KEYSTONE
BUSINESS DEVELOPMENT CENTER

Building a Sustainable Economy in Frederick, Maryland

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PALS - Partnership for Action Learning in Sustainability
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Executive Summary

Frederick, Md., is widely recognized for successful downtown revitalization. Despite an excellent quality of life, the small city is heavily dependent on commuters with high-paying jobs elsewhere. Workers are frustrated at congestion on the I-270 corridor; city leaders are intent on reducing economic dependence by stimulating local job creation.

The Keystone Business Development Center will act as a tangible link between the city and the small business community, supporting entrepreneurs and actively facilitating 'new economy' businesses. It will have flexible leasing terms to accommodate lightly-capitalized tenants as well as larger businesses seeking short-term project space or a telecommuting center to retain valued Frederick employees.

The Keystone Center is part of an attractive, master-planned retail and employment area, and will be a prototype for how technology and new media entrepreneurs establish professional networks and grow their businesses. East Frederick will see substantial real estate investment with improved local transit, interconnecting employment centers and homes. With a compact urban design complementing the adjacent downtown, a smart growth pattern will emerge.

Economic and transportation difficulties facing Frederick:

- Over-reliance on commuter jobs
- Shift to lower-paying jobs within Frederick County as a whole
- Particular losses in financial services and IT, in addition to manufacturing
- High vacancy and weak rent increases
- Residential development perceived as better land use than job centers
- Sequestration and other 'mega trends' tamping down the overall Metro Washington office market
- Trend in nearby counties and Washington, D.C., to concentrate jobs in mixed-use 'activity centers' with strong transit links

Resources to counter a challenging development climate:

- Excellent city / county coordination on economic development, transportation, infrastructure
- History of bipartisanship with 'can-do' attitude toward solving local problems
- City-owned, 32-acre parcel with strong local connectivity
- Revitalization of nearby, historic downtown; successfully set pattern for compact urban design, improving quality of life and reducing reliance on cars

- Adjacent residential / retail project that improves connectivity to downtown Frederick
- Public support for an attractive, master-planned project focused on stimulating new jobs
- Potential for city gap financing supporting the project

Dynamics of the Office Market

- Current vacancy rate 15 - 18%; rents $20 / SF triple-net
- Reviewed 17 comparables within 1.5 miles of downtown Frederick
    - 9 Class A properties; 8 Class BC
    - 764,000 SF total of this inventory
- Proximity to downtown is elevating all 17 comps
    - Lower rents, higher vacancy in outlying office properties
- Upcoming years generally favorable
- Keystone Business Development Center, 50,000 GSF in master-planned setting
    - Flexible leasing terms designed to stimulate new demand
    - Lease terms as short as 3 months; fully built-out suites available
    - 'Coworking' space, 8,000 SF, as prototype for how technology and 'new media' entrepreneurs establish professional networks and grow
    - Small café on site, plus printing / copying / managed IT infrastructure

Financing the Business Center

- Total development cost: $10,440,000
- Permanent loan: $7,308,000
- Permanent loan LTV: 70 %
- Permanent loan rate: 5.50 %
- Developer / general partner equity: $247,000
- Limited partner equity: $2,360,000
- Vacancy / credit loss: 12.0 %
- Anchor tenant base rent: $21.00 / SF triple net
- Rent increase per year: 3.0 %
- Expense increase per year: 3.0 %
- Cap rate: 7.6 %
- Year one cash-on-cash return: 9.36 %
- IRR, five-year holding period (before tax, leveraged): 15.59 %
- IRR, ten-year holding period (before tax, leveraged): 17.83 %

Section One: Site Description

The proposed development site is located in Frederick, Maryland, a small city that was founded in 1745 by German settlers. As the seat of government for Frederick County, the city is growing steadily with relatively low cost housing and proximity to the Washington and Baltimore metropolitan area. Residents and visitors are drawn to historic, cultural and scenic qualities which create the ambience of a pleasant hamlet close to major cities but with small-town charm.

While many indicators point to a high quality of life, Frederick is increasingly dependent on commuter jobs and residents are concerned about regional transportation limitations. Frederick has a population of about 67,000 people and Frederick County as a whole has a population of about 232,100.

The site encompasses 32 acres of undeveloped land with about 1,700 feet of frontage on Monocacy Blvd., located adjacent to the city airport. The city acquired the land from a farm family as part of a larger acquisition to build Monocacy Blvd.; a large tract on the other side of the road is targeted for a major residential subdivision by a reputable local developer. Monocacy Blvd. will become a primary artery connecting large, recent residential communities on the northern and eastern edges of the city to Interstate 70, half a mile south of the site.

To the immediate south are the Hartz Business Park, partially reoccupied after the closure of a luxury apparel plant eight years ago; and Altec Industries, a large regional service center for construction and tree trimming lift trucks. Monocacy Blvd. connects the site to Frederick Community College, one quarter mile; the county fairgrounds and Eventplex exhibition center, one half mile; and East Patrick St., a major east-west thoroughfare connecting to downtown. The nearby Community College campus provides vocational training and is a satellite campus to the county's main community college campus.

While the site is very convenient to the historic downtown and transportation routes, there are constraints on development. It is located within an airport overlay zone, and noise from the airport would tend to dissuade the higher-end home development that has been a cornerstone of the local real estate market for many years. There also is a sewage treatment plant nearby where Carroll Creek flows into the Monocacy River. These factors have led the PALS development team to focus on employment uses that would enhance city economic development goals with a mixed-use master plan, holding a portion of the site for future "phase 2" development. The master plan features light industrial compatible with airport resources; small retail that would complement the nearby residential growth; and an office building that will attract new corporate investment to Frederick while also fostering the growth of small businesses.

Technical Issues of Site Development

The site has been in use as farmland until recently. Before closing on purchase of the site, a developer would typically conduct a number of studies to determine the feasibility of building on it. While it is unlikely anything would be found on a "greenfield" site to rule out development, several professional studies are usually conducted to get a better handle on major items which could drive costs higher, scare off lenders, and affect the viability of the project. These due diligence items typically include:

- A Phase I environmental assessment to determine the presence of any toxic wastes which would affect development. Given the prior use as a farm, the most likely problem would be the presence of underground storage tanks for fuel oil or gasoline, and the potential for leaching of these petrochemicals into surrounding soil.
- Geotechnical studies to determine the bearing capacity of the soil. The soil type and condition affects the footing / foundation system used for construction, with considerable variability in cost among different designs.
- A civil engineer would typically be hired to give a preliminary assessment of several zoning, regulatory and site development items with large potential impacts on project cost and schedule. These include estimating the amount of grading needed to level the site; meeting regulatory requirements on stormwater management; and projecting the costs of bringing necessary utilities to the site.

An analysis of available information indicates it is likely electricity is available at the existing business park to the immediate south, and that the city ran new water and sewer infrastructure as part of the recently-completed construction of Monocacy Blvd. The next chapter includes a detailed discussion of city zoning practices affecting a master-planned project.

Local Connectivity

With a location on the eastern edge of Frederick, the site also enjoys good access to major economic centers through a network of interstate highways. Fifty miles to the east along I-70 is Baltimore, while the nation's capital is a similar distance to the southeast along I-270, which also passes through rapidly-growing Montgomery County. That county has several major job centers and has seen growth in the sciences, biomedical research and development, hospitality and federal government contracting. Frederick also enjoys good transportation connections to major Northern Virginia population and job centers. Frederick's access to the rapidly expanding technology center around Dulles airport and growing Loudoun County is arguably better than that of Montgomery County. Residents from the Washington suburbs working in Northern Virginia are primarily dependent on a single, highly-congested Capital Beltway bridge; U.S. 15 from Frederick is a more direct route to Loudoun County although there are sections of it that are only two lanes currently.

Baltimore Washington International Airport, 51 miles away, is the nearest commercial airport. Frederick also has two stations for the state's MARC commuter rail system, with three daily trains taking passengers to Montgomery County and Union Station in Washington. I-70 to the west and U.S. 15 to the north connect residents to popular historic and recreational resources such as the Gettysburg and

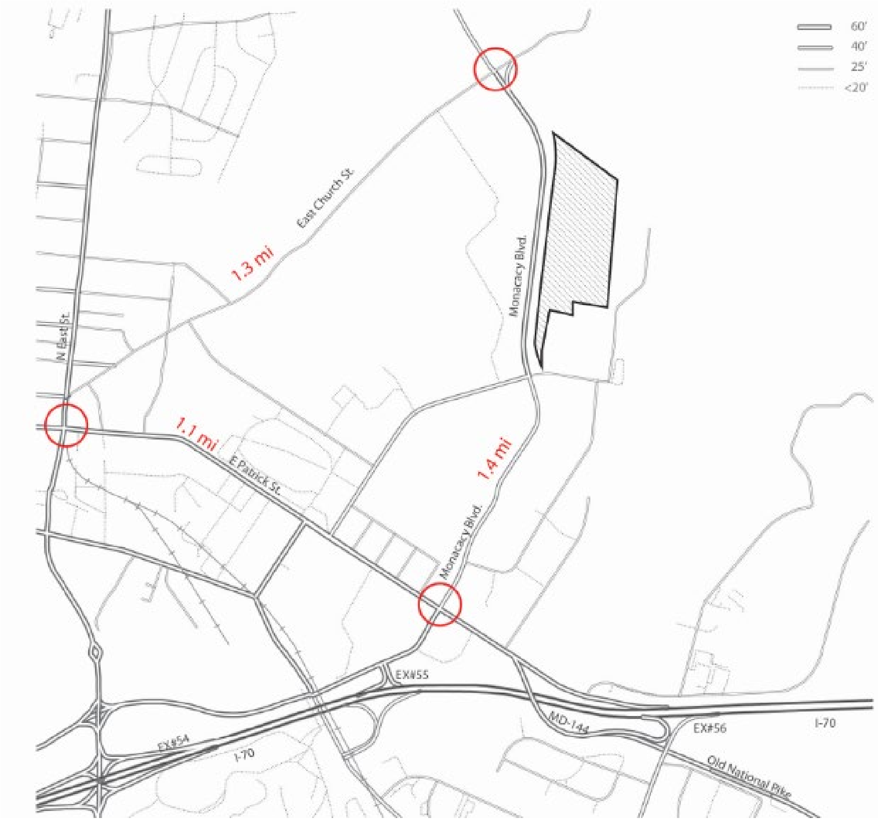


Figure 1-1: Monocacy Blvd. improvements have given the subject parcel excellent connections to downtown and highways

Antietam Civil War battlefields, ski areas and the Appalachian Trail. Hagerstown to the west, slightly larger than Frederick, is a hub for trucking, warehousing and manufacturing with its proximity to I-81.

Monocacy Blvd. at the subject property is a new road that has been completed in phases, with a major hurdle cleared in 2012 with the completion of the southern section that improved connections from I-70 to Hughes Ford Rd. adjacent to the site. The city and county are now combining forces on a "Monocacy Blvd. Central Section" project with a new bridge over the Monocacy River, widening of the boulevard to four lanes, and an intersection with East Church St. and Shifferstadt Blvd. immediately to the north of the site. The Central Section project, partially completed, is dramatically improving transportation from downtown and the interstate highway system, to the large new Riverside Research Park and areas to the northeast of downtown where steady residential development have occurred and in fact begun to accelerate.

The city's five-year Capital Improvement Program includes $37.7 million in spending for Central Section road improvements including sidewalks, possible bike lanes and water / sewer infrastructure as part of a total budget of almost $60 million. The costs to construct Monocacy Blvd. include contributions from Frederick County and the state, and are being offset in part by a state program to help communities adjust to military base realignment. In 2008, the east side of Frederick City became one of the first zones designated in the state under the program.

Upcoming work will include an improved interchange at U.S. 15 north of downtown, close to Fort Detrick. City publicity on the Monocacy improvements refer to them as a "major road construction project" which is "critical to the transportation network in the city." Noting the major commercial growth on the east and northeast of downtown, the city attests the project "will greatly enhance the access from East Frederick to the north end."

In addition to growth further north, the subject parcel and its immediate surroundings are seeing an unexpected, rapid surge of proposals for residential and small retail development. It had been anticipated over time that the eastern edge of downtown, traditionally devoted to agriculture and light industry, would become an attractive location for newer employment activity. One of the surprises is the city will now have to cope with the question of reserving some land for job growth, while allowing the right amount of residential growth which is hotter in the current local economy. City planners hope to encourage a grid of streets improving connectivity to downtown and the relatively new MARC station. The city's Land Management Code now encourages a more compact, walkable style of development to match the urban design of the historic downtown, a break from the era of single-use zoning and primacy of the private automobile when the majority of Frederick's housing and commercial growth occurred.

Clearly, the city and county have worked with an admirable degree of collaboration, effectively tapping into state and federal support to enhance the local transportation network. An effective balance is being struck between improving connections to the large subdivisions and commercial areas a mile or more away from downtown, and improving the lower volume network serving downtown and areas immediately adjacent. While the city-county bus service is relatively limited, community design is

Figure 1-2: Existing light industrial usage to the immediate south of the project site

trending toward more compact neighborhoods that would facilitate more people using busses and other alternative transportation.

At the same time, the interstate highway system itself poses issues for Frederick and its residents. The city's growth has primarily been driven by its proximity to booming Montgomery County; the ruling equation for many years has been one of good jobs in Montgomery, and attractive, cheaper housing in Frederick. Commercial growth has been sustained over the years by industrial activity, with ready access to markets over the highway system, and office / lab research centered around the influential Fort Detrick complex.

This study will question the sustainability of this model, based on increasing constraints on I-270 to the Washington area and other factors in the Washington / Montgomery growth model that are transforming the pattern of employment centers there.

Historic Downtown as Cultural Magnet

Frederick traces its roots to settlement by German immigrants in 1745, and thousands come from nearby population centers each year to visit its historic buildings, a diverse palette of restaurants, and cultural events and displays. The city was a hospital town for wounded soldiers during the Civil War with some of the war's major battles fought at nearby Gettysburg, Antietam Creek, Monocacy and South Mountain. It became a bustling industrial center with the growth of the Baltimore & Ohio railroad with

Figure 1-3: Historic preservation has helped reinvigorate downtown Frederick

thousands employed in canning, tanning and knitting. Frederick is situated on U.S. 40, which follows the alignment of the National Road dating to the early 1800s, the first federally-funded public works project.

Like most American cities Frederick saw businesses and residents migrate outward in the 20th century as wide individual ownership of automobiles facilitated greater mobility. The downtown was devastated by flooding in 1972 and 1976, and the city decided to rebuild by combining a massive underground flood management system for Carroll Creek with a linear park on the surface that would foster new recreational and entertainment opportunities downtown.

The city was added to the National Register of Historic Places in 1973, and won national recognition as one of 10 Great Neighborhoods in 2010. In conveying that honor, the American Planning Association referred to Frederick's "treasure trove of historic properties from the 18th, 19th and 20th centuries, which form one of the largest contiguous historic districts on the East Coast," as well as a highly engaged citizenry. The city and county have sought to infuse more activity to the downtown during the workweek by locating governmental facilities there, including a $16.1 million new headquarters for the county school system which was completed in 2010. On 22 weekends each year, downtown Frederick and neighboring 54-acre Baker Park play host to special events which include weekly summer concerts, monthly gallery walks, children's theatrical performances, and other events which celebrate the season.

Frederick was named one of the nation's 10 best downtowns for 2014 by Livability.com, which cited the revitalization of historic buildings; an attractive Arts and Entertainment district; and a "Main Street" program which has restored a diverse businesses district similar to traditional small town America.

To sustain the reinvigorated downtown area the city government has sought to encourage adaptive reuse of historical buildings, infill development of unimproved parcels, and a more compact "new urbanist" style of development in adjacent areas that are in transition. Recently attention has shifted to the significant potential of East Frederick Rising, over 2,000 acres that was mainly devoted to light industrial uses with significant acreage that was undeveloped or used for agriculture. City planners hope to guide phases of development in East Frederick over the coming decades so residential, employment and educational centers can coexist, different modes of transportation including walking, transit and bicycling are encouraged, and the nearby historic downtown continues to grow.

Frederick Municipal Airport

Frederick Municipal Airport (FDK) is owned by the city and is classified as a public use, general aviation, reliever airport. Reliever airports, as designated in the state's aviation system plan, are "typically located in major metropolitan areas (and) divert general aviation activity from larger commercial service airports," according to a 2013 brochure from the state. Relievers are designed to "minimize delay and congestion at commercial airports" such as Baltimore Washington Marshall International Airport (BWI). FDK flight traffic consists of about 95,000 flights annually, which translates to a daily average of about 260 takeoffs or landings. While no commercial carriers serve the airport, it is considered a growing economic resource for the region with the possibility of significant business usage. A small number of flights are military, likely related to Fort Detrick, or public safety flights.

The airport supports all types of general aviation activity including flight instruction, refueling, aircraft rental and charter flights. The state's promotional brochure says 228 aircraft are based at FDK, primarily single-engine type; official information currently posted online by the state puts the number at 180, including 10 helicopters and six jets. The state brochure says the "Frederick Flight Center is a state-of-the-art FAR Part 141 certified flight training facility." Charter aircraft services from the municipal airport are provided by Liberty Air Management, which has a fleet of five aircraft in Frederick serving the entire Mid-Atlantic Region. Frederick Municipal is the national headquarters of Aircraft Owners and Pilots Association, a hobbyist's group with about half a million members nationwide, and AVEMCO, a highly-rated insurance company providing the specialized insurance needed in general aviation.

Frederick worked for years to obtain funding for a control tower and won $5.3 million as part of President Obama's economic stimulus package to build one. It opened in 2012, and the city believes it will leverage an increase in business flights. The airport operates primarily on user fees with no direct budget allocation from the city; the control tower was threatened with closure in 2013 due to cuts in federal funding for air traffic control personnel but survived that ordeal.

In terms of rationalizing the resource in an era of constrained public budgets, it is worth comparing Frederick Municipal features with those of nearby airports. Hagerstown's airport 20 miles west has a control tower, a primary runway that is 1,500 feet longer, and 8,700 military flights annually. Hagerstown has 163 annual flights by small commercial carriers.

The major runway is identified as 05 / 23 and is 5,220 feet in length. A secondary runway, identified as 12 / 30, comes closer to the subject parcel and is 3,600 feet long; both runways are paved. Master plans for the airport show minor changes on the secondary runway, but significant changes to upgrade runway 05 / 23 including lengthening it by 600 feet. The master plan identifies 11 buildings intended to be acquired and razed to allow for runway expansion but the time frame for that activity is not clear and it apparently depends on funding support from the state. A second, turf runway of 2,400 feet parallel to the existing primary runway is proposed. The airport also plans to obtain an easement on the other side of the Monocacy River to prevent new buildings in the takeoff path from the primary runway.

The state's official data on the airport says "noise abatement procedures (are) in effect," and instructs pilots to "exercise caution" because of the mix of nearby land usages. Existing nearby land uses include I-70, which crosses the runway protection zone of the primary runway, and a sewage treatment plant near the secondary runway.

Summary

Land use policy is evolutionary, and a variety of potential trends can be read into the surroundings of the site. The completion of Monocacy Blvd., with excellent connectivity to the interstate highway system and emerging communities to the east and northeast of downtown Frederick, seems certain to improve prospects for the site and for the partially-vacant Hartz Business Park to the immediate south. Renn Farm, a massive master planned residential and retail development just across Monocacy Blvd., will dramatically raise the visibility of the parcel and bring potential workers and shoppers for proposed commercial uses. Renn Farm will apparently provide a well-placed new connector street, greatly improving the subject site's proximity to downtown Frederick by car or alternative means of transportation.

