



# Office Building Repositioning and Repurposing: *Fairfax County Building Repositioning Workgroup Report*

December 2016

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*Cover Photo Credit: ARLnow.com, Fairfax County Public Schools and Washington REIT*





# 1 | INTRODUCTION

The Fairfax County Board of Supervisors (Board) adopted the Strategic Plan to Facilitate the Economic Success of Fairfax County (Plan) on March 3, 2015. The Plan was developed by the Economic Advisory Commission to facilitate economic success within Fairfax County through establishing a vision and goals to guide economic growth and success; providing strategies to achieve those goals; and, recommending specific actions to make the County successful.

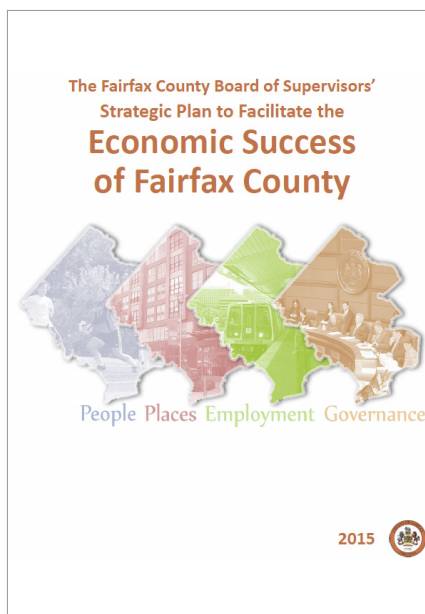
Recommendation 2.8 of the Plan specifically addresses building repositioning, and directs the County to:

*"STUDY AND IMPLEMENT WAYS TO REPURPOSE EMPTY OR OBSOLETE COMMERCIAL SPACE FOR RESIDENTIAL USES; URBAN SCHOOLS OR OTHER PUBLIC FACILITIES; ART AND CULTURAL PURPOSES; LIVE/WORK/MANUFACTURE USES; AND/ OR START-UP COMPANIES. ENGAGE STAKEHOLDERS IN RESEARCH AND RECOMMENDATIONS.*

*A. CONSIDER IMPLEMENTATION TOOLS SUCH AS LAND USE AND REGULATORY CHANGES, INNOVATIVE TAX POLICIES, AND THE USE OF PUBLIC SEED MONEY OR EQUITY PARTICIPATION TO SPUR OR SUPPORT REDEVELOPMENT AND INFILL, REVITALIZATION, AND PARTNERSHIP OPPORTUNITIES FOR REPURPOSING."*

The Fairfax County Building Repositioning Workgroup (the Workgroup) was established in the Fall 2015 to examine the conditions in Fairfax that contribute to office building obsolescence and to identify potential repositioning and/or repurposing solutions to address these conditions. The Workgroup was chaired by Braddock District Supervisor John Cook and was comprised of regional industry leaders with experience and/or interest in building repositioning and repurposing. The members included representatives of regional real estate developers, building owners, non-profit advocates, the Fairfax County Economic Development Authority (FCEDA), and County staff.

The Workgroup sought to understand the impacts of the changing office market within the Washington metropolitan region on existing office structures; how the market drives changes in building use over time; how buildings can be improved physically to improve value; and, what policy, process and regulatory changes the County should consider to address the challenges and opportunities raised.



FAIRFAX COUNTY ECONOMIC SUCCESS PLAN



## 2 | THE CHANGING OFFICE MARKET

Since 2010, Fairfax County added almost 47,000 jobs<sup>1</sup> and has had a very low unemployment rate, which as of July 2016,<sup>2</sup> was 3.2 percent; almost 35 percent lower than the national rate of 4.9 percent.<sup>3</sup> In addition, leasing activity within the County remains strong, as evidenced by a stable trend over the past decade.<sup>4</sup> Demand for new office inventory is also occurring, with almost 2.5 million square feet under construction.<sup>5</sup> Even with these positive trends, Fairfax County remains challenged with how to reduce its inventory of vacant office space.

The FCEDA reports that, at the end of 2015, the direct vacancy rate for office space was 16.2 percent.<sup>6</sup> This results in the availability of approximately 18.8 million square feet of available direct office space, the largest number in County history. Direct vacancy rates for office have remained in the double digits since 2007 at levels not seen since 1990 and 1991.

1 Fairfax County Economic Development Authority, 2010 – 2015 Annual Reports.

2 Fairfax County Department of Management and Budget, Economic Indicators (July 2016).

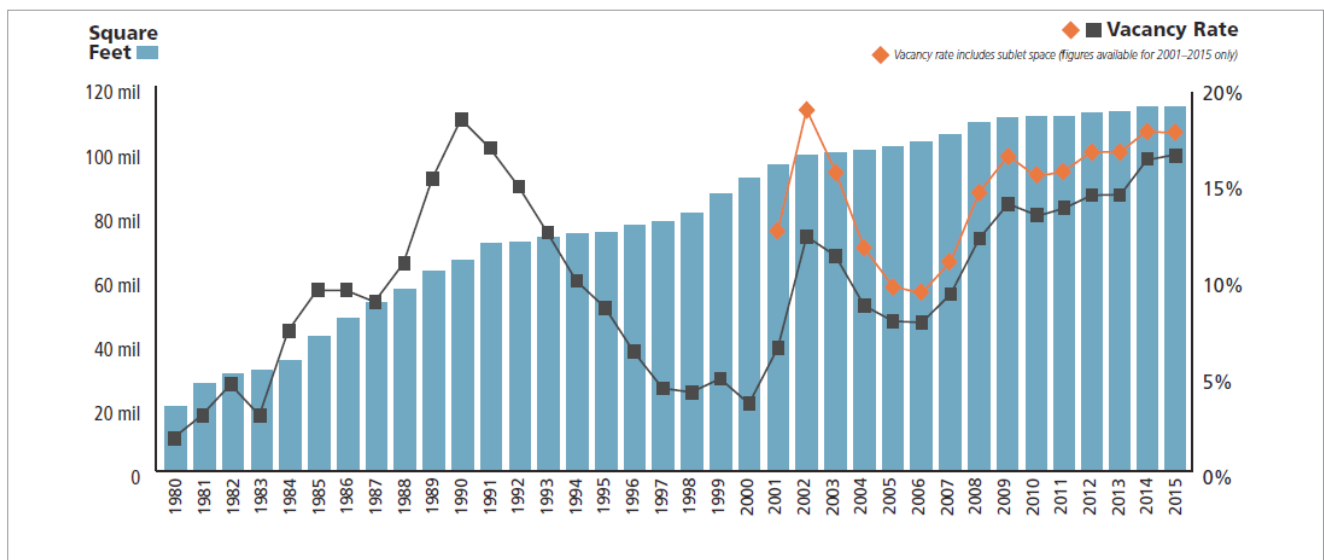
3 Bureau of Labor Statistics, Labor Force statistics from the Current Population Survey (August 2016), <http://data.bls.gov/timeseries/LNS14000000>.

4 Fairfax County Economic Development Authority, Real Estate Report, Year-End 2015 (2016).

5 Fairfax, Year-End 2015 (2016).

6 Fairfax, Year-End 2015 (2016).

### COUNTYWIDE OFFICE SPACE INVENTORY AND VACANCY RATES: 1980-2015



## OFFICE CLASS VACANCY VARIATIONS

The overall office vacancy rate of 16.2 percent is not equal across all office classes. There is generally a higher vacancy rate found in Class B and Class C office buildings than found in Class A structures. The gap between the two is generally higher in areas where newer Class A office product has been recently constructed, often with tenants moving from existing Class A and Class B spaces into newly delivered buildings.<sup>7</sup>

***“THE OVERALL OFFICE VACANCY RATE OF 16.2 PERCENT IS NOT EQUAL ACROSS ALL OFFICE CLASSES. THERE IS GENERALLY A HIGHER VACANCY RATE FOUND IN CLASS B AND CLASS C OFFICE BUILDINGS THAN FOUND IN CLASS A STRUCTURES.”***

In the three largest sub-markets in Fairfax - Tysons, Route 28 Corridor South, and Reston - there are significant spreads between the two classes of space. Colliers International<sup>8</sup> published vacancy rates for office product categories located in Northern Virginia submarkets for the second quarter of 2016. Key metrics from that report are listed in the table below.

### OFFICE VACANCY RATE - SECOND QUARTER 2016<sup>9</sup>

	ALL OFFICE CLASSES	CLASS A OFFICE	CLASS B & C OFFICE
Fairfax Area Total	18.2%	17.4%	19.1%
Reston Submarket	16.0%	14.4%	18.3%
Route 28 Corridor South Submarket	18.2%	15.1%	23.4%
Tysons Submarket	18.6%	15.1%	22.1%

While the absolute percentage numbers vary depending upon the source, other sources report similar trends.

<sup>7</sup> Colliers International, Market Report, Northern Virginia Office, Fourth Quarter 2014 (2014).

<sup>8</sup> Colliers International, Market Report, Northern Virginia Office, Second Quarter 2016 (2016).

<sup>9</sup> Colliers International, Second Quarter 2016 (2016).

## REDUCTION IN SPACE PER EMPLOYEE

***“A SIGNIFICANT TREND OCCURRING NATIONALLY AND AFFECTING THE OFFICE MARKET IN FAIRFAX COUNTY IS THAT THE AVERAGE AMOUNT OF LEASED SPACE PER EMPLOYEE IS SHRINKING.”***

A significant trend occurring nationally and affecting the office market in Fairfax County is that the average amount of leased space per employee is shrinking.<sup>10</sup> This is attributed to more efficient office design, increased ease of teleworking, and hoteling, all of which result in many types of work being done in locations other than the traditional office environment. Average footprints are anticipated to shrink from 225 usable square feet (USF) per person in 2010 to 150 USF per person by 2017, a reduction of 40 percent.

An example of this trend has occurred in Tysons Overlook, a new Class A office building delivered in 2015. LMI relocated to this building from an existing Class B/C office building also located in Tysons. However, it leased only 160,000 SF in the new building, whereas it had previously fully occupied all 321,965 square feet of the older building. The net 35 percent reduction in leased space resulted in a negative absorption within Tysons of over 90,000 square feet, and a significant shift in the vacancy rates between the Class A and Class B/C office classes.

This trend is further illustrated by the U.S. General Services Administration (GSA) acting under the Federal “Freeze the Footprint” policy.<sup>11</sup> This policy has resulted in a 23 percent reduction of GSA total workspace between FY12 to FY15<sup>12</sup> pursuant to a GSA goal of providing 136 USF per person.<sup>13</sup> In the metropolitan Washington region, this has generally resulted in a 15 percent reduction in space for renewal leases.<sup>14</sup> The GSA has issued a National Strategy for the Efficient Use of Real Property<sup>15</sup> policies to provide guidance to federal agencies to continue to reduce their real estate footprints by FY20.

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10 NAIOP, Changes in Average Square Feet per Worker (2012), <http://www.naiop.org/en/E-Library/Perspectives/Changes-in-Average-Square-Feet-per-Worker.aspx>.

11 U.S. Office of Management and Budget, Management Procedures Memorandum No. 2013-02 (March 14, 2013).

12 U.S. General Services Administration, GSA Responses to the Office of Inspector General’s Management Challenges for FY 2015 (2016), [http://www.gsa.gov/portal/mediaId/120074/fileName/AFR2015\\_GSAsResponsestoOIG.action](http://www.gsa.gov/portal/mediaId/120074/fileName/AFR2015_GSAsResponsestoOIG.action).

13 General Services, Challenges for FY 2015 (2016).

14 Colliers International, Market Report, Northern Virginia Office, Second Quarter 2016 (2016).

15 U.S. Office of Management and Budget, National Strategy for the Efficient Use of Real Property (2015), <https://www.whitehouse.gov/sites/default/files/omb/financial/national-strategy-efficient-use-real-property.pdf>.

## IMPORTANCE OF AMENITIES TO TENANTS

Another significant trend is that tenants are choosing to relocate to buildings close to amenities and transit options. The shift continues to drive office markets toward transit-oriented development nodes,<sup>16</sup> and places a particular stress on existing older commercial buildings sited due to their close access to primary highways and ample parking lots. These corporate office park locations are at a competitive disadvantage when competing with transit accessible locations that are within walking distance to attractive amenities.

***“ANOTHER SIGNIFICANT TREND IS THAT TENANTS ARE CHOOSING TO RELOCATE TO BUILDINGS CLOSE TO AMENITIES AND TRANSIT OPTIONS.”***

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<sup>16</sup> Newmark Grubb Knight Frank, Suburban Office Obsolescence: Quantifying Challenges and Opportunities (September 2015), <http://www.ngkf.com/Uploads/FileManager/NGKF-White-Paper-Suburban-Office-Obsolescence.pdf>.



### **3 | BUILDING REPOSITIONING AND REPURPOSING RESEARCH**

Significant research has been done on both national and international examples of repositioning and repurposing existing buildings, including the physical and locational characteristics of existing buildings that contribute to their obsolescence, and/or their suitability for repositioning or repurposing. A summary of the studies that were examined is in Appendix A.

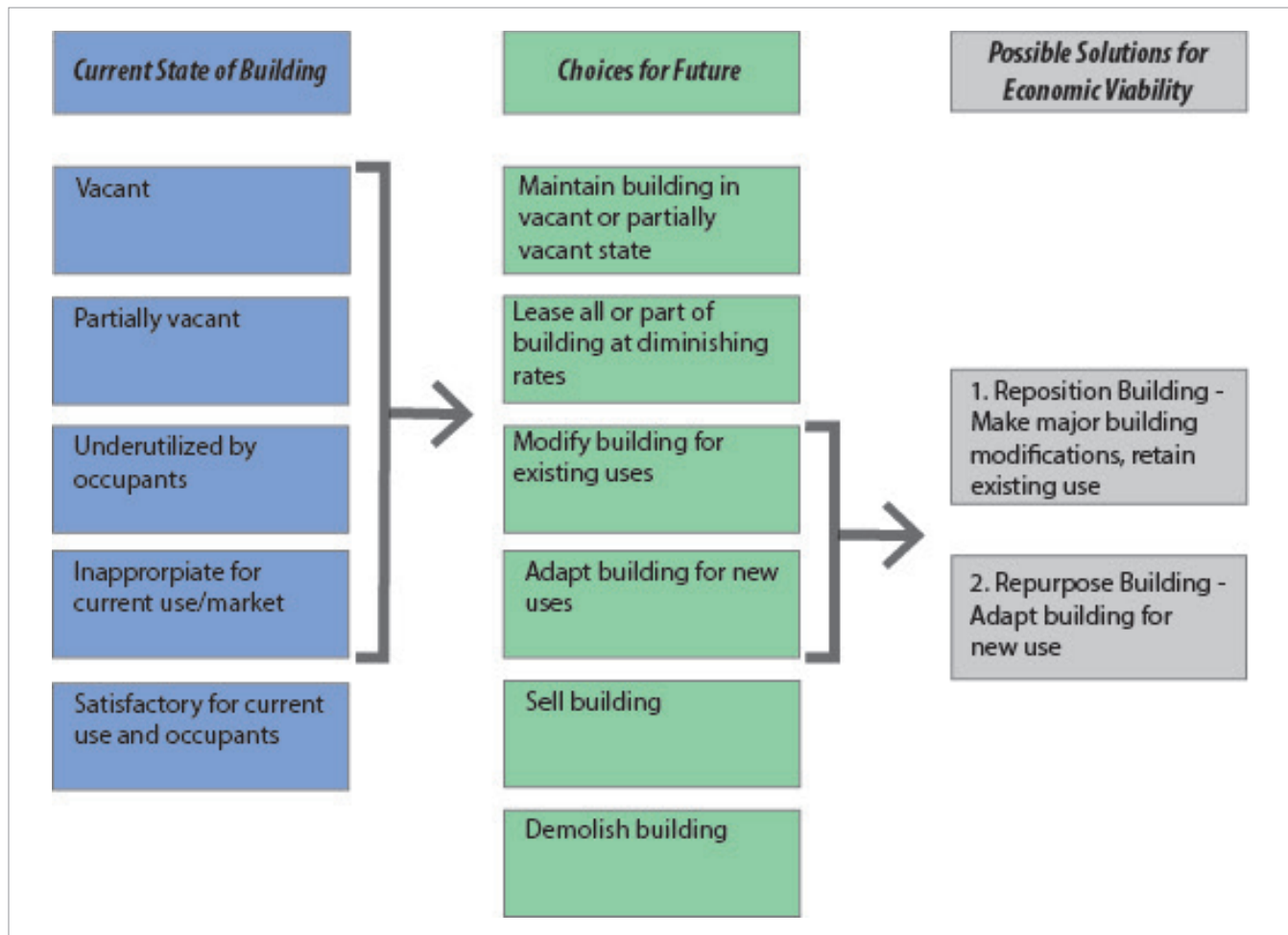
Staff also researched a select number of strategies utilized by other communities in the United States to address building obsolescence and to encourage a return to economic viability via building repositioning or repurposing. These strategies generally fall within two categories —policy and regulatory incentives, and financial incentives. The policy and regulatory incentive strategies reviewed focus on non-financial inducements to encourage private sector investment in older structures. The financial incentive strategies reviewed focused on major and minor monetary inducements to the private sector to pursue solutions for building obsolescence. Detailed descriptions of these strategies is compiled in Appendix B.

