



September 27, 2021

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Chairman Anthony Hood
Zoning Commission of the District of Columbia
441 4th Street, NW, Suite 200S
Washington, DC 20001

Re: ZC 21-05 | IZ-XL Phase 2, Applying IZ to Conversions of Non-Residential Buildings to Residential Use

Dear Members of the Zoning Commission:

On behalf of the members of the D.C. Building Industry Association (“DCBIA”), we respectfully submit these comments regarding IZXL, Phase 2. First and foremost, DCBIA and its membership organizations fully support the development of affordable housing. We appreciate the Commission’s efforts to fine-tune the IZ regulations so that the production of affordable housing is maximized. We also appreciate the phased, deliberative approach the Office of Planning (“OP”) and the Commission are taking with regard to enhancing IZ.

I. Summary of Comments

A. An IZ requirement for straight conversions without any offsetting benefits will disrupt the balance that has been the foundation of IZ since its inception. A fundamental tenet of IZ has been that the economic burden of providing affordable units must be offset by the availability of additional development potential through bonus density and, in many cases, increased height and lot occupancy. Conversion projects that involve the use of ANY bonus density are subject to IZ. Consistent with the underlying premise of IZ, it is only those conversion projects that involve no expansion at all that are exempt.

B. Conversions are subject to IZ requirements under the current IZ regulations. Consistent with the delicate balance mentioned above, the existing IZ regulations already apply to conversion projects, including to existing gross floor area under certain circumstances that very often arise when conversion projects occur. Specifically, in a conversion project IZ applies to any new gross floor area that results in 10 or more units. More importantly, IZ also applies to the conversion of existing gross floor area if the conversion project (i) uses any IZ bonus density, or (ii) increases the size of the existing building by 50% or more.

C. Adding an IZ requirement without any offsetting benefit will further challenge the economics of straight conversions. Conversion projects are beneficial to the real estate market not only because they increase the supply of housing but also because they help reduce the historically high oversupply of office. But the economics of conversions are inherently challenging and as a result, they are uncommon. Further constraints will reduce the already limited number of straight conversion projects.

~more~

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Liz DeBarros

In Memoriam
Albert R. “Butch” Hopkins, Jr.
(1941-2012)

ZONING COMMISSION
District of Columbia
CASE NO.21-05
EXHIBIT NO.14

- D. Non-zoning incentives such as tax abatements are needed to encourage straight conversion projects.** The tools that are available to the Commission to increase the supply of affordable housing are extremely limited and must be used carefully in order to avoid unintended consequences. The Council has immediate access to powerful incentives that will encourage conversions with no risk of adverse consequences.
- E. If the Zoning Commission nonetheless decides to apply IZ to straight conversions, a three-year implementation period will help avoid the most adverse of the potential consequences.** Development projects, including conversions, begin relying upon the Zoning Regulations from their very inception. The development cycle can take many years – from initial conceptualization to obtaining financing, to designing permit plans, to submitting for and obtaining approvals and building permits. The proposed IZ-XL Phase 2 amendments will have significant impacts on any conversion project that is underway as they would go directly to the underwriting of the project. It will also provide time for the Council to adopt non-zoning incentives.
- F. Downtown zones should remain exempt from ZC 21-05’s non-residential to resident conversion concept.** The extension of the conversion concept to the D zones would be highly problematic and cause significant adverse repercussions on the potential for building conversions on a portion of the market that never anticipated such a requirement.

I. Core components of IZ and relationship to current exemption of conversions

From its inception, the success of the IZ program has been based upon a carefully prescribed balance between five core components: (i) mandatory set-asides, (ii) compensating bonus density, (iii) target income levels, (iv) maximum purchase/rent limits, and (v) administrative procedures. The importance of keeping these components in balance with each other has been thoroughly discussed in numerous OP reports as the IZ regulations have been amended over the years. Understanding the relationship among these components clearly reveals the challenges in applying regular IZ set aside requirements to straight conversions of non-residential buildings (i.e. conversions without additions). For example, the foundation of the IZ program is the concept of the ability to take advantage of bonus density to help offset the IZ set aside requirement. Unfortunately, it is often the case in straight conversion projects that IZ bonus density is not available, or a property owner is unable to utilize IZ bonus density due to structural challenges and related costs to retrofit an existing structure for residential use. Some of these challenges are documented in OP’s recent study, *Assessment of Commercial to Residential Conversions in the District of Columbia* (November 2020) attached as Exhibit A, and in the *Office-to-Affordable-Housing Task Force Report* (August 2019) attached as Exhibit B, and include deep floor plates; closely spaced structural columns; sub-optimal slab spacing; and centrally-located utility and core functions. The impacts of these factors on the underwriting of a conversion project are what led

the Commission to exempt straight conversions when it initially adopted IZ, and only applied IZ to existing gross floor area (“GFA”) when a conversion project either added enough GFA or used IZ bonus density to help offset the added set aside. As discussed below, these factors not only still exists today, but the degree of their impact on a straight conversion project has increased dramatically due to consumer expectations in the multi-family residential sector, a significant escalation in construction costs, and waning / uncertain demand in the multi-family residential sector due to the COVID pandemic.

Challenges to applying regular IZ requirements to conversions

It is commonly misconstrued that cost savings are a justification for the conversion of a non-residential building to residential use. Indeed, as discussed in OP’s recent study, and numerous other recent studies and articles, straight conversions of non-residential buildings involve several complicating factors that result in substantial direct impacts to land value that often make these projects more costly than standard ground-up residential construction. The additional costs are often due to, among other factors, (i) the removal of gross floor area to achieve acceptable unit layout and natural light to interior units, (ii) the relocation of central core functions, and (iii) the completion of structural and function retrofits to meet applicable residential construction codes for fire protection and egress. In the past, the substantial challenges presented by these factors, combined with generally higher profitability of office space in the District, have limited the number of conversion projects. According to the August 2019 report entitled *Office-to-Affordable Housing Task Force* Report, only 11 conversion projects have been completed or are near completion since 2002.

II. Non-residential to residential conversions are subject to IZ requirements under the current IZ regulations

The delicate balance considered during the creation of the IZ regime described above **did** subject conversions to IZ. Specifically, the existing IZ regulations already apply to conversion projects, including to existing gross floor area under certain circumstances that very often arise when conversion projects occur. Specifically, in a conversion project IZ applies to any new gross floor area that results in 10 or more units. More importantly, IZ also applies to the conversion of existing gross floor area if the conversion project (i) uses any IZ bonus density, or (ii) increases the size of the existing building by 50% or more. Each of these scenarios is based on the fundamental concept of the IZ regime where additional affordable housing is provided in light of incentives or additional square footage. It is not the case that all conversions are currently exempt.

III. Need for careful, transparent financial analysis of potential impacts of IZ on conversions

What conversion projects have been completed have only been possible because property owners were able to achieve market-rate rents that are capable of covering the substantial conversion costs and either equal or outweigh the office value of the property. Unfortunately, the

proposed application of regular IZ set aside requirements to straight conversion projects, and related rent/purchase price and utility limits could disturb the balance between the ability of rent revenue to overcome the additional costs associated with a conversion project. As previously discussed, IZ depends upon the balance between the program's core components, where a change to one component requires a rebalancing of the others. In this instance, applying regular IZ set aside requirements to straight conversion projects without making adjustments to other IZ components, or offering other non-zoning incentives, will likely disincentivize and/or hinder the advancement of potential conversion projects. For instance, one preliminary analysis provided to DCBIA for a hotel to residential conversion in the Uptown submarket indicates that an 8% IZ set aside requirement could have an 8% impact on land value. To date, the OP reports in the case record do not include any financial modeling that shows the potential impact of regular IZ set aside requirements on straight conversion projects. Having this information would be beneficial as it would show the additional impact IZ would have on the land value on top of the impacts already imposed by the complexities of adapting a non-residential structure to residential use. Given the current exemption applied to straight conversion projects based on the original IZ analysis, when the land value was held constant, this information would also show what assumptions OP is using with respect to acceptable impacts to land value under the current proposal.

IV. Zoning and non-zoning incentives versus imposing further requirements

Due to structural and non-structural constraints, the only way applying IZ to straight conversion projects will work is to provide other zoning and, more importantly, non-zoning incentives that will help offset the cost IZ set-asides. This is expressly acknowledged in the 2019 Office-to-Affordable Housing Task Force Report which recommends that the District take steps to directly subsidize conversions, provide zoning incentives, and provide owners of particularly viable projects with funding for necessary feasibility studies.

Similar to DCBIA's comments on IZ-XL Phase 1, there are special circumstances related to conversion projects that led the Commission to exempt these projects when it initially adopted IZ. As discussed above, these circumstances still exist just as they did back then, and need to be taken into consideration when evaluating whether straight conversions should be subject to IZ. For a typical, ground-up project the Commission determined that an IZ set aside ranging between 8% - 12.5% could be offset by a 20% density bonus. As discussed above, there are unique costs and other factors that are not present in ground-up projects that make it difficult for conversion projects to utilize bonus density and offset the IZ requirement. As such, in light of these special circumstances, if the Commission is to move forward with an IZ XL Phase 2 concept, the Commission should carefully consider a special set aside requirement for conversion projects that is below the regular IZ set aside range.

As discussed in OP's recent study, many older office buildings have deep floor plates that make it difficult to achieve standard residential dimensions without having to carve out courtyards and light wells at extreme cost and loss of density. In addition, while IZ bonus density might be

available, the existing structure may be unable to support the additional density or there may be other site constraints. One potential new zoning incentive may be the relaxation of the requirement that all IZ units contain immediate access to an exterior window. While under the Construction Code, a room may be considered a “bedroom” even if it borrows light from another room, this is not permitted under the IZ regulations or DHCD IZ implementing regulations. Providing the ability to have in-board IZ units with bedroom windows that utilize “borrowed light” just as there are currently market-rate in-board units may, in tandem with other non-zoning incentives, provide a modest amount of assistance in bridging the gap between conversion costs and operating income.

To make straight conversion projects work, there needs to be a concerted effort by the District to develop new, non-zoning incentives. Examples of such incentives could include but are not limited to, tax abatements, tax assessment freezes with a progressive increase over time, and elimination of recordation and transfer taxes. While these tools fall outside the Commission’s purview, it is critical to consider them together with the proposed IZ-XL Phase 2 amendments. This includes consideration of whether the time is right to implement the proposed amendments in light of the current state of the District’s office and residential markets, or whether it is better to wait until the District can put in place other non-zoning programs that would incentivize conversions. Given that demand for conversion projects is likely to be low for the foreseeable future, it is possible that the IZ-XL Phase 2 amendments could delay a conversion project from going forward.

V. Vesting and phased implementation

Similar to IZ-XL Phase 1, to the extent the Commission adopts any of the proposed IZ-XL Phase 2 amendments it is important that such amendments include consideration for vesting. Development projects, including conversions, begin relying upon the Zoning Regulations from their very inception. Even before any substantial expenditure is made to develop permit plans, project proponents make assumptions based upon the Zoning Regulations to secure development partners and project financing. Upon submitting for permit, the amount of time it takes to navigate the various permit review processes can take many months. The proposed IZ-XL Phase 2 amendments will have significant impacts on any conversion project that is underway as they would go directly to the underwriting of the project. As such, DCBIA recommends a vesting period of at least three years. Such period aligns with the OP’s *Assessment of Commercial to Residential Conversions in the District of Columbia* (November 2020), which notes that it is expected that a three-year period will be required for the commercial market to recover to pre-pandemic levels. The timeframe would allow for more adjustment to the significant cost impact of the Phase 2 amendments. We also know that there is concern from some owners about such a term not being sufficiently long.

VI. Downtown Zones

We believe it is important to underscore that Downtown zones should remain exempt from ZC 21-05's non-residential to resident conversion concept. As conveyed by DCBIA members and others at the Zoning Commission's June 28, 2021 hearing on ZC 21-05, the extension of the conversion concept to the D zones would be highly problematic and cause significant adverse repercussions on the potential for building conversions. In addition, although not part of ZC 21-05, due to its importance, it bears mentioning that the inclusion of the currently-exempt D zones in the IZ regime would have highly deleterious impacts on the production of housing and the District's key revenue source of commercial real estate tax.

Thank you for the opportunity to provide these comments.

Respectfully,



Liz DeBarros
Interim CEO

Enclosed:

Exhibit A: Assessment of Commercial to Residential Conversions in the District of Columbia Q2, 2020

Exhibit B: Office-to-Affordable Housing Task Force Report, August, 2019



2019 SEP 26 PM 4:50

OFFICE OF THE
MAYOR

MURIEL BOWSER
MAYOR

SEP 26 2019

The Honorable Phil Mendelson, Chairman
Council of the District of Columbia
1350 Pennsylvania Avenue, N.W., Suite 504
Washington, DC 20004

Dear Chairman Mendelson:

The Deputy Mayor for Planning and Economic Development is pleased to submit the attached report ("Report") prepared by the Office-to-Affordable Housing Task Force (the "Task Force") pursuant to the Office to Affordable Housing Task Force Establishment Act of 2018 (D.C. Law 22-103; D.C. Official Code §42-2161.01 et seq.) This Report examines the potential for converting vacant office space to affordable housing in the District of Columbia.

The members of the Office-to-Affordable Housing Task Force met monthly from October 2018 through January 2019 and continued to work through the spring and summer of 2019 to prepare the report and produce recommendations. The Report addresses whether transitioning vacant commercial office space to affordable housing units would help address the District's affordable housing challenge; recommends possible legislative regulatory, zoning, or policy changes to promote the transition of vacant commercial office buildings to affordable housing units; and notes potential costs to the District and property owners associated with recommended changes.

I am happy to answer any questions you or your fellow Councilmembers may have.

Sincerely,

A handwritten signature in black ink that reads "Muriel Bowser".

Muriel Bowser

Enclosures

District of Columbia Office of Planning



Office of the Director

August 15, 2019

The Honorable Phil Mendelson
Chairman
Council of the District of Columbia
1350 Pennsylvania Avenue, N.W., Suite 504
Washington, DC 20004

Dear Chairman Mendelson:

Attached please find a report prepared by the Office-to-Affordable Housing Task Force (the "Task Force") that examines the potential for converting vacant office space to affordable housing in the District of Columbia, pursuant to the Office to Affordable Housing Task Force Establishment Act of 2018, D.C. Act 22-0304, effective June 5, 2018 (the "Report"). The members of the Task Force met monthly from October 2018 through January 2019 to determine the Report content and recommendations and continued to assist with drafting through the spring and summer.

The Report addresses whether transitioning vacant commercial office space to affordable housing units would help address the District's affordable housing challenge; recommend any legislative regulatory, zoning, or policy changes to promote the transition of vacant commercial office buildings to affordable housing units; and note any costs to the District and property owners associated with recommended changes.

The Task Force found that there are numerous barriers to office-to-residential conversions, which has limited the number of conversions in the District. These include the higher profitability of office space compared to residential use and the spread of office vacancies across buildings resulting in very few completely or nearly-completely vacant office buildings. The Task Force found that in most circumstances, office-to-residential conversions are not the most effective method of addressing the District's most pressing housing needs. However, lower-grade and Class C office buildings along or near commercial corridors outside of the central employment area may provide for feasible opportunities for conversion to affordable housing. Such conversions could also support the District's fair housing goals by increasing affordable housing supply in higher opportunity areas. The Task Force found that one of the most impactful policy changes would be to adjust zoning to provide additional density and mixed-use zones in these areas.

In light of Mayor Bowser's goal of producing 36,000 housing units by 2025, 12,000 of which will need to be affordable, we must make sure we add tools to the District's toolkit for increasing the supply of affordable housing. The Task Force's findings show that office-to-affordable



housing conversions should be supported in targeted circumstances where such conversions are financially responsible, most likely to be Class C and lower-grade office buildings located outside the central employment area of the District.