The airport itself could be interpreted several ways. With a new control tower it seems possible Frederick Municipal will begin to attract more business use and help connect executives in the city to bustling business locations in nearby states. High wage private industry groupings matching those businesses that help differentiate Frederick are found in parts of Virginia, the Raleigh / Durham area, and northern New Jersey. The subject site would stand to benefit tremendously if "short hop" executive air travel becomes more common. On the other hand, the vast majority of current traffic is from small-craft owner-operators who provide limited economic benefit to the city. Unless business use of the airport increases, the dramatic increase in residential development on the eastern edge of the city could introduce pressure to reconfigure the secondary runway to be further from downtown. What impact hobbyist use does provide seems likely to gradually ebb in the coming years as fuel prices rise, and broader policies are enacted discouraging the use of fossil fuels as the costs of climate change become larger and more immediate nationwide.

Section Two: Market and Planning Context

Zoning

East Frederick is a large area of about 2,000 acres. Traditionally devoted to lower value uses such as industry, industrial sales, rail yards, and even agriculture, community leaders believe East Frederick is ripe for redevelopment. Plans suggest substantial investment to stimulate new jobs, new residential construction, and a more compact urban design using the latest smart growth techniques.

Keystone Business Development Center will be built on city-owned Parcels C, E and F that were designated on a plat recorded in June, 2002 to establish right-of-way for Monocacy Blvd. The size of the individual parcels is shown in the chart below, with their total acreage 32.117 acres. All of the parcels are outside of the 100-year floodplain, and have no “non-tidal wetlands” according to the civil engineering work done at that time. The land is also exempt from the city’s forest ordinance because of its proximity to the airport. Total frontage on Monocacy Blvd. is about 1,900 feet, or 0.35 miles.

	Old Designation	**Net SF**	
Parcel E	Parcel 1352	856,357	
Parcel F	Parcel 1354	332,086	
Parcel C	Parcel 1353	210,557	
	Total buildable:	1,399,000	= 32.117 acres

Zoning and Public Review Procedures

Currently the land is zoned PB, professional office use, a Euclidean zoning designation intended to “provide land for office, medical office, and research and development with retail and service uses as secondary uses only.” The PB designation is “to preserve high quality future office lands primarily for office uses" with secondary uses for the convenience of office workers, according to Frederick's Land Management Code.

For this project a master plan for the entire site is being proposed to expand the range of uses. The team is proposing it for development under MXE, a designation allowing for a variety of employment activities and limited multifamily housing, or MU-2, a mixed use designation allowing the developer to propose a wide range of residential and non-residential uses subject to the city's approval. Both of these zoning designations are "floating zones," meaning they are not present on the city's zoning map until a developer proposes and gains approval to develop a site under one of the zoning designations. A developer using one of the floating zones must obtain "conditional rezoning and master plan approval" in the lexicon of Frederic's zoning code.

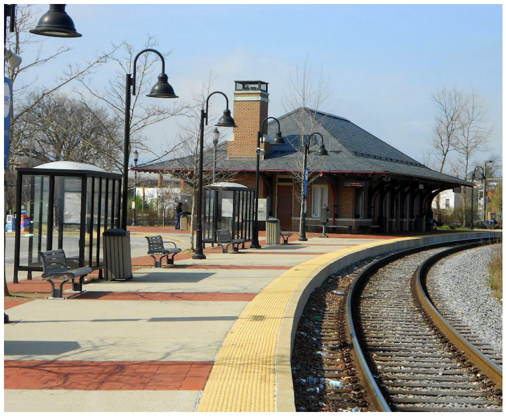
As in other jurisdictions, the master planning process in Frederick is intended to allow for public review and input over a period of time. The first step will be to get a sketch plan approved, followed by a master plan review that typically takes up to a year, followed by platting and approval of an exact subdivision plan including internal land boundaries, utilities, stormwater management and road grid.

Since they are not Euclidean zones, the MXE and MU-2 zones do not have strict rules but are reviewed by the city on the basis of flexible design criteria. Some of the key design criteria:

- The zones are not intended primarily as residential zones, and if any residential is incorporated it must be multifamily housing rather than single-family or townhomes;
- A pedestrian-friendly circulation system is required, allowing people to get from one part of the development to another without cars and to reach nearby residential areas without driving;
- The project must accommodate mass transit use;
- At least 20% of the site must be preserved as open, undeveloped space;
- A phasing plan must be submitted with the master plan and is part of the approval process.

Frederick's zoning code also includes an "airport overlay zone" which is intended to notify purchasers of noise and potential safety issues from the airport, and make sure uses disruptive of airport operations do not occur. The outer limit of the airport overlay district is the airport contour zone, a roughly three-mile radius around each runway, and the site and other forthcoming master planned developments are inside the overlay zone. According to the city land management code, buildings in that area may not give off dust, vapor, emissions or light that could get in the way of airport operations, and they may not interfere with navigational signals.

The planning commission has discretion to restrict uses that might impede aviation, according to the code. The planning commission may also request that the developer get a certificate from an engineer or land surveyor stating that the proposed land use will not hamper airport operations. Developers planning construction in the airport contour zone need to file obstruction evaluations with the Federal Aviation Administration for approval.



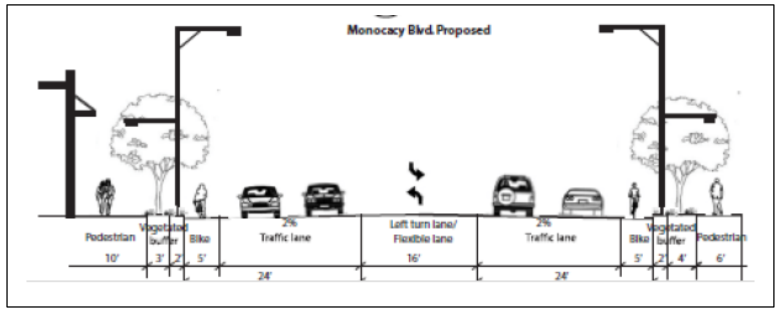


Figure 2-1: Frederick's MARC station, left; proposed Monocacy Blvd. 'complete street,' above

City Roles and Responsibilities in Zoning

Frederick has a Planning Commission, with five members plus an alternate, appointed by the Mayor and Board of Aldermen to conduct planning, zoning and development review activities. The Planning Commission is staffed by several planning department employees and one member also sits on the Board of Aldermen. While the Mayor and Board of Alderman have final power over planning and zoning decisions, in practice the Planning Commission has grown to exercise greater authority as the city has gradually moved from traditional, Euclidean zoning with codified "by right" uses, to forms of zoning that allow for mixed uses and flexible standards, subject to an extensive public review process. Commissioners serve five-year terms and meet formally once per month plus two other workshop sessions. In addition to reviewing specific development proposals, the Planning Commission prepares a Comprehensive Plan for the city and periodic revisions to the zoning map and text for adoption by the elected leadership.

The city also has a Zoning Board of Appeals that considers applications for conditional uses, requests for variances and modifications, and administrative appeals to zoning decisions. As the executive and legislative branches, the Mayor and Board of Aldermen appropriate funds for the expenses of planning activities through the annual budgeting process.

In addition to the MXE and MU-2 zoning designations, Frederick's Land Management Code has several other zoning designations for which a master plan is required. These include Planned Neighborhood Development (PND); Traditional Neighborhood Development (TND); Mixed Use District (MU. The code establishes detailed procedures for application and review of a master plan before building permits can be obtained. The open space requirement of the master planned districts is notable, in that residential master plans recently approved by the city appear to have much greater open space than in the design guidelines. At the same time, with a relatively small parcel the developer could certainly argue economic hardship requires reducing the open space requirement.

Frederick also has an Adequate Public Facilities Ordinance (APFO) resembling those in other Maryland counties that seek to manage growth and make sure funding is available to provide for public services and infrastructure. The APFO requires certain certificates be filed before a major project proceeds, illustrating that sufficient capacity is available for the development in the water and sewer service lines;

water and sewer treatment plants; the nearby network of roads and intersections; and in the schools servicing the new development.

Along with other Maryland population centers, Frederick and its surrounding county have sought to harmonize planning, zoning and development review tools to match a nationally-recognized emphasis on smart growth by state government. Among the initiatives are Priority Funding Areas, which incentivizes new development in locations where infrastructure already exists; rural and critical environmental area preservation; and incentive programs to preserve historical structures and expand jobs at existing workplaces. By contrast, more rural areas of the state have frequently opposed legislative efforts to strengthen and expand smart growth policies.

Master Planned Communities

While city master planning primarily focuses on employment uses in East Frederick, two master-planned residential communities near the subject property are in the pipeline with one under construction and the other going through master plan approval at this writing. These communities and one other northeast of downtown appear to be setting a new pattern.

As in most communities residential development is viewed as a “higher and better use” and certainly implies a higher value per acre than the agricultural and light industrial uses that have dominated the area. As recently as the city’s 2010 comprehensive plan, the land was designated for office / industrial development. However, the possibility these two parcels, a total of about 290 acres with excellent proximity to the historic downtown, will be residential and retail with no employment-oriented use should be a concern. While the two new developments represent a welcome sign of life to city leaders after a deep real estate slump, they unfortunately continue the trend of Frederick becoming more of a bedroom community rather than using all available tools to expand the base of local jobs.

Construction recently began on the 64-acre Nicodemus property. The developer is planning a total of 444 dwelling units, with 150 multifamily and the remaining primarily townhome-style condominiums. The project is the first residential use within the airport overlay zone. It is located along Church Street and abuts Monocacy Crossing, a single family home neighborhood that was built in the 1960s with additional units added in the mid-1990s. The development apparently will have a clubhouse and swimming pool but no commercial use; it is relatively close to older existing retail along North East Street, a main thoroughfare along the edge of downtown.

A second development, Renn Farm, is immediately across Monocacy Blvd. from the subject parcel. Currently in the master planning and community approvals stage, it will have a dramatic influence over the perception of the city-owned parcels at the airport if approved. After September approval of a sketch plan, the developer completed and submitted a proposed master plan October 22, 2014. The

Figure 2-2: Concept plan for Renn Farm, with a proposed 1,000 dwelling units and retail along Monocacy Blvd. Main entrance shown opposite airport parcel with a shared traffic light

planning and engineering for the project are being done by Frederick-based Harris, Smariga & Associates, which also performed the entitlement work for Nicodemus.

Renn Farm is named for a family which worked the land for many decades and is co-developer with Matan Companies of Frederick. The new neighborhood is proposed to include a total of 1,050 dwelling units on 222 acres, of which 68 acres along Carroll Creek would be designated as open space. The master plan appears to illustrate a commitment to a compact traditional neighborhood design in keeping with the city's aspirations to complement the historic downtown with new development that is more walkable and reduces reliance on the automobile. Renn Farm is proposed to include 360 multifamily units, 410 townhomes, 280 single family homes, and commercial space.

The developer has indicated the commercial area would be about 105,000 square feet, and would comprise a "new town square" concept with residences clustered nearby. While the usage is not designated, the size and positioning along newly-completed Monocacy Blvd. would appear to indicate a grocery store-anchored shopping center targeting the new homes and those traveling from the interstate highways to the existing neighborhoods northeast of downtown. However, it is also possible a mix of retail and office will emerge from the master planning discussion.

The developer intends to start the higher density construction along Monocacy Blvd. first and indicates a primary intersection there that would be conducive to development of city-owned parcels C, E and F. While there is every sign the developer wants to get started quickly and has support for the concept, it is a complex master plan so changes and delays could occur. Even if the master plan and subsequent subdivision plat are approved without major modification, it is obviously difficult to predict what the market conditions will be so construction phasing could be rolled out over a lengthy time period.

This study assumes that Renn Farm will move forward reasonably true to the master plan, given that it is a well-considered community design, promoted by a local planning firm and powerful developer with an excellent local reputation, and will profit a farm family that has held the land for many years. The positives for our team are obvious: adding life along Monocacy Blvd., providing a new thoroughfare that improves multi-modal connections to downtown, and bringing new residents close to employment uses proposed in this study. The Renn Farm proposal appears to meet most local and state goals for smart growth by placing multiple housing forms in close proximity to a new town center, with a "complete streets" approach for walkability. Potential negatives include an unwillingness to explore reduced parking counts, and failure to provide for a short street extension on the southwest corner that would connect Renn Farm better to the MARC station.

A development by regional homebuilder Dan Ryan Homes and JBG Rosenfeld Retail is further away but notable for enthusiastically embracing traditional neighborhood design. The Market Square project includes a luxury apartment building called The Haven with 206 units; over 200 townhomes and townhouse-style condominiums; a community center and a 180,000 square foot retail center within a short walk from the homes. The townhomes are primarily a "detached garage" typology that creates a neighborhood setting resembling traditional urban rowhouses with deep lots and alley loading to reduce the visibility of cars. With close proximity to a recently opened Wegmans grocery store the neighborhood has been very successful to date in leasing and sales.

Analysis shows that Frederick, despite an excellent quality of life, is heavily dependent on commuters leaving the county each day for high-paying jobs elsewhere. The Keystone Business Development Center will act as a tangible link between the city and the small business community, supporting entrepreneurs and actively facilitating the growth of companies that can revitalize local job generation. It will be located close to the growing downtown and flexible to accommodate corporate tenants as small as 500 square feet along with an 8,000 square foot coworking space. By locating near the historic downtown, having homes and eateries literally within walking distance, and incorporating features to help businesses get up and running quickly the business development center will have appeal to corporations exploring new growth in Frederick, younger workers, and the entrepreneurial sector.

2010 Comprehensive Plan and Small Area Plan

The State of Maryland requires that municipalities publish an updated Comprehensive Plan at least every six years. The Comprehensive Plan provides a guiding framework for how a particular jurisdiction intends to grow in the upcoming years. To prepare this document, Frederick makes a major effort to collect and analyze a wide range of information about development patterns, land use, population figures and projections, environmental resources, infrastructure including roads and utilities, and housing. Frederick prides itself on having an authentic sense of engagement with its citizens, and provides many ways in which the public exercises input into the preparation of the plan and enactment of its goals. The city's 2010 Comprehensive Plan, like many other documents providing information about city operations, is published on the city's official web site.

The 2010 Comprehensive Plan contains the following elements, among others:

- Land Use and Municipal Growth
- Transportation
- Water Resources
- Environmental and Recreation
- Community Character and Design
- Heritage Resources
- Economic Development
- Fiscal Element and Implementation

About 200 residents participated in surveys as part of the planning process, and their responses show they place a high value on the historic downtown and on efforts toward walkable, mixed use development to reduce traffic congestion. Large numbers of respondents expressed an interest in better local and regional transit options, and steps to reduce sprawl in Frederick County. Interest in stimulating local jobs and a more diverse economic base was high.

The 2010 Comprehensive Plan also designated seven sections of the city where planners intend to produce a "small area plan" to complement the Comprehensive Plan. These are "neighborhood-level plans" addressing land use, transportation and other topics affecting quality of life. The seven areas are considered to have a "unique character," justifying a separate and more detailed land use plan after a process of gathering recommendations from residents and stakeholders. The small areas defined by Frederick tend to be commercial areas or corridors rather than purely residential areas; city leaders hope to "improve predictability in land use and development" while facilitating capital improvements, environmental quality initiatives; and priority neighborhood projects that might merit special funding.

Following the 2010 Comprehensive Plan, the first small area plan was approved in 2013. This covered the "Golden Mile," a retail corridor west of downtown that where booming suburban-style growth with three sizeable shopping centers occurred during the 1970s but where fortunes have declined as shopper preferences have shifted in recent years. A vigorous public debate is currently occurring with regard to Frederick Towne Mall, which was the city's largest enclosed mall in its heyday. Currently three "big box" discount stores operate at the site but the indoor section of the mall is boarded up. The ownership is proposing to demolish the indoor section and build a new Walmart Supercenter on the site, with other changes to update the layout and reduce the feeling of a vast expanse of parking lots.

East Frederick Small Area Plan

East Frederick is expected to be the next small area plan and it currently is in the drafting process within city government. However, the East Frederick Rising Vision Plan, a plan funded and written by an independent group of advocates, was completed in November 2010 and is expected to heavily influence the East Frederick small area plan.

The vision plan noted East Frederick's important role over the years as a job center. But the advocacy group asserted the 2,200 acre area, five times as large and immediately to the east of downtown Frederick, had stagnated while downtown and other parts of the city and county were growing. While the plan does not give definitive guidance on how the eastside should change, it offers several well-thought-out general recommendations:

- Viewing East Frederick as a job center for the region;
- Using principles of smart growth to encourage office, light industrial, small retail and residential uses to coexist in close proximity to encourage more walking and use of transit;
- Guiding East Frederick's growth so it would begin to resemble and complement the connected, urban grid pattern of the historic downtown;
- Analyzing the growth levers of the economy, including information technology and green construction technology, to encourage new businesses that could influence the city economy;
- A special fiscal approach to East Frederick, such as Tax Increment Financing for new infrastructure, a community development fund, or tax abatements for trend-setting businesses.

East Frederick Rising noted the presence of many existing industries and acknowledged some would not be able to adapt as land values rose and the community design changed. However, city and county leaders believe there is ample opportunity for such low-margin operations to relocate to less expensive space in the county.

With the vision plan and subsequent discussions, advocates and city leaders have made clear they do not expect or want a big box retailer or a single large corporation to locate in East Frederick and "save the day." They expect the transformation to be slower and more organic. But they expect city and other public funding to help set the course by improving infrastructure, establishing better transit, and offering incentives to business development with a citywide impact. They also view East Frederick as the next location for local entrepreneurs to demonstrate how the economy can grow and diversify.

In summary, the large area to the east of downtown Frederick will be the subject of vigorous debate and difficult tradeoffs in the coming years. City leaders have demonstrated their support for advocates on an approach that primarily values the area for the potential to add local jobs appropriate to today's economy. Frederick as a whole has gradually moved in the direction of neo-traditional urban form that values compact structures, a mix of uses, walkability and improved transportation modality to reduce the dominance of cars, and the city is committed to carrying this pattern forward in East Frederick. The most challenging of all issues at hand will be persistently and creatively fostering growth job sectors from the "new economy," while keeping more immediately profitable residential development from skewing the balance.

The Sustainability Context

Devastating flooding on Carroll Creek floods in 1972 and 1976 deeply impacted the historical downtown of Frederick. With a concerted community decision to breathe new life into the downtown afterwards, it has perhaps been easier in Frederick than in other places to initiate the conversation about how environmental sustainability needs to be fostered at the local level.

The term "sustainable development" was coined by the Brundtland Commission of the United Nations in 1987, which defined it as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Early efforts to disseminate the urgency of sustainability primarily focused on the fragility of the global environment and gradual warming of the planet as a result of burning fossil fuels. Over time, sustainability has also come to include maintaining a balanced and resilient economy, while seeking a more equitable distribution of resources. Despite the lack of decisive federal government action on climate change, most Americans are concerned enough to reexamine some aspects of their way of life in terms of environmental impact.

In Maryland, concern over rapid deterioration of the Chesapeake Bay led to state government appointing the "2020 Commission," a group of experts which concluded much more needed to be done to protect sensitive land and concentrate growth in already-developed areas. The 2020 Commission was sharply critical of low density sprawl, and ensuing legislation would put the state on record supporting growth within municipal boundaries while preserving farms, forests and stream-sides.