#### **THE SPECTRUM OF OBSOLESCENCE – A FRAMEWORK FOR EVALUATION**

Office building vacancy is attributable to a myriad of reasons — some of which are highly dependent upon the individual characteristics of an existing building, and others of which are a reflection of larger consumer trends in the office market. Examples of current office trends are the rise of technology and the mobile office; more efficient use of office square footage per employee; new preferences in workspace layouts; and, the influence of workforce recruitment on office building locational decisions. All of these factors come to bear on the long-term economic prospects for transforming vacant or underutilized office buildings into fully utilized buildings.

A framework was utilized to characterize and evaluate existing buildings in terms of their current utility, desirability and general economic performance. This framework, in effect, describes a “spectrum of building obsolescence,” with corresponding strategies or solutions to redress the economic viability of a building. Thus, some existing office buildings might only require

## THE SPECTRUM OF OBSOLESCENCE – A FRAMEWORK FOR EVALUATION



SPECTRUM OF OBSOLESCENCE ADAPTED FROM WILKINSON, REMØY, LANGSTON, SUSTAINABLE BUILDING ADAPTATION: INNOVATIONS IN DECISION-MAKING (WEST SUSSEX, UNITED KINGDOM: WILKINSON, 2014).

upgrades and “tweaks” to achieve full economic viability; others might require wholesale changes of use in order to achieve full economic viability, such as conversion from office to residential use, or possibly the integration of new, emerging technologies and trends into the building. Some existing office buildings may never achieve full economic viability either as repositioned or repurposed buildings. The solution for these buildings is eventual redevelopment of the property. A visual representation of the “Spectrum of Obsolescence” is found above.

## **POTENTIAL APPROACHES TO ADDRESSING BUILDING VACANCY: BUILDING REPOSITIONING; BUILDING REPURPOSING; INCORPORATION OF EMERGING TRENDS AND TECHNOLOGIES**

The Workgroup investigated three primary approaches to address vacant, or underperforming, office spaces:

### **REPOSITIONING**

Repositioning refers to a strategy whereby improvements are made to a building that is no longer competitive, or viable, in the current market due to its age, function or location and becomes obsolete for the intended market. In some instances, this obsolescence can be alleviated through enhancements to the building while retaining the existing use. These enhancements may include upgrading building materials, systems, spaces, and/or providing amenities that upgrade the tenant experience, thus making the building more responsive to market demands. A case study on building repositioning is contained in Appendix C.

### **REPURPOSING**

Repurposing can occur when a building is no longer competitive or viable in the current market due to its use and when the facility's obsolescence may not be best addressed through strategies that retain the existing use. In such instances, building viability can be improved through a change in building use — such as a conversion from office to residential use, or office to institutional use. This is known as repurposing. Viability may be improved secondarily through the addition of supporting amenities. Two case studies on building repurposing are contained in Appendix C.

### **ACCOMMODATING EMERGING TRENDS AND TECHNOLOGIES—TRENDS IN MARKET USES**

There are a number of emerging trends and technologies that are providing opportunities to enhance the marketability of buildings in tandem with a building repositioning or repurposing solution. Some of these emerging trends, such as “co-working,” employ new and different models for the utilization of office space. Other emerging trends, such as co-living, makerspaces, food incubators, urban farming/vertical farming or flexible live/work units, challenge traditional notions of the separation of individual uses



within a single site, space, or building — particularly in relation to planning and zoning regulations. These trends are described in more detail below and in case studies provided in Appendix C.

## CO-WORKING

One evolution in traditional office space is “co-working.” Co-working is the use of an office, or other working environment, that is shared by people who often do not work for the same employer. Co-working provides the type of space, environment, culture, and cost that is appealing to individual entrepreneurs, freelancers, start-up companies (start-ups) and/or non-profits looking for the physical and social amenities of an office without the overhead costs or the obligation of signing a lease. Co-working also offers an alternative to the worker or company that has outgrown a home office or may be in need of temporary flex office space.<sup>1,2</sup> The co-working model has lowered the financial point of entry into an office environment for those who are self-employed, freelancers or start-ups and alleviated the need for new companies to work through tenant improvement negotiations prior to moving in.

There are multiple companies offering co-working spaces in the Washington D.C. metropolitan area. The individual companies may offer a slightly different take on co-working—whether it’s the clientele targeted, the physical model and environment presented, or the inclusion of business development assistance.



1 Karsten Strauss, “Why Coworking Spaces Are Here to Stay,” <http://onforb.es/1YLdeNG>, (May 28, 2013).

2 “Coworking,” <http://whatis.techtarget.com/definition/coworking>, (Accessed April 25, 2016).

LOCAL CO-WORKING COMPANIES | PHOTO CREDIT: LISTED COMPANIES

## LOCAL CO-WORKING COMPANIES

COMPANY	WEBSITE	LOCATIONS
Play, Work or Dash	<a href="http://www.playworkdash.com">http://www.playworkdash.com</a>	1 VA location (Vienna/Tysons)
Cove	<a href="https://cove.is/index">https://cove.is/index</a>	6 DC locations
Eastern Foundry	<a href="http://eastern-foundry.com/">http://eastern-foundry.com/</a>	2 VA locations (Crystal City, Rosslyn)
WeWork	<a href="https://www.wework.com/">https://www.wework.com/</a>	5 DC locations 1 VA location (Crystal City*, Tysons**) *Crystal City location also features "WeLive" residential component **Coming soon
Refraction	<a href="http://refractionpoint.org/">http://refractionpoint.org/</a>	1 VA location (Reston)
Make Offices	<a href="https://makeoffices.com/">https://makeoffices.com/</a>	2 DC/MD locations 4 VA locations (Clarendon, Rosslyn, Reston, Tysons)
Launch Workplaces	<a href="http://launchworkplaces.com/">http://launchworkplaces.com/</a>	4 MD 1 VA (Tysons)

For example:

- Play, Work or Dash<sup>3</sup> targets the working parent by providing onsite daycare in addition to co-working space;
- Cove<sup>4</sup> markets itself more as a "productive space" than a co-working space by providing more of a neighborhood drop-in retail space, versus a larger, dedicated co-working office environment;
- Eastern Foundry<sup>5</sup> focuses on serving federal government small business, technology, and professional service providers with space, business services and mentorship opportunities.

Other co-working models in the area include WeWork,<sup>6</sup> Refraction,<sup>7</sup> Make Offices<sup>8</sup> and Launch Workplaces.<sup>9</sup> More information about each company is found in the table.

<sup>3</sup> Play, Work or Dash, <http://www.playworkdash.com>, (Accessed November 7, 2016).

<sup>4</sup> Cove, <https://cove.is/index>, (Accessed November 7, 2016).

<sup>5</sup> Eastern Foundry, <http://eastern-foundry.com/>, (Accessed November 7, 2016).

<sup>6</sup> WeWork, <https://www.wework.com/>, (Accessed November 7, 2016).

<sup>7</sup> Refraction, <http://refractionpoint.org/>, (Accessed November 7, 2016).

<sup>8</sup> Make Offices, <https://makeoffices.com/>, (Accessed November 7, 2016).

<sup>9</sup> Launch Workplaces, <http://launchworkplaces.com/>, (Accessed November 7, 2016).



## CO-LIVING

Co-living is essentially a communal living concept akin to “dorms for adults.” Moving into the facility only requires a person to bring their suitcases—everything else is provided.<sup>10</sup>

## MAKERSPACES

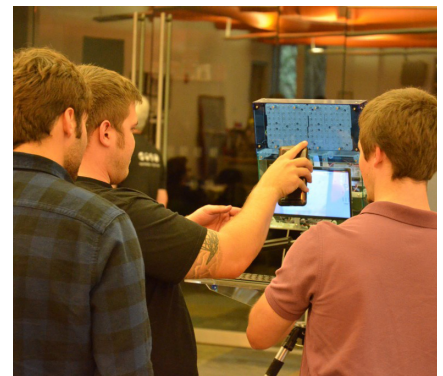
Makerspaces are community workshop facilities that integrate multiple uses at a single site (e.g., commercial, industrial and/or educational uses). This multifunctional nature of the space, with its emphasis on technology and creation, aligned with a spirit of community education and engagement, creates a culture of discovery and innovation for makers of all ages.

Technology has played a major role in the creation of makerspaces. As one report on makerspaces explains:

*“THE INTERNET HAS RESULTED IN INCREASED OPEN-SOURCED INFORMATION BECAUSE THE DISSEMINATION OF INFORMATION IS NOW DEEMED TO BE VIRTUALLY INEVITABLE. AS A RESULT, TINKERING PRIVATELY IN A GARAGE OR BASEMENT IS DISADVANTAGEOUS WHEN COMPARED TO MAKERSPACES WHERE ONE CAN EXCHANGE INFORMATION AND METHODS IN THE COMPANY OF LIKEMINDED ENTREPRENEURS, WHILE BENEFITING FROM THE ECONOMY OF SHARED EQUIPMENT AND SPACE. MAKERSPACES HAVE DEVELOPED DUE IN PART TO THE DRIVE TOWARD INTERDISCIPLINARY COLLABORATION IN INDUSTRY, WHICH REQUIRES INFORMATIONAL AND PHYSICAL CONNECTIVITY. TECHNOLOGY HAS ALSO ENABLED INVENTORS TO SELF-DEVELOP PROTOTYPES USING LASER CUTTERS AND 3-D PRINTERS, WHICH IS CHEAPER AND FASTER THAN RELYING ON THIRD-PARTY PROTOTYPE DEVELOPMENT, BUT NECESSITATES INVENTORS TO HAVE ACCESS TO A NEW LEVEL OF WORKSHOP EQUIPMENT. MAKERSPACES PROVIDE A NEW LEVEL OF ORGANIZATION AND FACILITIES IN RESPONSE TO THESE NEEDS BEYOND THE LOOSE CONFEDERATIONS OF POST-COLLEGIATE INVENTORS THAT FOR YEARS HAVE BEEN MEETING IN GARAGES AND LIVING ROOMS.”<sup>11</sup>*



CO-LIVING | PHOTO CREDIT: WELIVE



MAKERSPACES | PHOTO CREDIT: NOVA LABS

<sup>10</sup> WeLive Interview and Crystal City Site Visit, (July 26, 2016).

<sup>11</sup> Andrea Foertsch, “Innovation in Manufacturing: Makerspaces,” [http://ampitupma.com/pdf/makerspacesreport\\_april2013.pdf](http://ampitupma.com/pdf/makerspacesreport_april2013.pdf), (April 2013).





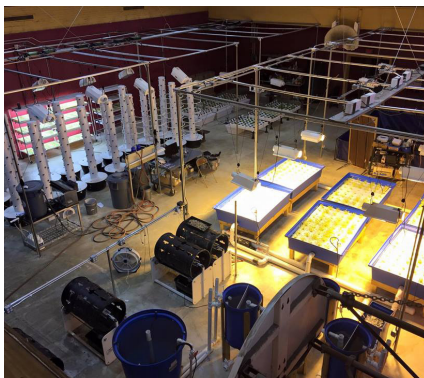
FOOD INCUBATOR | PHOTO CREDIT:  
FRONTIER KITCHEN

## FOOD INCUBATOR

Food incubators, or culinary incubators, offer shared commercial kitchen space and business coaching for food business entrepreneurs in early-stage catering, retail, and/or the wholesale food businesses. Access to the facility enables the entrepreneur to afford the cost of commercial kitchen equipment while in the early stages of business development until the culinary enterprise reaches a point where it can “graduate” from the food incubator and invest in its own facilities.<sup>12</sup>

## URBAN FARMING/VERTICAL FARMING

Urban farming is the production and distribution of food in a heavily populated community. The term is often used interchangeably with urban agriculture or urban gardening, and is sometimes associated with vertical farming. Urban farming may involve multiple aspects of farming including animal husbandry, beekeeping, and aquaculture—not just the cultivation of plants. It can occur in vacant lots, on rooftops, in park space, or in underutilized portions of a property, or other settings. The difference between urban farming and community gardening is mostly related to scale, the intended end user, and some form of commerce.<sup>13,14</sup>



URBAN FARMING/VERTICAL FARMING |  
PHOTO CREDIT: HARDING STREET UAC/VSU  
INDOOR FARM

Vertical farming, or indoor farming, is a term for food production within buildings that act as multi-story greenhouses.<sup>15</sup> Some concepts of vertical farming are associated with emerging or futuristic visions of agriculture—when hyper efficient, symbiotic buildings are envisioned as replacing large-scale horizontal farming that occurs outside of urban areas. However, vertical farming can also take place on a smaller scale and outside of such futuristic visions, or in a building in a non-urban setting.<sup>16</sup>

While urban farming does not equate to vertical farming, the possibility of overlap increases in likelihood as technology advances, as human population and urban densification increases,

12 “Kitchen Incubator,” Wikipedia, [https://en.wikipedia.org/wiki/Kitchen\\_incubator](https://en.wikipedia.org/wiki/Kitchen_incubator), (Accessed April 25, 2016).

13 “Urban agriculture,” Wikipedia, [https://en.wikipedia.org/wiki/Urban\\_agriculture](https://en.wikipedia.org/wiki/Urban_agriculture), (Accessed July 25, 2016).

14 “What is urban farming?” Greensgrow, <http://www.greengrow.org/urban-farm/what-is-urban-farming/>, (Accessed August 16, 2016).

15 Jake Cox, “What is Vertical Farming?” <http://archive.earth.org/blog/what-is-vertical-farming>, (November 9, 2009).

16 Dickson Despommier, “Vertical Farming Explained,” <http://www.verticalfarm.com/>, (Accessed July 25, 2016).

and as the retrofitting of existing buildings or construction of new buildings as a medium for agricultural production becomes more technologically and economically viable.

### FLEXIBLE LIVE/WORK UNITS

Unlike older concepts that feature downstairs/upstairs business and living configurations, this flexible live/work concept allows either or both uses to occur at the same time in a single space. Ultimately, the end user decides the use of the unit, as opposed to the traditional scenario in which uses are established at the front end through regulatory processes. In this scenario, the units are built to a standard layout and configuration and the flexibility means one's next door neighbor could be a business, a resident, or a resident who lives and works out of the unit. The uses are not segregated from each other throughout the building.<sup>17</sup>



FLEXIBLE LIVE/WORK UNITS | PHOTO  
CREDIT: E-LOFTS

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<sup>17</sup> Novus Residences LLC Interview and Site Visit, (December 16, 2015).

## 4 | POTENTIAL INVENTORY OF STRUCTURES IN FAIRFAX COUNTY

Based upon the research, case studies and discussions with area developers, staff has performed an initial high level survey of office buildings in Fairfax that may be suitable for repurposing to residential use. The quantification exercise that follows is solely to give a general scale and scope to the opportunities in Fairfax, and to assist policy makers when thinking about the impact that the Workgroup's recommendations may have. A more detailed and rigorous analysis is required to verify the underlying assumptions.

### EXISTING OFFICE BUILDINGS

The Fairfax County Office Structure Information report<sup>1</sup> details information about 5,142 office buildings in Fairfax. These structures range from individual office condominium units as small as 72 square feet up to the largest office structure in Fairfax located in McLean at over three million square feet.

