island as the site of a symbol of the entrance to downtown Nashville in the spirit of the St. Louis Arch

The project was to "be interwoven so that each housing unit – available for both rental and for purchase – will have direct access to a park area completely encircling the housing areas." The development was touted as "unique in that it offers the advantages of building a completely new community 'from the ground up' while also benefiting from the surrounding city."

The developer, Aladdin Industries, stated that the project was "an opportunity to move and reshape the whole city without upsetting anyone," and that it "was doubtful that there exists within any major city in America a similar opportunity to take such a large area of land and develop it into a model urban living center without the destructive effects of the bulldozer."[12]

In 1978, the project was only half-finished with 45 businesses located in Metro Center and without the cultural and recreational amenities advertised by the developer seven years prior.[13] By 1984, the development continued to struggle in meeting expectations not only for commercial and industrial development but for residential and retail development as well. As the business cycle of the late 1970s pushed lending rates out of reach for builders and buyers, the Metro Center concept stalled and efforts were focused on creating a standard office park. Still, Aladdin Industries promised that the development of retail and residential construction would commence in 1985.[14]

By 1987, retail and residential construction had still not started, although 110 office and commercial tenants had located in Metro Center. Construction was nearing completion on Fountain Square, a 25-acre, $25 million lakeside retail project that was expected to create a "development explosion" by bringing in 10 million customers in the first year of operation.[15] The 180,000 square foot complex was developed according to "the mixed use retail concept that is generally recognized as a dramatic economic stimulus in progressive cities."[16]

Groundbreaking on the first 250 of 1,000 high-rise and townhouse homes was to begin in 1988. The start of the second phase was to "depend upon the success of the initial residential undertaking", but "with the dramatic growth of the Metro Center as one of Nashville's most vibrant complexes, the next step should only be a short time behind the first."[17]

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[12] The Nashville Tennessean. 800-Acre Metro Center Set; to be State's Biggest Project. May 17, 1971.
[13] The Nashville Tennessean. *Metro Center Reaches Halfway Mark*. May 3, 1978.
[14] Advantage. Aladdin Returns to Its Original Concept for Metro Center. July 1984.
[15] The Nashville Tennessean. Metro Center's Fountain Square to Fuse Development Explosion. January 25,1987.
[16] The Nashville Banner. Fountain Square Official Predicts 10 Million Visitors. January 9, 1987.
[17] The Nashville Banner. *1,000 Metro Center Residences Planned*. May 15, 1987.

On July 26, 1987, Fountain Square opened with 60,000 customers in attendance. Planning for phase II of the development was already underway -- a 70% expansion that would take the complex to 300,000 square feet and ultimately result in a 1.5 million square foot "regional retail district."[18] By the summer of 1988, however, Fountain Square was suffering from high tenant turnover and the loss of half of the outdoor pushcart vendors.[19]

In 1989, Aladdin Industries sold controlling interest of the Metro Center complex, including Fountain Square, to a Dallas-based investment group, known as Metro Center Properties.[20] Two weeks after acquiring Metro Center, Metro Center Properties failed to make the first finance payment on an $18.12 million loan from Third National Bank. On August 11th, Third National Bank filed suit against the new owners, charging that they had fallen nearly $500,000 behind on interest on the loan. This financial difficulty arose primarily because the "center couldn't generate enough income to justify the kind of financing being sought." The complex "has had an up-and-down history, including an all-time office vacancy high of 47.7 percent in 1986, dropping to about 28% in the summer of 1989." Metro Center Properties filed bankruptcy on September 8th.[21]

In March 1990, Metro Center Properties emerged from bankruptcy, transferring Fountain Square to Equitable Bank N.A. in Baltimore and the Bank of Nova Scotia, satisfying $16 million of the company's debt.[22] Although the retail complex remained in operation and improved occupancy, by March of 1993 the banks were offering the entire Fountain Square complex for $1 million.[23]

Since 1993, Metro Center and Fountain Square have both made advances and suffered setbacks. Fountain Square continues to struggle with occupancy. In 1994, the 14-screen movie theater closed, and remained vacant for nine years until Watkins College of Arts established a presence in this space. The Tennessee Titans built a practice facility across the lake from Fountain Square, at a cost of $15 million to Nashville Metropolitan Government. Approximately 250 acres of Metro Center remain undeveloped, and high-density residential housing failed to materialize.