At the municipal level, Frederick and other cities have been able to tap into the interest in sustainability to propel local initiatives. More diverse types of parks and open space are welcomed as community amenities as well as for environmental protection. Frederick County is now using the state's Rural Legacy program to preserve a combined 64,056 acres in conjunction with two non-profit land trusts. Near the east side of South Mountain area a large greenbelt offers striking views for visitors to South Mountain State Park and the Appalachian Trail, while preserving some of the county's most productive agricultural land. A separate agricultural reserve and greenway connects preserved areas in Montgomery County with the Frederick preserve at South Mountain. With critical habitat and watershed, scenic byways, and historic communities, the second preserve also sustains a diverse agricultural area.

One of the key questions the city currently faces is whether home builders and home buyers, who play an outsize role in the local economy, will come to accept neighborhood designs that are compact enough to facilitate significant increases in transit and walking. Only then can the city truly begin to transcend the "automobile first" mentality.

Figure 2-3: Developers are starting to embrace compact, walkable design with a mix of housing types and neighborhood retail

As a point of reference, noted author and urban planner Peter Calthorpe has identified what he calls "the 12 percent challenge" Americans face in the coming years. Calthorpe, identified with the concept of Transit Oriented Development and other aspects of smart growth that are now pursued by many localities, says the U.S. must reduce per capita emissions of greenhouse gases from 23 metric tons per person, the 2005 figure, to just 12 percent of that, or 2.7 metric tons per person by 2050. While not dismissing green technologies, he urges a primary focus on compact urban design because it facilitates energy-saving transportation methods as well as reducing the energy used to heat homes.

City government issued a "sustainable practices action plan" in 2009 that primarily focused on conserving energy in city operations, and follow-up on that plan has been sketchy. The city is currently working on a draft sustainability plan that is expected to be approved by the mayor and city council in the coming months. The introduction says, "Frederick is committed to sustainability for everyone who lives, works, and plays in the City. With participation from businesses, residents, and government, we will create a City that is resilient at its core and periphery and will become a sustainability model for the region. This plan is the City's framework to tackle challenges and prioritize policies and actions that will guide Frederick toward a more sustainable future."

The introduction is short and the sustainability plan, at least as of this draft, does not discuss in any detail the global nature of the sustainability challenge; a search of the document does not turn up the terms globe or global, earth, or international. On the other hand, the document uses standard terminology of the sustainability field without apology – terms such as greenhouse gases, carbon footprint, climate change, reducing fossil fuel usage, and green energy.

The draft sustainability plan defines sustainability as, “maintaining balance between economic, social, and ecological needs for today and for future generations.” The plan is structured as a discussion of eight “interconnected sectors of sustainability,” and for a few of these lists firm benchmarks the city wants to reach. For each of these components the plan offers a short discussion, a list of suggested policies and actions, and a resource / reference list. The plan says the city will issue a progress report in two years.

Influencing the City’s Development Pattern

Efforts toward a more sustainable society have touched many localities, from large cities to small towns, and low-income neighborhoods as well as wealthy quarters. Architects and urban planners have gained a wider audience for what they refer to as “creating a sense of place.” Attractive, interesting outdoor spaces that make people want to walk, linger, slow down to shop or have a meal, and return again are considered essential to encouraging them to leave their car behind. While the total effect may be elusive to define, some of the elements of pedestrian-friendly public spaces are:

- Sidewalks wide enough to stroll without feeling crowded by others
- Trees to provide natural shading and landscape enhancement
- Cars kept at a distance, or buffered using parallel parking
- Buildings close to sidewalks, providing a comforting sense of “containment” for pedestrians
- A class urban “grid” of streets for better connectivity
- Defined plazas, whether simple public seating areas, grand town squares with well-known monuments, or something in between
- Attractive building architecture that touches on themes unique to the area
- Preservation of historic buildings
- Pathways to reach the area by walking, biking or skating as an alternative to driving

A broad complement of justifications have always existed for the sizeable public investment to revitalize downtown Frederick – saving treasured attractions for tourism; avoiding the blight of vacant buildings; and stabilizing / growing an important job center. Increasingly however, the historic downtown is viewed as providing a sense of identity for the entire area, and setting a pattern to help inspire compact, walkable development nearby.

One public figure in Frederick has proved to be a durable presence in revitalization efforts and has inspired many others to carry forth activity that can be both costly and slow to show results. Ron Young, a native of the city, became Mayor in 1974 after serving four years on the Board of Alderman. He oversaw planning and the 1983 start of the $60 million, 10-year project to control the threat of Carroll Creek flooding financed with a combination of city, county and statue revenue. Young held office until 1990 making him the longest-serving mayor in the city’s modern history.

Young has subsequently has been available at critical decision-making points for the city, serving as a consultant and a convener of non-profits working for community improvement. He is currently state

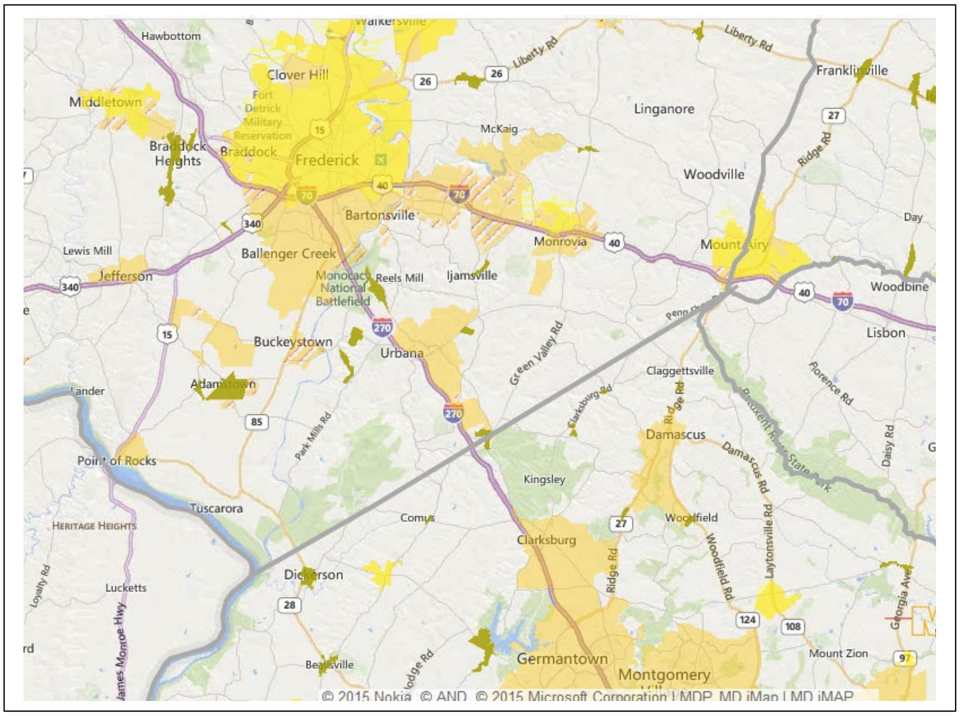


Figure 2-4: State policy restrains development to existing developed areas, as shaded on map

senator for parts of Frederick and Washington Counties. Young also had a direct impact on statewide sustainability initiatives, serving as one of the primary drivers in the Maryland Department of Planning during the six-year period when then-Gov. Parris Glendening passed and implemented the state's nationally-recognized "smart growth" incentives.

The state's "priority funding areas" program is based on a map of municipalities and other relatively high density areas; the state will fund roads, water and sewer, and other infrastructure within the priority areas but outside. Together with other programs encouraging infill development, the state is promoting "smart growth" development and redevelopment in areas with existing infrastructure rather than "greenfield" development. While a few other states are considered to have tougher, statewide standards for sustainability, Maryland is noted for a broad range of different programs that have proven influential over time in pressuring municipalities and developers to revitalize urban areas and reduce "hopscotch" growth further into the suburbs.

There is evidence the style of residential design in Frederick is gradually changing to better match the compact urban design of downtown. Subdivisions built in the rapid growth era from 1970 to the mid-1990s primarily emphasized a single-family home typology. More recently, the city has been able to encourage clustering of homes more compactly and the preservation of green spaces, and builders have built and sold thousands of townhomes. Official building permit data shows multifamily production was strong during the 2005 to 2007 building boom, and that segment of residential construction has come back as a very solid percentage of the building industry as the economy has recovered.

If the trend continues, with residential development emphasizing higher density, clustering of townhomes and multifamily near central locations, and pedestrian-friendly town squares, it will be easier for the city and county to justify investments in the bus service. These neighborhood design features translate directly into shorter walking distances to reach bus stops, and allow for improved ridership with fewer stops. The local bus service, TransIt, is run by Frederick County and has 11 routes. Most routes anchor at the MARC commuter rail station on the edge of downtown Frederick, and typically run every half hour during the business week. The downtown and other moderate-density areas are well served; while East Frederick is not, city planning documents indicate an intention of ramping up bus service as that area is developed and redeveloped.

The state provides popular commuter transportation services. Largest among these is a commuter bus, with about 14 morning trips from Frederick to the Shady Grove Metrorail station in Rockville. With hundreds of daily riders the route was split apart from a Hagerstown-to-Shady Grove route in late 2014 to accommodate steady growth in ridership. The state also provides MARC train service with three daily trains into Montgomery County terminating at Union Station in Washington, D.C.

Clean Energy Industry

Frederick was known for about 20 years as the home of Solarex / BP Solar, spurring local interest in clean energy production. Solarex, established in the 1980s in Rockville, Md., was one of the first successful efforts to commercialize the production of photovoltaic cells that had previously been used primarily in specialized military and communications satellites. Solarex moved from its original location to Frederick and employed over 500 employees, became part of BP through two separate corporate acquisitions and seemed to be well-placed as photovoltaics were put into much wider use for commercial electrical generation. The plant closed in 2012 after several years in which BP sharply expanded production as part of its “moving beyond petroleum” initiative; moved a portion of production overseas while investing in facilities that would deploy solar cells; then closed the Frederick facility entirely. The community was certainly dismayed by the zigzag decisions by distant corporate management, but local interest in sustainable technologies remained strong.

Recent years have also seen the development of North Pointe, a community of 55 duplexes and townhomes that meet U.S. Department of Energy standards as “net zero energy homes” and are located on the north side of downtown. The homes have a super-insulating building envelope, geothermal heat pumps, photovoltaic cells and a sophisticated control system to conserve energy while providing adequate makeup air. Northe Pointe, as the largest concentration of emerald-certified homes per the National Green Building Standard, brought publicity to Frederick from numerous national publications.

Currently, the city has a published a Request for Information to determine the feasibility of building an array of photovoltaics at Frederick Municipal Airport. While the documentation makes clear the city has not committed funds for such a project, it wants vendors to offer information to determine the possibility of solar generation, how much power could be generated, and whether the array can be safely deployed in “underutilized open space” surrounding the airport.

Section Three: Changes on the Corridor

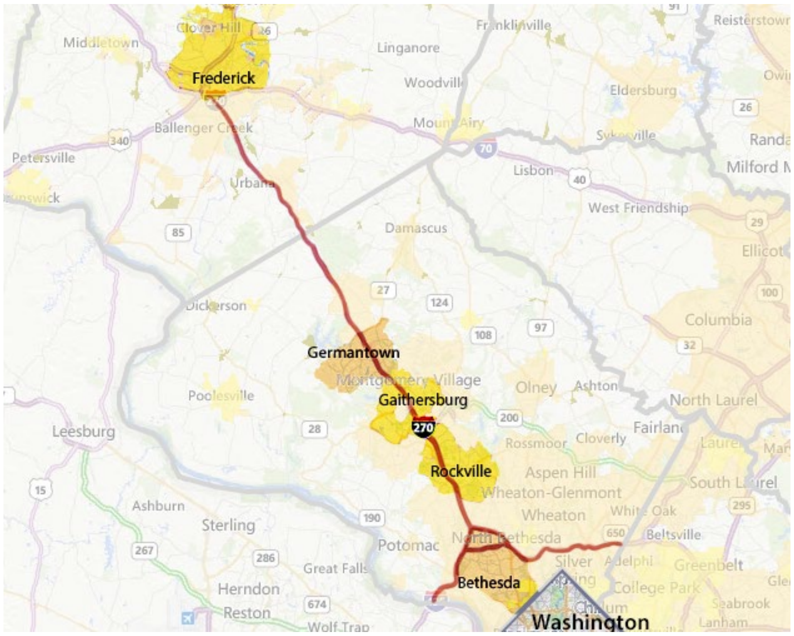
Demographics of Frederick

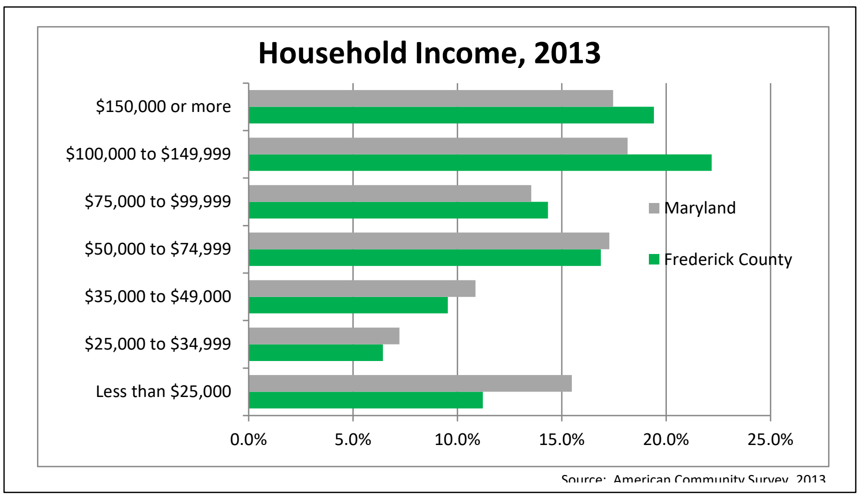
Frederick and surrounding Frederick County are now considered part of the Washington Metropolitan Statistical Area which comprises the District of Columbia and 23 counties and independent cities in Maryland, Virginia and West Virginia. Frederick is the largest county by area in Maryland, 667 square miles, although several counties are much larger in population. While this analysis will primarily look at demographic information for the entire county in order to capture a larger sample area, a few select characteristics of the City of Frederick will be highlighted.

The county had a population of 232,101 in 2013, according to the census bureau's American Community Survey five-year rolling estimate. The same metric placed the city's population at 64,028. Like most of the Washington area, Frederick is well-educated with 38.2 percent of county residents aged 25 or older possessing a bachelor's degree or higher. And the K-12 school system is rated among the top half-dozen of the state's 24 school districts in most rankings.

While most residents are born in the U.S., 9.6 percent were foreign born with Latin Americans and Asians comprising 72.5 percent of immigrants. Frederick consistently ranks among the fastest growing counties in the state, with average growth of 2,800 new residents annually between 2000 and 2013.

Figure 3-1 shows household income for Frederick County versus that of Maryland as a whole. Frederick has higher percentages of its population in the three upper income brackets, and smaller numbers in the three lower income strata. Notably, 22.2 percent of Frederick residents were in the upper-middle income range of $100,000 to $149,999 in annual earnings, compared to 18.2 statewide in that bracket. The county also showed notably lower proportions in the two lowest income strata. The county's median household income is $84,570, while statewide the median is $73,538 annually according to





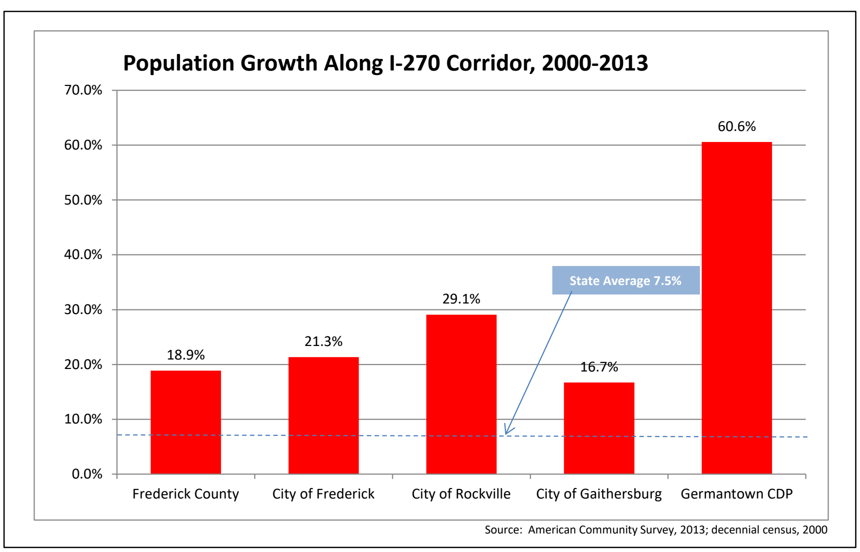


Figure 3-1: Household income brackets

Figure 3-2: Population growth comparison

American Community Survey estimates. However, on a key measure of poverty the county evidenced much of the same hardship that has impacted vulnerable families in recent years. Of families headed by a single mother, 18.0 percent were living in poverty compared to 19.3 percent statewide.

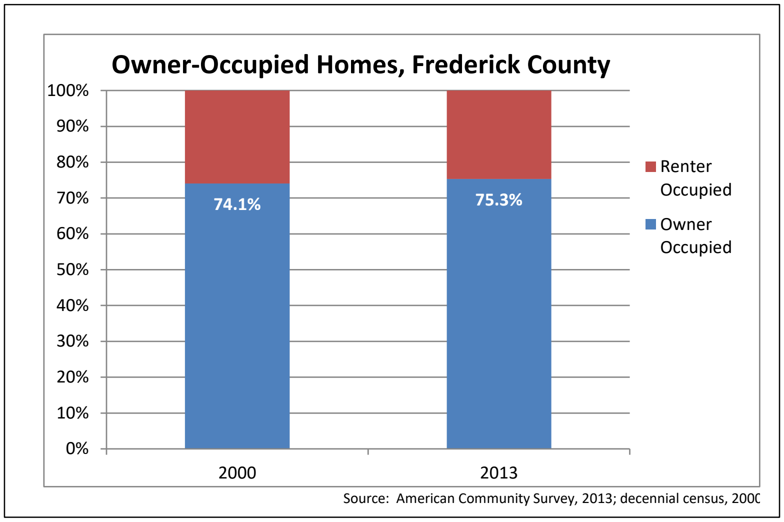
Interstate 270, a 35 mile highway from Bethesda to Frederick, has been one of the hottest growth corridors in Maryland and in fact the entire nation for several decades. The area has seen supercharged economic growth with diverse jobs in science, technology, defense and other government contracting, and the hospitality industry, and is considered to have a good quality of life with strong public services.

Figure 3-2 illustrates population growth in the primary cities and Census Defined Places along I-270 from the 2000 decennial census to the most recent five-year American Community Survey rolling average. Over that period, Frederick County and the city of Frederick had significant growth (18.9 percent and 21.3 percent, respectively). However a sharper boom occurred in Germantown, with astounding growth of 60.6 percent, and the cities of Gaithersburg and Rockville which are located near the midpoint of the I-270 technology corridor and are major job centers. Rockville is also the seat of government for Montgomery County, a county which hit one million in population in 2013 or 2014.

The American Community Survey also compiles occupational information into five broad categories; 44.2 percent of Frederick County residents reported being in management, business, science, and arts occupations, the largest category locally. The second largest occupational category showed 23.6 percent working in sales and office positions.

Figure 3-3 shows a high percentage of Frederick County residents own their home. Fully 75.3 percent of dwelling units were owner-occupied in 2013, according to the American Community Survey, with 24.7 occupied by renters. The owner-occupied percentage increased from 74.1 percent in 2000.