### SIZE PARAMETERS FOR OFFICE BUILDING CONVERSIONS TO RESIDENTIAL

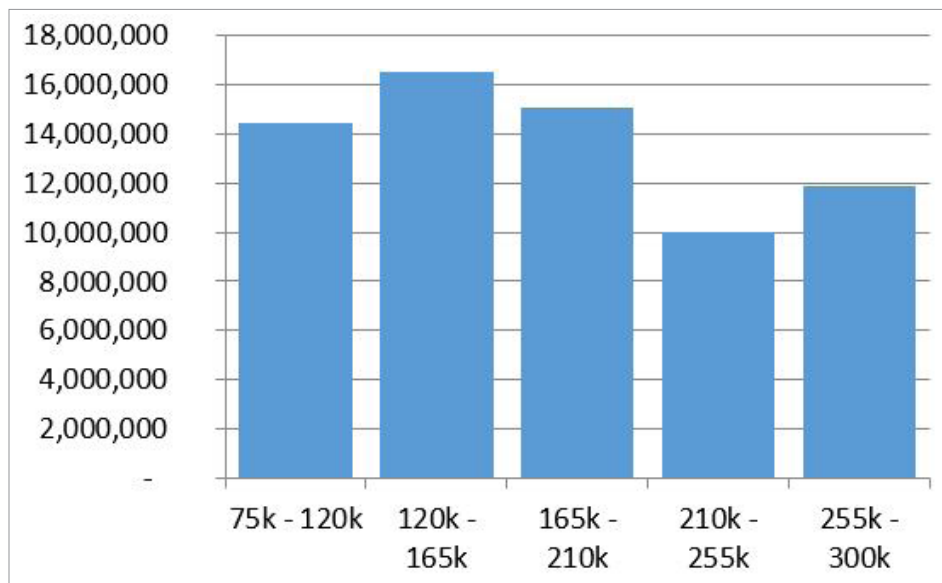
Based upon the literature review, and discussions with Workgroup members and local brokers, there appears to be some upper and lower limits to the size of a building in order for it to be attractive for conversion from office to residential use. If a building is too small, there may not be a sufficient number of units generated in the conversion to produce sufficient value to offset the conversion costs. If a building is too large, the project cost and risk may be too large to make financing the conversion attractive.

Staff chose to quantify a building size range of between 75,000 – 300,000 square feet. Each project and building is unique, and these parameters are based on 'rules of thumb' and may differ from project to project and building to building.

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<sup>1</sup> County of Fairfax, Office Structure Information (January 2015), [http://www.fairfaxcounty.gov/demogrph/demrpts/othrreports/inventory\\_office\\_structures.xls](http://www.fairfaxcounty.gov/demogrph/demrpts/othrreports/inventory_office_structures.xls).

## TOTAL OFFICE SPACE BY BUILDING SIZE



There are 432 buildings within this size range, comprising 53 percent of the total office stock in Fairfax, as of January 2015.

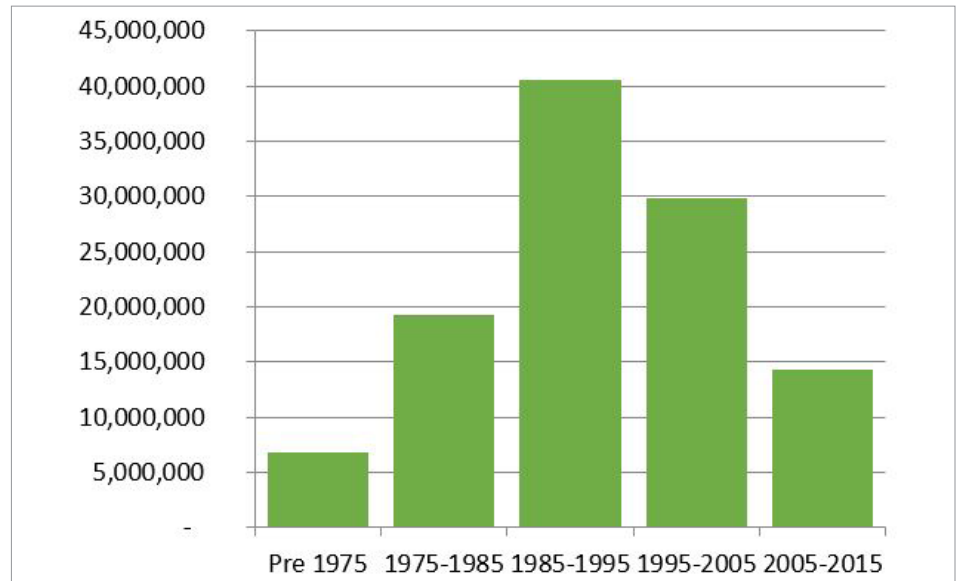
## AGE PARAMETERS FOR OFFICE BUILDING CONVERSIONS TO RESIDENTIAL

As of January 2015, 60 percent of the existing office buildings over 10,000 square feet in Fairfax were between 10 to 30 years old. For this analysis, staff did not count any of the buildings constructed before 1985 or since 2005. Buildings constructed prior to 1985 may be past their anticipated lifespan, may be historic in nature, or may have already had significant renovations. Buildings constructed since 2005 are still considered appropriate for office use.

There are 576 buildings within this age range in Fairfax, comprising 60 percent of the total office stock.

When combined with size parameters of 75,000 – 300,000 square feet, that number is reduced to 290 buildings.

## TOTAL OFFICE SPACE BY BUILDING AGE



## LOCATION PARAMETERS FOR OFFICE BUILDING CONVERSIONS TO RESIDENTIAL

Fairfax County has a long held land use policy to direct new development into its activity centers. These activity centers are generally where transit services are located and, in many instances, they have been the traditional commercial centers. The Comprehensive Plan for many of the County's activity areas includes the goal of adding residential uses to these areas. There are a number of parameters that should be taken into account when determining appropriate locations for potential office to residential conversion projects. Activity centers are one way to geographically narrow down those areas and generally keep the outcome in line with current land use policies. As such, staff used the activity centers designated in the County's Comprehensive Plan as an additional criteria to identify potential commercial buildings for conversion.

There are approximately 356 existing office buildings over 10,000 square feet in size that are located within existing activity centers. When the location is combined with an age range of 1985 to 2005, and size parameter of 75,000 – 300,000 square feet, the number is reduced to 182 buildings.

## ADDITIONAL BUILDING CHARACTERISTICS

In addition to the building size, age, and activity center area location characteristics listed above, there are additional general building characteristics that may allow for office buildings to be suitable for repurposing to residential uses.<sup>2</sup> These include the size of building's floor plate,<sup>3</sup> the construction material, and the ceiling height. These characteristics are more difficult to measure based upon existing available data.

Publicly available information from the Department of Tax Administration, spatial analysis performed on mapped buildings available through geographic information systems, and some spot checks resulted in an estimate that there are approximately 10 to 30 potential existing office buildings that could be suitable for conversion to residential based on the aforementioned criteria.

## CONCLUSION

As stated above, a more rigorous analysis is required to verify the assumptions. This analysis was performed solely to determine if there was a potential universe of office buildings that may be suitable for repurposing to residential use. Staff believes that such potential exists for approximately 10 to 30 existing office buildings.

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<sup>2</sup> Wilkinson, Remøy, Langston, Sustainable Building Adaptation: Innovations in Decision-Making (West Sussex, United Kingdom: Wilkinson, 2014).

<sup>3</sup> Newmark Grubb Knight Frank, Suburban Office Obsolescence: Quantifying Challenges and Opportunities (September 2015), 4, <http://www.ngkf.com/Uploads/FileManager/NGKF-White-Paper-Suburban-Office-Obsolescence.pdf>.



## 5 | RECOMMENDATIONS

Many of the recommendations supported by the Workgroup are adapted from successful policy and regulatory efforts utilized by other jurisdictions, from the research documented in the Appendices, and from experiences of the members themselves.

Specifically, the approaches endorsed by the Workgroup focused on:

- providing outreach and education on the opportunities available
- removing policy, process and regulatory obstacles to repositioning and repurposing
- creating advantages in certain designated areas to foster repurposing
- documenting decisions and creating a solutions database related to repositioning and repurposing
- encouraging consideration of repurposing existing buildings to accommodate public facilities
- monitoring and accommodating emerging trends

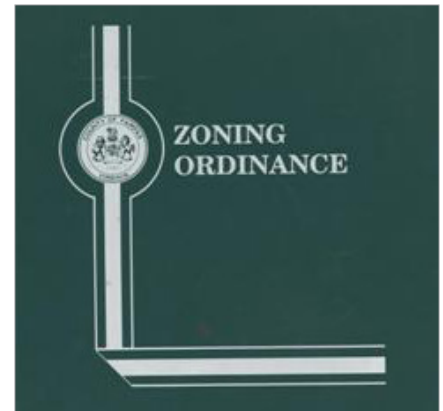
The Workgroup's recommendations follow.

### **RECOMMENDATIONS FOR REPOSITIONING AND REPURPOSING EXISTING STRUCTURES IN FAIRFAX COUNTY**

Following is a list of opportunities and potential solutions that have emerged from discussions within the Workgroup, site visits to locations within the metropolitan Washington region that have addressed the issue in a variety of ways, and research undertaken by county staff. These recommendations provide a variety of approaches that can be customized to specific building locations and characteristics, and that can positively impact vacant commercial spaces by lowering the challenges to repositioning and repurposing spaces, anticipating and accommodating future uses, and assisting building owners who would like to invest in their properties.

## CONSIDER CHANGES AND MODIFICATIONS TO THE ZONING ORDINANCE TO FACILITATE BUILDING REPOSITIONING, REPURPOSING, AND EMERGING TRENDS

- a. Permit additional flexibility under the Minor Modification provisions to accommodate such things as the addition of supporting and/or accessory uses within existing structures, and physical improvements (e.g., sidewalks) to support repositioning and/or repurposing.
- b. Modify provisions that permit increases in building FAR or maximum allowable square feet to increase the administrative flexibility under certain circumstances.
- c. Add flexibility to permit additional retail and similar uses on the ground floor of existing commercial buildings.
- d. Provide greater flexibility for proffer interpretations related to proffer requirements.
- e. Consider incorporating flexibility for the repurposing and repositioning of buildings into the current county work related to parking regulations.
- f. Create a Special Exception to allow for greater flexibility in the permitted uses within existing structures. Specifically, permit residential uses under certain circumstances and in certain locations in the commercial and industrial districts to provide flexibility for repurposing existing structures.
- g. Consider a Board's Own Motion or other mechanism to allow repurposing of certain selected buildings.
- h. Establish an inter-disciplinary group of county staff to identify, monitor, and track emerging land use trends and propose amendments to the Zoning Ordinance to facilitate projects that seek to accommodate such emerging uses. The group should identify existing or new zoning categories for these new uses and/or determine gaps in the ability of such uses to locate in appropriate locations, and propose Zoning Ordinance amendments, as appropriate. Continue to utilize the Fairfax County Building Repositioning Workgroup to vet ideas.



FAIRFAX COUNTY ZONING ORDINANCE

i. Evaluate the need for additional flexibility to accommodate more than one use within a single space. New and emerging uses, such as makerspaces, maximize value by creating either a mix of uses within a single unit to lower the barrier between different types of land uses and/or create value by allowing multiple revenue generating activities of different uses in one location. For example, educational uses (classes), industrial production and manufacturing, retail sales, and a social club could all be accommodated within the same unit. Other new and emerging uses with similar flexible space needs could include urban agriculture, food incubators, or flexible live-work units.

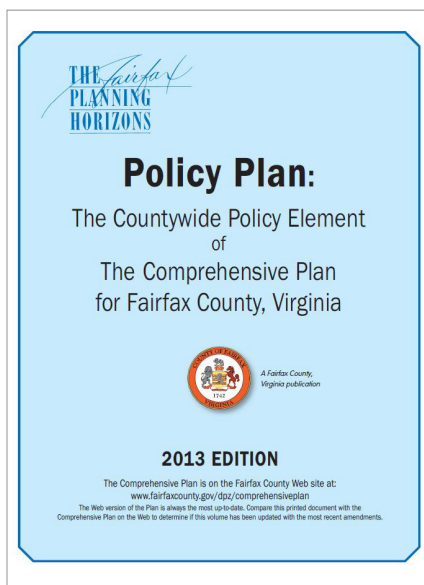
### **IMPROVE THE DEVELOPMENT PROCESS FOR THE REPOSITIONING AND REPURPOSING OF EXISTING STRUCTURES**

a. Institutionalize a simplified Proffered Condition Amendment (PCA) process which would apply to modifications of existing proffers on existing structures to accommodate repositioning and repurposing, while encouraging the provision of adopted streetscape and urban design guidelines.

b. Evaluate the need to make changes to the process by which occupancy permits are provided for repurposing of existing buildings. As additional flexibility is accommodated within a single structure, the current occupancy permit process may need to be revised to be responsive to changes in the marketplace. Currently, occupancy permits are issued for a Non-Residential Use Permit (Non-RUP) or Residential Use Permit (RUP), but no single permit exists for spaces that contain both use categories.

### **MAKE CHANGES AND MODIFICATIONS TO LAND USE PLANNING POLICY**

a. Amend the Policy Plan portion of the Comprehensive Plan to create policy guidance in support of repurposing existing commercial structures to residential and other uses. This new Appendix, 'Guidelines for Building Repurposing', should provide guidance on which areas are suitable for repurposing as well as on issues of general site characteristics and relationships to adjacent uses.



FAIRFAX COUNTY POLICY PLAN



BAILEY'S UPPER ELEMENTARY SCHOOL AS AN EXAMPLE OF BUILDING REPURPOSING | PHOTO CREDIT: FAIRFAX COUNTY PUBLIC SCHOOLS

- b. Use a demonstration project, or projects, to work through issues associated with repurposing an existing commercial use building, and make changes that are identified through this effort.
- c. Encourage county agencies and departments such as Fairfax County Public Schools, Libraries, Neighborhood and Community Services, and Housing and Community Development to consider the repurposing or repositioning of vacant buildings when planning for or seeking locations for new facilities.

## **IMPROVE INFORMATION DISTRIBUTION AND EDUCATION ON BUILDING REPOSITIONING AND REPURPOSING OPPORTUNITIES AND PROCESSES**

- a. Create outreach activities to expand the use of the State of Virginia Rehabilitation Code in building repositioning/repurposing activities. The VA Rehabilitation Code was enacted to aid in the improvement of both occupied and vacant older commercial buildings. Application of the standard building code to rehabilitation projects can lead to costly and time-consuming requirements, which can make rehabilitation projects less economically viable. The 2012 VA Rehabilitation Building Code is an alternative code that can be used to for the rehabilitation or alteration of existing



VIRGINIA REHABILITATION CODE

buildings. Fairfax County Building officials have determined that the code could benefit conversion projects; however, it is not often used by submitting architects.

b. Create a solutions database for common issues that are identified and resolved for building repurposing. With new and innovative conversions of existing structures, solutions that are successful in one project may provide solutions for future projects. An accessible database should be developed to document solutions, interpretations, administrative approvals, and the circumstances surrounding each decision.

c. Advertise new processes and repositioning/repurposing potential for existing commercial structures to building owners and broker associations. Consider conducting an introductory seminar on the topic.

d. Establish and document the process for the establishment of 'temporary' and 'pop-up' uses in vacant spaces.

e. Utilize the resources of the Economic Development Authority (EDA) as the primary provider of matchmaking services between existing commercial building owners with high vacancy rates and potential users/developers who are looking for repositioning/repurposing opportunities.

f. Involve the Office of Public Private Partnerships to assist with identifying art and cultural uses that could use portions of vacant commercial space on a temporary basis.

g. Create a 'Repositioning Coordinator' position to facilitate the management of building repositioning and repurposing efforts.

h. Monitor programs used in other jurisdictions to support building repurposing, to foster emerging trends, and to identify and make recommendations on implementation of those that would be of benefit to the County.





## 6 | APPENDICES

This section contains three appendices:

- Appendix A | Studies on Building Repositioning and Repurposing
- Appendix B | Strategies to Address Building Obsolescence from other U.S. Jurisdictions
- Appendix C | Regional Case Studies of Building Repositioning, Building Repurposing, and Emerging Trends and Technologies



# APPENDIX A | STUDIES ON BUILDING REPOSITIONING AND REPURPOSING

Significant research has been done on both national and international examples of repositioning and repurposing existing buildings, including the physical and locational characteristics of existing buildings that contribute to their obsolescence, and/or their suitability for repositioning or repurposing. Physical characteristics include building construction type, floor plate size (building length and depth), façade material, and location of the central core. Locational characteristics include parking ratios, proximity to public transportation, and relationship to amenities (either within the structure or in a walkable distance). Many of the international case studies were found to have adaptively reused structures with significant cultural heritage value.

Staff reviewed five studies to delve into issues and potential solutions as they relate to building repositioning and repurposing. The first, by Newmark Grubb Knight Frank, looked at the issue nationally, incorporating a local perspective on a Fairfax County office submarket. Two other studies highlighted local Washington metropolitan jurisdictions and generally found that neighboring communities are experiencing similar challenges to the office market as Fairfax County. The remaining two studies addressed barriers to the adaptive reuse of older existing buildings in the cities of Baltimore and Philadelphia.