I am happy to answer any questions you or your fellow Councilmembers may have.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew Trueblood', with a long horizontal flourish extending to the right.

Andrew Trueblood

Chair, Office-to-Affordable Housing Task Force

Office-to-Affordable Housing Task Force Report

August, 2019

Office-to-Affordable Housing Task Force
Established by D.C. Law 22-103, 2018



PREPARED BY:

Coalition for Nonprofit Housing &
Economic Development



WE ARE
WASHINGTON
DC GOVERNMENT OF THE
DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

EXECUTIVE SUMMARY

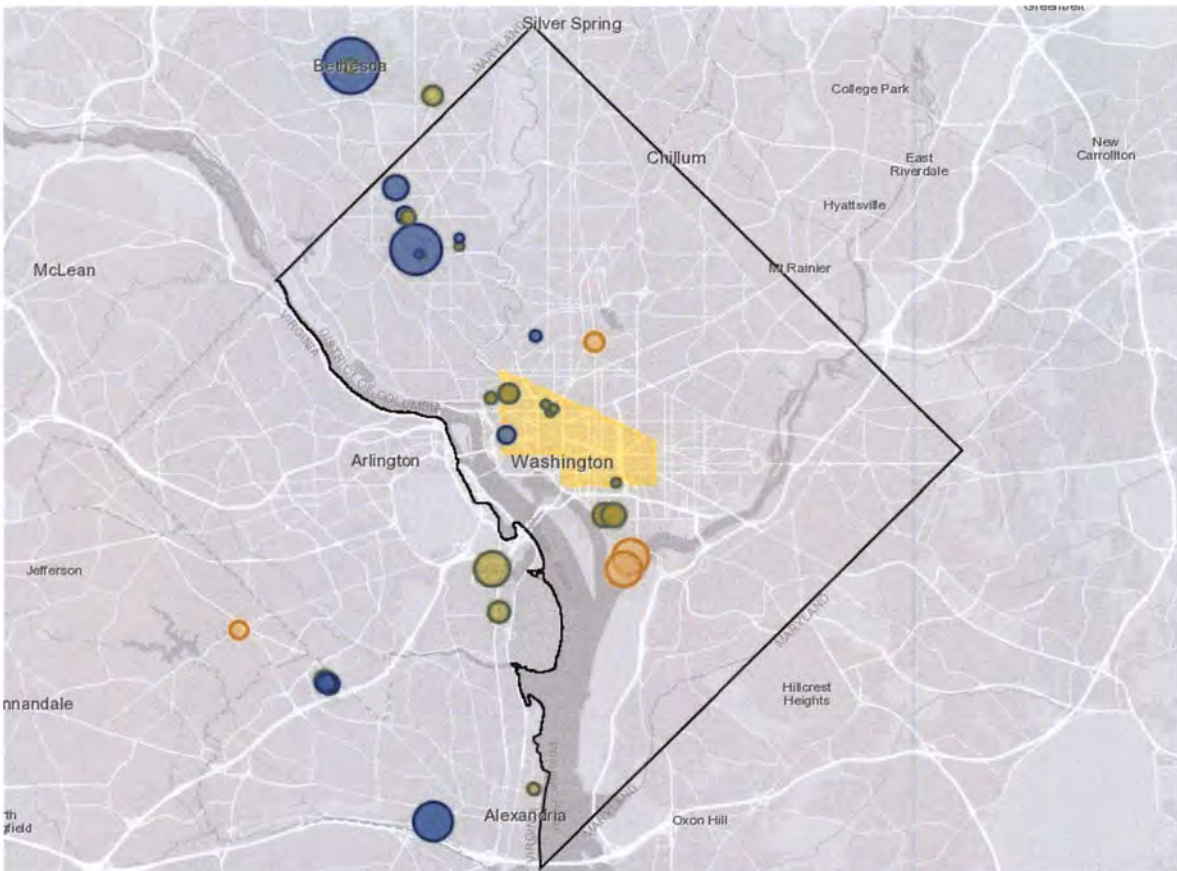
This report examines the potential for converting vacant office space to affordable housing to address the pressing housing shortage in the District of Columbia. In response to reports drawing attention to the large amount of vacant office space in the region and the District, the Council of the District of Columbia passed the Office to Affordable Housing Task Force Establishment Act of 2017, which commissioned a Task Force to answer three questions around feasibility, policy, and regulatory considerations, as well as the cost of office-to-residential conversions. Below we summarize our findings in response to each question.

1. Would transitioning vacant commercial office space to affordable housing units, including units with multiple bedrooms, help address the District's housing challenge?

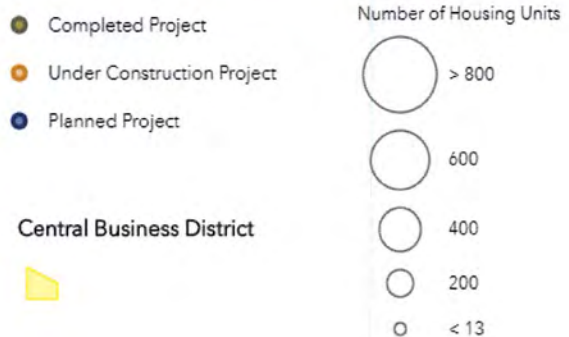
- **Office Vacancy in the Region and District.** At the end of 2018, two data sources (JLL Research and CoStar) show that the District has an 11 percent vacancy rate for privately-owned office space, amounting to between 13.4 to 16.9 million square feet (sf) of vacant office space. This compares to a vacancy rate of 15.4 percent for the region (the District and surrounding neighborhoods in Virginia and Maryland). Two-thirds of vacant office space in the District is located within the downtown core (i.e., East-End and central business district submarkets).
- **Office-to-Residential Conversions.** Despite high rates of vacancy, office-to-residential conversion in the District remain uncommon, particularly in the downtown core. According to research done by the Downtown BID, of the 1,371 new residential units completed in the District's conversions from 2002-2018, only 23 units (or 2 percent) are affordable. Taking into account conversions that are completed, under construction and planned since 2002, the District will have only created 393 affordable housing units through office-to-residential conversions out of over 3,800 total housing units, or 10% -- primarily through Inclusionary Zoning.
- **Barriers to office-to-residential conversions.** Barriers to market-driven office-to-residential conversions include: the higher profitability of office space compared to multifamily residential conversion; the spread of office vacancies across several buildings so that there are very few completely vacant office buildings; incompatible residential housing regulations and building codes; and lack of conversion construction experience, including uncertainty over the costs and logistics of conversion.

- Location of Potential Conversions.** Office-to-residential conversions are more likely to occur outside of central employment areas, in areas like Upper Northwest, Southwest, and West End, rather than in the central business district or the East End (i.e. the downtown core). This is because the net operating income (NOI) per square foot for class A and Trophy office use in the central employment area is higher than residential NOI. Further, the downtown core area has higher acquisition costs and a higher density of jobs. Vacant buildings located near or in primarily residential neighborhoods are more likely to be converted to residential because in these areas, the current residential NOI is more frequently approximate to or greater than an office NOI.

Office-to-Residential Conversions in the Washington, DC Metropolitan Area, 2010-2018

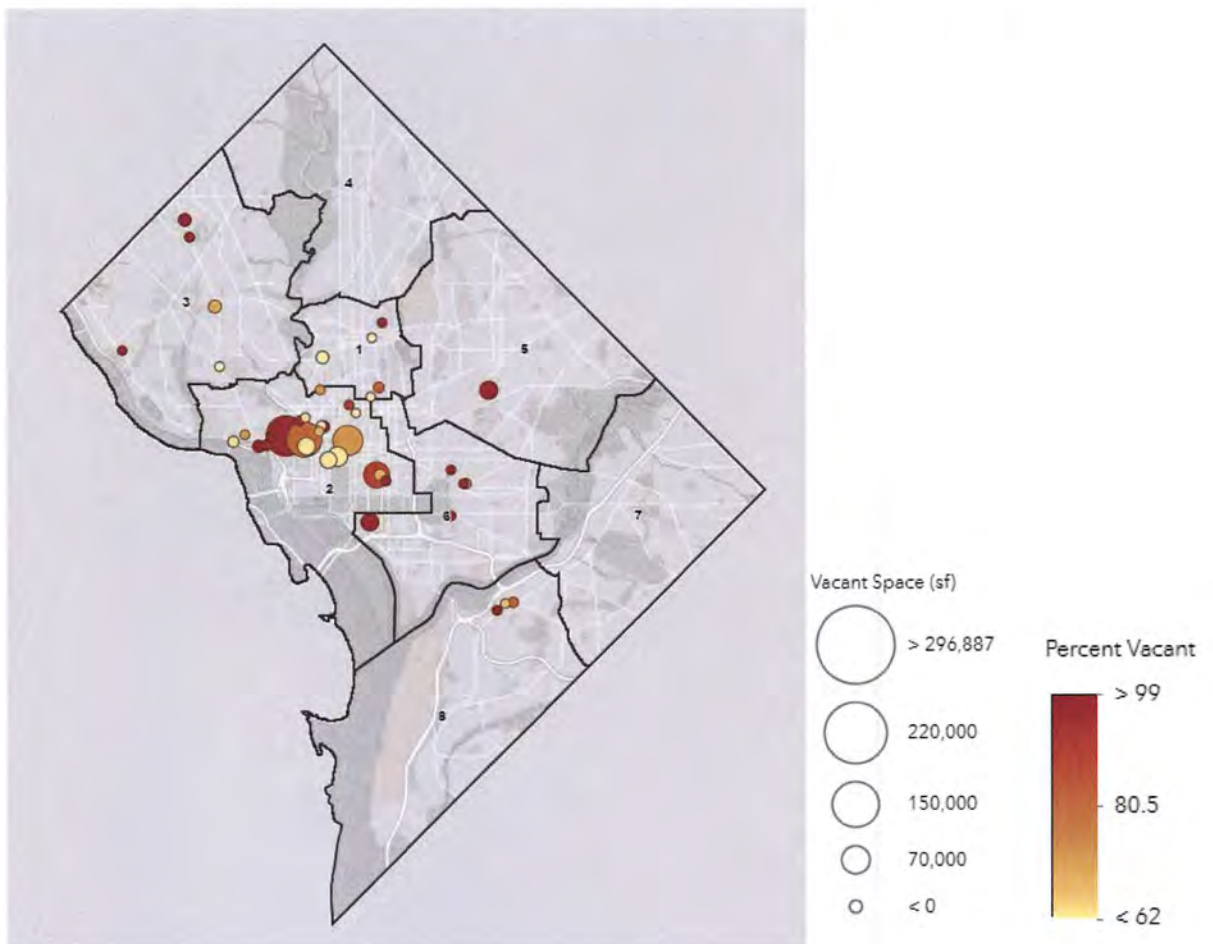


Source: DowntownDC BID



- Building Class of Potential Conversions.** The most likely candidates for office-to-residential conversions are vacant class B, C, and F office buildings, with class C buildings being the most viable. As of December 2018, the Task Force found that there were 45 class B, C, and F buildings that were 50 to 100 percent vacant, totaling just over 1 million sf cumulatively. Regardless of their potential, the lower expected NOIs from residential buildings and the current office market trends predict that most of these vacant office buildings are likely to remain offices.
- Impact on affordable housing stock and distribution.** Each year, there may be a few office buildings that have the right combination of financial and structural circumstances to make conversion to housing feasible, including affordable units. Such conversions would grow the affordable housing stock marginally. Developers looking to include affordable housing in conversions would benefit from existing federal incentives, notably a boost in the Low Income Housing Tax Credits (LIHTC) for projects located in Difficult to Develop Areas or Qualified Census Tracts. However, such conversions would provide a small, unpredictable contribution to alleviating the affordable housing challenge in the District. There is potential for office-to-affordable housing conversions to contribute to the District's fair housing goals and more equitable distribution of affordable housing, since many of the locations of offices that could be converted exist in areas with fewer affordable housing opportunities.

Map of Class B and C Office Buildings with 50 to 100% Vacancy Rates as of July 2019



2. Would any legislative, regulatory, zoning, or policy changes promote the transition of vacant commercial office buildings to affordable housing units, including units with multiple bedrooms?

- **Structural Complications and Opportunities for Office-to-Residential Conversions.** Common considerations to a change in occupancy type include construction classification type issues; the coordination of units and systems around the structural floor assembly; vertical transportation issues; the need to introduce light wells; zoning code restrictions; stormwater and green area implications for roof structures; façade redesigns; HVAC loads on the roof; and revised/upgraded utilities from the street. However, conversions can take advantage of existing structural systems, including sufficient fire ratings, surplus parking, partial conversions, and a greater floor area ratio (FAR) and density.
- **Policy and Regulatory Challenges.** In many areas with capacity for growth, zoning permits 50 to 100 percent more floor area ratio for housing than non-residential uses. This enables not only the conversion of the existing office to residential use, but also additional new housing. Most of the District’s mixed-use zoning permits more residential development than commercial development. In some cases, the regulations from non-commercial use (e.g., 100 percent of lot occupancy), can complicate conversions (e.g., when floor plates need to be reduced to permit light and air for windows). Still, there are many mixed-use corridors where the existing zoning and allowable heights and densities are not sufficient to encourage the redevelopment of existing office to housing, when those existing uses have relatively strong value.

3. Would there be any costs to the District and property owners associated with the recommended changes?

- **Construction Costs for Affordable Housing.** There are acquisition and construction costs associated with the production of affordable housing, and this would remain true for the conversion of office buildings into affordable housing. The Task Force compared the estimated costs of converting office into affordable housing with the Department of Housing and Community Development’s (DHCD) estimated costs of producing affordable housing through existing programs. DHCD’s average acquisition cost at application for projects with existing buildings was \$94 per sf, and for projects without existing buildings the average acquisition cost was \$118 per sf. Office-to-affordable-housing conversions may be more comparable to projects with existing buildings; though, other factors such as location, building material, and building quality may impact acquisition costs.
- **Costs of Conversion vs. Full Gut Renovations.** To assess the costs of office-to-apartment conversions versus apartment full gut renovations, the Task Force compared each to the cost of new construction. Office to apartment conversions typically save 5 to 10 percent versus the cost of new construction; however, apartment full gut renovations typically save 20 to 40 percent versus the cost of new construction.

Recommendations

While there are some opportunities to convert vacant office space to affordable housing in the District, the initial findings of the Task Force reveal that office-to-residential conversions are not the most efficient way to address the city's pressing housing needs. If the District would like to pursue office-to-residential conversions for those most feasible for conversion—class C office buildings along or near commercial corridors—the District should take the next steps as part of the strategy to address the affordable housing crisis:

- **Directly subsidize conversions.** While a limited number of office-to-residential conversions may continue to occur in the market, if the District decides to pursue office-to-residential conversions, many of the projects would require subsidies. Subsidies for conversion to affordable housing would need to be greater than subsidies for conversion to market-rate units. The District should consider the unique advantages that some office buildings may offer that mitigate the increased subsidy costs to produce affordable housing. These subsidies could come through a variety of sources, including the Housing Production Trust Fund, Local Rent Supplement Program (LRSP) project-based housing subsidies, property tax abatements, or grants. Furthermore, many of the office buildings that could be converted exist in areas with fewer affordable housing opportunities. Office-to-affordable housing conversion subsidies in these locations could help support fair housing goals and a more equitable distribution of affordable housing.
- **Provide zoning incentives.** The District could explore opportunities to increase allowable densities under zoning regulations, especially along and near commercial corridors, or offer property owners matter-of-right increases in density and height in exchange for producing office-to-residential conversions that provide a minimum threshold of affordable housing units. These incentives could provide preference or additional incentives for family-sized units as well. The District also could investigate mixed-use zone amendments to increase capacity along key corridors outside the central business district, where class C office space can be converted to residential use.
- **Fund feasibility studies.** If the District would like to further explore the potential of office-to-residential conversions for class C buildings near or around commercial corridors, it should fund feasibility studies for particularly viable projects. Developers would need feasibility studies to determine the costs of potential office-to-residential conversions. The District could provide a special pool of matching predevelopment funding to which developers could apply to fund feasibility studies for the conversion of non-residential buildings to affordable housing.