Next, we examine the rate of housing starts as an indicator of local residents' confidence in the economy and their own financial situation. Over 1,750 permits were issued for housing units in the



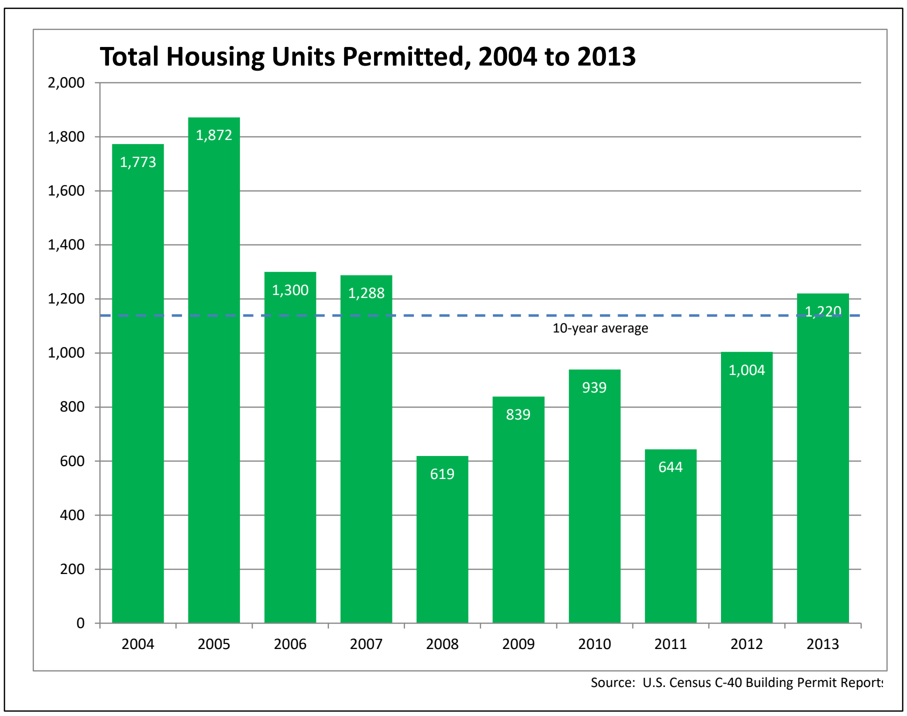


Figure 3-3: Percentage of owner-occupied homes

Figure 3-4: Annual building permits (housing)

Household Income	Frederick County Number	Frederick County %	Maryland Number	Maryland %
Under 15 years	48,190	20.4%	1,112,253	19.1%
15 to 19 years	16,875	7.1%	401,113	6.9%
20 to 24 years	14,051	5.9%	398,106	6.8%
25 to 34 years	28,195	11.9%	783,846	13.4%
35 to 54 years	73,382	31.0%	1,682,233	28.8%
55 to 64 years	28,464	12.0%	718,076	12.3%
65 to 74 years	15,531	6.6%	411,214	7.0%
75 years and over	11,980	5.1%	327,458	5.6%
Total:	236,668	100.0%	5,834,299	100.0%
Median Age:	38.7		38.0	

Figure 3-5: Age cohorts and median age

booming years of 2004 and 2005, before a long trough related to the Great Recession. As with other indicators locally and nationally, it took several years and the upturn has not been even, but finally in 2013 the number of housing starts reached the 10-year average.

Figure 3-5 depicts the age of Frederick County residents compared to the state as a whole. While the proportion of population in each cohort is fairly close to that of the state, Frederick's reputation as a great place to raise a family shows in a slightly higher percentage of children under 15. Maryland has a slightly greater proportion of seniors 65 to 74 and over 74 years in age. In the 35 to 54 age group representing the primary income earning years, Frederick has 31.0 percent of its population and the state is slightly back at 28.8 percent. The median age in Frederick is 38.7 years, slightly higher than the state's median age of 38.0 years.

Virtually all of the indicators evidence a very high quality of life locally, with a resourceful population able to adjust to changing economic conditions. As will be discussed elsewhere, there are indications more residents are turning to self-employment and new business ventures during a period of generalized economic uncertainty. Given the population's high education and occupational skill level, a high proportion in the upper income strata, and a strong representation in the younger to middle age groups where job change tends to be frequent, there are reasons to believe this trend will continue.

Economic Analysis

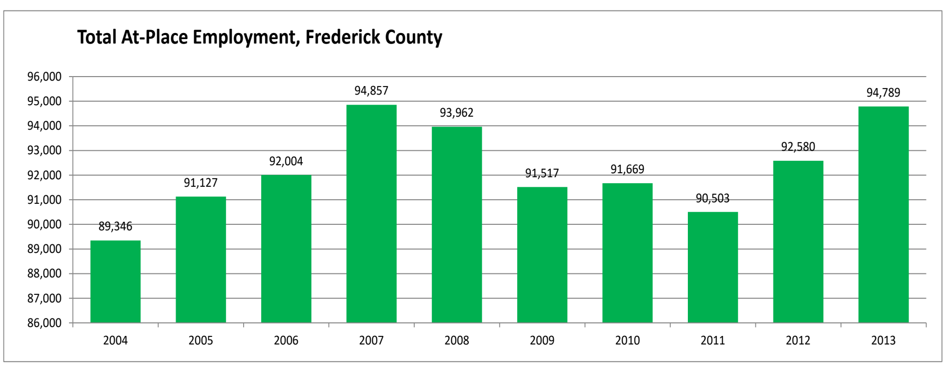
The Frederick-area economy is strong and growing. There is a solid foundation for future success, although careful scrutiny illustrates several issues and imbalances that may eventually hinder prosperity if not corrected. To understand the complete picture this report looks from two distinct perspectives: 1) data related to at-place employment, which illustrates the situation of local workplaces; and 2) employment information on the local workforce which shows the situation of workers whether they work locally or commute outside the county for work. In simple terms, the first information is assembled from employer reports while the second set is compiled from interviewing people about their employment situation. Data is primarily drawn from Frederick County census information to capture a larger sample, although some analysis of the city will be presented. Jobs located within city limits traditionally have represented about half of the total employment base of the county.

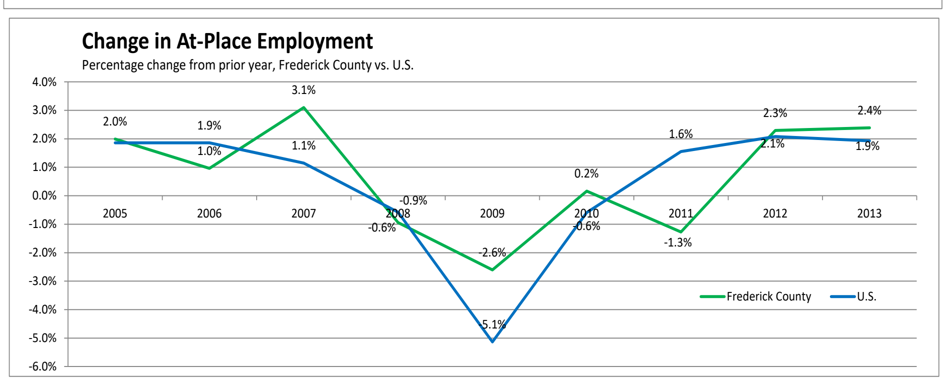
Snapshot of Jobs in the County

Frederick County workplaces employed 94,789 people in 2013, the most recent annual figures in the Quarterly Census of Employment and Wages (QCEW). While the entire country experienced significant job loss in 2008 and 2009, followed by an unusually long period of weak growth, Frederick's job growth of 2.3 percent in 2012 and 2.4 percent in 2013 was strong. While the national recovery has been somewhat more even coming out of the Great Recession, job growth in the county grew a combined 4.7

percent in those two years compared to 4.1 percent nationally. The QCEW data from the federal Bureau of Labor Statistics is collected from employers and sorted by county, state and metropolitan area, and is considered an authoritative picture covering 98% of jobs.

Figure 3-6 shows total at-place employment for Frederick County; Figure 3-7 shows the year-to-year percent change in at-place employment compared to the U.S. As can be expected for any small area the data appears more volatile in certain years. However, Frederick generally weathered the recession better, with its job loss considerably more shallow in 2009 than the nation (2.6 percent loss compared to 5.1 percent nationally). QCEW information also helps to understand the sectors of the economy that fuel the local jobs. The data is gathered by Standard Industrial Classification and grouped into 10 large categories. Frederick County's largest employment sectors are Trade / Transportation / Utilities, with 16,042 jobs; Professional / Business, with 15,005 jobs; Education / Health, with 12,601 jobs; and Leisure / Hospitality, with 10,913 jobs (see figure 3-8).





Source: BLS Quarterly Census of Employment and Wages

Figure 3-6: At-place employment

Figure 3-7: Employment base in Frederick compared to nationally

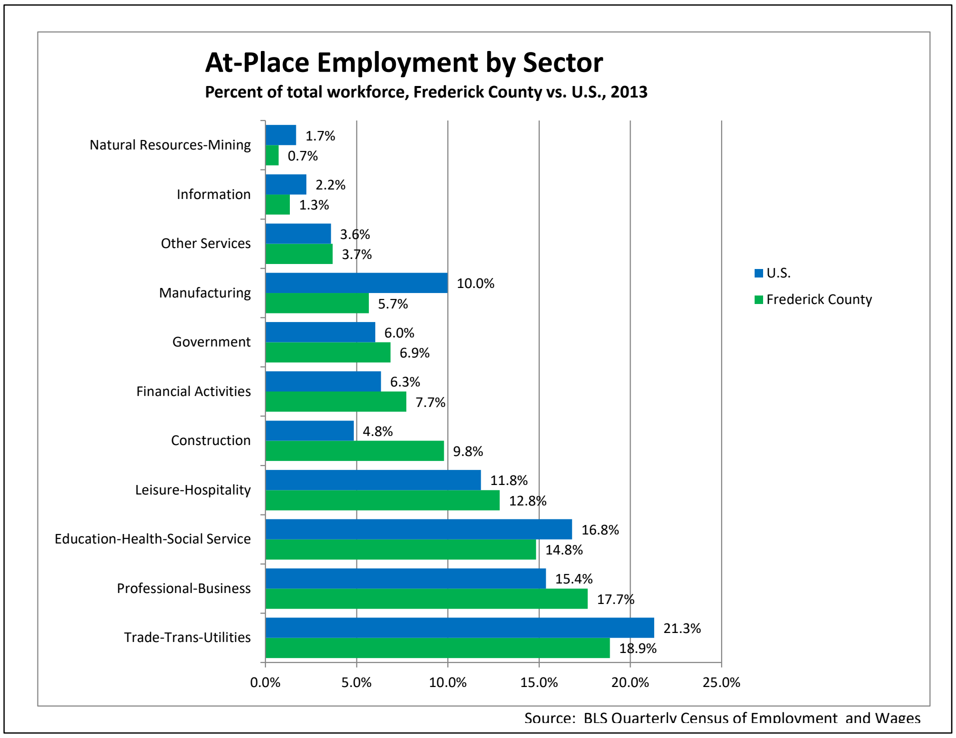


Figure 3-8: At-place employment by sector

What is most notable about the county economy is that it is very balanced. Most breakdowns of a single city or county would tend to show one or two industry sectors that were significantly larger than others. However, Frederick County literally is strongest in the same four super-categories as the national economy. The diversity of the local economy should be viewed as an important strength demonstrating resilience to changing circumstances.

The next two largest categories are construction, with 8,319 local jobs, and financial activities, with 6,564. Federal, state and local government comprises 5,826 jobs, or 6.9 percent of county-located jobs, again comparing closely to the national economy where 6.0 percent of jobs are tied to public administration. Other Maryland localities have benefited from much stronger government employment, with its relative stability and good employment benefits, creating an impression of communities that were relatively "recession proof." However in an era of fiscal austerity, especially at the federal level, these jobs are no longer viewed as beneficially as they once were.

Manufacturing provides a notable point of departure, with jobs in basic industry comprising 5.7 percent of the local economy compared to 10.0 percent nationally.

The next snapshot, as shown in Figure 3-9, takes the same 10 industry categories and examines their growth or decline over the five-year period 2009 to 2013 as derived from QCEW data. Frederick County saw strong growth in Natural Resources / Mining, a relatively small total category which grew 25.3 percent; Leisure / Hospitality, which grew 20.4 percent; and Construction, 7.3 percent growth.

Notable declines occurred in Financial Activities, losing 15.3 percent of jobs, and Information, losing 13.5 percent. While percentages varied substantially, many of the employment categories that grew in the county reflected the kind of jobs that grew nationally.

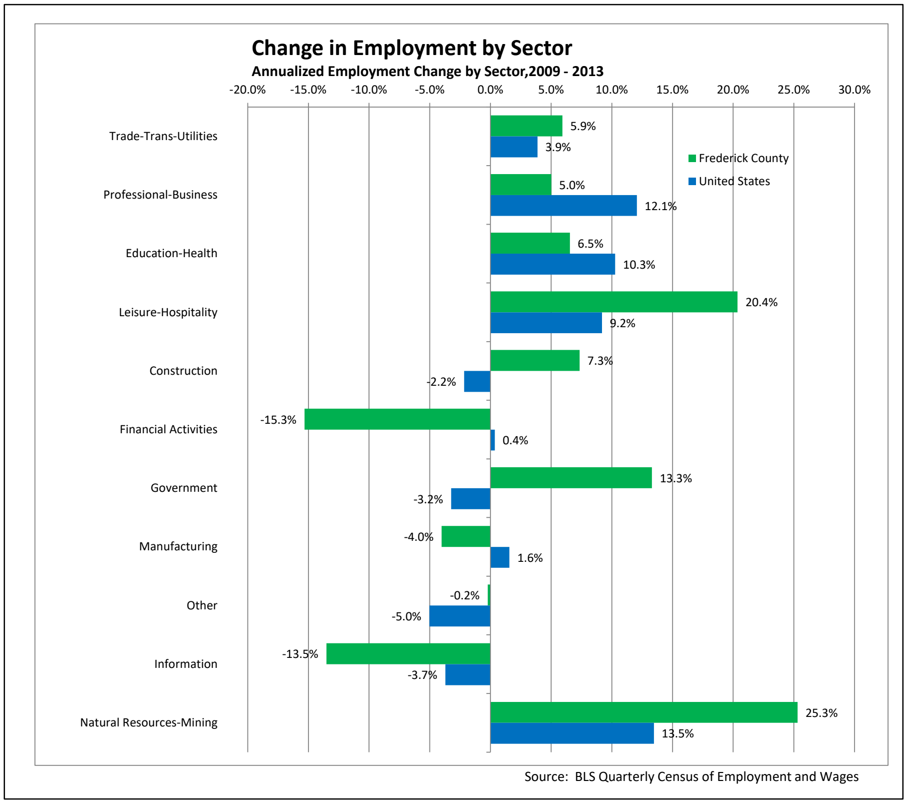


Figure 3-9: Change in employment by sector, Frederick vs. U.S.

An economic study recently commissioned by the city looked the same census and Bureau of Labor Statistics sources but broke the data out by individual census tracts and examined a longer period to illustrate significant trends. Local manufacturing was devastated in the 2002 to 2011 period, falling more than 31 percent county-wide and 48 percent in the City of Frederick. Weakness in manufacturing has been evident for decades nationally; traditionally a source of stable employment with solid wages and a high rate of unionization, manufacturing job loss has damaged the economy as a whole and exacerbated disparities between the wealthiest Americans and everyone else. However, basic industry actually has been a relative bright spot nationally coming out of the recession, with 1.6 percent growth seen from 2009 to 2013.

The city's recent economic study views financial services and insurance employment as important current and potential types of jobs, given the high pay and relative stability of this sector nationally. Viewing the 2002 to 2011 period, the city's jobs in financial activities grew over 60 percent.

A Perspective on Human Capital

While at-place employment illustrates the existing levers of the economy, an analysis of human capital can perhaps provide a deeper understanding of the Frederick area's future potential. The next chart illustrates employment highlights for residents of Frederick County. Based on telephone surveys, the annual estimates are captured over a 10-year period through 2014. The labor force was 127,398 in 2014, with 121,037 individuals employed for an annualized unemployment rate of 5.0 percent. Viewing the 10-year trend, the county unemployment rate is consistently lower than unemployment statewide

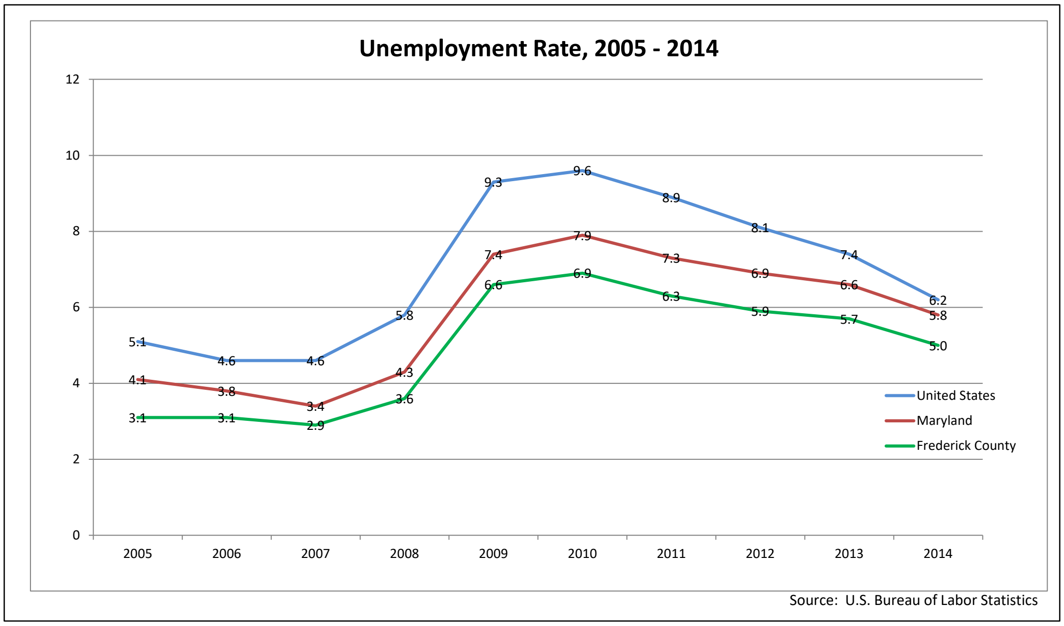


Figure 3-10: Unemployment rate compared to state, U.S.

or nationally. Unemployment peaked at 9.6 percent nationally in 2010, but Maryland reported 7.9 percent unemployment and the county was at 6.9 percent, a full 2.7 percent below the national rate. While the trend-lines narrowed as the economy recovered, unemployment for Frederick County residents in 2014 was still notably lower than Maryland's rate, 5.8 percent, or the national rate of 6.2 percent.

In a highly mobile society, many residents of Frederick County commute to jobs so a profile of the kind of work residents do helps understand the foundation of the local economy. A combined 39.1 percent of workers are in the largest two categories, education / health / social services, or professional / business work. These industries tend to offer solid middle class jobs that have some durability in times of changing fortunes. Then, 15.1 percent work in trade / transportation / utilities, a category that includes some good paying jobs as well as retail jobs which have grown steadily in today's economy but don't tend to pay well or offer the benefits needed to support a family. The remaining 46.0 percent of workers are relatively evenly disbursed across eight other employment categories.