Given the past promise of the development of Metro Center, there is a familiarity to Dr. Wade's assertion that "[F]inding tenants to take the office space and bring new business activity to serve national demands will not be a problem. Employers and employees from across the country will be drawn by the economic and amenity advantages of locating in MTC."[24]

History suggests that development at the urban core of the Nashville region is far from a sure thing, casting serious doubt on the "if you build it, they will come" philosophy implicit in the May Town Center Analysis.

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[18] The Nashville Tennessean. Fountain Square – Open and Growing: 70% Expansion Planned Along Lake Amulet. July 26, 1987.
[19] The Nashville Tennessean. The Mistake on the Lake: Fountain Square Keeps Head Above Water Despite Skeptics. July 11, 1988.
[20] The Nashville Banner. *Aladdin Sells Metro Center Development*. June 3, 1989.
[21] The Nashville Banner. Metro *Center Files Bankruptcy*. September 8, 1989.
[22] The Nashville Tennessean. Metro Center Refinances Debt, Sheds Fountain Square. March 1, 1990.
[23] The Nashville Banner. Banks Apparently Willing to Sell Fountain Square for $1M. March 22, 1993.
[24] William Wade Response Letter, p. 11.

# Appendix A




June 23, 2008

VIA EMAIL AND FAX

William W. Wade, Ph.D.
Energy and Water Economics
39 Public Square
Columbia, Tennessee 38401

Dear Dr. Wade:

Thank you for your timely reply to my telephone call regarding the May Town Center impact analysis.

Per our conversation today, I am forwarding this letter to you and to James Weaver of Waller, Lansden, Dortch & Davis. Given the importance of the issue and the magnitude of the projections in your analysis, I hope that – upon advice of counsel and permission of your client – you will be in a position to respond to the questions outlined below.

As we discussed on the phone, we have a number of questions regarding the February 4, 2008 ***Economic Impact Analysis for Bell's Landing Partners*** that you prepared.

- What sources does the model used in the Analysis reference for the various subcomponents of the analysis:
    - Construction costs
    - Industrial composition
    - Employment
    - Household spending
    - Residential preference
    - Firm locational preference
    - Regional purchase coefficients
    - Location quotients by sector
    - Local vs. non-local spending by households
    - Local vs. non-local spending by firms

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- What type of economic impact model was used? What type of multipliers were used?

- The analysis cites the creation of 40,000 new jobs resulting from the implementation of the full-scale development of the May Town Center complex. Does this figure represent total number of new jobs that this development is expected to create? In other words, does the analysis account for job displacement from other areas of the county such as the CBD, Metro Center, Bellevue and Antioch? Given that Census bureau population estimates suggest a 1.6% job overall job growth rate over the 2000-2007 time period, does the analysis support the conclusion that the May Town Center project has the potential to alter local trends in population growth? If so, what is the basis for this projection, other than input-output estimates?

- In the analysis of projected job growth for certain sectors in the Nashville/Davidson County economy, is there a historical context for the analysis, or is it purely driven by an input-output model? For instance, U.S. Bureau of Labor Statistics data (QCEW) indicates 2001-2006 job growth in Manufacturing, Finance/Insurance, and Accommodation and Food services was -17.7%, -8.7%, -2.3% respectively. Similarly, this dataset indicates that the number of firms in the Management of Companies and Enterprises sector increased by only five over the 2001-2006 time period. Does the analysis account for retraction or slow growth trends in the sectors supposedly affected by the May Town Center development? If so, in what manner? If not, why not?

- The analysis concludes that the residential component within the May Town Center development can house 5,000 families from the senior labor staff. Does this then mean that the model projects that 5,000 new households will reside in the county as a result of the full implementation of May Town Center? What is the basis for this assumption? What is the basis for the residential unit price and square footage estimates used in the analysis?

- Similarly, the analysis cites hard construction-related employment over the 2010-2024 to be 13,683 job years in the county, 29,024 job years in the region and 50,368 job years statewide, with an average of 3,358 jobs annually. Does this projection account for displacement of employment from other areas and sectors at each level of aggregation? How does this projection related to the 3.5% job growth rate in the Construction sector over the 2001-2006 time period and a total of 19,022 construction jobs in the entire county?

- The analysis cites approximately $1.5 billion in residential property value growth over the lifetime of the May Town Center project. What is the basis for this estimate? What was the geographic level of analysis?

- The analysis cites approximately $3.25 billion of office property value growth over the lifetime of the May Town Center development. What is the basis for this estimate? What is the geographic level of analysis?