## SUBURBAN OFFICE OBSOLESCENCE – NEWMARK GRUBB KNIGHT FRANK

Newmark Grubb Knight Frank<sup>1</sup> (NGKF) reviewed a number of factors nationally that are driving modern office tenant demands. There is a national trend at the higher end of office leasing (Trophy or Class A) for locations that are close to mass-transit with amenities that are within the building or are within walking distance. These locations are increasingly favored over a 'suburban' campus office setting. Among these types of office locations, there is a spectrum of obsolescence for office buildings

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<sup>1</sup> Newmark Grubb Knight Frank, Suburban Office Obsolescence: Quantifying Challenges and Opportunities (September 2015), <http://www.ngkf.com/Uploads/FileManager/NGKF-White-Paper-Suburban-Office-Obsolescence.pdf>.

to describe why some locations within office markets have difficulty in filling existing office space, and how to address these issues.

NGKF identified six quantifiable factors that signify obsolescence.<sup>2</sup> Three of these factors were identified as 'curable', or able to be addressed by building owners. These included, amenities, age (via renovation), and parking ratios. The remaining three factors were 'incurable', which included location, floor plate size, and building size.

In addition to the national review of obsolescence, NGKF looked at the Reston/Herndon Office Submarket, which, according to the study, validated the criteria.<sup>3</sup> NGKF extrapolated, that if this same criteria were applied to the entire metropolitan Washington region suburban office market, approximately 15.9 percent of the existing office inventory is obsolete (over 38 million square feet of office space). While many of these properties do not have currently higher-than-market vacancy rates, they are showing a depressed asking rent. This leads to a concern from NGKF that re-leasing much of this space will be difficult once the existing long-term leases expire.<sup>4</sup>

The minimum acceptable ranges that NGKF defined for the six factors used in their Reston/Herndon study<sup>5</sup> are listed in the table below.

#### CRITERIA AND RANGES IN RESTON/HERNDON SUBMARKET

CRITERIA	RESTON/HERNDON
Location (maximum acceptable distance)	1/2 mile to transit
Amenities	Food service, fitness center, conference facility
Year Built/Renovated	2000 or later
Floor Plate (ideal range)	25,000 - 50,000 SF
Parking Ration (minimum acceptable)	3.5/1,000 SF
Building Size (ideal range)	150,000 - 250,000 SF

***“NGKF IDENTIFIED SIX QUANTIFIABLE FACTORS THAT SIGNIFY OBSOLESCENCE. THREE OF THESE FACTORS WERE IDENTIFIED AS ‘CURABLE’, OR ABLE TO BE ADDRESSED BY BUILDING OWNERS. THESE INCLUDED, AMENITIES, AGE (VIA RENOVATION), AND PARKING RATIOS. THE REMAINING THREE FACTORS WERE ‘INCURABLE’, WHICH INCLUDED LOCATION, FLOOR PLATE SIZE, AND BUILDING SIZE.”***

<sup>2</sup> Newmark, Suburban Office Obsolescence, 3.

<sup>3</sup> Newmark, Suburban Office Obsolescence, 16-17.

<sup>4</sup> Newmark, Suburban Office Obsolescence, 16-17.

<sup>5</sup> Newmark, Suburban Office Obsolescence, 23.

## OFFICE MARKET ASSESSMENT AND THE NEW OFFICE LANDSCAPE – MONTGOMERY COUNTY, MD

The Montgomery County Planning Department commissioned Partners for Economic Solutions (PES) to prepare a market analysis to examine the regional office market. The goal was to better understand changing market demand for office. The report was delivered in June 2015,<sup>6</sup> and the relevant findings are summarized below.

***“WHILE THE REGION HAS EXPERIENCED MARKET DOWNTURNS IN THE PAST, THIS DOWNTURN IS BEING EXACERBATED AS A RESULT OF TENANTS REDUCING THEIR OFFICE SPACE EVEN WHILE THEIR WORKFORCES ARE EXPANDING. THIS TREND IS DUE TO THE DECREASING AMOUNT OF SPACE ALLOCATED PER EMPLOYEE, DESIGN CHANGES IN TENANT LAYOUTS, TECHNOLOGY, AND THE DESIRE FOR MORE EFFICIENT AND COMMUNAL FLOOR PLATES IN MODERN OFFICE BUILDINGS.”***

PES determined that, as of the second quarter of 2015, there were 71.5 million square feet of vacant office space in the metropolitan Washington region, with Fairfax County accounting for the largest share. While the region has experienced market downturns in the past, this downturn is being exacerbated as a result of tenants reducing their office space even while their workforces are expanding. This trend is due to the decreasing amount of space allocated per employee, design changes in tenant layouts, technology, and the desire for more efficient and communal floor plates in modern office buildings.

There is also a shifting of locational demand from suburban settings to urban ones. Companies are seeking to attract highly-valued employees by relocating to office spaces in walkable, amenity rich locations with access to transit that allow for employee choice on mode of transportation. Being able to live near job sites and reduce commuting times are high priorities for the modern workforce.

Location and place specifics are very important to note. Reston Town Center has an extremely low vacancy rate, attributable to it being a high quality, mixed-use pedestrian-oriented environment. PES anticipates that, in desirable locations with lower vacancy rates and within a walkable mixed-use setting in Montgomery County, office construction would begin again. There were concerns that new construction would be slow to return to single-use office park environments that do not offer local amenities.

The key elements of a successful office district identified by PES are summarized in the table on the next page.

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<sup>6</sup> Partners for Economic Solutions, Office Market Assessment, Montgomery County, Maryland (June 18, 2015), <http://www.montgomeryplanning.org/research/documents/MontgomeryCountyOfficeFinalReport061815.pdf>.

## KEY ELEMENTS OF A SUCCESSFUL OFFICE DISTRICT

	RESTON TOWN CENTER	NOMA	MOSAIC DISTRICT	CAPITOL RIVER- FRONT	SHIRLING- TON	ROCKVILLE TOWN CENTER	WHITE FLINT
Walkable District	X	X	X	X	X	X	X
Mixed Uses	X	X	X	X	X	X	X
Entertainment	X		X	X	X	X	X
Metro Station		X		X		X	X
Shuttle Bus to Metro			X		X		
Highway Access	X		X		X		
Public Space	X		X	X	X	X	X
Programming	X		X	X	X	X	

PES concluded that the conversion of older office buildings to new uses may become feasible, particularly for narrow-footprint buildings in mixed-use environments where rents can be set at rates sufficient to offset building renovations. In time, PES predicts that better-capitalized businesses will move to mixed-use districts in order to stay in the vibrant commercial centers. Furthermore, the following recommendations to address office vacancy were offered:

- Invest in transit options and pedestrian level improvements to make existing office parks more pedestrian friendly;
- Encourage place making through encouragement of programming in areas to build community;
- Remove zoning impediments to make sure zoning is flexible for existing office parks;
- Possibly provide incentives for older buildings in areas with the greatest potential for conversion and/or work with schools to see if conversion projects for educational purposes would be appropriate;
- Review building safety codes to ensure that older commercial buildings can be permitted quickly for tenants;
- Work with landowners on approved single-use office developments that have not been built yet to encourage redesign;
- Perhaps evaluate long-term land use strategy for future office locations. Ensure that the strategy and policy align with current market trends; and,
- Establish a business incubator program to support local entrepreneurs.

PES stated each location will have its own specific locational and submarket conditions and that the county should be flexible in order to respond to a changing market demand.



## CONVERTING OFFICE TO RESIDENTIAL USES IN ARLINGTON COUNTY – ULI MTAP

The Urban Land Institute Washington provided Arlington County with a mini Technical Assistance Panel (mTAP) to help it establish policy for the potential conversion of office and commercial uses into residential uses.<sup>7</sup>

***“THE mTAP IDENTIFIED A NUMBER OF CHALLENGES INHIBITING CONVERSION OF COMMERCIAL SPACE TO RESIDENTIAL USE IN ARLINGTON COUNTY. THE PRIMARY CHALLENGES IDENTIFIED WERE LACK OF CRITERIA TO EVALUATE CONVERSION OF SPECIFIC SITES; A DYNAMIC COMPREHENSIVE PLAN UPDATE PROCESS; UNKNOWN IMPACTS TO THE TAX BASE OF CONVERSION OF LAND USES FROM COMMERCIAL TO RESIDENTIAL USE; AND, AN EXISTING DEVELOPMENT PROCESS AND PUBLIC REVIEW PERIOD THAT WAS NOT DEVELOPED WITH CONVERSION PROJECTS IN MIND AND MAY INHIBIT INVESTMENT IN PLANNED PROJECTS.”***

The mTAP identified a number of challenges inhibiting conversion of commercial space to residential use in Arlington County. The primary challenges identified were lack of criteria to evaluate conversion of specific sites; a dynamic comprehensive plan update process; unknown impacts to the tax base of conversion of land uses from commercial to residential use; and, an existing development process and public review period that was not developed with conversion projects in mind and may inhibit investment in planned projects.

The mTAP found that Arlington County’s existing plans and policies could generally accommodate conversion requests (see Co-Living WeLive Case Study in Appendix C). However, there was a lack of information on potential sites for conversion. The mTAP made the following recommendations:

- Determine the size of the issue by conducting an inventory of potentially relevant sites to quantify the problem and to determine if specific County policy and regulatory changes were necessary;
- Ensure alignment of strategies and land use goals to provide policy guidance when stakeholders are evaluating proposed conversions;
- Consider adding flexibility to planning sector plan areas based upon demand within specific sub-markets, such as allowing for conversion in areas where an adjacent Metrorail station has an office market that could accommodate additional office growth (and making office development farther away less likely);
- Establish criteria within the plan amendment process to allow for administrative review of conversion requests to reduce approval timeframes; and,
- Consider innovative alternative uses for vacant office space to respond to emerging technologies and uses.

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<sup>7</sup> Mike Antonelli, Hilary Chapman, Justin Chapman, Dan Emerine, Jeff Hinkle, and Lisa Warden, Office to Residential mTAP (2016).

## BUILDING REUSE BARRIERS INITIATIVE IN BALTIMORE, MARYLAND

This study, completed in November 2014, explored the topic of building reuse and how the City of Baltimore could make it easier for property owners and investors to renew and repurpose older buildings. In addition to identifying barriers to reinvestment, the study used a methodology to identify areas of Baltimore that have the most potential to achieve successful building reuse and neighborhood revitalization in the near future, but have not yet experienced significant levels of reinvestment. The resulting selected neighborhoods were thought to be those that could benefit most from focused programmatic and policy assistance to accelerate market-driven building reuse.

The Baltimore model used a 'Character Score' for each 200-meter-by-200-meter grid square of the city as the baseline for analysis. The metrics included social, economic, real estate, and demographic measures. When compared against maps of existing incentive program areas, the Character Score provides a way to determine if policy and programmatic strategies should be adjusted.

The study advocated for a targeted intervention approach toward those areas with the greatest potential.

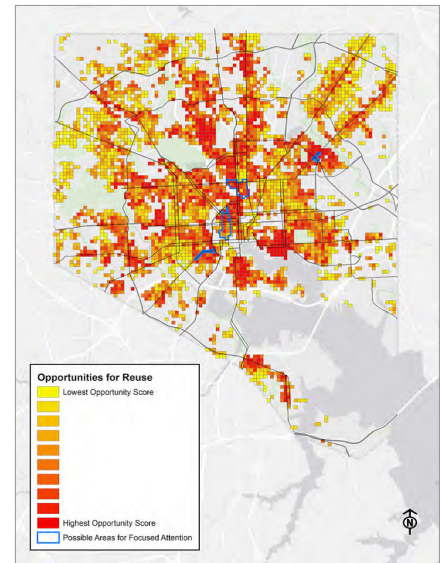
The report was a collaborative effort among the National Trust for Historic Preservation's Green Lab, the Urban Land Institute (ULI) Baltimore and more than 90 local stakeholders. The nine-month project was guided by a 33-member Reuse Advisory Committee with six focused workgroups.

The report identified the following barriers to building reuse in Baltimore:

- Market – supply and demand for various building types and uses;

For example: weak market conditions especially in areas of low employment and income, high crime rates or poor quality of schools.

- Financial – project costs, sources of equity, lending practices, and financial incentives;



OPPORTUNITIES FOR REUSE IN BALTIMORE |  
IMAGE CREDIT: BUILDING ON BALTIMORE'S  
HISTORY REPORT

For example: high cost of rehab projects, difficulty in financing, or availability of incentives especially for small projects.

- Technical – related to building location, site, design, construction and materials;

For example: lack of parking, lack of transit access, building layout, or environmental contamination issues.

- Regulatory – such as zoning and development standards, building codes, energy codes, historic preservation standards, seismic codes, and other review processes, requirements, permits and fees;

For example: code requirements related to secondary means of egress, parking requirements, or more stringent energy code requirements.

General recommendations of the report<sup>8</sup> were to:

- Adopt key provisions of the city's proposed new zoning code that provides more flexibility
- Promote creative building and energy code solutions
- Improve and promote incentive programs
- Focus attention in high-opportunity neighborhoods and districts

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<sup>8</sup> National Trust for Historic Preservation Green Lab and Urban Land Institute – Baltimore, Building on Baltimore's History: The Partnership for Building Reuse (November 2014), <http://baltimore.uli.org/wp-content/uploads/sites/11/2014/11/NTHP-BALTIMORE-REPORT.pdf>.

## BUILDING REUSE BARRIERS INITIATIVE IN PHILADELPHIA, PENNSYLVANIA

A study completed in September 2014, explored the topic of building reuse and how Philadelphia could make it easier for property owners and investors to renew and repurpose older buildings. In addition to identifying barriers to reinvestment, the study used a methodology to identify areas of Philadelphia that have the most potential to achieve successful building reuse and neighborhood revitalization in the near future, but have not yet experienced significant levels of reinvestment. The study recommends focusing programmatic and policy assistance to those areas to accelerate market-driven building reuse.

Like the Baltimore study, the model also used a 'Character Score' for each 200-meter-by-200-meter grid square of the city as the baseline for analysis. When compared against maps of existing incentive program areas, the Character Score provides a way to determine if policy and programmatic strategies should be adjusted.

The study advocated for a targeted intervention approach toward these areas given their potential. It also advocated the use of the methodology as a tool for starting discussions about building reuse.

The report was a collaborative effort among the National Trust for Historic Preservation's Green Lab, ULI Philadelphia and more than 40 local stakeholders. The project was guided by a 22-member Reuse Advisory Committee which utilized interviews, data collection and mapping and stakeholder meetings for findings.

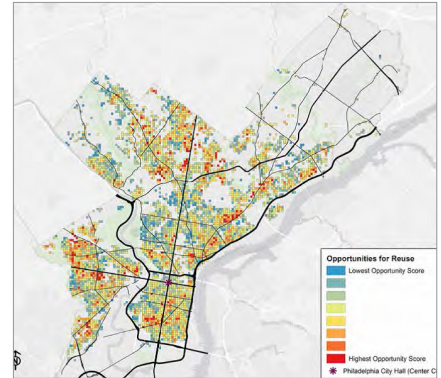
### General Barriers to Building Reuse in Philadelphia:

- Market – supply and demand for various building types and uses;

For example: weak market conditions and low rents.

- Financial – project costs, sources of equity, lending practices, and financial incentives;

For example: high construction costs, including high labor costs; lack of sufficient incentives for affordable housing and smaller commercial projects.



OPPORTUNITIES FOR REUSE IN PHILADELPHIA | IMAGE CREDIT: RETROFITTING PHILADELPHIA REPORT

- Technical – related to building location, site, design, construction and materials;

For example: complexity and cost of meeting zoning, building, and energy codes, especially for smaller projects.

- Regulatory – such as zoning and development standards, building codes, energy codes, historic preservation standards, seismic codes, and other review processes, requirements, permits and fees;

For example: difficulty in acquiring long-abandoned structures.

General Recommendations of the report<sup>9</sup> were to:

- Expand and increase the effectiveness of reuse incentives
- Increase the capacity of public agencies to facilitate reuse projects
- Provide new information and tools

## **APPLICABILITY OF STUDIES TO FAIRFAX COUNTY**

Many issues and solutions outlined in the proceeding studies were considered by the Workgroup in the course of evaluating building obsolescence in the county and devising potential solutions. Some of the solutions recommended include evaluating the county's zoning ordinance for needed flexibility in building repositioning and repurposing, raising awareness among different county stakeholders through outreach opportunities, and ensuring proper policy guidance is provided in Fairfax County's Comprehensive Plan regarding building conversions.