A table of major employers is provided in Figure 3-11. Other sources put employment at Fort Detrick as high as 11,000 employees, with the inclusion of workers employed by federal contractors at the base. Thus, while fewer than half of the employees on the campus are federal employees per se, the impact of the facility and federal government spending in the local economy are very significant.

For decades Fort Detrick has been known primarily for its work on biological warfare agents, developing vaccines and other defenses and decontamination techniques in two dozen separate labs on the campus. Chief among them is the military's main research facility on biological weapons, the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), where microbiologists and other scientists work on anthrax and other deadly agents.

Figure 3-11: Major Employers in Frederick County

Employer	Number of employees	Product / service	Industry
Fort Detrick	4,600	Military installation	Federal government
Frederick Memorial Health System	2,696	Medical services	Health care
Wells Fargo Home Mortgage	1,881	Mortgage services	Finance / insurance
Leidos Biomedical Research	1,836	Medical research	Professional services
Bechtel	1,578	Engineering, construction	Professional services
Frederick Community College	1,055	Higher education	Educational services
State Farm Insurance	900	Insurance	Finance / insurance
Walmart / Sam's Club	700	Consumer goods	Retail trade
AstraZeneca	595	Biopharmaceuticals	Manufacturing
Lonza Walkersville	520	Biological media, cultures	Manufacturing
Hood College	519	Higher education	Educational services
Mount St. Mary's University	511	Higher education	Educational services

Source: Maryland Department of Business and Economic Development. Excludes state and local government employment. Fort Detrick employment does not include employees of on-site contractors.

U.S. work on biological weapons was suspended by President Nixon in 1969. Since then, research has focused entirely on defenses against bioweapons, according to official accounts. Occasional controversies crop up around Fort Detrick and its type of work. In 1998 the military began requiring troops to be inoculated with an anthrax vaccine developed at Fort Detrick. The controversial program, which some soldiers said was unnecessary and dangerous, was temporarily halted in 2004 by a federal court order, but it resumed after further tests showed the vaccine was safe.

The county's workforce development agency lists over 30 contractors at Fort Detrick. Companies at Fort Detrick having a significant presence elsewhere in Metropolitan Washington include SAIC; General Dynamics; Northrop Grumman; Lockheed Martin; Booz Allen Hamilton, and Charles River Laboratories. The federal government's National Cancer Institute recently expanded its operations from Fort Detrick to a new research park on the east side of Frederick.

Coping With Change

While Frederick can certainly take pride in a balanced, healthy economy, macroeconomic dynamics have cooled the pace of growth considerably. The city's October 2014 market study said federal sequestration, following closely after the deepest and longest recession in memory, may continue to tamp down expectations. "Altered federal spending dynamics, smaller allocations of space per worker and competition from (nearby localities in) Northern Virginia and Montgomery County have collectively served to reduce net demand for space (in commercial buildings)," according to the study by the Sage Policy Group commissioned by the city Economic Development Department. The Sage study also observed some employment growth had shifted to Urbana and the Route 85 corridor outside city limits, although still within Frederick County.

Separately, the Metropolitan Washington Council of Governments (MWCOG) predicts future job growth will primarily occur in “denser, mixed-use housing and job centers known as Activity Centers,” according to a May 2014 bulletin. MWCOG, of which Frederick is a member, recommends concentrating job and population growth in Activity Centers to make the best use of existing and planned infrastructure and reduce vehicle-related emissions. Evidence of more dynamic economic conditions can perhaps already be seen in areas that enjoy strong connectivity with the Washington Metrorail system. Office leasing has enjoyed a solid recovery in the large Downtown Washington and Bethesda markets, with vacancy rates around 10 percent, while Frederick County had 21.2 percent vacancy at the end of 2013.

Excessive Reliance on Commuter Jobs

One of the clear problem areas for the local economy is heavy reliance on jobs outside Frederick County, coupled with over-reliance on automobile transportation. To illustrate, this report closely examined the ratio of jobs in the county to dwelling units, a factor known as the jobs / housing ratio.

Most major American cities grew in a “donut” configuration during the booming years after World War II to the 1970s. The cities were job centers, and the suburbs around them tended to become “bedroom communities” where the vast majority of new housing was built. New schools and retail services were located close to the rapidly growing residential areas. The negatives of this form of growth were primarily viewed as “city problems,” as urban neighborhoods were left behind to residents who lacked social mobility and city tax bases suffered. However, similar problems eventually were evident in the suburbs as neighborhoods aged and new growth tended to “hopscotch” even further out. Community design in the suburbs also relied heavily on single-use zoning and the expectation that residents would use their own automobile to reach work, go shopping and conduct most other activities.

The Washington MSA is a case-in-point for how the jobs / housing ratio can help to monitor revitalization of the core city, where a major goal has been to attract new residents, and diversification of the employment base in surrounding suburban areas. The most obvious implication of the jobs / housing ratio is for commuting times; other factors being equal, people can be expected to prefer working close to where they live.

More broadly, new growth should be concentrated in areas that can accommodate a mix of housing, commerce, industry and recreation to maximize the use of existing infrastructure, minimize travel times to and from work, and minimize servicing costs resulting from new growth, according to the American Planning Association. A nationally-recognized affordable housing group uses stronger language, calling jobs versus housing, “an essential benchmark that indicates the degree to which land use planning and regulatory systems are themselves in balance, such that sub-regions can support economic growth within their boundaries.” Encouraging mixed-use developments combining housing and employment opportunities has become policy in many parts of the Washington MSA, and elsewhere, as a means of achieving these broad objectives.

Jobs include all types of employment opportunities including those provided in the retail, industrial, government and private office sectors. A closely-related factor has been to diversify the mix of housing

	Frederick	Montgomery	Howard
At-place employment, 2013	94,789	451,869	159,348
Total all housing units, 2013	92,341	382,254	113,071
Derived Jobs / Housing Ratio	1.0	1.2	1.4

Figure 3-12: Jobs / housing ratio in three large Maryland counties

types, making sure affordable apartments are available for lower-paid service workers and that appropriate housing is available for seniors who no longer can maintain a single-family home.

Fairfax County, Virginia, reviewed recommendations from around the country in a 2012 study and found well-planned metro areas and large counties should have a jobs-housing ratio between 1.3 to 1 and 1.7 to 1. The Metro Washington Council of Governments (MWCOG) recommends a ratio of 1.6 to 1. Frederick County, using 2013 census and QCEW figures, has a jobs / housing ratio of 1.0 to 1 indicating an over-reliance on jobs located outside the county. Nearby Montgomery County, with a ratio of 1.2 to 1, and Howard County, exhibiting a ratio of 1.4 to 1, appear to have done a better job of building a local employment base and growing beyond the "donut pattern" as shown in Figure 3-12. The ratio in Frederick has remained statistically the same since the 2000 decennial census.

The Fairfax study is relevant because that large county in Northern Virginia has grappled with internal imbalances. One area of the county, Tysons, has been a major job center for decades but residential areas have been concentrated elsewhere causing serious gridlock on the roads. The solution in Fairfax has been to use all available planning tools to encourage residential development in Tysons, and utilize the new Metrorail Silver Line to begin radically reshaping Tysons from single-use zoning to a walkable, mixed-use urban design. Transforming Tysons has been a long-term effort and it certainly has not been without controversy. The fact massive change is now underway there, given that Virginia has a relatively weak legal framework for municipal-level community planning, is even more remarkable.

In Frederick, the solution would seem to be one of focusing on local job development to improve the balance between jobs and housing and reduce reliance on jobs outside the county. As the largest Maryland county in area, and the sixth largest in population, the sample size should be sufficient to illustrate a jobs-to-housing ratio that would come closer to the recommendations of MWCOG and others who have analyzed the issues of achieving balanced, resilient local economies. A variety of approaches, with close collaboration between government and developers, should be considered with the goal of making Frederick a stronger regional economic center of its own.

Transportation as Weathervane of Change

Interstate 270 was constructed to replace a two-lane highway in the 1960s to the southeast of Frederick and has helped to fuel remarkable growth ever since. Frederick has increasingly taken the role of bedroom community, as residents "moved outward" for lower cost housing and a high quality of life while holding jobs in Montgomery County and even the nation's capital beyond.

Change is coming, however, driven in large part by vigorous efforts to manage growth and environmental impacts led by Maryland's largest county, by state government, and by Washington, D.C. With a remarkable level of new development activity already underway, strongly supported and guided by policymakers, Montgomery County and Washington are directing new growth to compact mixed-use districts, while encouraging the use of transit instead of private automobiles. As Frederick's far larger neighbors to the south develop and redevelop at a higher density, fostering population and economic growth that reverses the longstanding pattern of flight ever further into the suburbs, the city faces a choice. Ultimately, rather than waiting for these forces to ripple unpredictably outwards, the city and surrounding county must act proactively to achieve greater economic self-sufficiency.

The development site was basically farm land on a two-lane road until recently. With the city and county's successful effort to complete Monocacy Blvd. over the last 15 years, excellent connections are now available to major economic centers. Fifty miles to the east along I-70 is Baltimore, while the nation's capital is a similar distance to the southeast along I-270. I-270 transects Montgomery County, which has grown to a million residents and emerged as a major economic engine for the entire state. The section of I-270 through Montgomery County has long been identified with cutting edge scientific and technological development, yielding high-paying, relatively steady job opportunities.

Gaithersburg, Rockville and Bethesda continue to spawn employment growth for the region with tens of thousands of high-paying jobs in the sciences, biomedical research and development, hospitality and federal government contracting. The heart of this job growth is about 28 miles from Frederick in the vicinity of the I-270 interchange with the recently-built Intercounty Connector. Bethesda is further south along the interstate network, as are downtown Washington and Northern Virginia which continue to be recognized nationally for multifaceted economic growth and technological innovation.

Frederick has two stations for the state's MARC commuter rail system, with three daily trains taking passengers to seven Montgomery County locations and to Union Station in Washington. Frederick's daily MARC ridership is about 325 to 375 passengers from the two stations.

Together with major state / federal road improvements such as new interchanges at I-70 to the south and limited access highway U.S. 15 on the north end of the city, Monocacy Blvd. at the site will form a high volume eastern artery around downtown and greatly enhance prospects for residential and commercial development. The eastern edge of the city, traditionally devoted to agriculture and light industry, appears to be transforming rapidly toward an attractive residential area with some retail. City priorities have identified East Frederick as a zone in which to grow new employment opportunities and this project analyzes how the airport site can meet that community goal.

While at first glance the transportation network looks solid, there are significant challenges. The city's growth has primarily been driven by its proximity to booming Montgomery County. With good jobs in Montgomery, many have chosen to reside in Frederick for its lower cost of housing and high quality of life. Similarly, much commercial office and light industrial growth over the years has been driven by executives seeking lower leasing rates while still enjoying good access to the regional economic centers such as Gaithersburg, Rockville, Bethesda, Washington, D.C., and Baltimore.

Figure 3-13: Inter-governmental efforts to improve commuter connections include more MARC trains and more commuter buses on I-270

Unfortunately the private automobile has remained the primary mode of travel and the commuting pattern has remained one primarily driven by residents going “in” to Montgomery in the morning and returning home in the evening.

Fully 76.7 percent of Frederick County workers reported “driving alone” as their primary means of transportation to work in the most recent American Community Survey by the U.S. Census. Significant traffic jams currently occur virtually every work day on I-270, and over time, it is anticipated road capacity constraints will make the situation worse for Frederick commuters. While hundreds of workers ride an increasingly popular commuter bus route from Frederick to Montgomery County, the buses are affected by the same traffic delays on the interstate system.

A 2013 “Maryland Mobility Report” from the State Highway Administration identified a segment of I-270 south between Frederick and Germantown as the fifth most congested segment of highway statewide in the morning rush. A discussion of the worst “bottlenecks” based on the number and duration of incidents causing speed reductions listed I-270 northbound at Maryland Route 80 in Frederick County as second worst in the state; I-270 north at I-70 in the city was also among the top ten bottlenecks.

While I-270 is a “mega highway” with up to 12 lanes in the Gaithersburg-Rockville-Bethesda section, it narrows quickly to two lanes in each direction for almost 20 miles between Germantown and Frederick. Montgomery County, beginning in the 1980s, set aside a 93,000 acre agricultural and natural resource preservation area along its border with Frederick County and encompassing this corridor west to the Potomac River. Montgomery views its agricultural reserve, encompassing almost a third of its area, as an important tool to prevent suburban sprawl and direct growth to existing developed areas. Powerful planning and zoning tools have been adopted to enforce that concept.

While it may be premature to say I-270 will never be expanded along this stretch, there are politically active, mainstream constituencies in Montgomery in favor of limiting suburban sprawl.

This point deserves some additional perspective to understand what Frederick commuters face. The Washington area consistently ranks among the top five worst metropolitan areas in the nation for highway congestion. That is one major factor behind Frederick's larger neighbors to the south investing vast public resources and political effort to restructure the style of development to reduce reliance on the use of cars in residents' daily commute. Washington and Montgomery County, and to a lesser degree Prince Georges County, have concluded that in order to grow and prosper they simply must pursue a dramatically different urban design and lay aside the habits of the past 50+ years of transportation policy. While they continue directing transportation funding to repairing and improving roads, new roads or additional lanes are basically off the table in favor of investment in mass transit.

Approaches to mass transit have also evolved quickly in Washington and its inner suburbs, with highly successful models to adapt from elsewhere in the U.S., Europe and Japan. While the Metrorail system continues to be built-out, with the nation's capital at its center and arterials such as the Red Line, the Blue Line, the Green Line and the new Silver Line reaching the most rapidly growing inner suburbs, new approaches will utilize less expensive surface transportation that can be more quickly deployed.

Most significantly for Frederick, Montgomery County is studying its so-called Corridor Cities Transit Network (CCT). The CCT would connect the Shady Grove Metrorail station in northern Rockville with nodes in Rockville, Gaithersburg and Germantown where some of the county's most rapidly growing residential and employment activity is focused.

The CCT is based on the concept of "bus rapid transit," an express bus system with special lanes and traffic signaling adaptations to give the buses priority over auto traffic. Suffice to say change is underway with every indication it will continue despite a constrained state and local fiscal environment. Frederick, with less than one-fourth the population of Montgomery, must adapt to this remarkable change in priorities which deemphasizes the superhighway system.

Within the state government, several decades of experimentation with environmental policies and growth management incentives coalesced in the late 1990s with a package of "Smart Growth" legislation. Ron Young, former Frederick mayor and current state senator, was a primary driver within then-Gov. Parris Glendening's circle and the state's efforts to redefine growth policy have drawn national attention.

One of the primary tools for encouraging Smart Growth, was the establishment of "priority funding areas." Development outside the priority funding areas is discouraged and the policy is backed up by the strong medicine that state funding for a given project cannot occur without a waiver.

Transportation officials for the state spent about $18.6 million to study widening I-270, and made projections that peak daily traffic would increase from 235,700 in 2010 to 267,400 in 2030. The study was justified by "poor levels of traffic service" and the likelihood traffic would "continue to deteriorate," according to a 2010 state document. However, the 2014 six-year state Transportation Department capital improvement budget shows no further expenditures for the "I-270 multimodal corridor study," saying "project planning (is) on hold, proceeding with transit options in corridor first."

In terms of transit, the same six-year plan from the state budgets for a comprehensive review of the Metrorail, MARC train, commuter bus and local bus networks in central Maryland. Funding is allocated for a “MARC Growth and Investment Plan” that would improve service and increase ridership. Transit advocates have urged full funding for the MGIP, with the long-term goal of all-day MARC service and trains every half-hour from Frederick during rush hour.

The transit goals are ambitious, and one limitation is that job centers in Montgomery are still widely dispersed rather than clustered at transit centers. That is gradually changing, and stronger MARC and commuter bus connectivity from Frederick to the high-growth Activity Centers in Montgomery and Washington, DC, appears to have political support.

Section Four:

Project Description

Master Plan

With the assistance of the architectural team, a master plan for the 32-acre site adjacent to Frederick Municipal Airport has been detailed. The Keystone Business Development Center will be a 50,000 square foot, Class A office building fronting on a pedestrian plaza at the center of the site. The Keystone Center is intended to meet community goals by stimulating entrepreneurship while giving larger businesses flexible lease terms to encourage then to "sample" Frederick as a location for new ventures. A portion of the space will be designed as a "coworking" space, a place for freelancers, telecommuters and start-ups to rent desk space while enjoying access to office services.

The master plan is designed to locate retail and employment uses in proximity, creating a "town center" ambience from the beginning while allowing space for future expansion elsewhere on the parcel. As in other complex real estate deals, the first step will be to receive approval of the master plan in a process that is subject to public review. The steps in Frederick are discussed in the earlier chapter on Market and Planning Context.

While the "rules of engagement" differ from city to city, any new real estate project will be most successful in the community review process if it draws from the architectural cues of its surroundings while meeting the goals for its location that are part of the approved master plans of the locality. The major relationships the new master plan attempts to establish are as follows, with several of these influenced by the expected Renn Farm residential community on the west side of Monocacy Blvd. with over 1,000 units of workforce housing and some retail.

- Retail and an attractive public plaza will be placed along Monocacy Blvd. to complement the activity center of the Renn Farm development.
- The two projects will intersect Monocacy Blvd. at the same location, with a traffic light, traffic calming, and crossing lights and markings that make it safe and pleasant for pedestrians to cross the boulevard from one development to the other.
- A bus stop will be established at this intersection, facilitating a short ride to and from the MARC station downtown and fast-growing residential communities to the northeast of downtown Frederick.
- A new central street of the Renn Farm project will greatly shorten the distance for pedestrians and bicyclists from the airport parcel to downtown and the MARC station, reducing it to just over a mile.
- The Keystone Business Development Center will be located on the public plaza.
- Located adjacent to the existing Hartz Business Center to the south, the new development will hopefully induce higher occupancy of that site and include direct pedestrian connections between the two sites.
- A row of trees that provides a buffer to the existing Altec light industrial site will be maintained and improved for visual buffer.
- A new light industrial project will be situated to the rear of the 32 acre parcel, adjacent to the airport and with its vehicle traffic coming from that side of the parcel rather than through the retail plaza.
- The master plan works with the existing land contours by using a hill in the middle of the parcel to reduce noise at the public plaza near Monocacy Blvd. from the primary airport runway.

The most important community planning goal relevant to this project is to maintain and grow a large area of employment uses to the east of downtown Frederick. The recent East Frederick Rising Vision Plan, expected to become the core of a formal small area plan by city government, established job creation as the first of four planning principles. East Frederick is slated to become a “Regional Hub for Economic Growth,” according to the vision document.

“It is the primary tenet of this plan to support job creation in the East Frederick area and to support the light industrial base for the city,” the plan stated, with these employment uses eventually becoming “urban, mixed use elements within the overall fabric of the community.” Carefully planned development and redevelopment of the large area to the east of downtown is considered to be a vital next step to complement the dramatic revitalization that has occurred in the historic downtown in recent decades. With downtown largely consisting of historic buildings and small blocks dating back literally centuries, one beneficial facet of East Frederick is the ability to build larger, more modern and energy-efficient structures. The development timeline for a greenfield site or a suburban retrofit can also be faster and more predictable than an infill or redevelopment in the historical downtown.

Another important aspect of the master plan is that a portion of the site will be reserved for future “phase 2” development. While the office building will introduce new, Class A space in a great location

Figure 4-1: While a grid pattern is built early, development is phased in as economic conditions allow

convenient to downtown, the size has been kept modest in keeping with conservative estimates of upcoming demand by office tenants in the Frederick market. But if the business incubator model works well, some tenants could grow their businesses and be in a position to seek expansion space.