- The analysis cites just over $4 billion of commercial property value growth over the lifetime of the May Town Center project. What is the basis for this estimate? What is the geographic level of analysis? Does this figure represent property value growth within the county only?

- The analysis predicts approximately $1.75 billion of residential investment demand growth over the lifetime of the May Town Center project. What is the basis for this estimate? Does the analysis consider historical trends in population growth in the region?

- The analysis projects residential build-out and household occupancy over the 2011-2026 time period. What is the projected occupancy rate for each year in the analysis? It appears that the model suggests the build-out will occur in equal annual phases. How does this projection comport with historical trends and real estate cycles?

- Does the projected growth in households account for estimated local residential displacement as these units become occupied? In other words, what are the assumptions regarding the number of May Town Center households that are moving from within the County and MSA?

- The analysis estimates that, as a result of occupancy of units in the May Town complex, total residential income will increase by just under $800 million and approximately $150 million in retail spending over the 2011-2026 time period. How were income flows modeled, both for activity within and without the Nashville MSA? What is the basis for these assumptions with regard to residential income?

- Does the analysis consider project phasing with regard to the office and commercial components of the development? What are the assumptions regarding the timing of residential development, office development and commercial development?

- The analysis cites projected retail and restaurant employment to exceed 3,500 jobs by the year 2026, and states, "retail tenants should meet new demand and not 'crowd out' existing retail jobs". What measure of "new demand" was used? Did the analysis consider retail and hospitality sector trends in the county and MSA to make this determination? For example, BLS data for the 2001-2006 time period indicates a 2.3% retraction in Accommodation and Food Services jobs in Nashville/Davidson County. Additionally, BLS data for Retail Trade suggests a 1.1% retraction in jobs over the same time period. Given these trends, under what scenario will such jobs not be "crowded out" following construction of May Town Center? The analysis also states that restaurant tenants at the May Town complex will "displace some existing jobs elsewhere". Is there a measure of the extent and geographic location of this displacement?

- The analysis cites specific direct, indirect and induced employment figures with respect to several industrial sectors, including Management of Companies and Enterprises, Administration and Support, Prof. R&D, Finance and Insurance, and

Real Estate. What type of multiplier was employed for each sector? Did the indirect and induced effects create employment in additional sectors?

- The analysis estimates a total state output effect of just under $16 billion, with a county-wide effect of just under $10 billion. Is there an estimate of the specific sectors that will increase output as a result of the May Town Center Development?

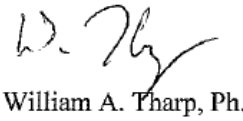
- The analysis estimates personal consumption to grow by about $2.5 billion in Davidson County and about $4.2 billion in the MSA over the lifetime of the May Town Center project. What is the basis for these estimates?

- The analysis cites tax effects projected to accrue to Davidson County in the form of direct project government revenues ($578 million) and property and sales tax revenues ($897). Does this figure represent the total or net effect? Did this portion of the analysis consider factors such as costs related to infrastructure provision, historical consumption patterns within the county and MSA, and residential and business location factors? Did the analysis consider the monetary value of incentive packages required to attract firms to the county?

- The analysis cites an economic migration of 33,183 people to Davidson County resulting from the May Town Center development. What is the basis for this estimate? Does this estimate consider historical trends in the components of population change for the county and MSA? For example, census bureau population estimates suggest a growth rate of 8.7% for Nashville/Davidson County over the 2000-2007 time period.

Thank you in advance for your cooperation in addressing these questions. CRC hopes to complete an initial assessment by July 11. Therefore, we would appreciate it if you could provide a written response to these questions by no later than July 3. If it would be more convenient to address these questions orally, I would be happy to have the opportunity to discuss them with you at your convenience.

Sincerely,



William A. Tharp, Ph.D.
Senior Policy Analyst

cc: Mr. James Weaver:
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# Appendix B

ENERGY & WATER ECONOMICS

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July 14, 2008

Dr. William A. Tharp
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Via fax 423-425-5619

**Re: Tharp June 23 Letter about May Town Center Economic Impacts**

Dr. Tharp:

Responses to your twenty questions in your June 23 letter can be collapsed efficiently to four topics:

1 Business relocation demand for Nashville will fill the May Town Center office space supply and create demand for commercial and residential development;

2 REDYN data sources are similar to REMI, but more detailed and its tradeflow modeling conventions are more advanced;

3 May Town Center will cause little displacement of business activity elsewhere in the Metro MSA;

4 The cost of incentive packages is a moot point.

The vision of the project is a precondition to understand both the physical design of the development and its economic significance to Davidson County and the entire Metro MSA. Companies want to relocate to Nashville, but inadequate options within Davidson County have forced them to other nearby counties. Rutherford, Wilson and Williamson Counties have averaged double-digit annual growth rates in budget increases since 2003, while Davidson County is faced with cutting services as costs are rising faster than revenues. May Town Center is a major remedy to Metro's revenue crisis.