While the District does host millions of square feet of vacant office space, not all of it is a strong candidate for conversion to housing, let alone affordable housing. The Task Force found that there are numerous challenges and costs involved with the conversion from office-to-residential. Given these realities, private owners might find it more profitable to let their office space remain vacant rather than undergo a conversion, even in a hot residential market like the District currently is experiencing.

However, with zoning changes, increased density incentives, funding from the Housing Production Trust Fund, LRSP funding, tax abatements, or grants, there are opportunities to increase the District's number of affordable housing units through conversions of class C office buildings, particularly along or near commercial corridors outside the central business district. This report highlights the opportunity costs of spending limited resources on conversions as opposed to the District's other affordable housing production and preservation programs. The Task Force believes that the District's affordable housing resources would generally be better spent on other affordable housing production and preservation programs, but there are particular circumstances in which office-to-affordable housing conversions may be a viable way to marginally increase the affordable housing supply, including in high-opportunity neighborhoods.

Additional work that would extend this effort includes the development of detailed case studies of office conversions completed in DC to date, as well as a deeper analysis of existing office buildings to determine profiles for likely conversion candidates.

INTRODUCTION

In her second inaugural address in January 2019, Mayor Muriel Bowser called on the region to produce 240,000 additional units of housing by 2025, and for the District to produce 36,000 units—12,000 of them affordable. While the District needs housing for residents across the income spectrum, low-income residents are increasingly at risk, living in a city with high and rising housing costs. With an eye toward increasing the supply of affordable housing, Mayor Bowser has charged the District with evaluating its zoning and land use policies, including height and density restrictions. Recognizing that all District residents share a common future, the Mayor called on all communities to determine how to accommodate needed housing.

Task Force Legislation

Prior to the Mayor's address, the District of Columbia Council passed the Office to Affordable Housing Task Force Establishment Act of 2017.¹ The formation of the Task Force was inspired in part by reporting on the large amount of vacant office space in the District, and office-to-residential conversions occurring in the region. The Task Force was charged with submitting a report to the Mayor and the Council that addresses the following three questions:

1. Would transitioning vacant commercial office space to affordable housing units, including units with multiple bedrooms, help address the District's housing challenge?
2. Would any legislative, regulatory, zoning, or policy changes promote the transition of vacant commercial office buildings to affordable housing units, including units with multiple bedrooms?
3. Would there be any costs to the District and property owners associated with the recommended changes? If so, provide recommendations on how to fund such costs.

The Task Force

¹ D.C. Act 22-0304, April 4, 2018, <http://lims.dccouncil.us/Download/38126/B22-0289-SignedAct.pdf>.

A twelve-member Task Force convened to investigate office-to-residential conversions. Members included Sarah Bardin (Office of Zoning [OZ]), Dwayne Bradford, Sheldon Clark, Leila Finucane, Stephen Glaude, Aubrey Grant, Allison Ladd (DHCD), Kirk Mettam, Aakash Thakkar, Andrew Trueblood (Office of the Deputy Mayor for Planning and Economic Development [DMPED], now Office of Planning [OP]), Keyda Walker, and David Whitehead. Regular participants in Task Force meetings included Scott Bruton, Yari Greaney (DMPED), Joseph Knackstedt (DHCD), Art Rodgers (OP), David Suls (Golden Triangle BID), Christopher Ahn, and Gerry Widdicombe (DowntownDC BID).

Director of Office of Planning Andrew Trueblood chaired the Task Force. The Task Force set up two committees to focus on aspects of its research mandate—the Finance Committee and the Practical Challenges and Solutions Committee. The Finance Committee, chaired by Allison Ladd, gathered data on the costs involved in converting an office building to affordable housing. The Practical Challenges and Solutions Committee, chaired by Sarah Bardin, investigated the structural changes needed to convert office buildings to multifamily housing and the regulatory restrictions that shape the parameters of those changes.

The Task Force met four times: October 12, November 15, and December 12, 2018, and January 17, 2019. The two committees held conference calls in between regular Task Force meetings as needed to discuss progress. Subgroups within each committee were responsible for addressing particular research questions and submitting draft sections of the final Task Force report.

Goals and Organization of the Report

The goal of this report is to explore the potential of office-to-residential conversions to increase the number of affordable housing units within the District. This report examines the level of vacancy within the District's office market and identifies where the highest concentrations of vacancies are clustered. Once identified, the report explores what kind of office vacancies are the most suited for conversion and discusses trends and dynamics in the office market that shape property owners' decisions. The report also discusses the legislative, regulatory, zoning, and policy changes that would facilitate or hinder potential conversions. The report concludes with a discussion of costs and recommendations. Ultimately, this report aims to provide policy makers with a framework for understanding the opportunities and challenges of office-to-residential conversions relative to other strategies to increase the supply of affordable housing in the District.

OFFICE-TO-RESIDENTIAL CONVERSION POTENTIAL IN THE DISTRICT

This section addresses the first question posed to the Task Force: “would transitioning vacant commercial office space to affordable housing units, including units with multiple bedrooms, help address the District’s housing challenge?” The Task Force first sought to understand the extent of office space vacancies within the District, and then sought to identify where the highest concentrations of vacancies are clustered. In 2017, when the Task Force was first conceived, reporting indicated that there was over 14 million sf of vacant office space in the District—the equivalent of over two empty Pentagon buildings.² While the District does host millions of square feet of vacant office space, not all the buildings represented in this figure are strong candidates for conversion to housing, let alone affordable housing.

Office Building Vacancy in the District

According to data provided to the Task Force by JLL Research, a real estate market research firm, the District and the surrounding regions of Maryland and Virginia have 334 million sf of privately-owned office space, of which 51 million sf was vacant as of the end of 2018 (amounting to a 15.3 percent vacancy rate).³ Within the District, two sources show a vacancy rate of approximately 11 percent. JLL Research reported that the District has 121.6 million sf of privately-owned office space, over 13 million sf of which is vacant. CoStar, a commercial real estate information company, counted 154.6 million sf of office space in the District, approximately 16.9 million sf of which is vacant. These vacancy levels have existed for the past several years, with higher vacancy rates in the neighboring suburbs of Virginia and Maryland than in the District.

Given the abundance of vacant office space, some older office buildings in the region have been converted into other uses (e.g., hotels, schools, etc.). Over the past few years, regional conversions total 3 million sf, with 1.5 million sf of conversions within the District. However, residential conversion only accounted for 50 percent of these conversions in the District (0.6 percent of total sf of privately-owned office space).⁴ Hotels, schools, and other non-commercial uses are strong competitors for office-space conversion.⁵

² Whitehead, D. (2017, October 17). DC has over 14 million square feet of vacant office space. What if some became homes? Greater Greater Washington, <https://ggwash.org/view/65195/dc-has-over-14-million-square-feet-of-vacant-office-space-what-if-some-became-homes>.

³ JLL Research

⁴ DowntownDC BID

⁵ JLL Research

Office buildings are loosely designated by the following rating system: Trophy, class A, class B, class C, and class F.⁶ The District’s vacant space breaks down as follows:

- 0.6 million sf of vacant Trophy office space
- 7.4 million sf of vacant class A office space
- 4.4 million sf of vacant class B office space
- 0.8 million sf of vacant class C office space.⁷

Figure 1. District Vacant Office Space

Type	City-Wide		Downtown Core		
	All	A	All	A	B,C,F
# Buildings	2,368	348	774	223	551
Existing sf	154,584,770	94,967,266	95,694,448	59,391,952	36,302,496
Vacancy sf	16,854,463	11,889,020	10,946,705	7,528,635	2,537,777
Vacancy %	10.9	12.5	11.4	12.7	9.5

Source: CoStar, December 2018. CoStar does not designate Trophy buildings.

The data reveal that nearly two-thirds of the vacant space, or roughly 10.9 million sf, is clustered within the District’s downtown core (Figure 1). The fact that the downtown core experiences the largest concentration of vacancy fits with dominant market themes. Since 2013, much of the rise in vacancy can be attributed to a convergence of multiple storms, beginning with sequestration several years ago on a city heavily dependent upon federal government spending and General Services Administration office leasing. At the same time, the open office space “right sizing” trend dominated new leasing activity. Law firms, traditionally downtown’s dependable large occupiers of space, saw double digit percentage decreases in office space use as firms relocated, rightsized, and redesigned their space. These firms are now seeking brand new class A buildings delivering in new and emerging submarkets. These factors left a large glut of “legacy class A” vacancies in the downtown core, or older, second generation, office-intensive space.

⁶ Buildings are classified based on criteria such as age of the building, location, amenities, infrastructure (e.g., HVAC), maintenance and technological capabilities. Though standards are relative to the market, Trophy buildings represent the “cream of the crop” and are industry leaders in design, environmental sustainability and technology. class A buildings represent the newest and highest-quality, generally in central locations with high occupancy rates and premier tenants. class B buildings are older, often between 10 and 20 years, and well-maintained, but not necessarily state-of-the-art. class C buildings are over 20 years old, potentially run-down and lack amenities such as on-site parking, lobby attendants, and central air conditioning. class F buildings are functionally or economically obsolete and are not competitive with any other properties in the market.

⁷ JLL Research. JLL does not designate class F buildings.

Office-to-Residential Conversions

Based on data from the DowntownDC BID, the Task Force identified office-to-residential conversions in the District that are completed, under construction, and planned (Figure 2).⁸ From 2002 to 2018, fourteen office spaces have been converted for new uses; eight of those uses are residential (apartments or condos). Of the 1,371 conversion residential units completed, only 23 units (or 2 percent) are affordable. Another 2,430 conversion residential units are either under construction or planned, 370 of which will be affordable (or 15 percent). Taking into account conversions that are completed, under construction, and planned since 2002, the District will have created only 393 affordable housing units and 3,408 market-rate housing units through office-to-residential conversions.

Despite the high vacancy rate, market-driven office-to-residential conversions have not been higher in the District due to several barriers. These include:

- **Office market economics.** Net operating income (NOI) is a calculation used to analyze profitability of real estate investments. In most District office submarkets, the expected office NOI per sf exceeds that of multifamily NOI per sf (Figure 3), meaning that property owners do not expect to profit from conversion of office to residential use. Therefore, the current economic calculation made by most office property owners does not support a market-rate conversion, before even considering the higher costs of a residential conversion compared to an office renovation.
- **Staggered expiration dates of a building's leases.** Most office landlords like to diversify their office lease expiration dates to lower the risk of cash flow disruptions. This practice means that, while there may be an overall high vacancy rate, vacancies are spread across buildings. There are very few completely or mostly empty office buildings that are not already being repositioned for other purposes, which makes it difficult for a building to move quickly into an office-to-housing conversion.
- **A building's physical features.** The individual physical features of each building may result in a loss of sf during conversion to comply with residential housing regulations and building codes. Light and air requirements for multifamily residential properties, for example, could require a reduction of floor plates or leave some areas of the building unused.
- **Little conversion construction experience.** The District has undertaken few office-to-residential conversions, historically. As the conversion of each building poses unique challenges, there is uncertainty over the costs and logistics of conversion.

⁸ It is possible that there are office-to-residential conversions that are completed, under construction, or planned of which the Task Force is not aware.

Figure 2. District of Columbia Office-to-Housing Conversions, 2002-2018

Year	Building/Building Address	New Use	Developer	Office				Hotel		Other
				Office SF	SF	Units	Afford	SF	Rooms	SF
Completed										
2002	806 15th St NW -- Sofitel Hotel	Hotel	Sofitel	54,000	154,000	-	-	154,000	237	-
2008	733 15th St NW --The Woodward	Residential -- Apartments	SJG Properties	164,000	164,000	189	-	-	-	-
2009	1255 25th St -- WestEnd25	Residential -- Apartments	Vornado	273,000	273,000	283	-	-	-	-
2013	1151 Fourth St SW -- The Lex	Residential -- Apartments	Urban Atlantic/JBG	198,000	198,000	266	-	-	-	-
2014	1150 Fourth St SW -- The Leo	Residential -- Apartments	Urban Atlantic/JBG	200,000	200,000	264	-	-	-	-
2015	1522 K St NW -- Hyatt Place	Hotel	Songy Highroads	80,000	-	-	-	80,000	164	-
2016	1100 Penn Ave NW -- Old Post Office	Hotel	Trump Hotels International	375,000	-	-	-	375,000	270	-
2017	2501 M St NW	Residential -- Condos	Tasea Invsmnt Co & Auger	98,000	98,000	59	-	-	-	-
2017	300 D St SW	Museum of the Bible	Museum of the Bible	391,000	-	-	-	-	-	391,000
2017	1025 15th St NW -- Architect Hotel	Hotel	Honey Bee Hospitality	29,000	-	-	-	29,000	50	-
2018	1255 22nd St NW -- Legacy West End	Residential -- Apartments	1255 22nd Street Lap	116,000	178,000	197	15	-	-	-
2018	4000 Brandywine St NW -- Frequency	Residential -- Apartments	Urban Investment Properties	50,000	50,000	100	8	-	-	-
2018	1108 16th St NW -- The Adele	Residential -- Condos	Red Multifamily Dev/Ellisdale	19,000	19,000	13	-	-	-	-
2019	4000 Connecticut Ave NW	School PK--12th Grade	Whittle School & Studios	650,000	-	-	-	-	-	650,000
				2,697,000	1,334,000	1,371	23	638,000	721	1,041,000
Under Construction										
	2100 2nd St SW -- Riverpoint	Residential -- Apartments	Akridge, Western	609,265	500,000	450	36	-	-	-
	1900 Half St SW	Residential -- Apartments	Douglas Development	478,000	481,000	462	37	-	-	15,000
	3900 Wisconsin Ave NW	Mixed Use	Roadside	228,000	-	-	-	148,000	145	80,000
	2225 Georgia Ave NW	Residential -- Apartments	Howard University	123,000	123,000	176	176	-	-	-
				1,438,265	1,104,000	1,088	249	148,000	145	95,000
Planned										
	4620 Wisconsin Ave NW	Residential -- Apartments	Urban Investment Properties	130,000	130,000	146	12	-	-	-
	515 22nd St NW	Residential -- Apartments	Insight	102,000	102,000	153	13	-	-	-
	3939 Wisconsin Ave NW	School	Sidwell Friends	40,000	-	-	-	-	-	40,000
	4250 Connecticut Ave NW	School	UDC (buying from Bernstein)	213,000	-	-	-	-	-	213,000
	4000 Wisconsin Ave NW	Residential -- Apartments	Donohoe Development	492,000	716,000	716	70	-	-	-
	5151 Wisconsin Ave NW	Residential -- Apartments	Donohoe Development	105,000	180,000	280	22	-	-	17,000
	1724 Kalorama Rd NW	Add'l residential units	Jubilee Housing	27,000	27,000	47	4	-	-	-
				1,109,000	1,155,000	1,342	121	-	-	270,000
		Total Completed, Under Construction and Planned		5,244,265	3,593,000	3,801	393	786,000	866	1,406,000

Source: DowntownDC BID

Figure 3. Comparison of Office NOI to Multifamily NOI in Submarkets of the District