More likely, established corporate tenants will rent special project space in the proposed office building to get a "foot on the ground" in Frederick, attracted by the availability of shorter lease terms; smaller spaces if desired; and ready-to-occupy, partially-furnished spaces. Some of these tenants would potentially expand at some future date if they find the location and available workforce are propelling new growth. The master plan includes space for two additional office buildings, which could be much larger than this proposal by building to three, four or five levels.

Establishing good internal connectivity will be an emphasis for the master plan, and will be detailed further as the project moves forward through the public approval process into an actual site plan. The city's design guidelines for mixed employment districts call for "a pedestrian-friendly environment," with a "comprehensive non-vehicular circulation network (linking internal) commercial and employment areas, as well as open spaces, public facilities and recreation areas." New master planned commercial projects such as this in Frederick are also strongly encouraged to establish walkability to nearby residential communities, while also facilitating the use of existing or planned mass transit.

The city's design guidelines are intended to have some flexibility, and they certainly imply additional complexity compared to a plain suburban-style office building developed with a single-use zoning approach. However, the office building and small retail center proposed for the airport area parcel will also directly benefit by using contemporary urban design principles to create an attractive new location for office tenants and shoppers. While the new and existing industrial uses are kept less conspicuous, these workers will also be in close proximity to areas for shopping and relaxing after work.

Designing for enjoyable public areas will encourage office workers to visit the outdoor spaces, mingle, grab coffee, meet a colleague for lunch or pick up something to take home for dinner. The proposed bus stop and complete crossing system to Renn Farm will improve accessibility between residential, shopping and job locations. The project will strive for design excellence, building enhanced public spaces as cost-effectively as possible while knowing that proximity to restaurants, services and public plazas are the kind of amenities that are increasingly necessary to differentiate the best Class A office space from other offerings available in the market.

Architectural Design

The guiding principle of appealing but cost-effective design and construction is also incorporated into the building itself. It will be a 50,000 square foot brick structure built on two levels with elevator service. The retail and office structures are designed to have similar "massing" near the central plaza and Monocacy Blvd., with retail facades about 25 to 30 feet high and the office building about 35. With parking primarily arranged in small lots to the side and rear of the buildings, the structures will provide a reasonable feeling of spaciousness while having a comforting sense of containment that encourages shoppers and workers to stop, talk with someone, and eat outside without disruption from road traffic. This "front door" portion of the site will be visually enhanced by the close proximity to retail and new homes in the Renn Farm development, while also enjoying pleasant views of the mountains to the west and north of Frederick. The existing and planned light industrial buildings will be partially hidden from view but close enough to add foot traffic and a sense of "all day activity."

On the exterior the building will have brick and complementary masonry elements as the cladding on concrete masonry unit (CMU) backing, which classifies as Type III construction. Type III construction with a sprinkler system reduces some interior construction complexities compared to wood-framed

Figure 4-2: Classic masonry construction, adapted to a modern aesthetic

construction, while meeting the fire safety standards of today's International Building Code. The first level will be slab-on-grade, while the second level will be wood truss with Gypcrete flooring substrate to reduce sound transmission and establish the necessary fire rating between levels.

In estimating construction costs for various building types in the market, the author was able to identify a brick construction "town hall" as a good comparison in typology. A town hall is typically built to achieve a 50-year lifespan, and office spaces are fully fitted-out which matches the project goals of the Keystone Center. By contrast, many office buildings are constructed as a "heated shell," with the intention of "building to suit" once a tenant is identified.

Sustainability features will include geothermal heating / cooling, a highly efficient type of system which is expensive to retrofit but very cost-effective when building from ground-up and viewing costs over the project's full lifecycle. The overall building features will qualify the Keystone Center as LEED Gold level. Most important among the sustainability features are those associated with a well-designed master plan that places jobs close to housing and retail, with numerous features to encourage walking. The new town center will feature a bus stop in anticipation the city will create or revise existing bus routes provide easy connection to downtown Frederick, little over a mile away. The master plan will also allow for shared parking between the office area, which is primarily used during the work day, and adjacent retail which is primarily populated in the evening and on weekends.

As will be detailed in the next chapter, the market has been analyzed carefully and the Keystone Center will enjoy several comparative advantages attributable to updated community design and architecture. Prominent among these features:

1) At 50,000 square feet, the building will be slightly larger than the market average, with significantly larger contiguous space than is typically found in the market. This would be attractive to a large anchor tenant or several medium sized, established businesses.
2) Locations close to downtown are drawing premium rents, and the new office will be able to capitalize on this. Tenants and workers will enjoy proximity to the MARC station; a planned convention center on the east edge of downtown; and government, educational and legal activities that are concentrated in the bustling downtown.
3) The vocational campus of Frederick Community College is very close, and the city can be expected to continue emphasizing workforce development in the East Frederick Rising employment district. It will be easy for employers to link with job development activities and for workers to connect with professional development offerings.

One major indicator in the market stands out, and this project is responsive to it. Elsewhere in the Washington metro area a sea change is happening, with white collar employment moving away from large, free-standing, 1970s-style suburban office parks surrounded by vast parking lots. Office rents and vacancy recovered rapidly in downtown Washington after the recession, despite a longstanding damper on federal spending that still continues. The city's population is growing steadily after decades of decline, with young college-educated professionals attracted to the city's nightlife, cultural offerings and the opportunity to live close to diverse job opportunities in the nation's capital.

In the largest suburban markets, Tysons in Virginia and Rockville, Md., developers, corporate employers and government leaders are responding to demographic cues by moving as rapidly as possible to embrace walkable, transit-oriented development with jobs, retail and housing together in attractive new multiple-use communities. The large millennial generation is far less likely to drive compared to their parents, and wants to have a workplace close to services, lunch spots and fun places to drop-in after hours with a colleague. Many older adults are also embracing this new urban lifestyle, especially if they are single or no longer have children living at home.

At the same time, successful employers in the New Economy must expand and contract more nimbly, identifying new markets to meet changing conditions. Younger people becoming established in the workforce are far more likely to freelance, consider starting their own businesses, and seek collaborative work relationships with educated professionals like themselves. Employers of all types are responding to workers' requests for more a flexible workplace including the possibility of telecommuting.

The master-planned site including the Keystone Business Development Center, adjacent retail and light industrial space in a location convenient to workforce housing and downtown Frederick will be designed to capitalize on these significant trends in the workplace and the professional services economy.

Allocation of Office Space

Among the many surprises from the new generation is the emergence of "coworking." Coworking is a style of work that involves a shared working environment, attractive to professionals who work from home, independent contractors, entrepreneurs, or those who travel frequently. The most successful coworking locations have been where many of the participants share professional ties, such as involvement in software development, new media production, or other emerging occupations and technologies. Members find the creative process is stimulated, with enthusiasm and synergies occurring from working in a conducive, collaborative environment with networking events and shared meeting and working spaces. In some cases coworking centers have a business consultant available to provide technical assistance with incorporation, developing a business plan, and other rungs on the ladder to mobilize from freelancing individual to established small business.

A 2011 survey found most coworkers are currently in their late twenties to late thirties, with an average age of 34 years. Four in five coworkers started their career with a university education, and the majority of coworkers work in creative industries or new media. While slightly more than half of all coworkers are freelancers, the share intending to incorporate a small business or who are salaried employees with a larger company based elsewhere appears to be growing steadily.

The Keystone Business Development Center will devote 8,000 square feet on the ground level to a furnished, ready to use coworking space. The coworking space will include a daytime receptionist,

Figure 4-3: Coworking spaces vary widely, from open tables in older Class C buildings to amenity-filled spaces, including semi-private desks

printing, photocopying and scanning equipment, and a server with available capacity. A conference room and video conferencing will be available on the same level, and an independently-run coffee shop / deli will help to create a sense of connection and community among members. Some services including telephone and broadband internet access will be free to members while other services will carry a fee. Workspace will consist of open work tables with slightly more contained, lockable cubicles available for an upgraded membership level.

Corporate tenants will be able to lease a contiguous space of about 11,000 square feet on the first level with a separate entrance. The second level will comprise leasable space of 21,250 square feet which can be leased by a single "anchor" tenant. The large, contiguous spaces will be marketed to anchor tenants. However the programming is also intended to allow for the interior space to be built-out in furnished office modules starting at about 1,800 square feet, with central cubicle-style floor space depending on the results of preleasing activity. Anchor tenants would have access to meeting space without additional charge but would have a menu of additional-fee services comparable to the coworking space.

Marketing the Space

At root, the Keystone Center programming is intended to create a profitable office building that is responsive to changes in the office leasing environment and has the flexibility to adapt to future trends. With smaller, furnished suites available, and shorter-than-typical lease terms the building will have a lower barrier to entry for established businesses looking for project space or a telecommuting hub for valued employees who live or want to live in Frederick. While allowing existing businesses to "think small," the center will encourage freelancers to "think large" by renting at a great location where they can establish stronger professional associations and potentially incorporate as small businesses with better growth potential. Properly administered and with creative marketing, the business center can also create a healthy symbiotic relationship between established businesses interested in new growth, and talented individuals who have tended to stay away from the traditional employment relationship.

While coworking works best when there is a loose-but- intentional career relationship among members, a certain level of staffing is also necessary. The Keystone Center will have a receptionist and clerical services provider as staff during the business day. This staff person will be the link between members and a set of free and paid services, providing some of the structure of an office that telecommuters or freelancers miss working from home. The paid services will cover the receptionist's salary and provide a modest additional income stream for property operations.

Basic level membership includes access to the open floor work space, a mailing address, and use of phones and high-speed internet / wi-fi. The coworking space will have robust, managed IT infrastructure and members will have free access to storage space. Members will also have access, for additional fees, to services such as:

- Locking, cubicle-style desks for those who desire a slightly quieter work environment;
- Photocopying, printing, color printing, scanning, and special document services;
- Use of meeting rooms / training rooms / audio conferencing; and
- Video conferencing.

Basic membership will require a three-month commitment, which then continues month-to-month. Tenants in the remainder of the building will be able to obtain services on a similar fee schedule, but will have to pay for server space or rack space in a data closet.

The Keystone Center will try to foster the kind of semi-formal professional networking that distinguishes the most successful coworking spaces in other cities. Members will be encouraged to establish a sense of community with lively professional interaction. To maintain and enhance these types of connections the center will hold occasional networking events, meet-ups, and short topical workshops. The coffee shop / deli will act as an informal drop-in spot for everyday interaction.

Ideally the coworking space would be able to work with city or county economic development officials, or the non-profit sector to have a business development specialist on site. Working independently, the business development specialist would provide basic consulting for free while providing low-cost consulting for more complex projects such as incorporating, devising a marketing plan, or seeking grants or venture capital.

Initial lease-up will involve conventional marketing to identify established businesses seeking project space, and less formal surveying and outreach to build interest and identify potential communities of interest among the self-employed. One channel of outreach could be to the extensive group of contractors at Fort Detrick, many of which have ties to businesses elsewhere in Metropolitan Washington. The Keystone Center would allow them to conduct activity unrelated to the military research and development occurring at Fort Detrick.

The county's workforce development agency lists over 30 contractors at Fort Detrick, including at least six having a major footprint elsewhere in the metropolitan region. A branch of the National Institutes of Health recently opened a new research center on the east side of Frederick, indicating the potential for organizations with ties to Fort Detrick to expand into new work in Frederick.

Another reference point for establishing, leasing and operating the Keystone Center is the Frederick Innovative Technology Center (FITCI). While FITCI focuses on a separate sector of the economy, laboratory research and development in biotechnology, it makes the list among the most successful technology incubators among 20 that coordinate their activity with state government. The ripple effect of FITCI is notable, with an estimated 68,000 square feet of lab and flex space currently leased by entrepreneurs and small businesses that started at the technology incubator.

A City of Entrepreneurs

Frederick is increasingly a city of entrepreneurs. The Keystone Business Development Center will tap into the power of entrepreneurship, creating an environment where freelancers can collaborate, explore channels to expand, and rub elbows with corporations that are testing the Frederick area for possible expansion. In addition to looking at the facts and numbers of the Frederick economy, this feasibility study looks at the "stories" of small and mid-sized businesses in the city. These anecdotes shed light on the industry trends that are shaping the workplace of the new economy, and give a glimpse of the kind of "change makers" that can influence the city's future.

Wycliffe Enterprises

Wycliffe Enterprises was founded in 2004, and has grown to employ about 15 employees in two Frederick locations. The company provides a wide variety of engineering, consulting, design / build, and project management services for commercial electrical, heating / cooling, fire safety and building automation systems. Headed by Barbara Wycliffe, the company is a Maryland-certified woman-owned business enterprise, and holds a variety of similar certifications that give it an advantage in bidding for work with federal agencies, Metrorail, and other large institutional facilities owners and managers.

The principals of the company have 33 years of experience in commercial construction, and annual revenue is estimated in the $2.5 to $5 million range. The company is a member of the U.S. Green Building Council which maintains the well-known LEED standards for sustainable commercial construction. The company's primary services make it an important player in building energy management, an indispensable qualification in today's environment of unpredictable energy costs and significantly stricter building performance standards in the federal sector. Wycliffe Enterprises represents the kind of Frederick small business that is positioned to grow by being at the leading edge of technological developments in the economy.

Luminal, Inc.

The new frontiers for technology in Maryland include developing systems for a range of IT managers to fight cyber-crime. In 2014, Frederick got on the map when startup Luminal, Inc., announced that it would make Frederick its home with support from a range of grants and venture capital. Luminal received a $600,000 investment from the state as part of the governor's InvestMaryland initiative and has raised over $12 million total in startup funding to date.

Luminal started in 2012 and develops software that simplifies operations and improves security in cloud computing. Maryland's governor said the Luminal investment is a good example of the state's larger efforts to boost the cybersecurity business scene in the Maryland economy. The $600,000 investment from the state will be used for research and development, CEO Josh Stella said. Luminal is in the early stages of developing a product called Fugue. Luminal hired several engineers to develop the product and bring it to market, and is currently beta testing its software with a small group of companies. "The current model for computing is broken, and bad actors are racing far ahead of available defenses," said Luminal CEO Stella. "We're taking advantage of the nature of cloud computing to deliver native security, declarative control, and operational simplicity previously unattainable."

The greater Washington area has been courting cybersecurity investment, with a recent pickup in activity after the Heartbleed Bug was found. For several years the market for cybersecurity professionals, both in government and in the private sector, has grown by leaps and bounds.

Maryland's investment was big help for Luminal, which just closed a $3.8 million round of investment for its next stage of growth. The company also applied for Cybersecurity Investment Incentive Tax Credit and won the May 2014 grand prize in the InvestMaryland Challenge. Luminal is a perfect example of the "innovation economy" the greater Washington area has become known for, and illustrates the potential for cutting edge businesses to take Frederick in new directions.

Medimmune

Frederick, like other American cities great and small, has seen its share of heartbreaks in the manufacturing sector. However, Gaithersburg-based MedImmune has invested heavily in Frederick and now employs hundreds in biopharmaceutical research and production.

The company commissioned a manufacturing facility in Frederick 1998, dramatically expanded it in 2009, and last fall announced it is investing $200 million to increase production, potentially adding another 300 jobs to a facility that currently employs almost 600. It has over 500,000 square feet of total manufacturing space in two separate buildings, and is listed by the state as the ninth largest employer in Frederick County.

MedImmune produces Synagis, a treatment for respiratory viruses in infants, and FluMist, an intranasal vaccine for influenza which can be taken by toddlers age 2 to adults. MedImmune has won major federal contracts to develop and update its products, for example during the recent Swine Flu scare. The company was purchased by British pharmaceutical giant AstraZeneca in 2007, and now accounts for half of that company list of potential new products with promising developments toward new cancer treatments, asthma drugs and obesity medications.

Notably, its current growth strategy is to establish research and development relationships with various governmental and educational institutions, working on a broader level to identify new medical treatments. Richard Bendis, leader of a Rockville innovation center that helps train entrepreneurs and incubate biotechnology startups statewide, refers to MedImmune as a vital “anchor partner” whose presence is helping make the I-270 corridor one of the nation’s leading places for life sciences research and development.

The MedImmune story illustrates how Frederick, close to nationally recognized technology hubs in Maryland and Northern Virginia, can continue to link a talented local workforce to business expansions and offshoot entrepreneurial opportunities.

Section Five: Financing the Center

Office Market Dynamics

The office market in Frederick County was knocked off its feet by the Great Recession and the recovery has come slowly. Developers responded by sharply curtailing new projects, reducing rents and offering larger concessions and tenant build-out allowances. An October 2014 market study commissioned by the city and conducted by Sage Policy Group analyzed trends and offered recommendations for improving the commercial real estate market.

Vacancy increased from a healthy 12 percent in 2006 to almost 30 percent in 2013 before declining to 15 - 20 percent currently. Rents for Class A office space trended lower along with older stock but have been quicker to stabilize, and top notch space is now commanding $24-per-square foot or slightly higher on a full service basis. Because of the small sample size of Class A stock, and because a portion of it is fully leased different sources show a slightly different premium over Class BC. In the Suburban Maryland market as a whole the premium is about $2 / SF, representing a rough proxy for the actual situation in Frederick. But the local market also includes a significant amount of unusual space in historic buildings or converted homes that may rent for a significantly lower rate because it is difficult for most businesses to adapt the space to their use.

There is evidence that those able to obtain financing and develop attractive new product will gradually garner tenants from older office stock and leave some of it obsolete. Reis, Inc., analysis shows that 4.0% of office buildings were built after 2009, and that these owners report being fully leased. Much of the market county-wide was built in the 1960s and 1970s and lacks the proximity to lunch spots and

			Property Data				Leasing Data			
			Year Built	Levels	Asset Class	Property Size (SF)	Vacancy Rate	Asking Rent (SF)	Lease Type	Comment
1	Monocacy Cannery, 150 S East St 21701		2015	3	A	30,000	N/A	$24.00	NNN	Initial Lease-up
2	Creekside, 50 Citizen Way 21701		2007	6	A	90,000	8.9%	$20.00	NNN	
3	64 Thomas Johnson Dr 21702		1999	3	A	60,000	30.0%	$17.00	NNN	Non-taxed public building
4	KeyPark Ctr, 1050 Key Parkway 21702		2007	2	A	27,878	12.0%	$17.00	NNN	
5	Patrick Center, 30 W Patrick St 21701		1987	6	A	66,269	23.9%	$22.11	NNN	
6	West Park, 10 N. Jefferson St. 21701		1990	4	A	28,950	33.0%	$22.24	NNN	
7	Westview 100, 5300 Westview Dr 21702		1990	1	A	11,000	9.3%	$17.34	NNN	
8	Westview 300, 5300 Westview Dr 21702		1990	1	A	10,000	10.1%	$17.44	NNN	
9	F&M Bank, 110 Thomas Johnson 21702		1987	4	A	122,491	9.8%	$22.62	NNN	
10	Glass Factory, 421 East 4th St 21701		1995	3	BC	40,000	2.4%	$18.00	NNN	Rehab of historic building
11	Fairview Center, 1003 W 7th St 21701		1988	5	BC	52,218	14.0%	$20.65	NNN	
12	198 Thomas Johnson 21701		1977	2	BC	54,200	13.6%	$19.00	NNN	
13	201 Thomas Johnson 21701		1977	2	BC	29,000	5.1%	$21.77	NNN	
14	411 Aviation Way, 21701		1982	2	BC	41,972	42.8%	$20.50	NNN	
15	N. Amber 1, 67 Thomas Johnson 21702		1989	1	BC	25,320	0.0%	$20.04	NNN	
16	N. Amber 2, 92 Thomas Johnson 21702		1988	2	BC	50,000	39.4%	$21.91	NNN	
17	Liberty Ctr., 194 Thomas Johnson 21702		1988	1	BC	25,000	0.0%	$24.58	NNN	
	Average, Class A:		1997			49,621	17.1%	$19.97		
	Average, all:		1992			44,959	15.9%	$20.36		

Figure 5-1: Comparable office properties within 1.5 miles of downtown

interesting public spaces, factors which are now considered important amenities to attract and retain the large Millennial generation entering the workforce.