If you've heard the term *smart growth* and wondered what it actually looks like, May Town Center planned development of mixed commercial, retail and residential properties is all you need to see. May Town Center, which will create over $4.0 billion dollars in new property value on the southeast tip of lower Bells Bend, will transform a small patch of pastoral land into a walkable development for living, working, shopping and a high quality of life that particularly will appeal to professional knowledge workers who can choose where they want to live and work.

The fundamental driving objective of our analysis is to examine the economic effects of introducing the enormous economic engine of May Town Center – approximately 10 million square feet of office development including corporate headquarters, 5,000 residences, and 1.5 million square feet of retail development – into less than 600 acres. Our analysis reveals that May Town Center will become an economic stimulus to restore Davidson County's competitiveness with Williamson County.

## 1 Business relocation demand for Nashville will fill the May Town Center office space supply and create demand for commercial and residential development.

Apparently you wonder whether demand will materialize for the planned mixed use development at May Town Center (MTC). I leave it to you to visit http://www.nashvilleareainfo.com/Default.aspx?Page=RecentRankings and follow the links to so many different indicators that reveal that Nashville is hot, hot, hot – even in this down economy. To borrow some words from the Chamber's web site,

Some of Nashville's advantages include:

- low cost of living;
- unique, affordable residential areas;
- abundant parks, waterways and recreational areas;
- a lively cultural base;
- a national hub for health care;
- many higher education institutions; and
- a seasonal climate.

Nashville's problem has been the lack of available corporate sites in Davidson County; the surrounding counties are benefiting from corporations that want to be in Middle Tennessee, while Davidson County has not enjoyed commensurate benefits. May Town Center solves this problem.

May Town Center's location is but a few minutes from virtually all of Nashville's rich cultural amenities, which adds to the competitiveness of the project. Nashville Area Chamber of Commerce officials reported 39 businesses negotiating for relocation during a Partnership 2010 meeting, according to the Nashville Business Journal May 22, 2008. MTC adds state of the art design office and living spaces to supply this demand, which otherwise could be unable to locate in Davidson County.

Reston Town Center (Virginia) is one of the most successful town-center developments in America. It represents decades of planning and design to cross-pollinate as a model for May Town Center. One of the striking features of Reston Town Center is office, retail and housing all working together to enhance the value of the other components. Rental rates in Reston office buildings are at a premium to Tyson's Corner a near-by community built on the typical urban sprawl model. Giarratana Development believes MTC will enjoy a similar premium. Based on 10 million square feet at an average rental rate of $22 dollars per square foot net and using a cap rate of 7%, the calculated value of office buildings is $3.15 billion.

The occupancy absorption is set up in equal phases as a method of simplifying the model. An equal build-out is a reasonable placeholder because predicting the real estate cycle accurately is impossible. The market will dictate the build out and phasing of the various components. Commercial retail and restaurant space will follow build-out of office and residential development.

At build-out, MTC will provide an estimated 40,000 new jobs. If 12.5% live in MTC that will require 5,000 homes, or one home per eight jobs. MTC will be a mixed-use community, providing unprecedented opportunities for recreation, shopping and working all with-in walking distance of home. Diverse housing types will be available, from affordable workforce housing to luxury homes in upscale condominium towers. We believe the housing values will be higher than the average of Davidson County. 5,000 homes at an average of $300,000 each was used in estimating the $1.5 billion residential value.

## 2 REDYN data sources are similar to REMI, but more detailed and its tradeflow modeling conventions are more advanced.

A number of your questions deal with the model and data used within the REDYN model. Your resume suggests some background in regional impact models. I will provide only a few words on how such models estimate the impacts of changes in policy or exogenous events (e.g., locating ten million SF of new office business activity) have on regional economies.