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<sup>9</sup> National Trust for Historic Preservation Green Lab and Urban Land Institute - Philadelphia, Retrofitting Philadelphia: The Partnership for Building Reuse (September 2014), <http://www.preservationnation.org/information-center/sustainable-communities/green-lab/partnership-building-reuse/04614-NTHP-Philadelphia-WEB-FINAL.pdf>.





# APPENDIX B | STRATEGIES TO ADDRESS BUILDING OBSOLESCENCE FROM OTHER U.S. JURISDICTIONS

Staff researched a select number of strategies utilized by other communities within the United States to address building obsolescence. These strategies generally fell within two categories—policy and regulatory incentives, and financial incentives.

## POLICY AND REGULATORY INCENTIVES

Policy and regulatory incentives can provide a non-financial inducement to the private sector to pursue solutions for building obsolescence.

### ADAPTIVE REUSE ORDINANCE AND INCENTIVE PROGRAM - LOS ANGELES, CALIFORNIA

Los Angeles has an Adaptive Reuse Ordinance (Ordinance) that allows for the conversion of historic and underutilized structures into new uses in order to encourage revitalization in five designated areas. Structures considered include apartments, condos, live/work lofts, retail use and hotels. As described in the city's Adaptive Reuse Handbook, 'Adaptive reuse' is defined as adapting an existing economically obsolete building for a new, more productive purpose through substantial, physical alterations which convert the building from its original use.<sup>1</sup> The adaptive reuse program streamlines the process developers must follow to get their projects approved, resulting in time savings. The Ordinance was originally approved by the City Council in 1999 for downtown Los Angeles. However after much success, it was extended into other neighborhoods of the city in 2003.<sup>2</sup>

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<sup>1</sup> City of Los Angeles Adaptive Reuse Program Handbook – Second Edition (February 2006), <https://www.downtownla.com/images/reports/adaptive-rescue-ordinance.pdf>.

<sup>2</sup> Adaptive Reuse Ordinance, City of Los Angeles Office of Historic Resources, <http://preservation.lacity.org/incentives/adaptive-reuse-ordinance>, (Accessed August 17, 2016).

An Adaptive Reuse Handbook was created to explain the program and process. The program consists of two main components to encourage the desired building conversions:

- A set of land use ordinances that relax parking, density, and other typical zoning requirements;
- More flexibility in the approval and permitting process for fire and life safety measures.

## ADAPTIVE REUSE INCENTIVE AREAS

Los Angeles has five designated adaptive reuse incentive areas. Developers may also submit applications for the adaptive reuse of existing buildings outside of the designated areas, but those applications are subject to a discretionary review, may be subjected to certain conditions, and/or may not qualify for any program incentives.

## MINIMUM STANDARDS AND PROGRAM INCENTIVES

The minimum size for new dwelling units (apartments, condos) and live/work units created is 450 square feet. The minimum average unit size for all apartments, condos, and live/work spaces in a building, or project, is 750 square feet. However, if a density incentive is not needed, the standards do not apply; a project may also choose the affordable housing density bonus in lieu of adaptive reuse density incentive if desired. Hotel rooms must include a toilet and bathing facilities, but there is no minimum room size or minimum average size.

The following incentives are available:

- Density – Underlying density restrictions imposed by zoning requirements are waived if minimum size standards are met. There is no limit on the number of apartments, condos, live/work spaces or hotel rooms permitted, if the project complies with the standards.
- Exceptions – When an existing building is converted to an adaptive reuse project, non-conforming floor area, setbacks and height are grandfathered.
- Mezzanines – New construction of mezzanine spaces is allowed, if it does not exceed one-third the size of the floor below and complies with the Code.
- Loading Space – If a loading space does not currently exist, none are required.

- Parking – No new parking is required. Existing parking spaces must be maintained, but they may be used for any on-site or off-site use.

## PROJECT EVALUATION

***“THERE ARE TWO PROCESSES TO EVALUATE PROPOSALS DEPENDING ON THE PROJECTS, QUALIFICATIONS OR SPECIFICATIONS. THERE IS A “BY-RIGHT” ENTITLEMENT PROCESS AND A DISCRETIONARY REVIEW PROCESS.”***

There are two processes to evaluate proposals depending on the projects, qualifications or specifications. There is a “by-right” entitlement process and a discretionary review process.

- By Right – The by-right process is automatically allowed for the project, and the project is entitled to all program incentives, if all the following conditions are met:
  - Project produces rental units
  - Project is inside a designated incentive area
  - Building has underlying commercial or R5 (high density residential) zoning
  - Building was constructed before July 1, 1974

The applicant can apply for a building permit with Department of Building and Safety and the project does not require a public hearing.<sup>3</sup> If the project involves the adaptive reuse of a historically significant building, environmental clearance (California Environmental Quality Act – CEQA review) for impacts on historic features will be required. The project must also meet all other applicable City standards and permit requirements.

- Discretionary – The discretionary review process is required if any of the following applies to the project:
  - Project produces condominium units
  - Project is outside a designated incentive area
  - Building has underlying industrial zoning
  - Building was constructed on or after July 1, 1974

The applicant must submit an application to the City Planning Department; the proposal’s utilization of incentives may be granted, modified, or denied. If the project has condos, the City Planning Department Advisory Agency will review the project. Otherwise, a Zoning Administrator will review the project. A public hearing may also be required. If the project has underlying industrial zoning and is located outside an incentive area, then the project is limited to Artist-In-Residence live/work spaces.

<sup>3</sup> Adaptive Reuse Projects, City of Los Angeles Department of Building and Safety, <http://ladbs.org/services/core-services/plan-check-permit/plan-check-permit-special-assistance/adaptive-reuse-projects>, (Accessed August 17, 2016).

The Los Angeles Zoning Code may be referred to for additional information. Finally, all discretionary projects require environmental clearance.

## PROGRAM RESULTS

The Adaptive Reuse Ordinance has resulted in 76 conversion projects, producing 9,137 units of new housing (2,479 for sale units, the remaining rental) in downtown Los Angeles. The bulk of building conversion projects occurred prior to 2011, but the Ordinance is still in effect. Overall, the Ordinance has had a positive impact on the City and has been viewed as one of the most successful planning ordinances in recent decades. Los Angeles has been transformed because of the residential base the ordinance helped facilitate, and it has led to a more vibrant, 24-hour downtown.<sup>4</sup>

***"OVERALL, THE ORDINANCE HAS HAD A POSITIVE IMPACT ON THE CITY AND HAS BEEN VIEWED AS ONE OF THE MOST SUCCESSFUL PLANNING ORDINANCES IN RECENT DECADES. LOS ANGELES HAS BEEN TRANSFORMED BECAUSE OF THE RESIDENTIAL BASE THE ORDINANCE HELPED FACILITATE, AND IT HAS LED TO A MORE VIBRANT, 24-HOUR DOWNTOWN."***

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<sup>4</sup> City of Los Angeles Office of Historic Resources Phone Interview, (September 13, 2016).

## FINANCIAL INCENTIVES

Financial incentives provide a monetary inducement to the private sector to pursue solutions for building obsolescence. Some of these major and minor financial incentive strategies are outlined below:

### TAX EXEMPTION AND ABATEMENT PROGRAM - NEW YORK, NEW YORK

The New York City Department of Housing Preservation and Development (HPD) administers several tax incentive programs—either as-of-right or in exchange for the creation or preservation of affordable housing.

The 421-g Tax Exemption and Abatement for Conversion of Commercial Buildings to Multiple Dwellings Program (Program) was referenced at a Workgroup meeting in September 2015, as a possible incentive program of interest. The Program was a tax exemption and abatement program for the conversion of commercial buildings into multiple dwellings in downtown Manhattan.<sup>5</sup> The Program was enacted in the mid-1990s to help rebalance the use mix present in the Financial District neighborhood by introducing more residential housing.

#### ELIGIBILITY

Conversion of commercial buildings or portions of buildings to multi-family dwellings was permitted with an Alteration Type 1 Permit dated on or before June 30, 2006, in most of the areas in Manhattan south of Murray Street/City Hall/the Brooklyn Bridge.

#### BENEFITS GRANTED AND PROCEDURAL REQUIREMENTS

- 1 year construction period tax exemption
- 12-year (8 full years + 4 years phase out) tax exemption from the increase in real estate taxes resulting from the work
- 14-year (10 full years + 4 years phase out) tax abatement based on the existing real estate taxes in year one of the benefit term
- New York City landmark projects (i.e., buildings that are designated landmarks by the New York City Landmarks Preservation Commission) get one additional year of full benefits

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<sup>5</sup> Tax Incentives 421-g, New York City Department of Housing Preservation & Development, <http://www1.nyc.gov/site/hpd/developers/tax-incentives-421g.page>, (Accessed December 3, 2015).

- All rental units become subject to rent stabilization for the duration of benefits

The developer applies to Tax Incentive Programs (TIP) and receives a certificate of eligibility. The Department of Finance implements the benefits.

## PROGRAM RESULTS

As of November 2015, the program had largely wound down since the law had expired, and the conversion process was required to have begun by June 2006. Overall, the program helped generate several thousand housing units across numerous buildings in the Financial District and is considered a success.<sup>6</sup> However, despite actual unit generation, there has been some controversy, including reports of rent-stabilization disputes in buildings that received tax abatement program benefits with tenants charging some building owners have raised rents at rate increases not allowed.<sup>7</sup>

***"OVERALL, THE PROGRAM HELPED GENERATE SEVERAL THOUSAND HOUSING UNITS ACROSS NUMEROUS BUILDINGS IN THE FINANCIAL DISTRICT AND IS CONSIDERED A SUCCESS. HOWEVER, DESPITE ACTUAL UNIT GENERATION, THERE HAS BEEN SOME CONTROVERSY..."***

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<sup>6</sup> New York City Department of Housing Preservation & Development Phone Interview, (November 4, 2015).

<sup>7</sup> Will Parker, "Tenants at 50 Murray mull taking on Bistricher over 421g," The Real Deal – New York Real Estate News, <http://therealdeal.com/2016/01/14/tenants-at-50-murray-mull-taking-on-bistricher-over-421g/>, (January 14, 2016).



## PACE FINANCING – NATIONWIDE

The Property-Assessed Clean Energy (PACE) model is a mechanism for financing improvements on private property to support energy efficiency and use of renewable energy. PACE programs allow local governments to fund the up-front cost of energy improvements on commercial or residential properties, which are then paid back over time by the property owners, often through property tax bill remittance. The program has been implemented by 32 states and the District of Columbia, and is supported by the Office of Energy Efficiency & Renewable Energy in the U.S. Department of Energy.<sup>8</sup>

***“THE PRIMARY FOCUS OF THESE PROGRAMS ARE TO PROVIDE ACCESS TO EQUITY FOR PRIVATE BUILDING OWNERS TO IMPROVE BUILDING ENERGY SAVING, THROUGH IMPROVEMENTS TO BUILDING SYSTEMS, MECHANICAL EQUIPMENT, WINDOWS, AND INSULATION.”***

The primary focus of these programs are to provide access to equity for private building owners to improve building energy saving, through improvements to building systems, mechanical equipment, windows, and insulation. Many of these improvements are also necessary as part of a building repositioning or repurposing effort, therefore the Workgroup reviewed local programs as one potential tool to assist in lowering the cost of these improvements, while encouraging improved energy efficiency.

Local examples of PACE Commercial Building programs include:

- Washington DC PACE Commercial.<sup>9</sup> This program provides 100 percent financing for qualifying clean energy and water conservation projects for commercial, institutional, or multi-family properties within the District of Columbia. To date, many of the projects have been smaller structures. The exception is the Walter Reed Army Medical Center Microgrid, which, when implemented, could include up to three million square feet of development across 66 acres.
- MD-PACE.<sup>10</sup> Maryland passed policy enabling PACE legislation in 2014. Since property taxes are collected at the county level, the program requires that local counties pass PACE ordinances to implement the programs. The MD-PACE program provides guidelines and support for counties to ensure consistency across the jurisdictions.

<sup>8</sup> U.S. Department of Energy - Office of Energy Efficiency & Renewable Energy, Property-Assessed Clean Energy Programs, <http://energy.gov/eere/slsc/property-assessed-clean-energy-programs>.

<sup>9</sup> Urban Ingenuity, Washington DC PACE Commercial, <http://www.urbaningenuity.com/dc-pace>.

<sup>10</sup> Maryland Commercial PACE, <http://www.md-pace.com/>.

On March 31, 2015, Montgomery County established the C-PACE program<sup>11</sup> providing PACE financing for commercial buildings. The program provides 100 percent financing to eligible commercial, non-profit, industrial, and multi-family structures.

- Virginia Pace.<sup>12</sup> Virginia passed PACE-enabling legislation in 2009 for renewable and energy efficiency improvements, and an amendment in 2015 extended the law's sunset provision to 2020.

LoudounPACE.<sup>13</sup> A commercial PACE program is in development; LoudounPACE, a non-profit, has been advocating for adoption in the county since 2010.<sup>14</sup>

## PROGRAM RESULTS

Montgomery County's C-PACE program is still in its initial stages of establishment and growth. As of September 2016, a lot of interest has been expressed in the program from private and non-profit entities, but there have only been two official applications so far, with one approval to proceed to construction.<sup>15</sup>

***"MONTGOMERY COUNTY'S  
C-PACE PROGRAM IS STILL IN ITS  
INITIAL STAGES OF ESTABLISHMENT  
AND GROWTH."***

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11 Montgomery County Department of Environmental Protection, Property Assessed Clean Energy Financing, <https://www.montgomerycountymd.gov/DEP/Energy/pace.html>.

12 PACE in Virginia, PACENation, <http://pacenation.us/pace-in-virginia/>, (Accessed August 18, 2016).

13 LoudonPACE, <http://loudounpace.org/about-us.html>, (Accessed August 18, 2016).

14 PACE in Virginia, PACENation, <http://pacenation.us/pace-in-virginia/>, (Accessed August 18, 2016).

15 Montgomery County Commercial PACE Phone Interview, (September 13, 2016).

## ECONOMIC DEVELOPMENT TOOLKIT – GAITHERSBURG, MARYLAND

The Economic Development Toolkit program offered by the City of Gaithersburg, Maryland, launched in 2010, provides a broad range of incentives to existing businesses and eligible commercial buildings/spaces across the city. The program consists of five categories: tenant fit-up, job training, commercial signage assistance, demolition assistance, and ADA and utility upgrades.<sup>16</sup> The focus of this summary is the tenant fit-up assistance since it relates to reusing vacant office space in existing buildings.

### ELIGIBILITY

Owners of buildings who are readying commercial spaces and buildings for tenants are eligible for the program if the space/building has have been vacant for at least one year. The tenant must also be relocating to the City or expanding a business currently in the City and sign a minimum five year lease under terms and conditions acceptable to the City. An applicant must contact the City prior to executing a lease or purchase agreement.

### BENEFITS GRANTED AND PROCEDURAL REQUIREMENTS

There is a matching grant maximum of \$50,000 for tenant fit-ups. The standard grant is up to \$2 per square foot; grants for up to \$4 per square foot are considered for projects in targeted industries, certain geographic areas, or facilities older than 25 years.<sup>17</sup>

### PROGRAM RESULTS

***“OVERALL, THE PROGRAM HAS BEEN EXTREMELY SUCCESSFUL AND THE CITY CONTINUES TO SUPPORT ITS MISSION AND GROWTH.”***

In FY 2015, about \$95,000 was spent on tenant fit-ups, and approximately \$132,000 spent on all five toolbox programs total; in FY 2014, \$106,682 was spent on all five programs. Total private investment totaled \$2,765,200 and 190 jobs were created or supported.<sup>18</sup> Overall, the program has been extremely successful and the City continues to support its mission and growth.<sup>19</sup>

<sup>16</sup> Economic Development Toolbox, City of Gaithersburg Maryland Office of Economic Development, <http://www.growgaithersburg.com/program-incentives/city-incentives>, (Accessed August 18, 2016).

<sup>17</sup> Toolbox Application PDF, City of Gaithersburg Maryland Office of Economic Development, <http://www.growgaithersburg.com/program-incentives/city-incentives>, (Accessed August 18, 2016).

<sup>18</sup> Economic Development Incentive Programs Update PDF, City of Gaithersburg Maryland Office of Economic Development, <http://www.growgaithersburg.com/program-incentives/city-incentives>, (September 30, 2015).

<sup>19</sup> City of Gaithersburg Maryland Office of Economic Development Phone Interview, (August 18, 2016).