The Reis data shows the median distance to a highway is also 9.7 miles, illustrating the significant number of office buildings built in far-flung office parks before the rebirth of Frederick's downtown. As has begun to occur elsewhere in the greater Washington area in a generally soft climate for office space, it is possible that some older office buildings will be converted to multifamily housing and go off the office market entirely.

Figure 5-1 shows 17 comparable properties advertising space to lease, including their age, size, vacancy and asking rent. The properties representing 764,000 total inventory are all within 1.5 miles of downtown, and include nine Class A properties and eight considered Class BC. Apparently the proximity to the thriving downtown area of Frederick is elevating all of these properties compared to the county as a whole, as vacancies and rents are very similar in the two classes. Included in the comps is the Monocacy Valley Cannery, a 30,000 SF adaptive reuse project on the eastern edge of downtown which is currently under construction and is preleasing at $24 / SF triple net.

Market-wide, the maximum contiguous space available mostly runs about 15,000 to 20,000 SF, with few buildings larger than 60,000 SF and numerous actively-marketed buildings being much smaller. The comps shown are on the lower half of the scale for contiguous space available and overall building size compared to Frederick County as a whole. This is attributable to the historic character of downtown Frederick and the fact the city has preserved a grid of relatively small blocks as new construction occurs.

None of the comps are in East Frederick Rising, and Figure 5-2 illustrates that the total inventory in this sector of the city is quite small. The east side has traditionally been devoted to light industrial, flex and uses related to agriculture, but that could change rapidly with the excellent new connectivity to

Area	Rentable Bldg. Area	Total Available SF
Frederick County	3,935,491	1,412,021
City of Frederick	2,084,995	567,500
Downtown	545,524	164,529
Golden Mile	260,984	41,744
East Frederick Rising	55,336	12,155

	2015-2020	2020-2025	2025-2030	Total 2015-2030
Frederick County: Net New Office Employment	2,631	2,011	1,470	6,112
City of Frederick (62%): Net New Office Employment	1,630	1,246	911	3,787
Office Demand (SF), Based on Projected Employment Growth	**309,699**	**236,691**	**173,078**	**719,468**
Average SF per Worker	190			

Source: Sage Policy Group

Figure 5-2: Inventory by market and submarket; and predicted demand for office space in upcoming years

downtown and the interstate system, boosted by massive new residential development discussed elsewhere in this report. Total office inventory countywide is estimated at 4,459,000 SF.

Several indicators show office activity likely to pick up. Reis shows vacancy declining steadily from the current 20 percent county-wide to about 15 by 2017, with rents growing steadily about 2.5 percent annually over the same period. Figure 5-2 includes a compilation of city and county data on growth in the employment sectors that are primary users of office space, and indicates a demand for 309,699 SF of office space between 2015 and 2020. Much of that demand may be met by space that is currently vacant, but new construction will also be needed to meet tenants' demand for higher quality.

The city-commissioned market study in October gave an honest, detailed assessment of the commercial real estate market, encouraging the continuation of economic development activity already underway without resorting to costly efforts to rob major corporate tenants from elsewhere.

With respect to East Frederick Rising the Sage group pointed out that many pieces of the puzzle are now coming together, potentially rewriting the book on the 2,000 acre area within a mile of downtown that was historically undervalued. The market study encourages city leaders to:

- Make maximum use of "critical road, water, and other public infrastructure" such as the new Monocacy Boulevard and related highway interchanges to "support continued commercial investment;"
- Tap into the significant job growth potential of "professional services clusters" at the airport and the new Riverside Research Park northeast of downtown;
- Support high-technology incubators such as the Frederick Innovative Technology Center;
- Identify ways to encourage businesses to make greater use of existing employment tax credit programs, which appear to be underutilized.

Most pointed of the Sage market study's counsel is that economic conditions never go exactly as expected. Just as an earlier study for the city in 2008 had turned out to be wildly optimistic, predicting the need for 2 million new square feet of office space and 2.5 million new square feet of flex space, the current predictions of slow but steady growth could end up underestimating growth prospects. The keys to the game for Frederick will be to continue exploring the prospects for innovation.

Lessons from the broader Suburban Maryland market cannot be ignored either. Most analysts have observed a "flight to quality," with real estate quality now defined to a greater degree than before by location. The concept of "live / work / play" appears to be moving from the realm of a mere marketing slogan, to be a durable concept as the new generation decides where it wants to live and work. Just as downtown Frederick has undergone a renaissance and should be in a position to draw back growth that had been migrating outward, nearby East Frederick has the opportunity to complement the downtown with spacious, energy-efficient buildings and become a vital emerging job center for the region.

Comparative Advantages of Keystone Center

While the Frederick County office market can be expected to remain somewhat soft, the Keystone Development Center is designed for several comparative advantages attributable to sophisticated community design. Among these advantages are:

- At 50,000 square feet, the building will be slightly larger than the market average.
- The second level aimed at a corporate tenant will be a notably larger contiguous space than is typically found in the market, allowing an employer to have up to 125 employees in working proximity if they rent the entire floor.
- Locations close to downtown are drawing premium rents, and the new office will be able to capitalize on this. Tenants and workers will enjoy proximity to the MARC station; a planned convention center on the east edge of downtown; and government, educational and legal activities that are concentrated in the revitalized downtown.
- The vocational campus of Frederick Community College is very close, and the city can be expected to continue emphasizing workforce development in the East Frederick employment district.
- Workers will have excellent connectivity to residential and retail areas, and the ability to walk or ride transit instead of driving. Employers will value the convenience to the interstate highway system and the prominent markets and humming business networks of Metropolitan Washington and Baltimore.

Project Financing

With uncertain office market conditions and weak absorption in recent years, the financial plan for the Keystone Center had to include conservative assumptions and still show a return that justified the investment. At the same time a favorable interest rate climate provides an important overall incentive to get the project underway in anticipation of improved office leasing in the coming years.

Most importantly, the pro forma is based on a 12 percent vacancy rate, where commercial developers normally stay on the sidelines until that assumption can be brought down to 5 - 10 percent. Programmatically, the management's willingness to accept lease terms as short as three to six months implies more frequent turnover and periods of vacancy, but is also tied to the goal to incentivize leasing by startup businesses and by established corporations seeking space for new projects in Frederick. In essence, building a higher vacancy rate into the financial model is necessary to the goal of being an effective small business incubator in the local market.

The lending terms assume a 5.50 percent interest rate, with a ten-year term and 25-year amortization. Minimum debt coverage ratio is 1.20 and maximum loan-to-value is 70 percent. The construction loan evidences today's low interest rates, with interest-only financing at Libor plus 250 basis points, or 3.25 percent. Adequate up-front reserves are built into the development budget, with a one-year lease-up reserve and two years of up-front capital reserves. The entering capitalization rate is 7.6 percent, on par with the Frederick market.

Leasing rates are carefully calibrated to the market for Class A office space close to downtown Frederick, but not inflated. Office tenants would pay on a triple-net basis, while the coworking space would be a flat monthly fee of $260 treated as a "membership fee." It is assumed 25 to 30 percent of the space would need to be preleased in order to obtain firm commitment from lenders. A portion of the first level will be devoted to a coffee shop / deli operated independently and paying market leasing rate.

The property shows modest income from special services such as printing and document preparation, rental of conference rooms and arrangement of video conferencing. These services are primarily geared to the coworking space, making the relatively inexpensive space have added attractions that would help draw those who might otherwise work from home. The services would also be available to the corporate suite tenants who might find them convenient and allow them otherwise to keep their leased footprint and equipment purchases low. A robust, managed IT infrastructure would be provided, with free access for coworking members and paid access for the corporate suites.

A daytime receptionist / coworking administrator would be the point of contact for all special services, and that individual's salary would be paid from the special services income rather than be reflected as an operating cost of the building. The net of the special services income minus the cost of an administrator is modest. However, having these services available is considered an important component of attracting members to the coworking space while simultaneously making it easy for

Figure 5-3: Sources and Uses Statement

Sources			Uses	
Permanent Loan	7,308,000		Acquisition / Site Development	600,000
Developer Equity	247,000		Construction, Hard Cost	7,000,000
Limited Partner Equity	2,360,000		Construction , Other Costs	1,023,785
City Waiver of Impact Fees	75,000		Soft Costs	742,145
City Acquisition Loan	450,000		Financing Costs	238,057
			Reserves and Development Fees	836,012
Total Sources:	10,440,000		Total Uses:	10,440,000
			Total Development Cost (TDC):	10,440,000

Figure 5-4: Development Assumptions

Development Financing			Operational Variables	
Construction Cost	$140 / GSF		Vacancy / Credit Loss	12.0%
Construction Contingency	5.0%		Property Management Fee	4.5%
Construction Financing Rate	3.25%		Rent Increase Per Year	3.0%
Permanent Financing LTV	70%		Expense Increase Per Year	3.0%
Permanent Loan DCR	1.20		Core Charge Factor, NNN Tenants	1.12
Permanent Financing Amortization	25 years		Capital Reserves ($.10 / SF)	$5,000
Permanent Financing Term	10 years		Cap Rate	7.6%
Permanent Financing Rate	5.50%		Property Tax Millage	$14.00
Development Fee	4.5%			
Lease-up Reserve (12 months)	$356,200			

tenants in the corporate suites to mobilize quickly, and see a clear benefit of leasing at the Keystone Center compared to other offerings.

The development budget also differs slightly from an ordinary office project. Construction costs include the cost of fully building out the office space, where an office developer would typically hold this out of the construction budget but showing it as negotiable tenant build-out allowance in the development plan. The approach with the Keystone Center is to have relatively standard modules of about 1,800 square feet “ready to go” for tenants. Along the same lines, the development budget includes a large number for furnishing the building so the coworking space and at least a portion of the corporate suites would be “available for immediate occupancy.”

Because the build-out and furnishing would occur toward the end of the construction period, this approach could be adjusted if preleasing goes well and anchor tenants with specific requirements for their space are identified. For those tenants, a traditional negotiation of build-out would be conducted. Typically the ownership would pay the cost of build-out up to one year’s rent on a long term lease, but would not furnish the offices.

Figure 5-5: Stabilized Income / Expense Statement, and Project ROI

YEAR SIX* INCOME / EXPENSE	
Income	
Potential Rental Income	1,171,331
Vacancy & Credit Loss	140,560
Expense Reimbursement / Other	286,533
Gross Operating Income:	1,317,303
Expense	
Administrative	59,948
Operating	137,374
Maintenance	12,752
Taxes & Insurance	178,982
Total Operating Expenses:	389,056
Net Operating Income (NOI)	**928,247**
Capital Reserves	5,000
Debt Coverage Ratio	1.56

*Property taxes fully phased-in

RETURN ON INVESTMENT	
Investment Results, Short Term	
Year 1 Cash-on-Cash Return	9.36%
Investment Results, 5-Year Holding Period	
IRR, Before-Tax Leveraged	15.59%
NPV, 12% Discount Rate	336,741
Investment Results, 10-Year Holding Period	
IRR, Before-Tax Leveraged	17.83%
NPV, 12% Discount Rate	1,074,136

All figures represent returns for the entire limited partnership

The Keystone Business Development Center is a project intended to meet community needs as well as earn a reasonable return over a projected 10-year hold period. In the Frederick real estate market, housing has been the primary profit center over the years and in particular in the years coming out of the Great Recession. But city leaders know that it is also important to spur creation of good jobs and reduce the local economy's reliance on commuter jobs.

For these reasons, the developer will seek several specific financial supports to mitigate risk in the short term and improve the prospect for profit in the medium and long term. First, the city will be asked for an acquisition loan to cover the value of the land. The city currently owns the land as a result of the Monocacy Blvd. road project, and stands to benefit enormously from successful development of a top notch, master-planned retail and business park close to the airport and to the planned Renn Farm residential community.

Second, the city will be asked to waive impact fees for the development, estimated at $75,000. Finally, the city will be asked to structure property taxes to phase in over five years. Market analysts have expressed concern that the city's property tax rate is sharply higher than that of the county, creating an "incentive for sprawl" that runs counter to the city's goals of compact development that complements and adds life to the downtown. The financial model shows this as a "payment in lieu of taxes," or PILOT, which starts at zero and increases to full taxation in year six.

DEVELOPER ASSUMPTIONS, KEYSTONE BUSINESS DEVELOPMENT PARK

OPERATIONAL VARIABLES	
Vacancy / credit loss	12.00%
Property management fee (% of EGI)	4.50%
Rent increase per year	3.00%
Expense increase per year	3.00%
Core charge factor, NNN multi-tenant	1.12
Capital Reserves ($.10 / SF)	$5,000
Cap rate	7.6%
Exit cap rate (10 years)	8.5%
Property tax millage	$14.00
SPECIAL SERVICES INCOME, EXPENSE	
Coworking receptionist / administrator salary	$40,000
Special services income total, first full year of operation	$59,000
ARCHITECTURAL ASSUMPTIONS	
Building Gross Size, GSF	50,000
Building Efficiency	85%
Rentable Building Area, SF	42,500
Footprint (2 level building)	25,000
Parking Spaces (3.5 per 1,000 SF RBA)	149
Area Required for Parking Lot (300 SF / space)	44,625
Public Plaza / Landscaping, SF	12,000
Total Land Acquisition, acres	1.9
DEVELOPMENT COST, FINANCING ASSUMPTIONS	
Construction contingency (% of total construction)	5.00%
Construction financing points, fees	0.50%
Construction financing rate (Libor + 250 basis points)	3.25%
Architectural & Engineering (% of total construction)	6.00%
Lease-up reserve (12 months)	$356,212
Capital reserve (2 years)	$10,000
Development fee	4.50%
Debt Coverage Ratio (DCR)	1.20
Permanent financing points, fees	0.50%
Permanent financing LTV	70%
Permanent financing amortization, years	25
Permanent financing term, years	10
Permanent financing interest rate	5.50%

RENT SCHEDULE, GROSS OPERATING INCOME AND ABSORPTION

LEASING COMPONENT	Type	# units	SF Per	SF Total	Rent / Mo.	Total/month	Total Annl.	Rent/SF
Anchor Office Tenants	NNN	18	1,850	33,300	$3,250	$58,500	$702,000	$21.08
Coworking Membership / Space	Full Service	90	89	8,010	$260	$23,400	$280,800	$35.06
Coffee Shop / Deli	NNN	1	1,190	1,190	$2,300	$2,300	$27,600	$23.19
	Totals:	109		42,500		$84,200	$1,010,400	

Total monthly rent:	**$84,200**
Total annl. rent (gross rent potential):	**$1,010,400**
Rentable building area (SF):	**42,500**
Total NNN space (SF):	**34,490**
Pro-forma operating cost / SF:	**$ 7.12**
Core charge factor:	**1.12**
Occupancy:	**88.00%**
Expense reimbursement incl. core:	**242,177**

INCOME SCHEDULE		**Stabilized Annual**
Gross Potential Rent		$1,010,400
-Vacancy / credit loss	12.00%	$121,248
Effective Gross Income (EGI)		$889,152
Miscellaneous Income / Expense		
Expense Reimbursements		$242,177
Special Services Income		$59,000
-Coworking Admin Payroll		$40,000
Other Income (Net)		$261,177
Gross Operating Income		$1,150,329

OPERATING EXPENSE SCHEDULE (PRO-FORMA)

		Property Total	Per SF Per Year
ADMINISTRATIVE EXPENSES			
Marketing		$ 1,200.00	
Management Fee (% of EGI)	4.50%	$ 40,011.84	
Legal		$ 4,000.00	
Audit / Acounting		$ 5,000.00	
Security		$ 1,500.00	
TOTAL ADMINISTRATIVE EXPENSES		$ 51,711.84	$ 1.03
OPERATING EXPENSES			
Electric (heat pumps, light)		$ 85,000.00	
Gas (hot water)		$ 15,000.00	
Water / Sewer		$ 12,000.00	
Supplies		$ 1,500.00	
Exterminating		$ 1,000.00	
Trash / Snow Removal		$ 4,000.00	
TOTAL OPERATING EXPENSES		$ 118,500.00	$ 2.37
MAINTENANCE EXPENSES			
HVAC Maintenance		$ 3,000.00	
Elevator Maintenance		$ 3,500.00	
Maintenance Supplies		$ 2,000.00	
Miscellaneous Maintenance / Repair		$ 2,500.00	
TOTAL MAINTENANCE EXPENSES		$ 11,000.00	$ 0.22
TAXES & INSURANCE			
Real Estate Taxes		$ 150,000.00	
Property & Liability Insurance		$ 25,000.00	
TOTAL TAXES & INSURANCE		$ 175,000.00	$ 3.50
TOTAL OPERATING DISBURSEMENTS		**$ 356,211.84**	$ 7.12
Capital Reserves		$ 5,000.00	$ 0.10

PROFORMA INCOME & EXPENSE STATEMENT

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Period Beginning Date	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26
Period Ending Date	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
INCOME										
Potential Rental Income	$ 1,010,400	$ 1,040,712	$ 1,071,933	$ 1,104,091	$ 1,137,214	$ 1,171,331	$ 1,206,470	$ 1,242,665	$ 1,279,944	$ 1,318,343
Vacancy & Credit Loss	$121,248	$ 124,885	$ 128,632	$ 132,491	$ 136,466	$ 140,560	$ 144,776	$ 149,120	$ 153,593	$ 158,201
EFFECTIVE RENTAL INCOME	$ 889,152	$ 915,827	$ 943,301	$ 971,600	$ 1,000,748	$ 1,030,771	$ 1,061,694	$ 1,093,545	$ 1,126,351	$ 1,160,142
Expense Reimbursement	$ 140,197	$ 164,799	$ 189,527	$ 214,385	$ 239,377	$ 264,506	$ 272,442	$ 280,615	$ 289,033	$ 297,704
Special Services Income (net)	$19,000	$ 19,570	$ 20,157	$ 20,762	$ 21,385	$ 22,026	$ 22,687	$ 23,368	$ 24,069	$ 24,791
GROSS OPERATING INCOME	$ 1,048,349	$ 1,100,195	$ 1,152,985	$ 1,206,747	$ 1,261,510	$ 1,317,303	$ 1,356,822	$ 1,397,527	$ 1,439,453	$ 1,482,637
EXPENSE										
Administrative	$ 51,712	$ 53,263	$ 54,861	$ 56,507	$ 58,202	$ 59,948	$ 61,747	$ 63,599	$ 65,507	$ 67,472
Operating	$ 118,500	$ 122,055	$ 125,717	$ 129,488	$ 133,373	$ 137,374	$ 141,495	$ 145,740	$ 150,112	$ 154,616
Maintenance	$ 11,000	$ 11,330	$ 11,670	$ 12,020	$ 12,381	$ 12,752	$ 13,135	$ 13,529	$ 13,934	$ 14,353
Taxes & Insurance	$ 25,000	$ 55,750	$ 86,523	$ 117,318	$ 148,138	$ 178,982	$ 184,351	$ 189,882	$ 195,578	$ 201,446
TOTAL OPERATING EXPENSES	$ 206,212	$ 242,398	$ 278,770	$ 315,333	$ 352,093	$ 389,056	$ 400,728	$ 412,750	$ 425,132	$ 437,886
NET OPERATING INCOME (NOI)	$ 842,137	$ 857,797	$ 874,215	$ 891,414	$ 909,416	$ 928,247	$ 956,095	$ 984,778	$ 1,014,321	$ 1,044,751
CAPITAL RESERVES	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000