Given estimates of direct economic impacts, software such as the REDYN model estimates endogenous linkages between production, labor and capital income,

trade, and household expenditures providing estimated effects on sector output, value-added, household income, and employment. The process captures the direct and indirect effects in production, as well as the induced effects. Direct effects represent the initial impacts of an outside perturbation on a particular sector. Indirect effects refer to the economic impacts on a particular sector's demands for intermediate goods. Induced effects refer to changes in demands for goods and services made by households spending their altered income. REDYN does not use multipliers to calculate the secondary (indirect + induced) effects; one can derive multipliers from the results, if desired.

Some of the REDYN public materials best respond to your questions. As you indicated knowledge of the REMI model, it is worth pointing out that similar to REMI, the REDYN model is a conjoined econometric/input-output simulation model. REDYN is developed by former REMI analysts. Like REMI, REDYN constructs models that reveal the economic and demographic effects that policy initiatives or external events may impose on a local economy. Unlike REMI, REDYN captures the full sector detail of NAICS 5, accounts for commodity-level trade flow by mode of transport, properly scales results to baseline data, and always accounts for rest-of-US (ROUS).

The REDYN Model is a fundamental re-envisioning of economic theory applied to estimating multi-regional, dynamic economic effects of perturbations to the region at issue. It reflects advances in New Economic Geography, especially gravity theory (regional attraction) and trade flow (regional imports/exports), based on a new distance impedance database from Oak Ridge National Laboratories that enables calculating trade flow by commodity by direction by road, rail, water, air, modes. The design breakthrough is the commodity production linkage between the trade flow process and an entity based data structure for the economy. Entities are industries, workers, investors, governments, capital goods providers, land, etc., and commodities are goods and services they use and make.

### 2.1 Employment by industry

Employment and other industry data are included for all inputs and reports at user option for all scenarios and results at any level from NAICS 2 through 5. All 316 NAICS 4 sectors and all 703 NAICS 5 sectors are fully present. The model accounts for the regional composition of higher NAICS inputs by flowing all higher inputs down to their related NAICS 5 sectors. This ensures impact results reflect the most detailed regional interpretation of inputs. In baseline and impact reports, users optionally are able to see any greater NAICS detail within any specified aggregate NAICS level. The methodology and data sources to populate the model data are described in the next six paragraphs.

1. Regional Dynamics uses several sources to estimate county-level employment and output for its baseline database. The REDYN model applies the North American Industrial Classification System (NAICS) at the five-digit detail level

(703 industries), and also uses NAICS to identify all the goods and services (over 180 commodities) made and used by the detailed industries.

2. The REDYN model uses economic data from government sources, including County Business Patterns (CBP), Journey-to-Work, and County-to-County Worker Flow from the Bureau of the Census; the Regional Economic Information System (REIS), National Income and Product Accounts (NIPA), and Annualized Input-Output Tables from the Bureau of Economic Analysis (BEA); and Input-Output Tables & Projections, Employment and Wage Projections, and Employment by Occupation Tables & Projections from the Bureau of Labor Statistics (BLS).

3. The primary employment data sources are the CBP and the REIS. Wage Bill (payroll) data are derived from the same sources and with the same techniques as the employment data. The CBP reports the total annual payroll for each NAICS code up to the five-digit level of detail for the US as a whole and for every region, state, and county. Total employment data and total payroll data are subject to data suppressions for privacy. Regional Dynamics developed a sophisticated row-and-column sum (RAS) analytic system to fill all data suppressions by using all information available in the CBP series.

4. The REIS directly provides wage bill and employment data for the government and agriculture sectors, and disposable personal income data by county. The REIS county income data are used to allocate national consumption to counties from the NIPA.

5. Annual Input-Output (I-O) tables are constructed using BEA I-O make-and-use tables, as well as biennial 10-year I-O forecast tables from the BLS. Make tables describe all the commodities made by each economic entity, and use tables describe all the commodities used by each economic entity. The very detailed BEA I-O make-and-use tables are extended year-by-year to match the annual changes in make-and-use composition implied by the current 10-year BLS I-O tables. This generates a detailed annual forecast series of national I-O make-and-use tables.

6. Each county's wage bill by industry is used to allocate each industry's national output to counties from the NIPA, and then the regional output by industry is allocated to commodities based on the national I-O make table proportions. This assumes that the commodities produced by an industry are truly joint in the production process, as dictated by a uniform production function for all firms in each industry based on competitive pressures to diffuse advantages quickly across all firms in an industry. For all concepts, the model applies a spline curve to fit history, the near-term business cycle, and the mid-term BLS projections to generate a well-behaved 50-year baseline forecast. [Spline curves refer to a wide class of functions used in applications requiring data interpolation and/or

smoothing. Spline curves may be used for interpolation and/or smoothing of either one-dimensional or multi-dimensional data.]