Area	Difference in adjusted NOI/sf between multifamily residential and office building	Office building class	Total vacant sf	Inventory sf
Upper Northwest	\$14.13	C	77,632	333,727
West End	\$11.15	A	179,156	543,472
Market District	\$9.49	A	98,822	276,000
Ballpark	\$8.76	C	-	274,396
East End	\$8.00	C	492,457	1,933,632
Dupont-Logan-Shaw	\$7.53	C	8,920	491,726
Market District	\$6.95	C	26,567	82,140
Upper Northwest	\$4.56	B	308,775	2,146,356
Georgetown	\$3.10	C	-	79,606
Ballpark	\$1.90	B	25,898	1,193,471
Southwest	\$1.63	A	1,366,697	7,427,700
CBD	\$1.47	C	191,634	2,469,198
Georgetown	\$1.19	A	43,072	730,904
Georgetown	\$1.11	B	124,406	1,846,063
Capitol Hill	\$0.11	A	638,140	2,141,411
Market District	-\$0.15	B	9,498	116,221
Southwest	-\$1.67	C	32,868	572,416
West End	-\$2.67	C	-	613,540
Southwest	-\$2.95	B	215,651	3,989,848
NoMa	-\$3.03	C	-	430,785
NoMa	-\$3.49	B	333,371	3,951,296
CBD	-\$3.55	B	1,252,914	16,632,343
East End	-\$3.73	B	1,750,983	16,957,031
Dupont-Logan-Shaw	-\$4.50	B	219,606	3,748,190
Ballpark	-\$4.53	A	280,328	3,151,876
Capitol Hill	-\$4.91	C	10,059	184,199
Capitol Hill	-\$5.14	B	81,534	2,364,668
NoMa	-\$5.70	A	463,990	4,986,463
West End	-\$8.18	B	86,138	2,824,188
East End	-\$9.56	A	2,739,051	20,594,370
CBD	-\$12.07	A	1,628,734	9,580,787
CBD	-\$24.45	Trophy	142,030	2,840,596
East End	-\$26.52	Trophy	383,357	4,852,621
Capitol Hill	-\$28.31	Trophy	93,391	972,822
Southwest	-\$28.53	Trophy	21,137	267,560

Source: DowntownDC BID

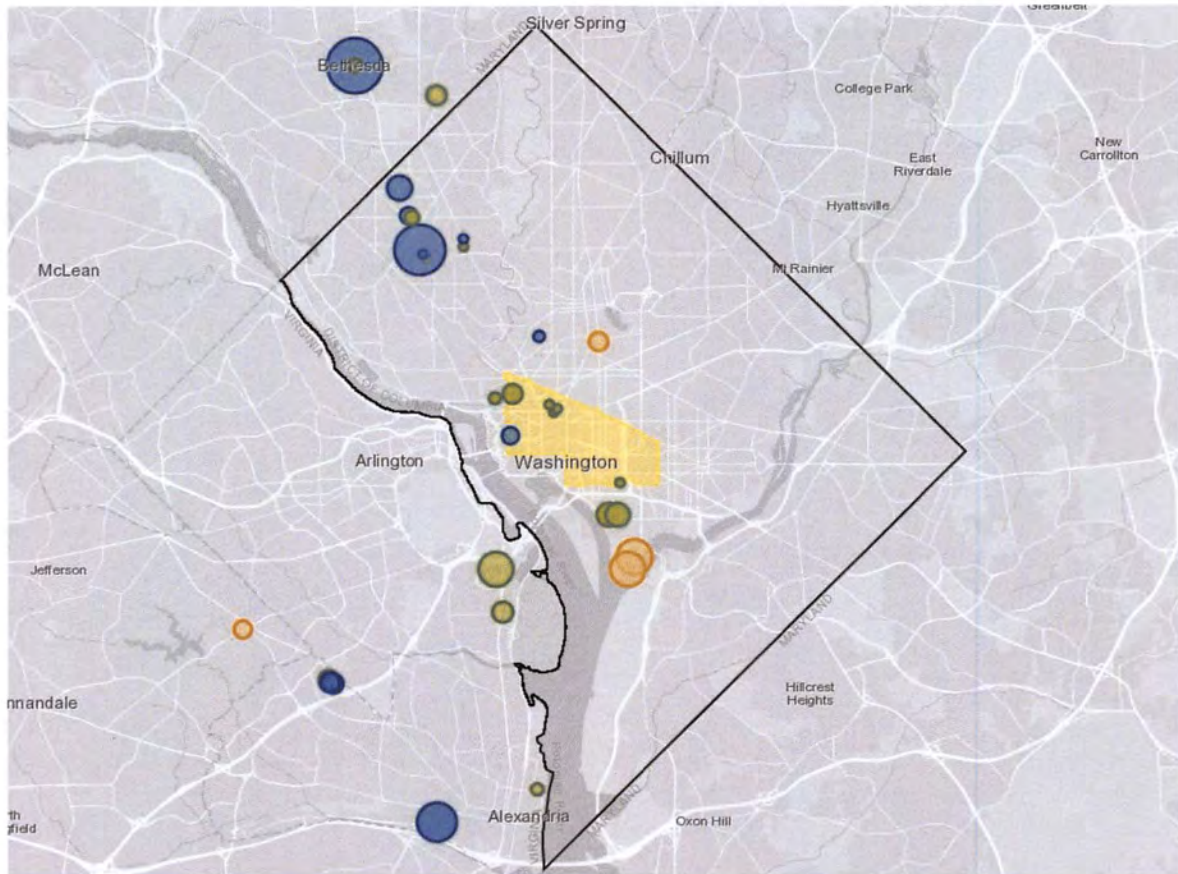
Profitability of Potential Office-to-Residential Conversions

Figure 3 shows the difference between the multifamily residential NOI and the office NOI across submarkets in the District, grouped by their building class. The light blue highlighting indicates submarkets and office building class where office-to-residential conversions would increase the NOI per sf. In other words, these are the combination of submarkets and office building class in which conversion has the potential to be profitable for the property owner or landlord. This analysis is based on the average NOI per sf by submarket of office space and multifamily residential, respectively. The NOI for both uses is adjusted based on vacancy rates as of February 2019, and estimates of operating expenses and taxes.

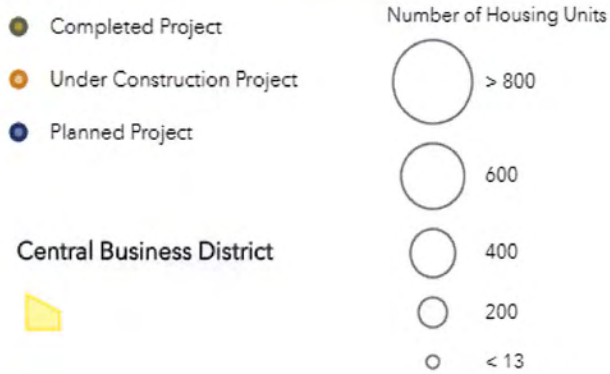
In areas where an office-to-residential conversion would result in greater NOI per sf, class C buildings were the most common; they also demonstrated the greatest average difference between NOI for multifamily and NOI for office—\$7.13 per sf (compared with \$4.72 per sf for class A buildings and \$2.52 per sf for class B buildings).

The District's zoning code permits greater residential density than office density, so modest increases in NOI per sf, and even small decreases in NOI per sf, could still result in a multifamily building that is more profitable than an office building. Regardless of the expected NOI, Trophy buildings are the least likely to result in greater NOI if they were to be converted to multifamily residential units. This analysis suggests that conversions would lead to the greatest increase in NOI per sf in the Upper Northwest, West End, Market District, and Ballpark submarkets. The amount of vacant office space that would lead to profitable conversions in these submarkets is constrained. In all submarkets, the vacancy area is distributed across multiple buildings.

Figure 4. Office-to-Residential Conversions in the Washington, DC Metropolitan Area, 2010-2018



Source: DowntownDC BID

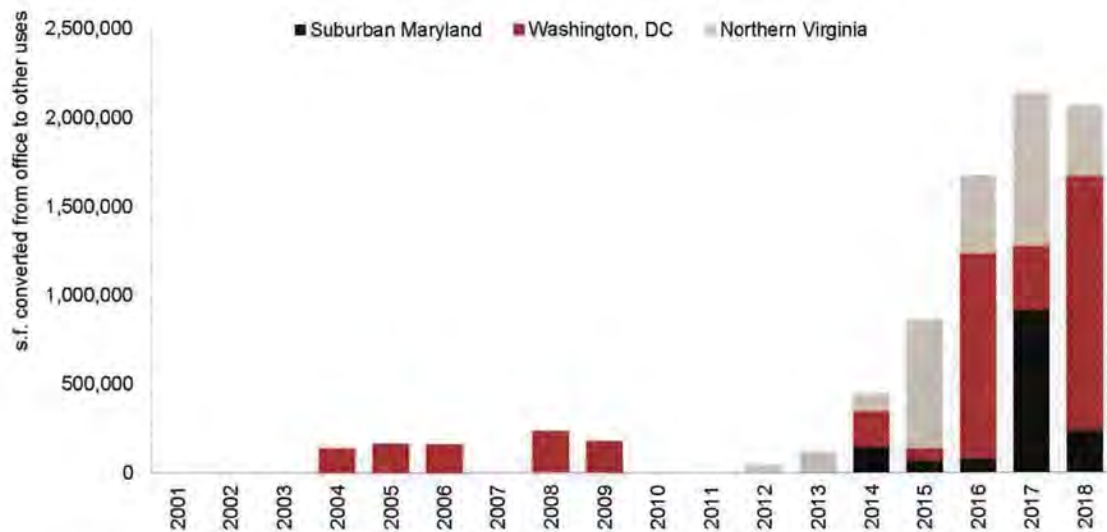


Location of Potential Conversions

The overwhelming amount of conversions in the region and District have occurred outside the downtown core, in submarkets like Upper Northwest, Southwest, and West End. Figure 4 shows the distribution of office-to-residential conversions in and around the District since 2010. Most office-to-residential conversions occur outside of the District's central business district (and thus outside of central employment areas). Further, the few office-to-residential conversions that have occurred within the central business district have resulted in comparably fewer residential units than conversions outside the central business district.

There are several reasons that office-to-residential conversions are more common outside of the downtown core.⁹ For one, there is a high concentration of class A and Trophy office space in the downtown core. This office space remains high-value and converting it for residential use would likely result in significant reductions in NOI (see Figure 3). Office-to-residential conversion is also disincentivized in the downtown core by high acquisition costs and the high density of jobs, which generally increases the value of the office space. These findings align with the Task Force consensus that high acquisition costs within the central business district make office conversions more likely outside of central employment areas. The projects most likely to convert to residential are those located near or in primarily residential neighborhoods, where the current residential rent is approximate to (or greater than) the office rents.

Figure 5. Metro Area Office Conversions, 2001-2018



Source: JLL Research

⁹ Identifying the vacancy cluster's location is vital, as portions of the economics of opportunity cost change drastically for property owners within the cluster area. Like an interconnected network, what affects one can affect all, as near historically high landlord concessions become uniform across a submarket, or ultra-low capitalization rates from a sale raise real estate taxes on their neighbor. Thus, we can identify location-based motivating themes for potential conversions, essentially to identify the "where" to understand the "why."

Figure 5 illustrates the distribution of commercial conversions in the metro area. Data provided to the Task Force by JLL Research indicates that since 2014, 7.9 million sf of office space in the metro area has been converted to other uses—41 percent of which is in the District.

Analysis of Office Buildings with Highest Potential for Conversion

Class A office buildings represent the newest, most desirable, and expensive commercial real estate. Large scale class A ownership in the District is dominated mostly by large institutional asset managers or Real Estate Investment Trusts (REITs), whose decisions may be influenced outside of the direct vacancy factors described above. REITs and institutions with high levels of liquidity can wait out the market, undergo costly renovations, or sell in a climate of ever-increasing prices per sf paid for large class A downtown office buildings. Therefore, a challenging market alone may not be enough of a motivating factor for these participants to convert an office building to residential use.

The most likely candidates for office-to-residential conversions are vacant class B, C, and F office buildings. However, the Task Force found that there are far fewer vacant class B, C, and F buildings than they had expected. Using data from CoStar, the Task Force found that as of December 2018, there were only 45 class B and C properties that were 50 to 100 percent vacant,¹⁰ totaling just over 1 million sf cumulatively. This means that only six to eight percent of vacancies in the District were in class B and C. As shown in Figure 6, most of these are older buildings (median year built = 1925), are of masonry construction, and are 2 to 4 stories tall. Figure 7 shows the location, size (in sf), and vacancy rate of these building. The variation in size of the points shows the difference in square footage of each building and the color goes from yellow to red as the vacancy rate approaches 100 percent. Most of these buildings are clustered in and near the downtown core (Wards 1 and 2), with a few outlying buildings located in major commercial corridors and in industrial areas (primarily in Wards 5 and 6).

Many of the class B and C buildings in Figure 6 are unlikely to consider conversion to residential uses as the expected returns (or NOI) from conversion are lower than if those buildings remained office space. Additionally, the increase in class A inventory has coincided with a decrease in the comparatively smaller inventory of higher-grade class B office space. Although higher grade class B office space is well-suited for conversion, increased tenant demand for the remaining class B space mitigated potential conversions. As many of the existing higher-grade class B building owners with liquidity chose to undergo renovations and took their office space off the market, existing cost-conscious class B tenants exhibited high demand for what remained. Thus, one of the main conversion-motivating drivers for class B landlords—reduced NOI—quickly diminished as inventory shrank drastically, due to near double-digit percentage increases in asking rates. However, this dynamic helps keep rents low, which helps maintain affordability for many smaller commercial tenants.

While market forces may discourage the conversion of the limited inventory of higher-grade class B buildings, smaller class C building owners who do not have the liquidity or potential demand for their product might consider conversion rather than undergo costly renovations or high concession packages. Characteristically, most class C buildings are smaller than their counterparts, averaging around 14,000 sf, they have fewer amenities, and are located on the fringes of major downtown corridors. Having to compete with higher-class building subleases and an ever-expanding supply of co-working space within the District may push additional class C buildings toward conversion. Therefore, owners of class B and C

¹⁰ While CoStar includes a designation for class F buildings, they do not list vacancy rates, vacancy sf, and direct available sf for class F buildings.

buildings face more pressure to find a productive use for their vacant office space, especially as new office trends demand different layouts and tastes (e.g., co-working spaces), and new class A office construction continues to come online. However, given the economic calculus and other barriers to conversion, buildings with high vacancy rates are primarily being repositioned as offices (e.g., Washington Metro Area Transit Area purchase of 300 7th Street SW and the redevelopment of 609 H Street NE) and it is expected for that trend to continue.

Developers that include affordable housing in the conversion would benefit from existing federal incentives. Figure 8 shows the class B and C office buildings with 50 to 100 percent vacancy rates (the same properties from Figure 6 and 7) overlaid with the federal Difficult to Develop Areas (Red), Qualified Census Tracts (Green), and Opportunity Zones (Blue outline). Projects located in Difficult to Develop Areas or Qualified Census Tracts receive a 30 percent boost in federal Low Income Housing Tax Credits (LIHTC), which could help to incentivize the inclusion of affordable housing in any conversion in those areas. This can also support the District's path toward a more equitable distribution of affordable housing.