Expense Reimbursement / Phase-in of Taxes

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Operating Expenses	$ 206,212	$ 242,398	$ 278,770	$ 315,333	$ 352,093	$ 389,056
Operating Expense / SF	$ 4.12	$ 4.85	$ 5.58	$ 6.31	$ 7.04	$ 7.78
NNN space	34,490	34,490	34,490	34,490	34,490	34,490
Expense Reimbursement:	$ 140,197	$ 164,799	$ 189,527	$ 214,385	$ 239,377	$ 264,506

Annual Rent Increase:	3.00%
Annual Expense Increase:	3.00%
Vacancy Rate:	12.00%

SOURCES, USES AND DEBT CALCULATIONS

USES SCHEDULE			
USES - Development Costs			**Total**
Acquisition			
Land Acquisition		$	450,000
Site Development		$	150,000
Total Acquisition		**$**	**600,000**
Construction			
Building		$	7,000,000
Parking		$	260,748
Contingency	5.00%	$	363,037
Taxes (During Construction)		$	25,000
Tap Fees, Permits and Impact Fees		$	225,000
Tax Credit Fees		$	-
Insurance (During Construction)		$	40,000
Consultants (Construction Management)		$	75,000
Utilities (During Construction)		$	10,000
Other - Construction Costs		$	25,000
Total Construction		**$**	**8,023,785**
Construction Financing			
Points & Fees (origination)	0.50%	$	40,119
Interest Expense (12-month construction period)	3.25%	$	130,387
Total Construction Financing		**$**	**170,505**
Soft Costs			
Architectural & Engineering	6.00%	$	435,645
Environmental Studies		$	10,000
ALTA Survey		$	10,000
Appraisal		$	7,500
Legal		$	55,000
Market Study		$	10,000
LEED Certification		$	18,000
FF&E		$	150,000
Marketing (Lease-up)		$	25,000
Organization Costs		$	5,000
Accounting (Startup)		$	8,500
Syndication / Legal & Related Costs		$	-
Application / Reservation / Allocation Fees		$	-
Cost Certification		$	7,500
Total Soft Costs		**$**	**742,145**
Permanent Financing			
Points & Fees (origination)	0.50%	$	36,540
Transfer / Recording Fees (.15%*loan + 50)		$	11,012
Title Insurance, Other Mgmt. Costs		$	20,000
Total Permanent Financing		**$**	**67,552**
Up-front Reserves			
Lease-up Reserves		$	356,212
Capital Reserves		$	10,000
Total Reserves		**$**	**366,212**
Development Fees			
Development Fee	4.50%	$	469,800
Total Development Fees		**$**	**469,800**
Total Development Cost		**$**	**10,440,000**

SOURCES, USES AND DEBT CALCULATIONS

CALCULATION OF DEBT AND EQUITY ATTRACTED

Monthly loan payment based on NOI, DCR	
Net operating income, 1st year (from proforma):	$842,137
Debt coverage ratio:	1.20
Available for debt annually:	$701,781
Available for debt monthly:	$58,482
Maximum mortgage based on DCR	
Payment, monthly:	$58,482
Loan amortization, years:	25
Interest rate:	5.50%
Maximum loan amount:	$9,523,353
Maximum mortgage based on LTV	
Total development cost (est. of value):	$10,440,000
Loan-to-value:	70%
Maximum loan amount:	$7,308,000
Debt attracted (lesser of two mortgage calculations)	
Mortgage based on DCR:	$9,523,353
Mortgage based on LTV:	$7,308,000
Debt attracted (lesser of two):	$7,308,000
Minimum equity attracted	
Owner equity (% of Total Development Cost)	N/A
Hard entry below based on secondary sources)	

SOURCES SCHEDULE

SOURCES - Development Funding	Total
Equity	
Equity - Sponsor Cash	$ 247,000
Equity - LP Investors	$ 2,360,000
Debt	
1st Mortgage (Conventional)	$ 7,308,000
City Acquistion Loan (subordinate, 4.00%, 10 year)	$ 450,000
Other	
City Waiver of Impact Fee	$ 75,000
City / County Grants	$ -
Total Financing / Equity	**$ 10,440,000**
Current Excess (Shortfall)	**$ 0**

SALE SCHEDULE

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Period Beginning Date:		Jan-17	Jan-18	Jan-19	Jan-20	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26
Period Ending Date:		Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
Cap Rate:	8.50%										
SALE PROCEEDS											
Sale Price (NOI / Cap)		$ 9,907,491	$ 10,091,728	$ 10,284,881	$ 10,487,219	$ 10,699,016	$ 10,920,557	$ 11,248,174	$ 11,585,619	$ 11,933,187	$ 12,291,183
+ Reserve Fund		$ 5,000	$ 10,000	$ 15,000	$ 20,000	$ 25,000	$ 30,000	$ 35,000	$ 40,000	$ 45,000	$ 50,000
- Cost of Sale (commission)	4.00%	$ 396,300	$ 403,669	$ 411,395	$ 419,489	$ 427,961	$ 436,822	$ 449,927	$ 463,425	$ 477,327	$ 491,647
= Adjusted Sales Price		$ 9,516,192	$ 9,698,059	$ 9,888,486	$ 10,087,730	$ 10,296,055	$ 10,513,735	$ 10,833,247	$ 11,162,194	$ 11,500,860	$ 11,849,536
- Mortgage Balance		$ 7,580,561	$ 7,393,698	$ 7,196,904	$ 6,989,643	$ 6,771,351	$ 6,541,432	$ 6,299,258	$ 6,044,167	$ 5,775,460	$ 5,492,402
Total Sale Proceeds Before Tax		$ 1,935,631	$ 2,304,360	$ 2,691,582	$ 3,098,087	$ 3,524,704	$ 3,972,303	$ 4,533,989	$ 5,118,028	$ 5,725,400	$ 6,357,133
Sale Proceeds Before Tax		$ 1,935,631	$ 2,304,360	$ 2,691,582	$ 3,098,087	$ 3,524,704	$ 3,972,303	$ 4,533,989	$ 5,118,028	$ 5,725,400	$ 6,357,133
- Tax on Capital Gain		$ (46,642)	$ 60,681	$ 170,042	$ 281,500	$ 386,196	$ 493,117	$ 624,274	$ 757,678	$ 893,394	$ 1,031,492
- Tax on Ordinary Income		$ (22,697)	$ (21,752)	$ (20,806)	$ (19,860)	$ (18,915)	$ (17,969)	$ (17,023)	$ (16,077)	$ (15,132)	$ (14,186)
Sale Proceeds After Tax		$ 2,004,970	$ 2,265,431	$ 2,542,346	$ 2,836,446	$ 3,157,423	$ 3,497,155	$ 3,926,738	$ 4,376,427	$ 4,847,137	$ 5,339,827
CALCULATIONS											
Basis at Acquisition		$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236	$ 9,981,236
+ Capital Additions		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
- Accumulated Cost Recovery		$ 274,070	$ 548,140	$ 822,210	$ 1,096,281	$ 1,332,851	$ 1,569,421	$ 1,805,991	$ 2,042,561	$ 2,279,131	$ 2,515,701
=Adjusted Basis		$ 9,707,166	$ 9,433,095	$ 9,159,025	$ 8,884,955	$ 8,648,385	$ 8,411,815	$ 8,175,245	$ 7,938,675	$ 7,702,104	$ 7,465,534
Sale Price		$ 9,907,491	$ 10,091,728	$ 10,284,881	$ 10,487,219	$ 10,699,016	$ 10,920,557	$ 11,248,174	$ 11,585,619	$ 11,933,187	$ 12,291,183
- Cost of Sale		$ 396,300	$ 403,669	$ 411,395	$ 419,489	$ 427,961	$ 436,822	$ 449,927	$ 463,425	$ 477,327	$ 491,647
- Adjusted Basis		$ 9,707,166	$ 9,433,095	$ 9,159,025	$ 8,884,955	$ 8,648,385	$ 8,411,815	$ 8,175,245	$ 7,938,675	$ 7,702,104	$ 7,465,534
=Total Gain (loss)		$ (195,974)	$ 254,963	$ 714,461	$ 1,182,775	$ 1,622,670	$ 2,071,920	$ 2,623,002	$ 3,183,520	$ 3,753,756	$ 4,334,002
x Capital Gain Tax	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%	23.80%
=Tax on Capital Gain (Savings)		$ (46,642)	$ 60,681	$ 170,042	$ 281,500	$ 386,196	$ 493,117	$ 624,274	$ 757,678	$ 893,394	$ 1,031,492
Ordinary Income											
+ Recapture of Cost Recovery		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
- Unamortized Expenditures		$ 64,850	$ 62,148	$ 59,446	$ 56,744	$ 54,042	$ 51,340	$ 48,637	$ 45,935	$ 43,233	$ 40,531
=Ordinary Income on Sale (loss)		$ (64,850)	$ (62,148)	$ (59,446)	$ (56,744)	$ (54,042)	$ (51,340)	$ (48,637)	$ (45,935)	$ (43,233)	$ (40,531)
x Income Tax	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
=Tax on Ordinary Income (Savings)		$ (22,697)	$ (21,752)	$ (20,806)	$ (19,860)	$ (18,915)	$ (17,969)	$ (17,023)	$ (16,077)	$ (15,132)	$ (14,186)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10

FINANCIAL REPORT

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Period Beginning Date:		Jan-17	Jan-18	Jan-19	Jan-20	Jan-21	Jan-22	Jan-23	Jan-24	Jan-25	Jan-26
Period Ending Date:		Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
INCOME & EXPENSE STATEMENT											
Potential Rental Income		$ 1,010,400	$ 1,040,712	$ 1,071,933	$ 1,104,091	$ 1,137,214	$ 1,171,331	$ 1,206,470	$ 1,242,665	$ 1,279,944	$ 1,318,343
- Vacancy / Credit Loss	12.00%	$ 121,248	$ 124,885	$ 128,632	$ 132,491	$ 136,466	$ 140,560	$ 144,776	$ 149,120	$ 153,593	$ 158,201
= Effective Rental Income		$ 889,152	$ 915,827	$ 943,301	$ 971,600	$ 1,000,748	$ 1,030,771	$ 1,061,694	$ 1,093,545	$ 1,126,351	$ 1,160,142
+ Expense Reimbursement / Other		$ 159,197	$ 184,369	$ 209,684	$ 235,146	$ 260,761	$ 286,533	$ 295,128	$ 303,982	$ 313,102	$ 322,495
= Gross Operating Income		$ 1,048,349	$ 1,100,195	$ 1,152,985	$ 1,206,747	$ 1,261,510	$ 1,317,303	$ 1,356,822	$ 1,397,527	$ 1,439,453	$ 1,482,637
Operating Expenses		$ 206,212	$ 242,398	$ 278,770	$ 315,333	$ 352,093	$ 389,056	$ 400,728	$ 412,750	$ 425,132	$ 437,886
+ Other Project Expenses		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
= Total Expenses		$ 206,212	$ 242,398	$ 278,770	$ 315,333	$ 352,093	$ 389,056	$ 400,728	$ 412,750	$ 425,132	$ 437,886
Net Operating Income		$ 842,137	$ 857,797	$ 874,215	$ 891,414	$ 909,416	$ 928,247	$ 956,095	$ 984,778	$ 1,014,321	$ 1,044,751
ANNUAL TAXABLE INCOME ANALYSIS											
Net Operating Income		$ 842,137	$ 857,797	$ 874,215	$ 891,414	$ 909,416	$ 928,247	$ 956,095	$ 984,778	$ 1,014,321	$ 1,044,751
- Interest Expense		$ 415,764	$ 406,340	$ 396,408	$ 385,942	$ 374,910	$ 363,283	$ 351,028	$ 338,112	$ 324,496	$ 310,145
- Total Annual Cost Recovery*		$ 274,070	$ 274,070	$ 274,070	$ 274,070	$ 236,570	$ 236,570	$ 236,570	$ 236,570	$ 236,570	$ 236,570
- Non-Operating Expenses (amortization)		$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702	$ 2,702
= Taxable Income (Loss)		$ 149,601	$ 174,685	$ 201,034	$ 228,700	$ 295,234	$ 325,692	$ 365,794	$ 407,394	$ 450,552	$ 495,334
ANNUAL CASHFLOW ANALYSIS											
Net Operating Income		$ 842,137	$ 857,797	$ 874,215	$ 891,414	$ 909,416	$ 928,247	$ 956,095	$ 984,778	$ 1,014,321	$ 1,044,751
- Annual Debt Service (p&i)		$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203	$ 593,203
- Capital Additions											
- Capital Reserves		$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
+ Additions to Reserves											
= Cash Flow Before Tax		$ 243,934	$ 259,594	$ 276,012	$ 293,211	$ 311,214	$ 330,045	$ 357,892	$ 386,575	$ 416,118	$ 446,548
Taxable Income (Loss)		$ 149,601	$ 174,685	$ 201,034	$ 228,700	$ 295,234	$ 325,692	$ 365,794	$ 407,394	$ 450,552	$ 495,334
x Income Tax	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
= Tax Liability		$ 52,360	$ 61,140	$ 70,362	$ 80,045	$ 103,332	$ 113,992	$ 128,028	$ 142,588	$ 157,693	$ 173,367
Cash Flow Before Tax		$ 243,934	$ 259,594	$ 276,012	$ 293,211	$ 311,214	$ 330,045	$ 357,892	$ 386,575	$ 416,118	$ 446,548
- Tax Liability		$ 52,360	$ 61,140	$ 70,362	$ 80,045	$ 103,332	$ 113,992	$ 128,028	$ 142,588	$ 157,693	$ 173,367
= Cash Flow After Tax		$ 191,574	$ 198,455	$ 205,650	$ 213,166	$ 207,882	$ 216,053	$ 229,864	$ 243,987	$ 258,425	$ 273,181
Debt Coverage Ratio		$ 1.42	1.45	1.47	1.50	1.53	1.56	1.61	1.66	1.71	1.76

INTERNAL RATE OF RETURN / NPV CALCULATIONS

Investment Results (Theoretical) — **BEFORE TAX, LEVERAGED**

LLC or LP INVESTMENT RESULTS

Year	Total LLC Equity Pay-in	1 Cash Flow Before Taxes	2 Before-tax Property Sale	3 LLC Before-tax Distribution
0	$ (2,607,000)			$ (2,607,000)
1		$ 243,934		$ 243,934
2		$ 259,594		$ 259,594
3		$ 276,012		$ 276,012
4		$ 293,211		$ 293,211
5		$ 311,214	$ 3,524,704	$ 3,835,918
Total:	**$ (2,607,000)**	**$ 1,383,966**	**$ 3,524,704**	**$ 2,301,670**

Internal Rate of Return Before Tax:	**15.59%**
Net Present Value:	$336,741
Hurdle Rate:	12.00%
NPV Rate:	12.00%

Investment Results (Theoretical) — **AFTER TAX, LEVERAGED**

LLC or LP INVESTMENT RESULTS

Year	Total LLC Equity Pay-in	1 Cash Flow After Taxes	2 After-tax Property Sale	3 LLC After-tax Distribution
0	$ (2,607,000)			$ (2,607,000)
P		$ 191,574		$ 191,574
1		$ 198,455		$ 198,455
2		$ 205,650		$ 205,650
3		$ 213,166		$ 213,166
4		$ 207,882	$ 3,157,423	$ 3,365,305
Total:	**$ (2,607,000)**	**$ 1,016,727**	**$ 3,157,423**	**$ 1,567,151**

Internal Rate of Return After Tax:	**11.14%**
Net Present Value:	($77,082)
Hurdle Rate:	12.00%
NPV Rate:	12.00%

Note: All figures are for the entire ownership entity -- the LLC and / or partnership

Investment Results (Theoretical) — **BEFORE TAX, LEVERAGED**

LLC or LP INVESTMENT RESULTS

Year	Total LLC Equity Pay-in	1 Cash Flow Before Taxes	2 Before-tax Property Sale	3 LLC Before-tax Distribution
0	$ (2,607,000)			$ (2,607,000)
1		$ 243,934		$ 243,934
2		$ 259,594		$ 259,594
3		$ 276,012		$ 276,012
4		$ 293,211		$ 293,211
5		$ 311,214		$ 311,214
6		$ 330,045		$ 330,045
7		$ 357,892		$ 357,892
8		$ 386,575		$ 386,575
9		$ 416,118		$ 416,118
10		$ 446,548	$ 6,357,133	$ 6,803,681
Total:	**$ (2,607,000)**	**$ 3,321,145**	**$ 6,357,133**	**$ 7,071,278**

Internal Rate of Return Before Tax:	**17.83%**
Net Present Value:	$1,074,136
Hurdle Rate:	12.00%
NPV Rate:	12.00%

Investment Results (Theoretical) — **AFTER TAX, LEVERAGED**

LLC or LP INVESTMENT RESULTS

Year	Total LLC Equity Pay-in	1 Cash Flow After Taxes	2 After-tax Property Sale	3 LLC After-tax Distribution
0	$ (2,607,000)			$ (2,607,000)
1		$ 191,574		$ 191,574
2		$ 198,455		$ 198,455
3		$ 205,650		$ 205,650
4		$ 213,166		$ 213,166
5		$ 207,882		$ 207,882
6		$ 216,053		$ 216,053
7		$ 229,864		$ 229,864
8		$ 243,987		$ 243,987
9		$ 258,425		$ 258,425
10		$ 273,181	$ 5,339,827	$ 5,613,008
Total:	$ (2,607,000)	$ 2,238,238	$ 5,339,827	$ 4,971,065

Internal Rate of Return After Tax:	**13.75%**
Net Present Value:	$298,635
Hurdle Rate:	12.00%
NPV Rate:	12.00%

Resource Listing

Maryland Public Use Airports, May 2014, Maryland Aviation Admin. data on general aviation airports, www.marylandregionalaviation.aero/content/mdpublicuseairports/fdk.html

Airport Layout Plans, February 2008, Frederick Municipal Airport, City of Frederick.

Capital Improvements Program, FY2013 – FY2018, City of Frederick.

Land Management Code, City of Frederick, www.cityoffrederick.com/index.aspx?NID=233

2010 Comprehensive Plan, 2010, City of Frederick,. www.cityoffrederick.com/index.aspx?NID=231

Mid-Maryland's Economic Engine, A Vision for the Revitalization of the East Side, 2010, East Frederick Rising.

Quarterly Census of Employment and Wages, U.S. Dept. of Labor Bureau of Labor Statistics.

American Fact Finder, U.S. Census Bureau.

Jobs-Housing Ratios: National Perspectives and Regional and Local Benchmarks, 2012, Fairfax County Dept. of Planning and Zoning.

Transportation Planning Board Weekly Report, May 6, 2014, "Washington Region Forecast to Continue Growing, Mostly in Activity Centers."

State Highway Mobility Report, September 2013, Maryland Dept. of Transportation.

2014 State Report on Transportation, FY2014 – 2019 Capital Improvement Program, Maryland Dept. of Transportation.

Office Market Survey, 2015, Reis, Inc., Suburban Maryland Market, Frederick, Md. Submarket

Economic, Demographic and Real Estate Dynamics in Frederick, Md., October 2014, Sage Policy Group, Inc.