## **APPLICABILITY OF STRATEGIES FROM OTHER U.S. JURISDICTIONS TO FAIRFAX COUNTY**

Policy and regulatory strategies, as well as financial strategies, were considered by the Workgroup in the course of evaluating building obsolescence in the County and devising potential solutions. Los Angeles' successful Adaptive Reuse Ordinance provided inspiration for several recommendations related to changes and modifications to Fairfax County's Zoning Ordinance, and processes to facilitate the repositioning and repurposing of existing buildings. For example, adding administrative flexibility to modify existing zonings; creating a more streamlined development review process; creating a Special Exception to allow greater flexibility in the permitted uses within existing structures in certain locations; and, adding guidance to the Comprehensive Plan regarding building conversions.

Ultimately, the Workgroup primarily endorsed policy and regulatory strategies rather than financial strategies as the solutions that are best suited to Fairfax County.

# **APPENDIX C | REGIONAL CASE STUDIES OF BUILDING REPOSITIONING, BUILDING REPURPOSING, AND EMERGING TRENDS AND TECHNOLOGIES**



## BUILDING REPOSITIONING | ENHANCEMENTS TO BUILDING WHILE RETAINING EXISTING USE

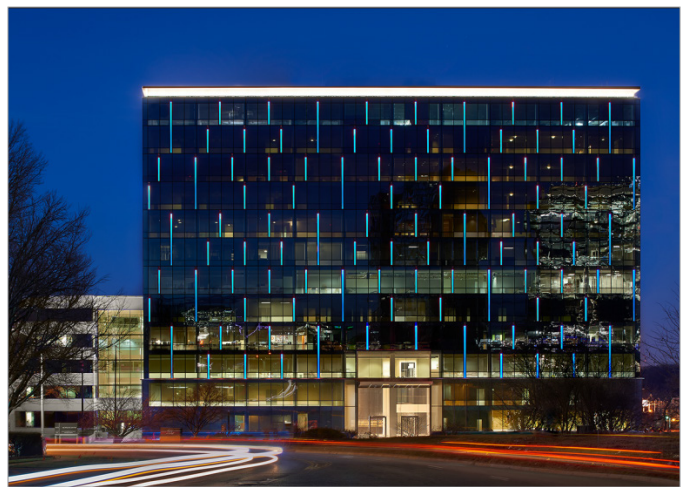
Silverline Center is a case study that highlights building repositioning.



RENDERING OF NEW CONFERENCE CENTER | IMAGE CREDIT:  
WASHINGTON REIT



BEFORE BUILDING REPOSITIONING | PHOTO CREDIT: GOOGLE



AFTER BUILDING REPOSITIONING | PHOTO CREDIT: WASHINGTON REIT



RENDERING OF TENPENH RESTAURANT | IMAGE CREDIT: WASHINGTON REIT



<b>PROJECT NAME</b>	<b>SILVERLINE CENTER   <a href="http://www.silverlinecenter.com">www.silverlinecenter.com</a></b>
Building Location	7900 Westpark Drive McLean, VA 22102
Local Jurisdiction	Fairfax County, VA
Building Owner	Washington Real Estate Investment Trust (Washington REIT)
Context	<p>Buildings</p> <ul style="list-style-type: none"> <li>Built in 1973 (Tower Building), 1985 (Atrium Building) and 1999 (Terrace Building)</li> <li>Facilities required upgrades to lease with 40 percent of building lease roll expiring in 2014</li> <li>Location 0.3 miles to Tysons Metrorail Station; Adjacent to Tysons redevelopment area</li> <li>High development activity in Tysons area/intense Class A office building competition</li> </ul>
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>Zoned C-4 (High Intensity Office District): High intensity predominantly non-retail commercial uses such as office and financial institutions.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>12 floors</li> <li>527K square feet rentable building area</li> <li>Floor plates range from 22K square feet to 60K square feet</li> <li>8'6" – 11' typical finished ceiling height</li> </ul>
Project Highlights and Results	<p>Project</p> <ul style="list-style-type: none"> <li>By-right process utilized to minimize possible timeline delays; renovations highly sensitive to timing between lease roll and market conditions</li> <li>Some challenges related to the mix of uses in the building and parking requirements, permitting for construction, and tax implications of building's new value</li> <li>Replaced pre-cast concrete Tower Building façade with modern floor-to-ceiling glass with 270 programmable LED lights</li> <li>Silverline Center now Class A space at a reasonable discount to Tysons new-build Trophy product</li> <li>95 percent leased up as of August 2016</li> </ul> <p>New Improvements and Amenities</p> <ul style="list-style-type: none"> <li>Newly renovated entry and lobby atrium with high quality finishes</li> <li>Conference center and meeting suites available for tenant use</li> <li>Childcare facility</li> <li>Upgraded fitness center with golf simulator</li> <li>Outdoor café and terrace lounge operated by Bourbon Coffee</li> <li>On-site TenPenh restaurant operated by Passion Food Group</li> <li>Bike storage room</li> <li>New site landscaping, layout, and pedestrian connections</li> </ul>
Pre-Project Assessed Value (Building and Land)	\$80.4M in 2015 tax year
General Project Cost	\$35M investment in hard costs for changes and upgrades – figure does not include cost of lease commissions, rent inducements or tenant fit-ups
New Assessed Value (Building and Land)	\$141.4M* in 2016 tax year (*under appeal)

## BUILDING REPURPOSING | CHANGE IN BUILDING USE

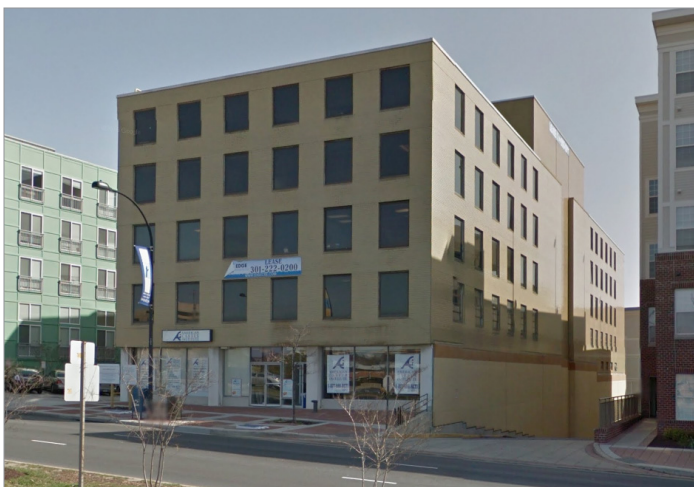
Two building repurposing case studies follow:

1. Office to Residential conversion, and
2. Office to School conversion

The George is a case study that highlights an office to residential building conversion.



INTERIOR OF APARTMENT | PHOTO CREDIT: THE GEORGE



BEFORE BUILDING REPURPOSING | PHOTO CREDIT: GOOGLE



AFTER BUILDING REPURPOSING | PHOTO CREDIT: GOOGLE



INTERIOR OF APARTMENT | PHOTO CREDIT: THE GEORGE

<b>PROJECT NAME</b>	<b>THE GEORGE   <a href="http://www.thegeorgeapts.com">www.thegeorgeapts.com</a></b>
Building Location	11141 Georgia Avenue Silver Spring, MD
Local Jurisdiction	Montgomery County, MD
Building Owner	Lowes Enterprises Real Estate Group
Context	<p>Building</p> <ul style="list-style-type: none"> <li>Built in 1960s; Class C office space at purchase</li> <li>0.614-acre parcel size</li> <li>Location adjacent to Wheaton Metrorail Station, proximity to bus transit center and regional shopping mall</li> </ul>
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>Zoned CR-6.0, C-5.5, R5.5, H200 (Mixed Use Commercial/Residential): Maximum nonresidential FAR of 5.5, maximum residential FAR of 5.5, maximum building height of 200 feet.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>5 stories + 7 stories = 12 stories to capture density available to site</li> <li>Increased building from 80K square feet to approximately 145K square feet</li> <li>60' wide   200'deep   145' tall</li> </ul>
Project Highlights and Results	<p>Project</p> <ul style="list-style-type: none"> <li>Utilized site plan process for development</li> <li>Had to demonstrate to County some elements desired for project (primarily retail) were not economically viable</li> <li>Concept viability sensitive to timing and market conditions</li> <li>Required shared parking with parcel next door</li> <li>Required contribution of 12.5 percent affordable units</li> <li>Exempt from some impact costs due to location in Enterprise Zone</li> <li>Integrated 7-story building addition design to match the rhythm of the original façade</li> <li>Removed asbestos, relocated core (elevator/stairs), added parking to building, created new ingress/egress for fire safety</li> <li>Adaptively repurposed building creating 194 one-bed, two-bed and studio rental units</li> <li>Renovations took 14 months and project was under budget and on-time</li> <li>99 percent leased as of April 2016</li> </ul> <p>Market and Amenities</p> <ul style="list-style-type: none"> <li>Building amenities such as rooftop terrace with resident lounge, kitchen, grills, dining area, TVs, and water + fire pit; fitness center; game area, etc.</li> <li>Appeals to priced-out DC/Silver Spring renter but has urban and boutique building feel</li> <li>Opened in May/June 2014 and leased up faster, at higher rates, than competitors; experiencing a better lease renewal rate than market average</li> </ul>
Pre-Project Assessed Value (Building and Land)	\$7.1M in 2013 tax year
General Project Cost	Unknown investment in changes and upgrades
New Assessed Value (Building and Land)	\$33.5M in 2015 tax year



## BUILDING REPURPOSING | CHANGE IN BUILDING USE

Bailey's Upper Elementary School is a case study that represents an office to school building conversion.



CLASSROOM AND GATHERING SPACE | PHOTO CREDIT: FAIRFAX COUNTY PUBLIC SCHOOLS



BEFORE BUILDING REPURPOSING | PHOTO CREDIT: ANNANDALE BLOG



AFTER BUILDING REPURPOSING | PHOTO CREDIT: FAIRFAX OCR



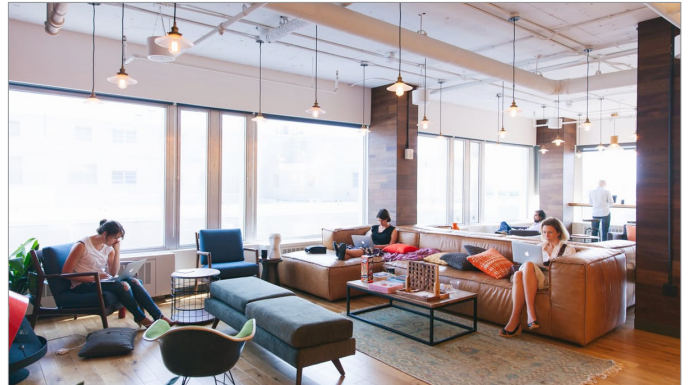
CAFETERIA | PHOTO CREDIT: FAIRFAX COUNTY PUBLIC SCHOOLS

<b>PROJECT NAME</b>	<b>BAILEY'S UPPER ELEMENTARY SCHOOL   <a href="http://www.fcps.edu">www.fcps.edu</a></b>
Building Location	6245 Leesburg Pike Falls Church, VA
Local Jurisdiction	Fairfax County, VA
Building Owner	Fairfax County Public Schools
Context	<p>Building</p> <ul style="list-style-type: none"> <li>Built in 1987 for office use; vacant since September 2012</li> <li>3.4 acre parcel size</li> <li>Location in Seven Corners area of Fairfax just 1.6 miles from Bailey's Elementary School</li> </ul>
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>Zoned C-3 (Office): Predominantly non-retail commercial uses such as offices and financial institutions.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>5 floors   99K square feet</li> <li>72' wide   L-shaped building, 192' deep   60' tall</li> <li>9' typical ceiling height</li> </ul>
Project Highlights and Results	<p>Project</p> <ul style="list-style-type: none"> <li>First FCPS vertical elementary school; community concern about model and impacts on students and surrounding area</li> <li>Project required a quick turnaround in order to relieve severe student overcrowding at Bailey's Elementary School</li> <li>Renovations included all new interior and exterior finishes, all new energy efficient windows, new roofing, new HVAC, new electrical service and distribution, and new fire alarm and other life safety systems</li> <li>Repurposed office building creating 29 classrooms with a 700 student capacity, plus a full-size cafeteria and multiple fitness and activity rooms for physical education</li> <li>Renovations took 8 months and 23 days; project was on time and within budget</li> <li>Opened for 2014-2015 school year for students in grades 3-5</li> </ul> <p>Other Features</p> <ul style="list-style-type: none"> <li>Hosts Arts and Sciences magnet program and Spanish immersion program</li> <li>A new gymnasium and outdoor play areas</li> </ul>
Pre-Project Assessed Value (Building and Land)	\$7.6M in 2014 tax year
General Project Cost	\$21.5M
New Assessed Value (Building and Land)	\$21M in 2016 tax year (tax-exempt)



## EMERGING TRENDS AND TECHNOLOGIES | CO-WORKING

One case study that highlights this emerging trend is WeWork.



COMMON AREA | PHOTO CREDIT: WEWORK



COMMON AREA AND KITCHEN | PHOTO CREDIT: WEWORK



CONFERENCE ROOM | PHOTO CREDIT: WEWORK



DEDICATED DESK WORKSPACE | PHOTO CREDIT: WEWORK

<b>PROJECT NAME</b>	<b>WEWORK - DUPONT CIRCLE   <a href="http://www.wework.com">www.wework.com</a></b>
Building Location	1875 Connecticut Avenue NW, Washington D.C.
Local Jurisdiction	Washington D.C.
Building Owner	Vornado Realty Trust
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>• Zoned C-3-C (Major Business and Employment Centers): Permits medium-high density development, including office, retail, housing, and mixed-use development.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>• Built 1963; Renovated 1990</li> <li>• 12 floors   383K square feet total   39K square feet average floor</li> <li>• 8'7" slab to slab height</li> <li>• \$148.1M assessed value in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>• Population density</li> <li>• Proximity to public transit/transportation options or access to parking</li> <li>• Building location's proximity to a "place"</li> <li>• Neighborhood ambiance, restaurants and services available</li> <li>• Median age/median income of population</li> <li>• Level of independent worker/small business market in area</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>• WeWork Dupont Circle location opened November 2014</li> <li>• Approximately 120K square feet of co-working space across 4 floors; space is subdivided into a series of transparent private offices, common areas and desk space</li> <li>• Model provides leasing flexibility—minimum of 1 month, but otherwise user free to go month-to-month or sign lease for longer</li> <li>• Building was previously struggling to fill space; WeWork's presence has helped invigorate building and make it more attractive to other tenants</li> <li>• Neighborhood location tends to drive membership and environment of the WeWork location (e.g., Creatives vs. NGOs, etc.)</li> <li>• Environment is conducive to network growth potential and collaboration across fields of expertise/innovation/community, etc.</li> </ul> <p>Improvements, Amenities and Membership Cost</p> <ul style="list-style-type: none"> <li>• Amenities include high speed internet, unique high-quality space, printing, free coffee/beer, game lounge, arcade room, lounges/nooks, conference rooms, private phone booths and hosted weekly events</li> <li>• Rental rates: Hot desk \$350/mo / 1-person private office \$700/mo, etc.</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Model challenges office space utilization and traditional office building market</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>• WeWork primarily focused on urban markets</li> <li>• Predicts growth potential in area due to existing and growing independent worker market</li> </ul>



## EMERGING TRENDS AND TECHNOLOGIES | CO-LIVING

One case study that highlights this emerging trend is WeLive.