### 2.2 Economic impact assessments

Regional Dynamics, on a multiregional county basis (or user-defined aggregated regions), provides economic and demographic forecasts and models the impact of industry changes and government policies. The REDYN model is calibrated to local conditions using local data in context with a structured and replicable estimation process to support highly defensible forecasts at local levels. The model views the economy as a comprehensive, continuous production process where industries and entities convert input commodities (including labor and capital) into output commodities. It reflects advances in New Economic Geography for gravity theory (regional attraction) and trade flow (regional imports and exports), based on a new impedance database from Oak Ridge National Laboratories that enables calculating trade flow between all US county pairs by commodity, direction, and mode.

The model's impedance, commodity, and transport detail; its deep industry detail; and its thorough microeconomic foundation integrate to support nonlinear baseline and impact accuracy. The enabling design breakthrough is the commodity make-and-use production function linking the trade flow process with an entity-based structure for the economy. Entities include industries, workers, remittance cohorts, governments, investors, and so forth, and commodities are the goods and services they use, make, and transport. REDYN applies a spline curve to fit history, the near-term business cycle, and mid-term BLS projections to generate a well-behaved 50-year baseline forecast.

Economic impact assessments can include any period from 1 to 50 years. Baseline and impact reports are available on output, employment, payroll, wage rates, and productivity by user specified counties and custom regions for any industry from NAICS 2 through NAICS 5.

## 3 May Town Center will cause little displacement of business activity elsewhere in the Metro MSA.

A number of your questions wonder about economic displacement. For example, you ask, "Does the analysis account for job displacement from other areas?" "Does this projection account for displacement of employment from other areas and sectors at each level of aggregation?" Ultimately, you seek to discover whether our analysis overstates the actual net economic impacts. No; it does not.

While you have seen selected numerical economic results of the total impacts of MTC, a better understanding of the significance of the project to Davidson

County and the Metro MSA generally may aid your understanding of the magnitude of those economic impacts. The following subsections place the very large economic impacts in context and then discuss the technical nuances of displacement issues that you raise in relation to the economic drivers: Construction, Office business activity and commercial – retail and restaurant.

Keep in mind that our analysis has not yet dealt with infrastructure investments. Notably, constructing the new bridge across the Cumberland River connecting MTC to Briley Parkway near John C. Tune Airport is not included in our analysis. That and other infrastructure considerations can be added to the model at a later time. The developer has stated that no Metro funds will be used for the bridge.

### 3.1 May Town Center adds a huge economic engine to a small footprint at the bottom of Bells Bend.

May Town Center, which will create over $4.0 billion dollars in new property value on the southeast tip of lower Bells Bend, will transform a small patch of pastoral land into a walkable development for living, working, shopping and a high quality of life that particularly attracts professional knowledge workers who can choose where they want to live and work. May Town Center is an ideal example of infill development. Though the southern tip of Bells Bend is just five miles west of the State Capitol, the Cumberland River makes it accessible only via a roundabout route that comes in from the north. I-40 and Briley Parkway can be seen from the site just hundreds of yards away across the river. A new bridge across the Cumberland will restore Nashville's ability to compete for much needed new corporate enterprise right in the heart of Nashville's commerce. While this is a huge locational advantage, May Town Center's dramatic development will be concentrated into an exceptionally small footprint.

The property is about 1,500 acres, but the enormous economic engine of May Town Center – approximately 10 million square feet of office development including corporate headquarters, 5,000 residences, and 1.5 million square feet of retail development – will be concentrated into fewer than 600 acres surrounded by 900 acres of open space owned by the project. That surrounding acreage will be committed and permanently preserved, through conservation easements or donations to the Land Trust for Tennessee or other trust or government agencies.

The property is but a small portion of pastoral land on Bells Bend. Several 600' – 850' ridgelines between May Town Center and residents to the north virtually isolate the development from existing scattered housing. Traditional development patterns, which can be observed throughout Middle Tennessee, would chew-up thousands of acres to create the same mixed business and residential properties as these 600 acres. The benefit to the public of saving thousands of acres of open space in Middle Tennessee, while creating a 21st century smart growth living, working, and shopping environment on very few acres, has not been

incorporated into my analysis. The planned set-aside of 900 acres at May Town Center could be joined with other land trust commitments by interested citizens to enhance the entirety of lower Bells Bend.