Figure 6. Class B, C, and F Office Buildings with 50 to 100% Vacancy Rates as of December 2018

Property Address	Building Class	Percent Vacant (%)	Year Built	Direct Available Space (sf)	Direct Vacant Space (sf)
750 17th St NW	B	44.14	1989	72416	71394
2428 Wisconsin Ave NW	B	51.23	1984	3900	3900
888 16th St NW	B	53.38	1969	102605	102605
3003 Williams Aly	B	53.49	2019	2300	2300
1763 Columbia Rd NW	B	58.30	1910	31482	31482
2033 K St NW	B	59.38	1975	78728	83867
1541 14th St NW	B	59.56	1914	1000	1000
1506 21st St NW	B	63.52	1912	2150	2150
1827 Jefferson Pl NW	B	67.79	1902	3796	3796
905-909 E St NW	B	68.84	1910	25402	25402
3400 Idaho Ave NW	B	70.00	1988	31286	31286
518 C St NE	B	70.44	1990	9499	9499
1125 15th St NW	B	72.50	1971	263848	197924
3246 Prospect St NW	B	73.89	1870	1995	1995
2100 M St NW	B	82.30	1969	248000	248000
999 E St NW	B	89.48	1931	157659	157659
1077 30th St NW	B	97.57	1985	16030	16030
2445 M St NW	B	99.64	1986	296887	296887
214 2nd St SE	B	99.92	1890	2598	2598
405 8th St NW	B	100.00	1927	6428	6428
1015 31st St NW	B	100.00	1985	28792	28792
2801-2803 M St NW	B	100.00	1850	10500	10500
5025 Wisconsin Ave NW	B	100.00	1981	31876	31876
1413-1415 22nd St NW	B	100.00	1940	9604	9604
2124 Martin Luther King Jr Ave SE	B	100.00	1957	4278	4278
1900 W Pl NE	B	100.00	1993	83250	83250
1804 11th St NW	C	50.00	1915	2210	1105
1312 18th St NW	C	56.01	1910	4901	4901
3401 K St NW	C	63.12	1988	19049	19049
1916 13th St SE	C	66.67	1905	1520	1520
1806-1808 Florida Ave NW	C	73.66	1912	2240	3041
918-920 U St NW	C	83.06	1920	10300	12400
1418 Good Hope Rd SE	C	83.96	1939	7000	7000
1439 R St	C	90.95	1920	1738	1738
603 2nd St NE	C	99.86	1890	1398	1398
1319 18th St NW	C	100.00	1900	23850	23850
500 C St NE	C	100.00	1986	3240	3240
3328 Georgia Ave NW	C	100.00	1909	2160	2160
5115 Macarthur Blvd NW	C	100.00	1927	2000	2000
300 12th St SW	C	100.00	1937	79385	79385
4748 Wisconsin Ave NW	C	100.00	1909	6232	6232
615-619 14th St NW	F	--	1924	--	--
1340 G St NW	F	--	1920	--	--
1342 G St NW	F	--	1920	--	--
913 L St NW	F	--	1900	--	--

Source: CoStar, July 2019

Figure 7. Map of Class B and C Office Buildings with 50 to 100% Vacancy Rates as of July 2019

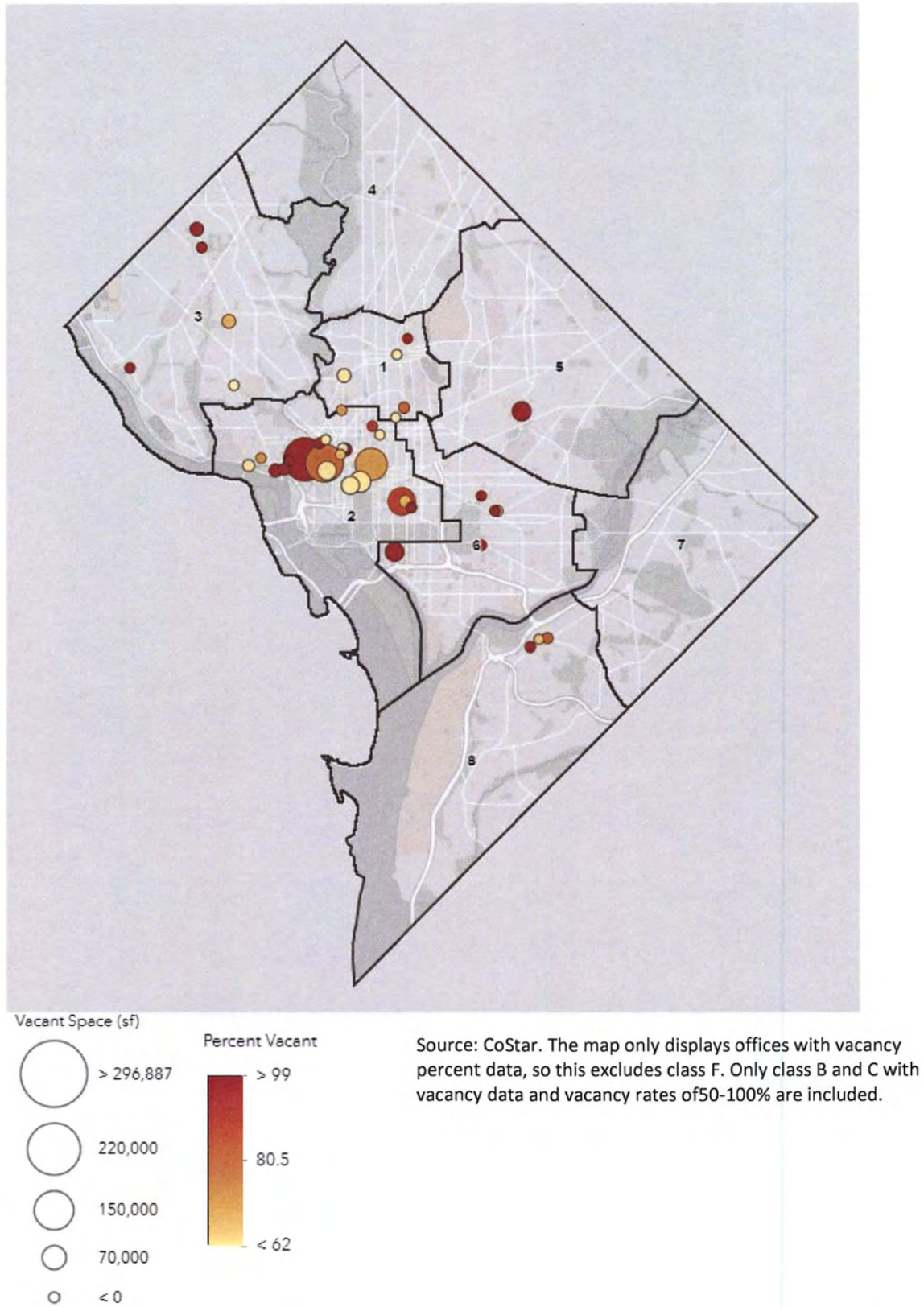
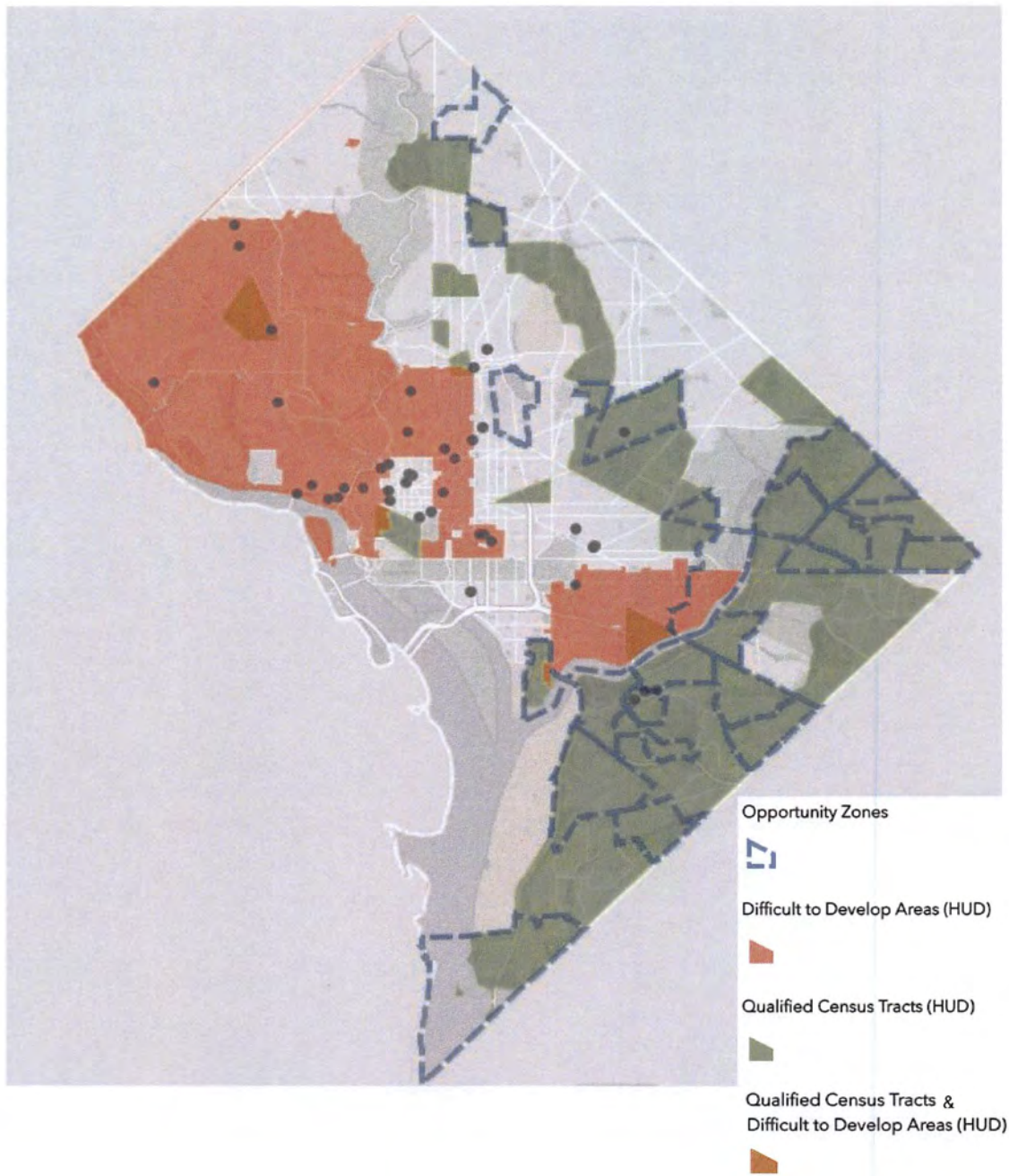


Figure 8. Class B, C, and F properties with 50-100% vacancy rates overlaid with Difficult to Develop Areas (HUD), Qualified Census Tracts (HUD), and Opportunity Zones



Source: CoStar, DC Office of the Chief Technology Officer.
The map only displays offices with vacancy percent data, so this excludes class F.
Only class B and C with vacancy data and vacancy rates of 50-100% are included.

Office Tenant Concessions

Downtown property owners have responded aggressively to the recent recession by offering historically high concessions, mainly in the form of tenant improvement allowances and free rent. In fact, the District has recently been competing with New York City in offering the highest concessions in the nation. According to the 2018 Savills Studley Effective Rent Index, which measures actual deal terms of higher-caliber class A product among the nation's largest central business districts, the District set a national and local record for landlord concession per sf at \$201.88, versus the national average of \$94.83.¹¹

These concessions affect a property owner's return in the form of NOI. Property owners may consider multifamily residential conversion, if bottom line profits look weak, depending on their asset management plan. Savills Studley provides further data on this economic calculus by examining percentage change in landlord effective rents from the pre-recession market peak of 2007. Landlord effective rents are closely related to the actual income a landlord received when factoring in concessions. Among the nation's largest central business districts, the District is one of the worst performers with a drop of 58.5 percent in landlord effective rent; only downtown New York City and San Diego dropped more dramatically during the period 2007-2017.¹²

A major factor for the District's increasingly high vacancy rate is the large amount of new construction and renovated building supply delivering over the next few years. On the demand side, private and government office users continue to require less space per employee than before. This "office market compression" means that even as the number of jobs in the District grows, the demand for office space lags behind. An even bigger issue is the District's office space availability rate, which is determined by adding the current amount of sublease space on the market to the vacancy rate (Figure 9). The availability rate can be thought of as the total amount of office space that is on the active market, or space available for lease, sublease, or sale. The high availability rate in the District provides further evidence that the market is in the tenant's favor and concessions are likely to remain elevated for the foreseeable future. As such, landlords are eager to find value-add opportunities in this challenging market wherever they can.

Figure 9. District Availability Rate and Vacancy Rate



Source: CoStar

¹¹ Savills Studley 2018 Effective Rent Index

¹² *ibid.*

PHYSICAL AND REGULATORY CONSIDERATIONS FOR OFFICE-TO-RESIDENTIAL CONVERSIONS

This section provides stakeholders with an understanding of the various codes that impact the physical requirements and needs of buildings that are being considered for conversion. It addresses the second question posed to the Task Force: “would any legislative, regulatory, zoning, or policy changes promote the transition of vacant commercial office buildings to affordable housing units, including units with multiple bedrooms?” It is also intended to be a starting place for factors that need to be considered when performing a feasibility study on a specific office building that is a candidate for conversion to housing.

Construction classification Type

The major structural consideration for office-to-residential conversion is the building construction classification type. Construction classification will impact the allowable heights, areas, and use classifications, influencing the conversion to residential use groups. Potential building types for conversion generally are one of three types: Type I (Concrete Framed); Type II (Steel Framed); Type IV (Heavy Timber). (See Appendix A for a detailed breakdown of Construction classification Type challenges.)

Structural Considerations for Office-to-Residential Conversions

Though the developer or owner of each building/property will need to study the property to determine the potential benefits of conversion, each of the construction types listed above will grapple with similar considerations, which may be associated with additional costs that could make office-to-residential conversions cost-prohibitive. These include:

1. The coordination of units and systems would require navigation around the structural floor assembly, which can impact placement of elements such as kitchens and bathrooms. This ultimately impacts conversion efficiencies.
2. Vertical transportation issues, such as stairs’ egress capacity for the occupancy change, elevator capacity for an ambulance stretcher, and location of elevators for conversion, may be limiting factors.
3. Introducing light wells required to create a habitable space within a large building may be a challenge in a typical double loaded corridor, which ranges between 60’- 70’, and some large buildings have wider floor plates. Light and air requirements for residential can mean a reduction of floor plates or building footprint.
4. The zoning code typically allows for more residential density than commercial. With a change in occupancy from commercial to residential, the building code typically reduces the allowable building area per floor (except Type I), which means that some areas of the building could remain unused with an all-residential conversion. It does present an opportunity for mixed-use conversions.
5. While the District provides credits for conversions to help offset stormwater and green area ratio requirements, it is unclear if the credits would mitigate the costs involved in complying with these regulations in a conversion.

6. Other considerations include façade redesigns to accommodate operable windows to meet current energy codes, stiffening structures for HVAC loads on roof, and revised/upgraded utilities from the street (because residential projects typically have heavier loads than office buildings).

In addition to the structural challenges outlined above, it is important to consider the size, location within a block, and shape of a building when assessing whether a building would be a good candidate for conversion.

Structural Opportunities for Office-to-Residential Conversions

Office-to-residential conversions make use of the existing structural systems of office buildings that are typically either steel (Type I) or concrete (Type II) construction. The required structural loads are similar enough that substantial reinforcement typically is not required. However, the condition of the existing system must be verified by a thorough structural analysis. Depending on the building, the following features may facilitate office-to-residential conversions:

1. Concrete (Type I) office buildings already have fire ratings above and beyond those required for residential units.
2. Residential buildings typically have a lower parking demand than office buildings, which provides an opportunity for repurposing surplus parking into an amenity space or to generate an additional income stream.
3. There is the opportunity for partial conversions where the existing building area exceeds the maximum allowable area for residential use. This may be beneficial for communities that suffer from un-activated streets after business hours and right sizing the supply of office space in the community. By partially converting the building to residential use, the owner could take advantage of the preference that the Zoning Code gives to residential uses. To fully take advantage of mixed-use redevelopment, the District will need to fully examine its zoning codes and regulations.
4. Residential uses typically allow more floor area ratio (FAR) and density than a previously maxed-out office building. Owners and prospective developers may also be able to take advantage of that additional density by adding floors and gross building area, structure permitting.