STUDIO UNIT SLEEPING SPACE | PHOTO CREDIT: WELIVE



UNIT KITCHEN | PHOTO CREDIT: WELIVE



COMMUNAL KITCHEN/DINING SPACE | PHOTO CREDIT: WELIVE



COMMUNAL SPACE | PHOTO CREDIT: WELIVE

<b>PROJECT NAME</b>	<b>WELIVE - CRYSTAL CITY, VA   <a href="http://www.welive.com">www.welive.com</a></b>
Building Location	2221 S Clark Street (Crystal Plaza 6) Arlington, VA
Local Jurisdiction	Arlington, VA
Building Owner	Vornado Realty Trust
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>Crystal Plaza 6 is primarily zoned C-O and partially zoned M-2</li> <li>Zoned C-O (Commercial Office Building, Hotel and Multiple-family Dwelling District): Limited office building land use, and under appropriate conditions, rebuilding with high-rise office buildings, hotels, or multiple-family dwellings in the vicinity of Metrorail stations.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>Built 1965</li> <li>12 floors; 158K square feet total</li> <li>13,632 square feet typical floor plate</li> <li>9'6" typical floor height</li> <li>\$20.8M assessed value in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>Strong partnership with Vornado</li> <li>Resurgence of Crystal City neighborhood and new energy, level of activity, and people moving to area</li> <li>Experimenting in different contexts and learning from them; Crystal City and Lower Manhattan are the two U.S. pilot locations</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>Arlington County's Major Site Plan Amendment process utilized</li> <li>WeLive - Crystal City opened in May 2016</li> <li>Approximately 127K square feet of building repurposed to multifamily residential, about 25K square feet repositioned for co-working space, plus ground floor amenity space</li> <li>Total of 216 residential units; mix of studios up to 4- bedroom units</li> <li>WeLive consists of 3 residential "neighborhoods" comprised of 3 floors each with inter-floor access to communal areas (chef's kitchen, lounge room, laundry)</li> <li>Model provides leasing flexibility—minimum of 1 month, but otherwise resident free to go month-to-month or sign lease for longer</li> </ul> <p>Improvements, Amenities and Membership Cost</p> <ul style="list-style-type: none"> <li>Façade updates, new landscaping, upgraded streetscape, plus building and site layout changes including outdoor library space, play zone, lounge zone, and community garden</li> <li>WeLive Membership includes all needed unit furnishings, supplies like linens and towels, and amenities like high speed wi-fi, utilities, concierge, housekeeping, and access to community events</li> <li>Rental rates: Private bedrooms in Crystal City start at \$1,200/mo   private units start at \$1,640/mo</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>Model challenges traditional concepts of multifamily residential housing and housing rental market, plus the line between housing v. group living or short-term accommodations</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>No plans to open another WeLive location in near term; want to see how the pilots work</li> </ul>

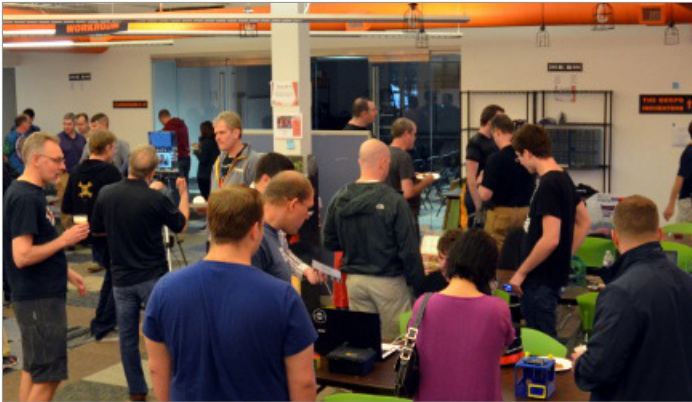


## EMERGING TRENDS AND TECHNOLOGIES | MAKERSPACES

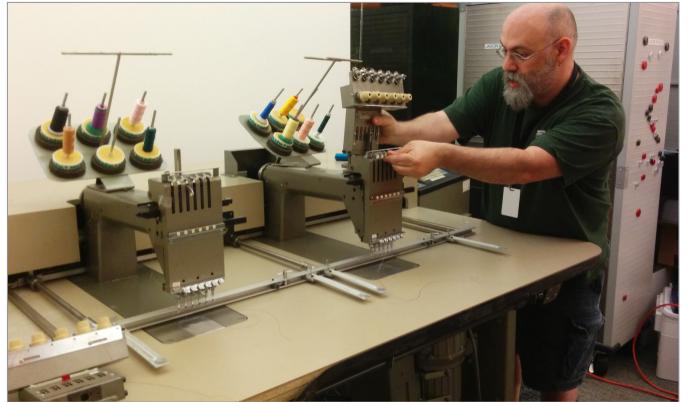
One case study that highlights this emerging trend is NOVA Labs.



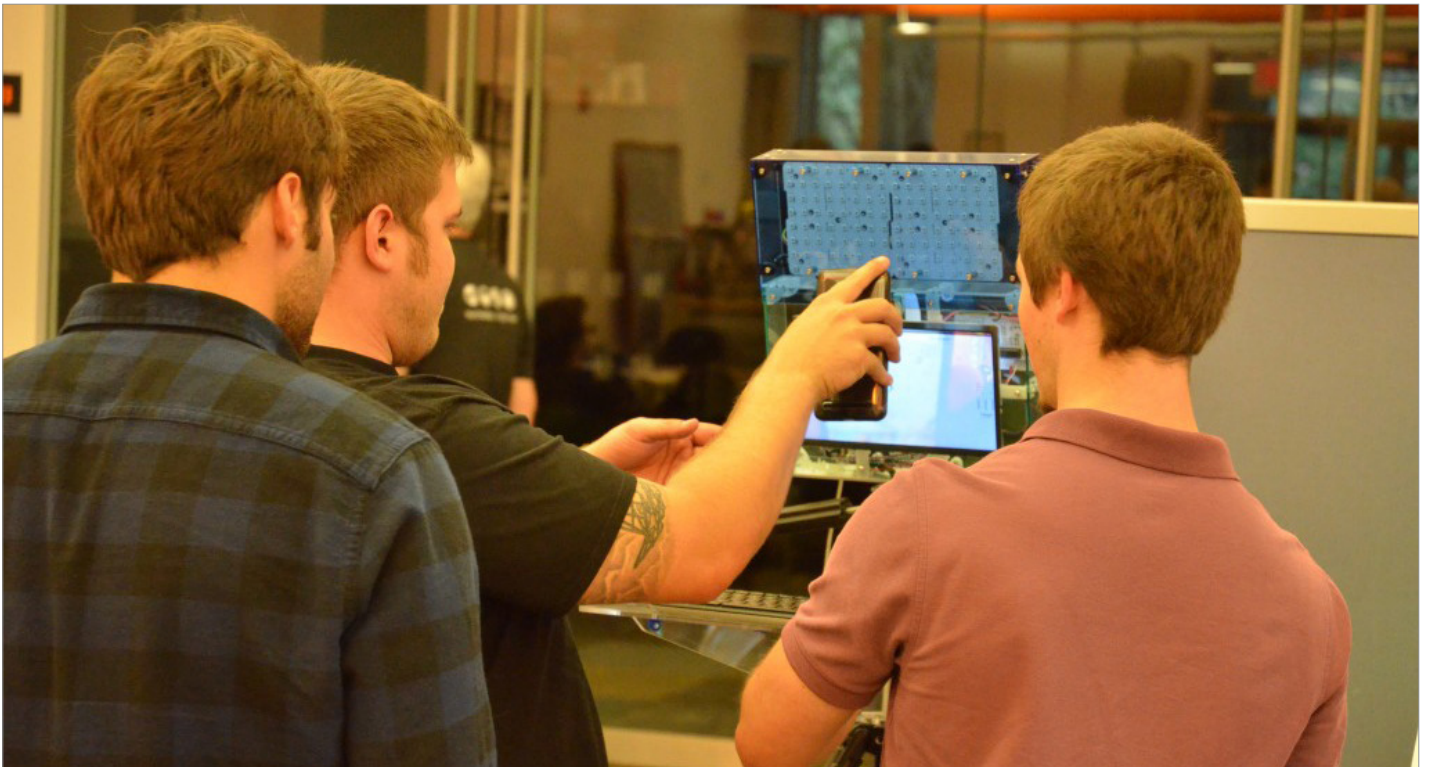
EDUCATION SPACE | PHOTO CREDIT: FAIRFAX OCR



MAKERS GATHERING | PHOTO CREDIT: NOVA LABS



MAKERSPACE EQUIPMENT | PHOTO CREDIT: NOVA LABS



MAKERS WORKING WITH A FREESTANDING PHOTOBOOTH KIOSK | PHOTO CREDIT: NOVA LABS

<b>PROJECT NAME</b>	<b>NOVA LABS   <a href="http://www.nova-labs.org">www.nova-labs.org</a></b>
Building Location	1916 Isaac Newton Square West Reston, VA
Local Jurisdiction	Fairfax County, VA
Building Owner	APA Properties No 6 LP
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>• Zoned I-5 (General Industrial District): A wide range of industrial and industrially-oriented commercial activities; Medium performance standards designed to minimize the impact of noise, smoke, glare, and other environmental pollutants.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>• Built 1968</li> <li>• 28K square feet total  10.5K square feet used by NOVA Labs</li> <li>• Single-story building with high ceilings</li> <li>• \$4.8M assessed value in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>• Expanded from 3.3K square feet of space at previous location</li> <li>• Have 5-year lease with year-to-year notice after that; Difficult to move/fit out space for any time less than 5 years due to the cost</li> <li>• Useful business synergies in area include specialty stores, welding supply shops, and metals shops – however, these stores do not exist near Reston and only on the outskirts of Fairfax (if at all)</li> <li>• Makerspaces do well in areas with constrained housing space (e.g., Reston) – less space for tinkering so need a common workshop space</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>• Two primary maker models: Community-created makerspaces (e.g., NOVA Labs) and for-profit makerspaces (e.g., TechShop in Crystal City)</li> <li>• Founded in 2011; Grown into a membership-driven, all-volunteer 501c(3)</li> <li>• Facility has separate areas devoted to open work common space, a classroom, incubator offices, and machinery shops</li> <li>• Heaviest use of building is evenings/nights instead of daytime</li> <li>• Runs community events such as maker faires every year</li> </ul> <p>Membership Levels</p> <ul style="list-style-type: none"> <li>• Attendee – Attend specific lectures or classes typically via Meet Up group</li> <li>• Associate Member – Full access during open hours via member sponsor</li> <li>• Member – 24/7 access and required to share knowledge by leading classes</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Multifunctional model with a mix of uses, including small-scale manufacturing, within a single site challenges a land use regulatory system with an emphasis on the separation of uses</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>• Need to stay in Reston/Herndon area due to membership base but unique needs requires zoned industrial property; current industrial location vulnerable to redevelopment due to Metro expansion</li> <li>• Organization is self-sustaining but would be nice if it had more support</li> <li>• Would welcome the opportunity to have makerspace in new mixed use development, especially in an area with activity that encourages interaction, collaboration and entrepreneurial spirit</li> </ul>



## EMERGING TRENDS AND TECHNOLOGIES | FOOD INCUBATOR

One case study that highlights this emerging trend is Frontier Kitchen.



STORAGE SHELVES FOR RENT | PHOTO CREDIT: FAIRFAX OCR



FOOD PREPARATION | PHOTO CREDIT: FRONTIER KITCHEN



FOOD INCUBATOR BAKERS AT WORK | PHOTO CREDIT: FRONTIER KITCHEN



FOOD INCUBATOR CATERER | PHOTO CREDIT: FRONTIER KITCHEN

<b>PROJECT NAME</b>	<b>FRONTIER KITCHEN   <a href="http://www.frontierkitchen.org">www.frontierkitchen.org</a></b>
Building Location	8538 Terminal Road Lorton, VA 22079
Local Jurisdiction	Fairfax County, VA
Building Owner	V-NBC LLC
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>• Zoned I-6 (Industrial Heavy): Heavy industrial activities with minimum performance standards where the uses may require that some noise, vibration and other environmental pollutants must be tolerated, and where the traffic to and from the district may be intensive.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>• Built 1986</li> <li>• 256K square feet total warehouse space in complex   7.5K square feet suite used by Frontier Kitchen</li> <li>• Single-story building</li> <li>• \$29.4M assessed value in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>• Two locations opened in 2015: Lorton and Haymarket</li> <li>• Facilities marketed to caterers, bakers, food trucks and food product makers; these culinary entrepreneurs mostly sell their products at farmers markets and online. With growth, they also begin selling wholesale products to retail stores and restaurants</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>• Facility provides commercial kitchen equipment/space and provides business mentoring on certifications, customer base building, business training, networking, etc.</li> <li>• Users must be insured, licensed and certified by the health department, USDA, etc.</li> <li>• Facilities open 24/7; members have electronic access code to facility</li> <li>• Scheduling is done online – people sign up for shifts</li> <li>• Conducts monthly health inspection/general meetings, checks on storage compliance of members, provides collaboration opportunities with other businesses</li> </ul> <p>Membership Levels</p> <ul style="list-style-type: none"> <li>• Full-time Level – 24/7 access to the kitchen, serious about growing business, need minimal assistance or training in managing business - \$950/mo</li> <li>• Part-time Level – Business is growing, work 6 p.m. – 7 a.m. M-F/or all day Saturday and Sunday, could use some assistance but overall business in good shape - \$650/mo</li> <li>• Food Truck Depot – Just need the depot services (parking and cleaning) and a bit of storage, with everything else covered on the truck - \$500/mo</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Emerging multifunctional model with potential for mix of uses within a single site challenges a land use regulatory system with an emphasis on the separation of uses; Shared kitchen concept and business development service model also challenges traditional food regulatory system and insurance environment</li> <li>• Local zoning, health department and building review challenges and delays resulted in extra start-up costs for the company</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>• Food incubator industry is very small and emerging (200 nationwide)</li> <li>• Incubator aims for 75 percent facility occupancy - allows for natural growth of clients</li> <li>• Interested in adding an education or workforce development component that could capitalize on high school and college culinary training programs/internships in future</li> <li>• Not interested in adding restaurant component attached to facilities</li> <li>• Does not think food incubators are a good fit for vacant office space due to property lease cost– but graduates could be good fit for older, vacant shopping centers</li> <li>• The ability to hold farmers markets indoors more would benefit the food industry – current regulations trigger more requirements for sanitation facilities that become cost/time prohibitive</li> <li>• In other communities where this incubator trend is more developed such as Portland, Los Angeles, or emerging in D.C., communities are seeing a spike in food tourism</li> </ul>



## EMERGING TRENDS AND TECHNOLOGIES | URBAN FARMING/ VERTICAL FARMING

One case study that highlights this emerging trend is the Harding Street Urban Agriculture Center (UAC)/Virginia State University (VSU) Indoor Farm.



BUILDING BEFORE CONVERSION TO INDOOR FARM | PHOTO CREDIT: HARDING STREET UAC/VSU INDOOR FARM



HYDROPONIC EQUIPMENT | PHOTO CREDIT: FAIRFAX OCR



SEEDLINGS | PHOTO CREDIT: FAIRFAX OCR



VIEW OF INDOOR FARM EQUIPMENT AND OPERATIONS | PHOTO CREDIT: HARDING STREET UAC/VSU INDOOR FARM



<b>PROJECT NAME</b>	<b>HARDING STREET URBAN AGRICULTURE CENTER (UAC)/VIRGINIA STATE UNIVERSITY (VSU) INDOOR FARM   <a href="http://urbanagcenter.com">http://urbanagcenter.com</a></b>
Building Location	453 Harding Street Petersburg, VA
Local Jurisdiction	City of Petersburg, VA
Building Owner	City of Petersburg
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>• Zoned R-3 (Two-Family Residence District): A generally spacious residential environment that also permits a variety of housing types. Population density and height of buildings compatible with neighboring single-family development. Community facilities also permitted.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>• Built in early 1900s</li> <li>• 2 floors; 6.5K square feet total</li> <li>• 0.36-acre parcel size</li> <li>• 25-30' building height</li> <li>• \$1.3M assessed value in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>• Indoor farm located in a food desert area</li> <li>• Building vacant prior to reuse; adjacent to vacant lots</li> <li>• Facility is former recreation center; building has functioned as community anchor for decades</li> <li>• Building has good height for vertical gardening, roof for solar panels to power operations to cut down on cost of utilities</li> <li>• Facility owned by City of Petersburg; under lease agreement for 10 years at nominal cost since purpose is to serve community</li> <li>• Building has classroom facilities on second floor for educational and community uses</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>• Urban Agriculture Center to address community food deserts by building a sustainable food production system and distribution hub; research the effectiveness of innovative methods of indoor production, sustainable environmental and energy practices; and develop an educational program centered around training citizens in operations, marketing and entrepreneurship</li> <li>• Utilizes system of mobile farmers' markets to deliver fresh produce to underserved communities</li> <li>• Provides educational programming in urban agriculture, marketing, nutrition and entrepreneurship</li> <li>• Eventually will become a self-sustaining business</li> <li>• Receiving funding and contributions from entities such as USDA, VSU, City of Petersburg, etc. – model is a fusion of collaborators/resources</li> <li>• Four staff: Director, Environmental Tech, Hydroponic Tech, and Marketing</li> <li>• Urban farming of nearby vacant lots to supplement indoor farm production</li> <li>• Currently serve approximately 20 families</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Emerging multifunctional model with mix of uses within a single site challenges a land use regulatory system with an emphasis on the separation of uses</li> <li>• Required conversations with City about use of facility from a regulatory standpoint but did not have to clear extensive hurdles; Reuse of facility for indoor farm did not require a zoning change, just a change of use and building code approval</li> <li>• Model requires significant organization and collaboration among partners and community due to nature of facility and mission</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>• Hope for continued growth and the ability to serve more families, but will eventually require more staff</li> <li>• Installation of commercial kitchen for workforce development and skills training</li> </ul>

## EMERGING TRENDS AND TECHNOLOGIES | FLEXIBLE LIVE/WORK UNITS

One case study that highlights this emerging trend is e-Lofts.