While compact and tucked-into lower Bells Bend, May Town Center is expected to be the economic stimulus to restore Davidson County's competitiveness with Williamson County. One indicator tells the story: for the last ten years inflation-adjusted (real) taxable sales have grown annually at 9 percent in Williamson County; 3.3% in Davidson County and 3.4% for the surrounding group of counties. This huge disparity reflects rapid growth in residential population with disposable income and tax base in Williamson County. Cool Springs explains the largest part of this growth. May Town Center will infuse some parity. Its economic and fiscal impacts will be massive for Davidson and surrounding counties.

### 3.2 What about displacement? Or, does May Town Center really create very large positive economic results?

The REDYN model is a structural economic model of regional economies, meaning that it traces cause-and-effect relationships. In the model, businesses produce goods and services to sell to firms, consumers, investors, governments, including purchasers inside and outside the region. The output is produced using input commodities defined as labor, capital, and specific goods and services. The demand for input commodities per unit of output depends on their relative costs defined as profit maximizing delivered prices from place of origin to place of use by mode of transport until the input demand has been met. An increase in the delivered price of any input leads to substitution away from that input to other inputs. People will move into an area if employers demand more labor input than exists in the baseline economy. Therefore, migration is induced by economic activity and the rational expectations notion that workers (thus, labor supply) and their families will move toward areas with work and a desirable quality of life.

Our May Town modeling estimates how changes to four direct economic drivers change the level of economic activity in Davidson, the rest of the Metro MSA, and rest of Tennessee. The four direct economic drivers to new multi-regional business and worker spending consist of construction activity, office business activity, retail activity, and restaurant activity. These direct drivers result in additional growth (multiplier effect) due to derivative demand from further industry and worker spending caused by multi-regional expansion to meet supply and labor needs stemming from (a) the four direct activities and (b) the suppliers' own increased demand for supplies and labor.

Two of the economic drivers represent increased demands for the output of specific goods and services: construction spending and consumer spending. The other two economic drivers represent increased supplies of specific activities: office business activity and commercial retail and restaurant activity. Note that increased consumer spending demand is modeled as a function of the new direct

and secondary employment. The analysis makes the conservative assumption that the residents in the 5,000 new residential units at Bells Bend are new employees in the region. Therefore, to avoid double counting the net earnings and consumer spending from the new office employment, consumer spending specifically from the new Bells Bend units is not treated as a direct model input.

Your questions wonder if the increased construction, business and commercial activity at May Town Center increase economic activity in the Metro MSA or merely move it from some other place to Bells Bend. The succinct answer is that the new office and retail economic activity does increase the overall level of the economy and does not merely displace business activity from someplace else to Bells Bend. A small amount of restaurant activity is displaced in Davidson County. The results in our slides are all net effects. This is a technical topic and begins with regional modeling definitions to facilitate your understanding.

**Local Market Displacement** applies crowd-out within the regions that compete to supply the regions served by the target region (Davidson). Davidson currently is competing to meet demand from itself and from other places, including regions in the Metro MSA, the Rest of State, and the Rest of US (ROUS). This is the standard displacement when firms compete for industry market share based on a scenario with increased output from a new or expanded firm in the local multi-region market. In effect, local displacement addresses how a new firm within an existing local industry will compete with suppliers in multiple regions for the multi-region market served by the target sector and region. As you know, the new firm's output will not necessarily increase net industry output to match the firm's output because some output from other suppliers will be displaced as all the suppliers compete to meet existing demand in the multi-region market served by the new firm. Of course, growth in demand over time will elicit additional supply from local suppliers modeled as having lower delivered prices into each region.

**National Output Displacement** apportions the crowd-out pro-rata to every region including ROUS where there exists any output of the target industry. National displacement therefore is concentrated in regions with the largest share of U.S. output for the target sector. That region usually is the Rest-of-US area. National displacement applies when a direct change relates to an investment decision that considered US-wide alternative locations for undertaking new construction—national displacement effects reflect the foregone opportunity for the US-wide locations not selected. It also applies if a decision is made to source specialized labor as a core factor of production from a US-wide labor pool, such that the ability of the US-wide sector to compete in the U.S. market will be reduced pro-rata. When crowd-out relates to the larger ROUS output; less crowd-out falls on Metro MSA.