Policy and Regulatory Considerations

Zoning and land use regulations are designed to achieve multiple District-wide goals, such as mixed-use zoning that encourages pedestrian access and reduces the need for automobile trips; light and air lot occupancy requirements to support high-quality, livable residential units; and stormwater management for environmental sustainability. Many of the District's approaches to growth help office-to-residential conversions. For instance, the District's pursuit of Transit Oriented Development (TOD) mixes uses and brings uses closer together to encourage pedestrian connections. However, at times, the goals of different regulations conflict with one another. The Task Force noted that there will need to be a comprehensive review of any regulatory conflicts for an existing conversion.

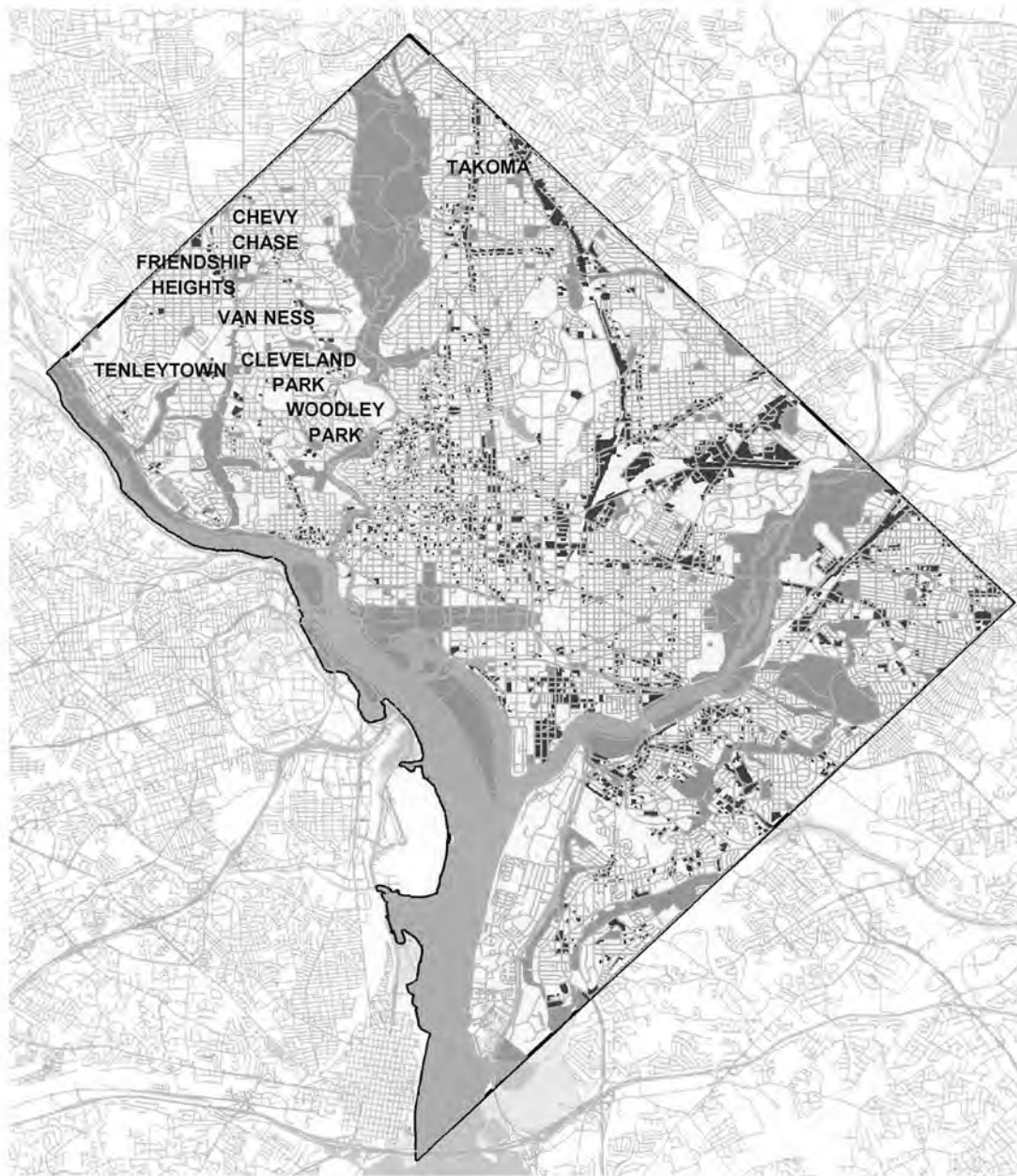
In general, the District's land use regulations support office-to-housing conversions. Most of the District's mixed-use zoning permits more residential development than commercial development. This zoning not only facilitates conversion to residential but also enables more housing to be built in addition to the converted space. In some cases, the form non-residential uses are permitted to take, such as

using 100 percent of lot occupancy, make conversions difficult when floor plates need to be reduced to permit light and air for living or bedroom windows. This requirement may result in the reduction of the building floor plates; however, in the majority of zone districts, increased density is permitted through additional stories above the non-residential use. Even in the District's downtown core, zoning regulations provide incentives for residential uses to balance the market value difference between office and housing.

Still, there are many mixed-use corridors where the existing zoning and allowable heights and densities are not sufficient to encourage the redevelopment of existing office to housing, when those existing uses have relatively strong value. Some of these areas include Takoma, Woodley Park, Cleveland Park, Van Ness, Tenleytown, Chevy Chase on Connecticut Avenue, and Friendship Heights (Figure 10). Redevelopment and conversion to housing in these areas tends only to happen when the building has lost significant value as it reaches the end of its functional life. Each of these corridors have direct and immediate Metro access and old, underutilized office buildings.

Figure 10, based on an analysis by the DC Office of Planning in 2013, illustrates where vacant and underutilized land (in purple) exists in the District. The Office of Planning is in the process of updating this map, which will help to identify where remaining opportunities exist and inform how zoning could be refined to encourage redevelopment.

Figure 10. Vacant & Underutilized Land in Multi-Family and Mixed-Use and Commercial Zones: 2013



Source: Office of Planning 2013. Some mixed-use corridors where the existing zoning and allowable heights and densities are not sufficient to encourage the redevelopment of existing office to housing are labelled on the map. These areas include Takoma, Woodley Park, Cleveland Park, Van Ness, Tenleytown, Chevy Chase on Connecticut Avenue, and Friendship Heights.

OFFICE-TO-AFFORDABLE-HOUSING CONVERSION COSTS

The District is exploring more ways to produce affordable housing in a cost-effective manner. In response to the third question posed to the Task Force: “would there be any costs to the District and property owners associated with the recommended changes?”, this section provides a cost analysis about conversions from office-to-residential versus new construction. We explore how the District could fund incurred costs in the recommendations section.

Construction Costs for Affordable Housing

To address whether there would be any costs to the District and property owners associated with conversions, DHCD conducted an analysis of all projects admitted into its pipeline since 2015, as well as all the applications submitted during the most recent 2018 Consolidated Request for Proposals (RFP). The data set included 79 selected and proposed projects in all wards, except Ward 3 (Figure 11). DHCD determined that the most applicable comparison for office-to-affordable-housing conversions was the acquisition costs for projects with existing buildings and the construction cost for new buildings. The average acquisition cost at application for projects with existing buildings accepted into DHCD’s pipeline was \$94 per sf and for proposed projects was \$118 per sf. Construction costs in DHCD’s pipeline are harder to compare with office-to-affordable-housing conversions, as construction costs vary by the type of construction and level of rehabilitation. The Consolidated RFP has existing standards for construction costs.

The Task Force expects office-to-affordable housing conversions to have hard construction costs (less contingency) that would not exceed the new construction guidelines in the below chart from the RFP. The RFP does allow for waivers for projects that deviate from the above standards by up to 15 percent or a maximum of \$276 per sf as of the most recent summer 2018 RFP. The average construction cost at application for new construction projects accepted into DHCD’s pipeline was \$208 per sf and for proposed projects it was \$181 per sf. DHCD did not complete an analysis of soft costs/financing costs for current Housing Production Trust Fund (HPTF) projects, as these costs should be similar for both office to affordable housing conversions and current HPTF projects. All projects in the District receiving HPTF funding need to comply with Davis-Bacon and Related Acts prevailing wages, with the “residential” wage rates applying for all buildings below 5 stories, and the “building” wage rates applying for all projects six stories and higher. The value of already poured concrete and avoided construction costs is higher for these projects and may be greater than the five to ten percent that would be expected for market rate developments.

Figure 11. Maximum Construction Costs for Affordable Housing per Gross Square Foot (\$)

Type of Building	New Construction	Substantial Rehabilitation	Moderate Rehabilitation
Townhouses	180	145	100
Garden Apartments/ Condos	175	135	95
Elevator Buildings (5 floors)	210	150	125
Mid-Rise Buildings (6+ floors)	240	165	140

Source: DHCD

Costs of Office-to-Apartment Conversion versus Apartment Full Gut Renovations

To assess the costs of office-to-apartment conversions versus apartment full gut renovations, the Task Force compared each of these to the cost of new construction. Office-to-apartment conversions typically save 5 to 10 percent versus the cost of new construction, whereas apartment full renovations typically save 20 to 40 percent. Office-to-residential conversions typically require a full rework of the following, which is not typical in an apartment full renovation: skin/façade, mechanical, electrical, and plumbing (MEP) systems, and vertical circulation (stairwells and elevators). Full renovations offer the ability to save the structure, skin/façade, interior framing, MEP risers/branch in some cases, and vertical circulation. These reasons contribute to the higher cost of conversion as opposed to renovation.

Though renovations do not inevitably increase the housing stock, they do hold the potential to increase the amount of affordable housing in the District, if subsidized. Conversions, on the other hand, indisputably add to the housing stock. If all is held equal—meaning if subsidies are offered for office-to-residential conversions and for full gut renovations—it is less costly to increase the stock of affordable housing through renovations than through conversions.

Figure 12. Estimates of Potential Costs to Convert Office to Residential

Trade	Unit Cost	Unit	% of Total
Demolition	\$3.98	Total Bldg. sf	4.4%
Exterior Enclosure	\$17.53	Exterior sf	10.7%
Interior Finishes	\$32.76	Bldg. Equiv. sf	33.0%
Elevators	\$7,500	Elevator stops	0.8%
Plumbing	\$9.96	Bldg. Equiv. sf	10.0%
HVAC	\$10.07	Bldg. Equiv. sf	10.1%
Fire Protection	\$3.30	Bldg. Equiv. sf	3.7%
Electrical	\$16.23	Bldg. Equiv. sf	16.3%
General Cond. And Fees	\$0.11	% of Total	11.0%

Source: Dwyer, Mike. Spring Cost Corner – Office to Residential Conversion. Merritt & Harris: Construction Consultants. <http://www.merrittandharris.com/news/archives/spring-cost-corner-2/>

Figure 12 contains estimates of potential costs to convert from office to residential. Items such as parking, sitework, retail, utilities, etc. are excluded from the above, and would be independent of this analysis.

RECOMMENDATIONS

While there are some opportunities to convert vacant office space to affordable housing in the District, the initial findings of the Task Force reveal that office-to-residential conversions are not the most efficient way to address the city's pressing housing needs. Given their cost effectiveness, class C office buildings along and near commercial corridors (and outside the central business district) present the greatest potential for conversions. Additional density—permitted under residential zoning regulations—would also need to be allowed for conversions to be a viable way to increase the affordable housing stock. Should the District choose to pursue office-to-residential conversions as a means to increase housing, the following recommendations would support those conversions.

Directly Subsidize Conversions

The factors working against property owners undergoing office-to-residential conversions are numerous. As such, the District government would need to make a policy decision that it is in the public interest to increase the frequency of conversions to produce affordable housing. If the District government decides to pursue such a policy, it would need to directly subsidize office-to-affordable-housing conversions to make the projects economically feasible. The Task Force's analysis shows that without such subsidies, the District may continue to see small numbers of office-to-residential conversion with very few affordable units.

The District government may find that some office buildings offer unique advantages that mitigate the increased subsidy costs to produce affordable housing. Converting office to affordable housing could help the District's housing challenge by contributing to its affordable housing stock.

Furthermore, Mayor Muriel Bowser has directed the Office of Planning and DHCD to create fair share goals that would promote more equitable distribution of affordable housing, and the District remains committed to Affirmatively Furthering Fair Housing (AFFH) goals. Converting office to affordable housing in areas with fewer affordable housing options could help the District achieve these goals.

While current market conditions make the owners of smaller class C office buildings in residential areas the most likely candidates for conversion, the addition of government subsidies could increase Transit Oriented Development in areas near Metro stops, which may be considered Communities of Opportunity under HUD's AFFH guidelines.

Provide Zoning Incentives to Increase Density and Affordable Units

While regulatory changes to the District's building codes would not be advisable to facilitate office-to-residential conversions, zoning incentives and direct financial subsidies are already used to achieve policy ends. The District could explore opportunities to increase allowable densities under zoning regulations, especially along and near commercial corridors, or offer property owners matter-of-right increases in density and height in exchange for producing office-to-residential conversions that provide a minimum threshold of affordable housing units, with preference or further incentives for family-sized units with three or more bedrooms. Other cities have used zoning to successfully achieve family-sized units.

Much of the District's capacity for growth exists along commercial corridors where existing one and two-story uses, including small office buildings, can be redeveloped into four to seven story buildings. In the

vast majority of these areas, zoning regulations permit 50 to 100 percent more floor area ratio for housing compared to non-residential uses. This additional density would enable new housing, in addition to the conversion of the existing vacant office space.

When considering zoning changes, the District should conduct a thorough investigation into how the changes will improve the likelihood of achieving policy goals. These market analyses could be used by the Office of Planning to balance between increased density, desired community benefits, and market forces that might produce unintended consequences. For example, the loss of class C office space to residential conversion could have a negative impact on the rental costs for small businesses. However, mixed-use projects that add residential units and retain office space could provide a solution to the competition for space.

The District could investigate and implement mixed-use zoning amendments to increase capacity along key corridors where office space can be converted to residential. The most likely conversions will occur in class C office building along or adjacent to commercial corridors outside the central business district (see planned conversions on Wisconsin Ave. in Figure 2 and Figure 4). Specific corridors include Takoma, Woodley Park, Cleveland Park, Van Ness, Tenleytown, Chevy Chase, and Friendship Heights. Each of these corridors have direct and immediate Metro access and older, underutilized office buildings. Matter-of-right density increases and mixed-use zoning, coupled with mandatory inclusionary zoning and direct financial subsidies and tax abatements, could help catalyze office-to-residential conversions with affordable units.

Fund Feasibility Studies

If the District chooses to further explore the potential of class-C-to-mixed-use-residential conversions with affordable units, it could fund feasibility studies to determine the costs of project-specific conversions along or near commercial corridors. The District could provide a special pool of matching predevelopment funding to which developers could apply to fund feasibility studies for the conversion of non-residential buildings to affordable housing. In exchange for providing the predevelopment funding, the District should receive copies of the feasibility studies for collective evaluation.

Financial subsidies, tax abatements, and zoning changes also may be needed to achieve deeper levels of affordability and to serve tenants with policy-preferred levels of household income (percent of Area Median Income). The Mayor and District Council would need to appropriate the necessary funds to provide direct financial subsidies for the creation of affordable housing through the Consolidated RFP, either through the HPTF or LRSP or a new program. To include tax abatements in any subsidy incentive package, the Mayor and Council would have to legislate a new tax abatement program and appropriate whatever funding the District's Chief Financial Officer determines is necessary for implementation in the bill's fiscal impact statement.

Review Regulatory Requirements to Streamline Office-to-Housing Projects

While the District's land use and zoning regulations generally support office-to-housing conversions, the District could conduct a review of building and development regulations to identify and address any existing regulatory conflicts for a conversion project. This review should prioritize building safety and harmonize requirements that pose barriers to a streamlined regulatory environment for office-to-housing developments.

APPENDIX A

This Appendix is a sample building assessment questionnaire that developers and the District could use when analyzing potential buildings for conversion. It should serve as the template for future studies and conversion analyses, and as a tool for discovering the needs of each building during the feasibility phase. The professional performing the study would need to carefully analyze the building and should supplement the checklist below based on their findings.