E-LOFTS MODEL UNIT - LIVE FLEX | PHOTO CREDIT: E-LOFTS



RENDERING OF LIVE FLEX SET-UP | IMAGE CREDIT: E-LOFTS



RENDERING OF WORK FLEX SET-UP | IMAGE CREDIT: E-LOFTS

<b>PROJECT NAME</b>	<b>E-LOFTS   <a href="http://www.e-lofts.com">www.e-lofts.com</a></b>
Building Location	4501 Ford Avenue Alexandria, VA 22302
Local Jurisdiction	City of Alexandria, VA
Building Owner	NOVUS Residences LLC
Zoning and Building Specifications	<ul style="list-style-type: none"> <li>• Zoned CRMU/H (Commercial Residential Mixed Use – High): Developments that include a mixture of residential, commercial, cultural, and institutional uses in a single structure or multiple but integrated and related structures.</li> </ul> <p>Building Statistics</p> <ul style="list-style-type: none"> <li>• Built 1987</li> <li>• 12 floors   234K square feet</li> <li>• 20' x 30' column grid   80' depth</li> <li>• 10' typical ceiling height</li> <li>• \$20.1M in 2016</li> </ul>
Location Factors	<ul style="list-style-type: none"> <li>• Building accessible to I-395</li> <li>• Building vacant since major tenant left circa 2010</li> <li>• Building parked at office rate so plenty of parking for conversion uses</li> <li>• Immediate area has several other residential buildings</li> <li>• Able to utilize by-right development process for conversion</li> </ul>
Highlights	<ul style="list-style-type: none"> <li>• Required a zoning ordinance interpretation from the City of Alexandria; by-right development process authorized</li> <li>• Utilized Virginia Rehabilitation Building Code for existing building conversion construction as an alternative to the Virginia Construction Code for new building construction – more flexible for adaptive reuse of existing buildings</li> <li>• Renovations included all new flexible live/work layouts and interior finishes, new filtered and ionized air system, new plumbing and electrical service, and new filtered water system, etc.</li> <li>• Repurposed building creating 200 mostly 1- and 2-bedroom rental units with common area client bathrooms for businesses on floor</li> <li>• Construction began in November 2015; currently pre-leasing units for opening in 2016</li> </ul> <p>Features and Amenities</p> <ul style="list-style-type: none"> <li>• Units with flexible spaces including bedrooms/conference rooms, walk-in closets/workrooms, certification for commercial and residential occupancy</li> <li>• Building amenities such as co-working club space and conference rooms, community kitchen, fitness center, pet spa, music rooms, outdoor space, bike storage and repair area</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Flexible live, work, or live-work model that allows tenant-driven choice for unit end use challenges a land use regulatory system with an emphasis on the separation of uses; Model challenges conventional concept of building occupancy as either/or situation (residential or commercial) versus both being allowed at the same time or adjacent to each other without separation</li> </ul>
Future Prospects	<ul style="list-style-type: none"> <li>• Concept is patent-pending; Plan to deploy model in other metro areas across the country</li> <li>• Lots of opportunity in D.C. region due to office vacancy rate; Other building conversion projects underway including a proposal for 5600 Columbia Pike in Fairfax County, VA</li> <li>• Existing building conversions less expensive than building from scratch</li> <li>• Smallest building company would target for similar conversion is 150K square feet</li> </ul>

## **APPLICABILITY OF REGIONAL CASE STUDIES TO FAIRFAX COUNTY**

The case studies were considered by the Workgroup in the course of evaluating building obsolescence in the County and devising potential solutions. The emerging trends and technologies case studies in particular highlighted the need for additional policy guidance and greater flexibility in county regulations. Flexibility is needed because emerging trends and technologies tend to utilize a multifunctional model with a mix of uses within a single site—a characteristic which challenges a land use regulatory system with an emphasis on the separation of uses. Trends and technologies also can change rapidly over time as new innovations emerge. The case studies provided guidance for recommendations related to changes and modifications to Fairfax County’s Zoning Ordinance, and processes to facilitate the repositioning and repurposing of existing buildings. For example, adding administrative flexibility to modify existing zonings; creating a more streamlined development review process; creating a Special Exception to allow greater flexibility in the permitted uses within existing structures in certain locations; creating a solutions database for common issues identified and resolved during innovative conversion projects; and, monitoring programs used in other jurisdictions related to building repurposing and fostering emerging trends.



## REGIONAL CASE STUDIES BIBLIOGRAPHY

### SILVERLINE CENTER | BUILDING REPOSITIONING CASE STUDY

- Daniel J. Sernovitz, "Could the rebirth of one Tysons Corner office building be a roadmap to the future?" Washington Business Journal, [http://www.bizjournals.com/washington/breaking\\_ground/2015/02/closing-the-gap-between-old-and-new-in-tysons.html](http://www.bizjournals.com/washington/breaking_ground/2015/02/closing-the-gap-between-old-and-new-in-tysons.html), (February 27, 2015).
- Fairfax County Building Repositioning Workgroup Meeting, (November 10, 2015).
- Silverline Center, <http://www.silverlinecenter.com/>, (Accessed August 1, 2016).
- The Silverline Center in Tysons, ULI Case Study Presentation, (August 18, 2015).
- Fairfax County Department of Tax Administration's Real Estate Assessment Information Site, <http://icare.fairfaxcounty.gov/ffxcare/main/home.aspx>, (Accessed August 1, 2016).
- Washington REIT Email, (September 8, 2016).
- Washington REIT Interview and Site Visit, (October 29, 2015).
- Washington REIT Interview, (August 4, 2016).
- Washington REIT & CBRE Silverline Center Brochure, [http://www.silverlinecenter.com/uploads/2/5/8/9/25893071/silverline\\_center\\_flyer\\_email.pdf](http://www.silverlinecenter.com/uploads/2/5/8/9/25893071/silverline_center_flyer_email.pdf), (Accessed August 10, 2016).

### THE GEORGE | BUILDING REPURPOSING CASE STUDY

- Lowe Enterprises Interview and Site Visit, (April 5, 2016).
- Montgomery County Planning Department Preliminary Plan No. 120120230, Site Plan No. 820120170, 11141 Georgia Avenue Staff Report, (September 20, 2012).
- Montgomery County Real Property Consolidated Tax Bill for 11141 Georgia Avenue, (7/1/2013-6/30/2014).
- Montgomery County Real Property Consolidated Tax Bill for 11141 Georgia Avenue, (7/1/2015 – 6/30/2016).
- Montgomery County Zoning Map, <http://mcatlas.org/zoning/>, (Accessed August 1, 2016).
- Montgomery County Zoning Ordinance – Article 59.2. Zones and Zoning Map, <http://library.amlegal.com>, (Accessed August 1, 2016).
- Maryland State Department of Assessments & Taxation, <http://sdat.dat.maryland.gov/RealProperty/Pages/viewdetails.>, (Accessed August 1, 2016).
- The George Apartments <http://www.thegeorgeapts.com/>, (Accessed August 1, 2016).

## **BAILEY'S UPPER ELEMENTARY SCHOOL | BUILDING REPURPOSING CASE STUDY**

- Bailey's Elementary School for the Arts and Sciences, Fairfax County Public Schools, <http://www.fcps.edu/BaileysES/aboutbaileysoverview.html>, (Accessed April 21, 2016).
- Bailey's Upper Elementary School for the Arts and Sciences Project Information, Fairfax County Public Schools, [http://www.fcps.edu/BaileysES/upper/project\\_info.html](http://www.fcps.edu/BaileysES/upper/project_info.html), (Accessed April 21, 2016).
- Bailey's Upper Elementary School for the Arts and Sciences (Upper) School Profile, Fairfax County Public Schools, [http://schoolprofiles.fcps.edu/schlprfl/f?p=108:50::::P0\\_CURRENT\\_SCHOOL\\_ID:107](http://schoolprofiles.fcps.edu/schlprfl/f?p=108:50::::P0_CURRENT_SCHOOL_ID:107), (Accessed April 21, 2016).
- Drew Costley, "Bailey's Upper Elementary Now Open on Leesburg Pike," Falls Church News-Press, <https://fcnp.com/2014/09/03/baileys-upper-elementary-now-open-on-leesburg-pike/>, (September 3, 2014).
- Fairfax County Department of Planning and Zoning Staff Report for Application 2232-M13-14, (November 20, 2013).
- Fairfax County Department of Tax Administration's Real Estate Assessment Information Site <http://icare.fairfaxcounty.gov/ffxcare/main/home.aspx>, (Accessed April 21, 2016).
- Fairfax County Public Schools Cable TV: Bailey's Upper Construction Tour, [http://www.ebmcdn.net/fcps/fcps\\_video\\_viewer.php?viewnode=dd0458cdb8c76](http://www.ebmcdn.net/fcps/fcps_video_viewer.php?viewnode=dd0458cdb8c76), (Accessed April 21, 2016).
- Fairfax County Public Schools Cable TV: First Day of School at Bailey's Upper – Interview with Dr. Garza, [http://www.ebmcdn.net/fcps/fcps\\_video\\_viewer.php?viewnode=e82c6a00afc2b](http://www.ebmcdn.net/fcps/fcps_video_viewer.php?viewnode=e82c6a00afc2b), (Accessed April 21, 2016).
- Fairfax County Public Schools Email, (September 9, 2016).

## WEWORK | CO-WORKING CASE STUDY

- District of Columbia Office of Zoning, Zoning Report for 1875 Connecticut Avenue NW, <http://maps.dcoz.dc.gov/>, (Accessed April 25, 2016).
- District of Columbia Office of Tax and Revenue, Real Property Tax Bill for 1875 Connecticut Avenue NW, [https://www.taxpayerservicecenter.com/rptBill/jsp/DisplayRPTBill.jsp?op\\_ssl=2535%20%20%20%200830](https://www.taxpayerservicecenter.com/rptBill/jsp/DisplayRPTBill.jsp?op_ssl=2535%20%20%20%200830), (10/1/2015-9/30/2016).
- WeWork City Lead Interview and Dupont Circle Site Visit, (August 6, 2015).
- WeWork website, <https://www.wework.com/locations/washington-d-c/dupont-circle>, (Accessed periodically).
- Vornado Realty Trust website, <http://www.vno.com/office/property/1875-connecticut-avenue-nw/3311836/landing>, (Accessed April 25, 2016).

## WELIVE | CO-LIVING CASE STUDY

- ARLnow.com, "'WeLive' in Crystal City is 'Beta Testing,' Preparing for May Opening," <https://www.arlnow.com/2016/04/08/welive-in-crystal-city-is-beta-testing-preparing-for-may-opening/>, (April 8, 2016).
- Arlington County Projects & Planning website, 2221 S. Clark St. – Crystal Plaza 6, <https://projects.arlingtonva.us/projects/2221-s-clark-st/>, (Accessed April 25, 2016).
- Arlington County Projects & Planning website, 2221 S. Clark St. – Crystal Plaza 6, Major Site Plan Amendment Including Office Floors drawings, dated February 10, 2015, <https://propertysearch.arlingtonva.us/Home/GeneralInformation?Irsn=53545>, (Accessed April 25, 2016).
- Arlington County Projects & Planning website, 2221 S. Clark St. – Crystal Plaza 6, Site Plan Review Committee Meeting Summary, dated March 23, 2015, [http://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/31/2015/03/SPR\\_Meeting-Summary\\_Mar2315.pdf](http://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/31/2015/03/SPR_Meeting-Summary_Mar2315.pdf), (Accessed April 25, 2016).
- Arlington County Property Search website, 2221 S. Clark St., <https://propertysearch.arlingtonva.us/Home/GeneralInformation?Irsn=53545>, (Accessed April 25, 2016).
- Arlington County Zoning Ordinance, Article 12. Use Standards, <http://buildingarlington.s3.amazonaws.com/wp-content/uploads/2013/06/ACZO.pdf>, (Accessed August 12, 2016).
- Dan Sernovitz, "A tour of WeLive in Crystal City (Video)," Washington Business Journal, <http://www.bizjournals.com/>



washington/video/14aG1iMzE6lVoKd7CHmLUdpPgZqzJQSj, (Accessed August 12, 2016).

- WeLive Interview and Crystal City Site Visit, (July 26, 2016).
- WeLive website, <https://www.welive.com/>, (August 12, 2016).

## **NOVA LABS | MAKERSPACES CASE STUDY**

- Andrea Foertsch, "Innovation in Manufacturing: Makerspaces," Produced for MassDevelopment, [http://ampitupma.com/pdf/makerspacesreport\\_april2013.pdf](http://ampitupma.com/pdf/makerspacesreport_april2013.pdf), (April 2013).
- Fairfax County Department of Tax Administration's Real Estate Assessment Information Site, <http://icare.fairfaxcounty.gov/ffxcare/main/home.aspx>, (Accessed April 27, 2016).
- NOVA Labs Email, (September 9, 2016).
- NOVA Labs Interview and Site Visit, (November 5, 2015).
- NOVA Labs website, <http://www.nova-labs.org>, (Accessed periodically).
- TechShop website, <http://www.techshop.ws/arlington.html>, (Accessed periodically).
- Food Incubator Case Study:
- Fairfax County Department of Tax Administration's Real Estate Assessment Information Site, <http://icare.fairfaxcounty.gov/ffxcare/main/home.aspx>, (Accessed May 3, 2016).
- Frontier Kitchen Email, (September 9, 2016).
- Frontier Kitchen Interview and Site Visit, (December 22, 2015).
- Frontier Kitchen website, <http://www.nova-labs.org>, (Accessed periodically).

## **FRONTIER KITCHEN | FOOD INCUBATOR CASE STUDY**

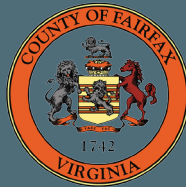
- Fairfax County Department of Tax Administration's Real Estate Assessment Information Site, <http://icare.fairfaxcounty.gov/ffxcare/main/home.aspx>, (Accessed May 3, 2016).
- Frontier Kitchen Email, (September 9, 2016).
- Frontier Kitchen Interview and Site Visit, (December 22, 2015).
- Frontier Kitchen website, <http://www.nova-labs.org>, (Accessed periodically).

## **HARDING STREET UAC/VSU INDOOR FARM | URBAN FARMING/VERTICAL FARMING CASE STUDY**

- City of Petersburg Assessor Office, 453 Harding Street Property Record Information, <http://petersburg.crissind.com/details.php?recordID=5714>, (Accessed May 3, 2016).
- City of Petersburg Building Official Interview, (May 17, 2016).
- City of Petersburg Comprehensive Plan, <http://www.petersburgva.gov/DocumentCenter/View/1836>, (Accessed August 16, 2016).
- City of Petersburg GIS Mapping, 453 Harding Street Property Record Card, <http://petersburggis.timmons.com/>, (Accessed May 3, 2016).
- City of Petersburg Zoning Ordinance, <http://www.petersburgva.org/DocumentCenter/View/23> (Accessed May 3, 2016).
- Harding Street Urban Agriculture Center Interview and Site Visit, (May 2, 2016).
- Harding Street Urban Agriculture Center website, <http://urbanagcenter.com/>, (Accessed periodically).

## **E-LOFTS | FLEXIBLE LIVE/WORK UNITS CASE STUDY**

- City of Alexandria GIS Parcel Viewer Tool, Parcel #011.02-01-09 Property Details, <https://geo.alexandriava.gov/>, (Accessed April 21, 2016).
- City of Alexandria Tax Map, <https://www.alexandriava.gov/gis/taxmaps/011.02.pdf>, (Accessed August 15, 2016).
- City of Alexandria Zoning Ordinance, [https://www.municode.com/library/va/alexandria/codes/zoning?nodeId=ARTVMIUSZO\\_S5-300CRCOREMIUSHI](https://www.municode.com/library/va/alexandria/codes/zoning?nodeId=ARTVMIUSZO_S5-300CRCOREMIUSHI) (Accessed August 15, 2016).
- E-lofts website, <http://www.nova-labs.org>, (Accessed August 15, 2016).
- Novus Residences LLC Interview and Site Visit, (December 16, 2015). Virginia Uniform Statewide Building Code (USBC), <http://www.dhcd.virginia.gov/index.php/va-building-codes/building-and-fire-codes/regulations/uniform-statewide-building-code-usbc.html>, Virginia Department of Housing and Community Development, (Accessed August 15, 2016).



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