**Indirect Effects:** Changes to indirect demand for supply-chain goods and services, including for the labor commodity supplied by workers, follow the change in demand for inputs stemming from the first-round direct perturbation. If

nearby service or manufacturing providers or labor pools are insufficient or not present, some local indirect demand usually will be met by output increases in other regions (*leakage*). Commuting and economic migration will occur. Of course, the expansion within derivative suppliers to meet the indirect demand will result in additional derivative demand for labor, goods, and services (thus adding to consumption demand and supply chain demand). This iterative *multiplier* process continues until the model reaches an iteration cutoff point. Iteration solution rounds dealing with indirect and induced effects reflect derivative impacts and are not subject to crowding out.

With the above paragraphs in mind, I now address displacement for each of the three sectors modeled. The bottom line is that the estimated impacts of our modeling represent net additions to the regional economy as tracked by the model within Davidson, Dickson and Sumner, rest of MSA and rest of TN.

**Construction**

The direct construction demand increase is offset by displacement relative to the U.S. construction sector's total output; i.e., the developers decided to build in Davidson and not, say, in Atlanta. The new direct construction demand is treated as demand in Davidson County so that the supply response occurs in the regions in the model based on the construction sector's distributed presence and behavioral tradeflows in the Metro MSA area and the rest of state. The resulting first-round direct output response arises from the local supplying regions, offset by construction activity foregone pro-rata in the U.S. This is the appropriate displacement treatment because the investment decision to initiate construction could go anywhere in the U.S. The U.S. bears the opportunity cost of a specific investment decision. Therefore, the displacement is relative to the national output, not to output specific to the Metro market.

**Office**

The development scenario specifically aims at labor sourced from the U.S.-wide knowledge market. Knowledge workers (and thus their employing firms) are to be attracted from the US-wide labor market. Given a national sourcing for labor as the core factor of production, it's appropriate for displacement to be a national exercise; the rest of the U.S. market will be reduced pro-rata. This means that the Davidson and Metro MSA displacement is small because Davidson's output is small compared to total U.S. output for each office business sector involved.

**Retail and Restaurant**

The first-round direct retail and restaurant output increase in Davidson, the supplying region, is offset in each region (including Davidson) that serves demand via tradeflow across all regions in the model (Davidson, two other subregions in the MSA, and rest-of-state). This is treated as market (or local)

displacement. This displacement choice is valid because there were no national circumstances related to investment decision-making context, or to sourcing the core factor of production for serving a U.S. market.

The market displacement effect found from the modeling results for retail is weak compared to the stronger market displacement effect for full-service restaurants. This occurs because Davidson's retail sector is less vulnerable due to a multi-region retail supply area over which displacement can be spread to serve the multi-region retail demand footprint. In contrast, full-service restaurant sector supply is concentrated in Davidson, which must compete head-on with itself to serve demand primarily stemming from Davidson itself.

## 4 The cost of incentive packages is a moot point.

Your experience with the Dell relocation has misled you. Whatever incentive package local government or TECD might separately or together offer to attract a company to Middle Tennessee has nothing to do with May Town Center. The incentives attach to attracting the firm to the region; i.e., improving the state's competitive advantage over another state. On the other hand, if you are unfamiliar with available site locations in Davidson County to attract a corporation seeking a campus site, then you may not realize that May Town Center at Bells Bend is about the only location available that will provide virtually all of the characteristics that would comprise a corporate decisionmaker's bullet list. In other words, incentives are an irrelevant cost in evaluating May Town Center but May Town Center is extremely relevant to whether a company might come to Nashville or go elsewhere.

## 5 Conclusions

Nashville is a desirable location to attract new business activity to the region. May Town Center will be an award-winning smart growth development that will jump-start Davidson County to more than compete with Williamson and other counties for growth over the build-out period. Finding tenants to take the office space and bring new business activity to serve national demands will not be a problem. Employers and employees from across the country will be drawn by the economic and amenity advantages of locating in MTC. Building MTC will create a large demand for construction activity as revealed by the modeling results you have seen. The economic effects of office and commercial activity at MTC will ripple across the Metro MSA as indicated by our REDYN modeling results adding a huge economic impact on the region while adding significant government revenues to Metro government.

I realize that I have not provided detailed numerical answers to your twenty questions. I believe that my responses will enable you to grasp how enormous will be the economic impacts of May Town Center. In terms of its design characteristics, its quality of life, and its economic impacts to Davidson County and Metro Nashville, truly, May Town Center will be a unique addition to the entire region. Metro government will benefit hugely from the new revenues that the project will produce and stimulate across the County.

Cordially,

William W. Wade