Note that a simple formulaic approach cannot be applied to the attached checklist because the office stock varies in size, age and construction type. In fact, the age of the building can be just as impactful because the best practices of that period, may differ from today's building standards.

CODE RELATED ISSUES

Construction classification:

Description of the Issue: These are the three main building types that most likely will qualify for conversion consideration, according to the IBC (International Building Code).

Type I – concrete framed structure	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Type II – steel framed structure	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Type IV – heavy timber structure	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Solution/Recommendation: Type I concrete framed buildings are the most cost effective construction classification type building for conversion of office buildings to affordable housing.

Fire Rating/ Separation Assemblies:

Description of the Issue: Conversions will be a change in use that may have impacts on the fire protection requirements.

Type I: The structure ratings remain the same because it's based on the protection of the structure not occupancy type	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Type II: What would be adjusted or need to be looked at is the fire separation requirement for floors and structural components between units and egress protection, which would have to be performed/ done regardless.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Solution/Recommendation: The Practical Solutions Committee of the Task Force (the Committee) found that fire rating assemblies is a reasonable cost to have budgeted, unless it is a steel building because the fire proofing may need to be redone.

Permissible Use Areas:

Description of the Issue: The International Building Code (IBC) has height and area restrictions based on the use of the building which may dictate how much of an existing building can be converted based on the construction type.

Type I: B use to R2 use		
• Unlimited height	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• Has the advantage of being able to add floors, structure permitting?	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• More likely to be able to take advantage of zoning FAR increase based on construction type vs other uses	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Type II: B use to R2 use		
• Reduction in allowable area per floor from 35,000 to 24,000 sf	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• 5 – 6 floors max assuming sprinkled	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• What do you do with upper floors, if building is allowed to be 6 floors? Opportunity for mixed use?	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• If fire walls are required to compartmentalize a larger building the costs outweigh the benefits. May be better to lose that additional building area.	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Type IV: B use to R2 use		
• Reduction in allowable area per floor from 36,000 to 20,500	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• 5 floors max, assuming building is fully sprinkled	Cost driver?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Solution/Recommendation:

Additional study needs to be conducted on the cost benefit analysis on Type II buildings and the requirement to compartmentalize fire walls.

The Committee does not see a lot of opportunity for the conversion of Type IV buildings. In some cases larger buildings may be repurposed for mixed-use, providing the opportunity to have multiple types of activities in a neighborhood and helping it to keep activated.

Code Mandated Upgrades:

Description of the Issue:

Change of Use leading to higher Risk Category	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Ratio of construction costs to value of a property	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

HVAC/Systems:

Description of the Issue: Different uses have different Heating, cooling and air exchange requirements. The change of use will have an impact of existing systems.

Systems are heavier, therefore stiffening of the structure may be required	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Can the existing boiler/ chiller infrastructure be reused to condition space?	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Incoming utility demand from the street increases.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Solution/Recommendation: This needs to be studied on an individual basis. The systems may need to be replaced.

STRUCTURAL MODIFICATIONS

Existing Conditions/Repairs (perform due diligence or facility condition assessment):

Description of the Issue: Can the structure withstand the change in load (weight) caused by the requirements of the new use?

Structural engineer may need to lead with the analysis of areas of building that can more easily be modified/ penetrated. Could inform design choices.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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Solution/Recommendation: Structural engineer should lead the process early on.

Coordination/ Integration of Utilities:

Description of the Issue: Residential buildings typically have more plumbing, and more intricate electrical and mechanical needs than an office building. Does the configuration of the building structure allow easy conversion or for the developer to meet the required unit count to be successful? What compromises need to be made?

Slab Penetrations (cores)			
• Do major cores need to be grouped?	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

<ul style="list-style-type: none"> • 2 way-slab vs one-way slab 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Slab Openings	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Can new opening be made without new framing? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Can new framing be incorporated with available ceiling heights? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Horizontal Distribution (Wall Openings, Beam Openings)			
<ul style="list-style-type: none"> • In some cases, openings will be prohibited. We will have to go below beam. Do we have the ceiling heights to accommodate for running pipes/ ductwork through corridors? Or how do you zone the systems so that horizontal runs have minimal impact on ceiling heights/ bulkheads.? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Where structural modifications are required, has feasibility/cost been confirmed? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Unit piping and distribution			
<ul style="list-style-type: none"> • Type II and IV pose more coordination challenges based on beams and joists spacing for toilet and bathtub placement 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • For beam or joist structural systems, is there flexibility in unit layout to adjust vertical risers to avoid framing? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Solution/Recommendation: Identify this system requirement and allow flexibility in unit layouts.

Mechanical Equipment Relocated to Roofs:

Description of the Issue:

Reinforcement of Structure (is this necessary?)	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Reinforcement for Screenwalls (is this necessary?)	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Roofing modifications (Warrantee affected?)	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Vertical Transportation/ADA Upgrades:

Description of the Issue: The change in use has different circulation requirements, both by code and for proper function.

Stair Modifications

<ul style="list-style-type: none"> Guardrails may not be compliant and need to be replaced 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> We may need additional stairs based on remoteness requirements, dead end corridors and unit layouts 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Verify non-compliant stairs where larger new structural openings are required/may affect adjacent units. 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Elevator Modifications			
<ul style="list-style-type: none"> Many elevators probably don't meet stretcher requirements. Shafts may need to be enlarged. 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
External Ramping and Site Work Retaining Structures			
<ul style="list-style-type: none"> Identify/monitor impact on stormwater regulations 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Introduction of Internal Ramps or built-up floors for Existing Elevation Differences			
<ul style="list-style-type: none"> Verify structural capacity for added load 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Solution/Recommendation: Use lightweight construction/systems where appropriate.

Stormwater Requirements:

Description of the Issue: As part of its green initiative The District imposes stormwater requirements for conversions of a certain size and value. These projects most likely will fall within those requirements and the cost must be studied.

Introduction of Greenroofs - Upgrades to existing structure for additional weight and mass.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> The Zoning Administrator cannot modify Green Area Ration (GAR) standards, a special exception to allow a lesser GAR score would be required. 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> There may be some DOEE alternatives to meet the score. 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Or do you buy credits from other developers? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Introduction of Bioretention and impact on foundations on existing structures.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Or do you buy credits from other developers? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

<ul style="list-style-type: none"> • If its possible great. If impossible would the city be willing to waive or modify the requirements. 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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Solution/Recommendation: Unless the district provides grant funding this will be born by the developer. Conduct early feasibility study to understand challenges and opportunities.

Expansion:

Description of the Issue: This section pertains to determine if the building volume can be increased.

Reinforcement of structure for increased gravity and lateral load resisting systems.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Has cost/schedule been established? 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Potential for IEBC code mandated upgrades.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Perform early code analysis 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Vertical Expansion	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Penthouse – verify load capacity 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Multi-floor additions - require seismic upgrade 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Lateral expansion	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • New foundations require geotechnical investigation 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Other site utilities/considerations 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Floor Plate Reduction	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Verify stability of revised configuration 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Coordinate performance requirements for new enclosure 	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

RELATED TOPICS

Envelope modifications (performance and/or penetration):

Description of the Issue:

Will we keep existing or reclad to update building appearance or give it more residential appeal	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Will have to update to meet new energy codes (existing cannot remain without some modification)	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Conversion from Parking:

Description of the Issue: Parking in excess of the minimum parking can be converted for other uses.

Storage/ gym	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Opportunity to rent/ sell existing spaces for additional income.	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Existing parking an asset	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Conversion of Roof for Occupancy (See green roof above):

Description of the Issue:

Stair Modifications	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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Loss of class B or C Office Space:

Description of the Issue: Full conversion of these buildings may result in the loss of more affordable rent for small business. (That could drive entrepreneurs outside of the district.)

Put office space on the upper floors of the Type IV construction	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
The upper floors could be used for wraparound services Type IV	Cost driver?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Assessment of Commercial to Residential Conversions in the District of Columbia

DC Office of Planning Analysis, Q2 2020

ACKNOWLEDGEMENTS

This Document was developed by the DC Office of Planning with input from staff at partner agencies including the Office of the Deputy Mayor for Planning and Economic Development and the Department of Housing and Community Development.

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INTRODUCTION

OP assessed the District’s real estate market for conditions that support conversion of commercial properties (including office and hotel)¹ to housing. The analysis builds on 2019 findings from the *Office to Affordable Housing Task Force* to inform implementation of the *Comprehensive Plan* and Mayor Bowser’s *Housing Framework for Equity and Growth*. This is a technical resource intended for policymakers and real estate professionals.

Commercial to residential conversions represent an opportunity to create both market rate and affordable housing units—adding to the District’s needed supply—but for these conversions to make economic sense, they necessitate specific characteristics. Therefore, OP characterized and evaluated the potential of the District’s real estate market to support conversions using several geographic scales (from the region to specific sites) and across three conversion approaches, as follows:

1) Office Conversion: This conversion approach retains an existing office building and reuses its superstructure to create housing through a gut rehab. This is one of the fastest ways to generate new housing, because conversion does not require significant structural construction, excavation, or sheeting and shoring.

2) Site Redevelopment: This conversion approach involves partial or full removal of existing commercial building(s) on a specific site followed by new construction, which—due to market forces—typically uses a greater portion of zoning envelope than the building(s) replaced. This approach can produce multi-family buildings that can yield deeper affordability and/or a larger number of affordable housing units.

3) Hotel Conversion: This conversion approach retains an existing hotel building and reuses it to create housing. This approach is physically the most straightforward as well as time and cost effective since hotels are designed in a manner that readily accommodates residential uses, including through features such as floor plates, window and plumbing configuration, and hallway loading/light penetration. OP has less available data on how specific hotel properties are performing than it does for the preceding two conversion approaches. As a result, analysis of conversion is conducted with higher-level data pertaining to the District and hotel categories nationally.

Objectives of this Analysis

This analysis seeks to inform the District’s housing production potential of commercial to residential conversions by:

- Assessing the current (post-COVID-19) outlook for the District’s commercial (office and hotel) and multi-family housing real estate markets.
- Characterizing the magnitude of opportunity for conversion or redevelopment of existing commercial properties to residential use through an analysis of commercial real estate market

¹ Note: This study did not evaluate adaptive reuse potential for retail properties, which may present additional opportunities for housing due to changing practices and trade patterns in related industries. However, retail uses tend to use deep floor plates, and have window and plumbing configurations that present specific challenges, which would need to be studied as part of an opportunity assessment.

fundamentals across several levels of geography (including the metropolitan region, Comprehensive Plan Planning Areas, and office submarkets).

- Updating the District’s understanding of site-specific characteristics that support adaptive reuse and redevelopment to housing.

Summary of Findings

1) Opportunities for all three approaches to conversion (office, hotel, and site redevelopment) are limited, specifically:

- Potential is highest in the Rock Creek West Planning Area (whose boundaries are roughly similar to those of the Uptown Office Submarket) and to a lesser extent in the Near Northwest and Upper Northeast Planning Areas, where office and hotel demand show indications of decline.
- Buildings most likely to support conversion have specific characteristics, such as high vacancy, lack of renovation for many years, a building design that could support conversion, and/or outdated floor configurations (such as office suites featuring large document production and storage areas). As an example, the Dupont Circle Office Submarket within the Near Northwest Planning Area has a large number of office buildings constructed between 1970 and 1990 that were designed with a paper record-driven workplace in mind. Some buildings in this area have vacancy rates and capitalization cycles that may support conversion.

2) The high volume of unabsorbed new housing supply in the District is likely to significantly reduce construction of new housing stock, including conversions, until the market significantly absorbs excess supply.

- Over the next three years, the District’s Class A multi-family residential market is expected to have excess supply, when office vacancy will likely be highest.
- Conversions will become more likely when residential absorption is one year from matching demand. This horizon enables new unit construction timed to deliver as the market comes back into balance between supply and demand.

3) The District’s office market is oversupplied with space, which is likely to pose a long-term challenge. This is a result of macro and microeconomic factors pre-dating COVID-19 that the public health emergency has exacerbated.

- Prior to the COVID-19 public health emergency, exceptional demand for Trophy Class office space among anchor tenants in the District drove elevated vacancy in the Class A office market. Trophy Class office space is a subset of the Class A office market defined by the highest quality architecture and materials. These spaces are designed with a strong emphasis on collaboration in a digital era where document production and storage are much less important.
- Demand for Trophy Class space generated a wave of new office construction that was not proportional to demand for new office space. As a result, the District’s office market is over supplied with space, which is likely to pose a long-term challenge.
- Oversupply triggered by Trophy Class construction and amplified by COVID-19 is likely to extend throughout the District’s office market reaching every class and submarket.
- Office vacancy will likely be highest and longest lasting in submarkets further from the White House and Capitol Building, which are the two primary epicenters of the District’s office market.

4) Office conversion potential is higher in Class B and Class C office buildings experiencing lower demand.

- Prior to the COVID-19 public health emergency, vacancy in the District's Class B office space generally stayed low, in the 7% to 8% range, reflecting high demand for the limited supply of lower-cost office space. Importantly, vacancy in these buildings began climbing quickly before COVID-19 in the second quarter (Q2) 2019 reaching an elevated rate of 11.8% in Q2 2020.
- This increased vacancy is likely a function of significantly decreased price distinction between Class B and older Class A office space. Higher vacancy in the Class B office market in conjunction with broader oversupply in the Class A office market increases the likelihood of office to residential conversions in submarkets with lower demand. In these submarkets, Class B office building owners may have trouble retaining existing tenants and attracting new tenants, which increases the likelihood of conversion.
- Lower rents and high vacancy in Class B office buildings is likely to erode rents and vacancy in the Class C office market. Due to the high levels of persistent vacancy in the District's office market, Class C office buildings may have the longest path to recovery. As a result, they may have an increased likelihood of converting to residential use.

5) In established office markets, long-term property value is significantly higher for office buildings than residential buildings, which will likely dissuade most property owners from converting their office buildings to residential use.

- In these office buildings, property owners are likely to absorb short-term losses of rental income resulting from vacancy to preserve the higher value of their building in the long-term.
- Conversions to residential use are very difficult to finance if the commercial building requires a significant capital investment to convert to housing that ultimately results in a loss of value due to the change of use. Even if short-term operating income is higher with the new use through a decrease in vacancy, the long-term earning potential of the buildings is diminished in these instances.

6) Oversupply in the District's hotel market that pre-dated COVID-19, combined with the potential for weaker demand post-COVID-19 hotel owners may be more likely to consider conversion.

- The District's hotel market showed indications of oversupply prior to COVID-19 due to inefficiencies caused by increasing segmentation of the hotel industry, which resulted in new hotel construction as part of global brand strategies despite unproven demand.
- The oversupply of hotel rooms reduces profitability for typical hotels and reduces the likelihood that property owners will make further investments in the market.
- Under typical conditions hotel construction would likely slow until supply and demand came back into balance. However, post COVID-19, recovery may be protracted for some parts of the District's hotel markets, which could encourage some owners to seek conversion opportunities.

RECOMMENDATIONS

This report has determined a range of analyses that could be conducted in the future to help identify specific conversion opportunities, as follows:

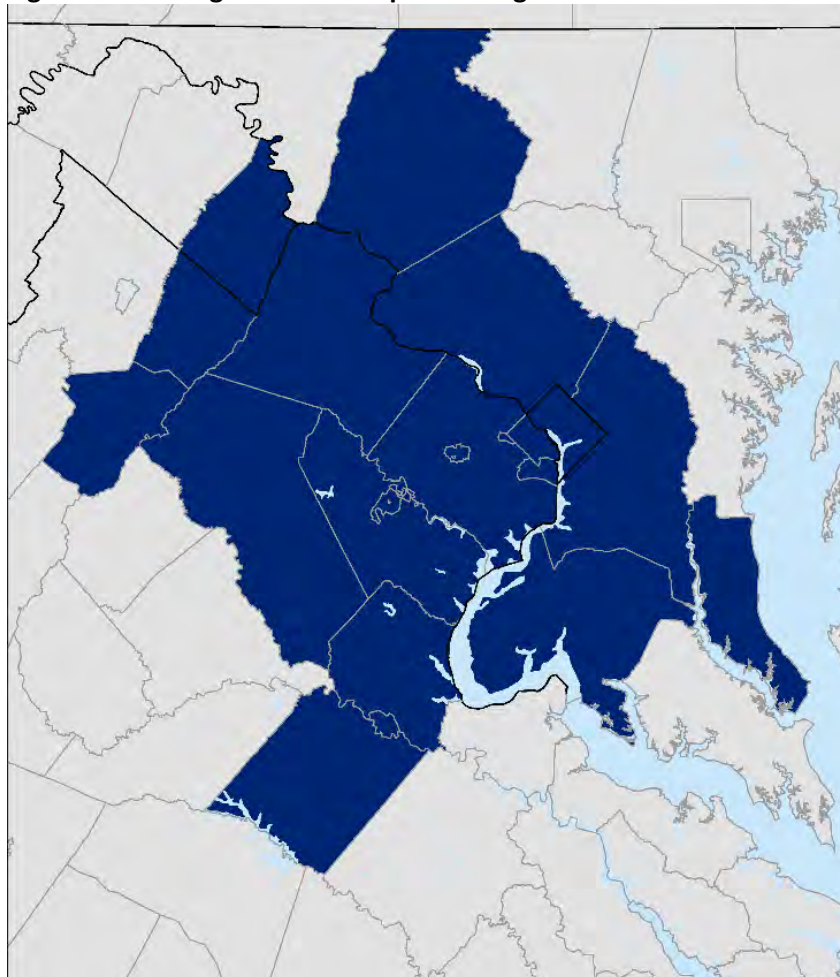
- 1) Examine the Rock Creek West Planning Area in greater detail:** Identify and further examine office and hotel buildings with high vacancy and/or expiring leases in the Rock Creek West Planning Area. This planning area has office and hotel buildings that present some of the strongest opportunities citywide for conversion to housing or redevelopment as housing (See Figure 2 for map of Comprehensive Plan Planning Areas).
- 2) Review specific building typologies in Central Washington and Near Northwest Planning Areas:** Identify and further examine wedge-shaped buildings in the Central Washington and Near Northwest Planning Areas (See Figure 14 for more information about wedge-shaped buildings). In established centrally located office districts, these buildings are the most likely building typology to convert for residential use due to their high percent of façade with street frontage. For this type of building, conversion to residential use may present a cost-effective opportunity due to their revenue potential derived from views, window configuration, and internal layout.
- 3) Identify older hotels that are economically disadvantaged by their location:** Hotels that have not been renovated within the last ten years serving contracting office markets, extended stay guests, group travel, and low-cost segments may be particularly likely to accommodate conversion to residential use.
- 4) Analyze office expansion opportunities in the Near Northwest Planning Area:** In this area, Class A residential has a small price advantage over Class C office, which is most likely to result in conversions to housing if buildings are expanded to offset any rentable building area lost to conversion by adding net new floor area. Analyze the feasibility of adding density or redeveloping adjoining property for residential use in the Near Northwest Planning Area. Analysis should also consider the architectural feasibility of converting to Class A residential standards and financial performance.
- 5) Evaluate leases and market conditions in the Upper Northeast Planning Area:** The planning area hosts several office buildings serving production, distribution and repair uses. In the District, these uses are evolving, which may present residential conversion opportunities. Determine if these office buildings are likely to convert to residential use as stand-alone sites or as part of larger redevelopment initiatives.
- 6) Conduct property-level analysis of internal Office Submarket trends in the West End:** This submarket has been volatile for several years. There may be portions of the submarket that are ready to transition to residential use. Conduct an analysis of building level trends to determine if there are internal patterns to the submarket that may facilitate targeted conversion opportunities.

Overview of Geographic Scales Used in this Analysis

In order to best identify the opportunity for commercial to residential conversion and redevelopment, this analysis uses three distinct analytic geographies:

- 1) **The Metropolitan Region:** Analyzing office market conditions across the metropolitan region provides macroeconomic context to interpret place-based trends.
 - This geography enables analysis of relative residential and office demand.
 - While this study evaluates conditions at the metropolitan region level of geography, this analysis primarily illustrates how the current recession and COVID-19 are likely to impact the District's commercial and residential real estate markets.
 - Citywide trends are similar to regional trends but less valuable for interpreting place-based trends because they do not provide as complete of a picture of macroeconomic supply and demand pressures. Citywide trends were not included in this report to increase clarity by emphasizing the metropolitan region as the base unit of economic analysis.

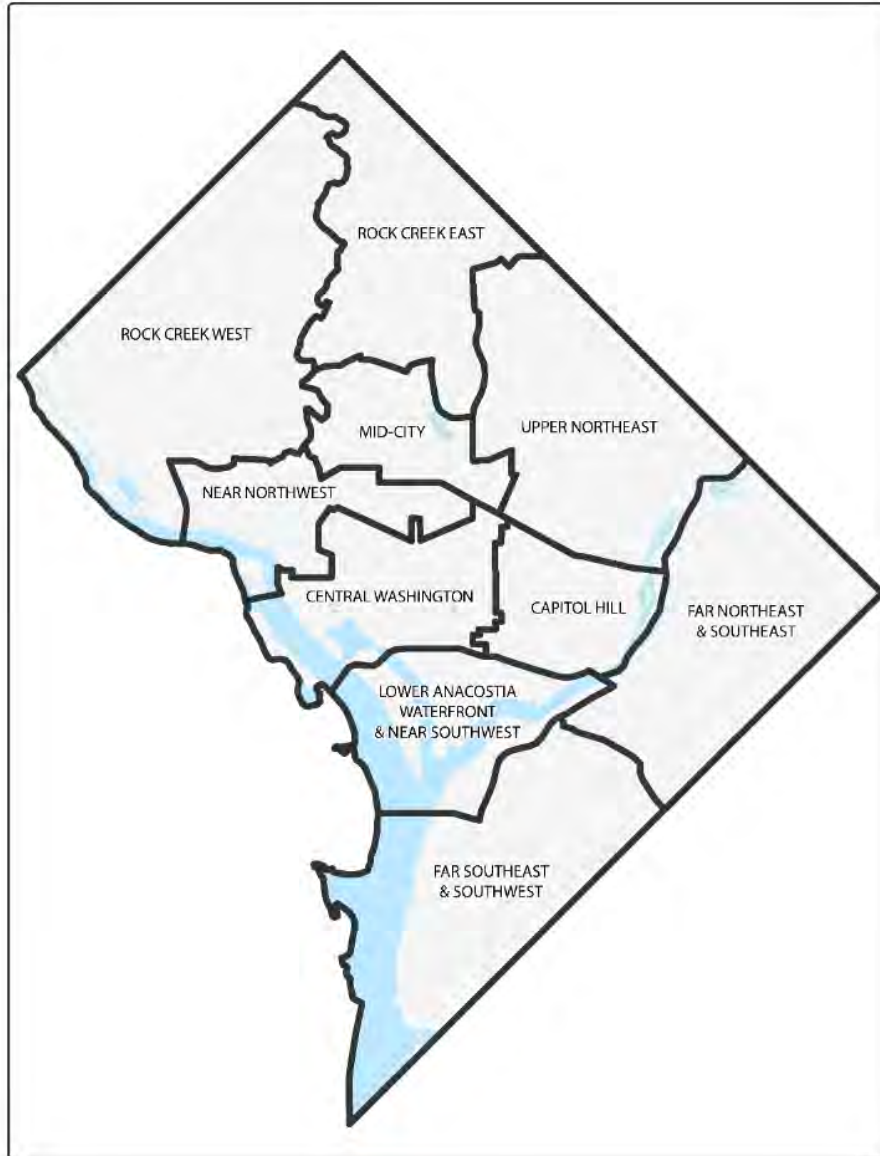
Figure 1. Washington DC Metropolitan Region



Source: DC Office of Planning

- 2) **DC Comprehensive Plan Planning Areas:** Planning Areas provide a useful sub-regional geographic unit for understanding residential and commercial demand with greater resolution.
- An added benefit of Planning Areas is that they are the basis for key District policy including affordable housing production.
 - In this analysis, OP uses the Planning Area geographic level of analysis to link regional and submarket insights and assemble a framework for potential investment that is directly aligned with the District’s geographic housing production targets among other policies.

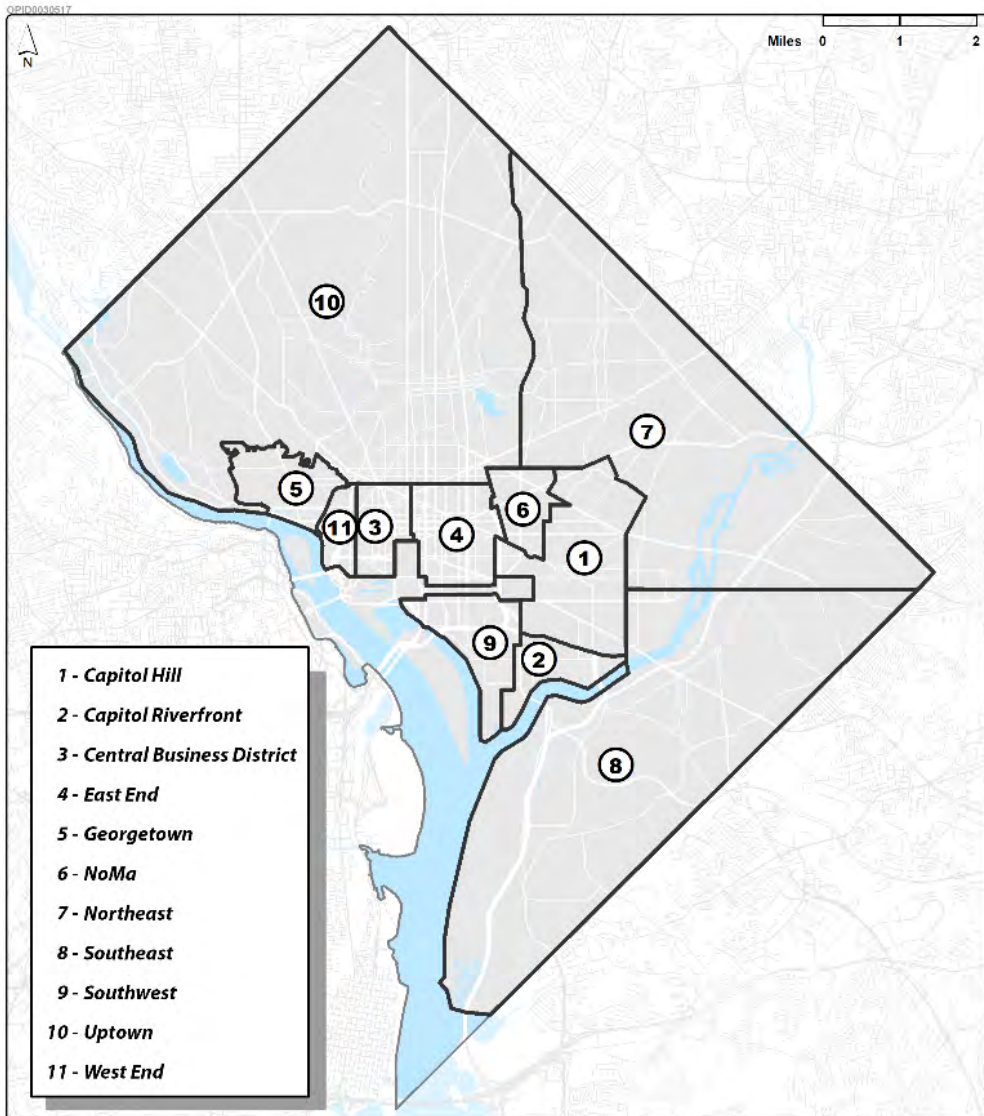
Figure 2. DC Comprehensive Plan Planning Areas



Source: DC Office of Planning

- 3) **Submarkets:** Office submarkets are a specialized geography tailored to place-based conditions in the office market.
- Submarkets are defined by mutually exclusive clusters of common building and tenant types that vary in scale from a from blocks to wards.
 - Analyzing office market fundamentals at the submarket level presents the most efficient way to identify groups of properties that may be candidates for conversion or redevelopment.
 - However, residential markets use a separate set of submarkets (i.e. geographic units), which limits comparison across segments using this geography.

Figure 3. Washington, DC CoStar Office Submarkets



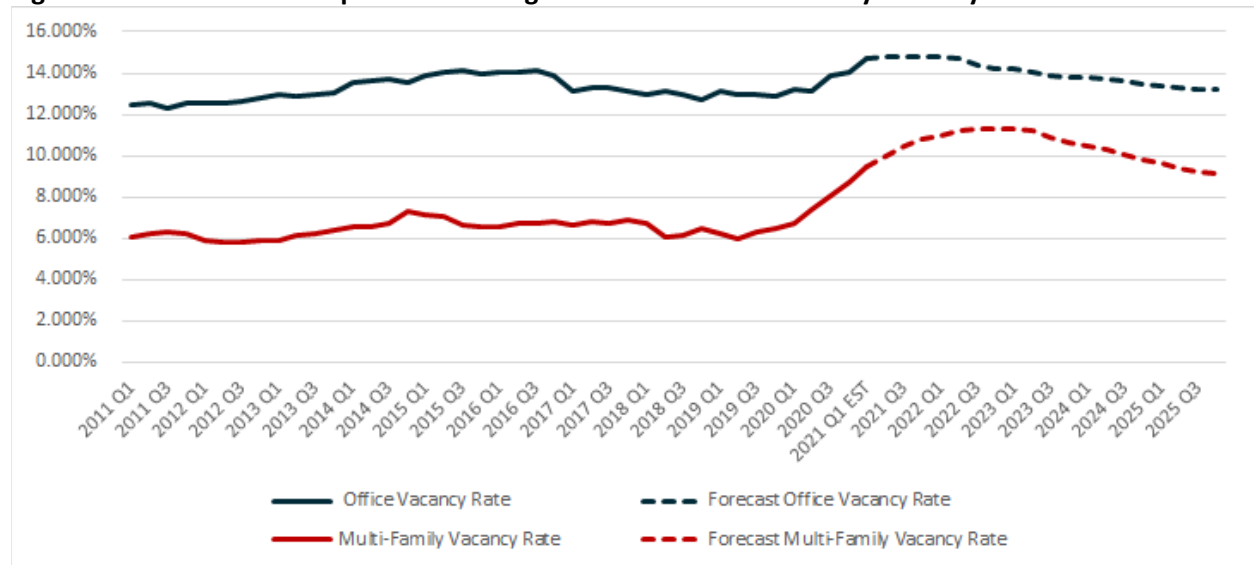
Source: CoStar

REGIONAL MARKET ANALYSIS

This study starts with the regional perspective to provide context for subsequent finer grained analysis. Metropolitan regions are the most reliable geographic unit for economic modelling. The Census Bureau identifies these regions based on county-level commuting patterns, which illuminate each region's housing and labor markets. Comparing regional forecasts for office and multi-family vacancy rates as well as rent growth provides insight for the likelihood of foreseeable commercial to residential conversions.

Figure 4 shows that both office and multi-family vacancy rates have increased significantly in 2020. The chart shows that each property type is likely to require more than five years to reach pre-COVID levels. The simultaneously elevated and prolonged vacancy in each commercial real estate segment indicate that at the regional scale, it is unlikely that widespread conversions of office buildings to residential use would occur. High vacancy rates indicate that short-term demand for multi-family housing can be accommodated by the region's existing supply.

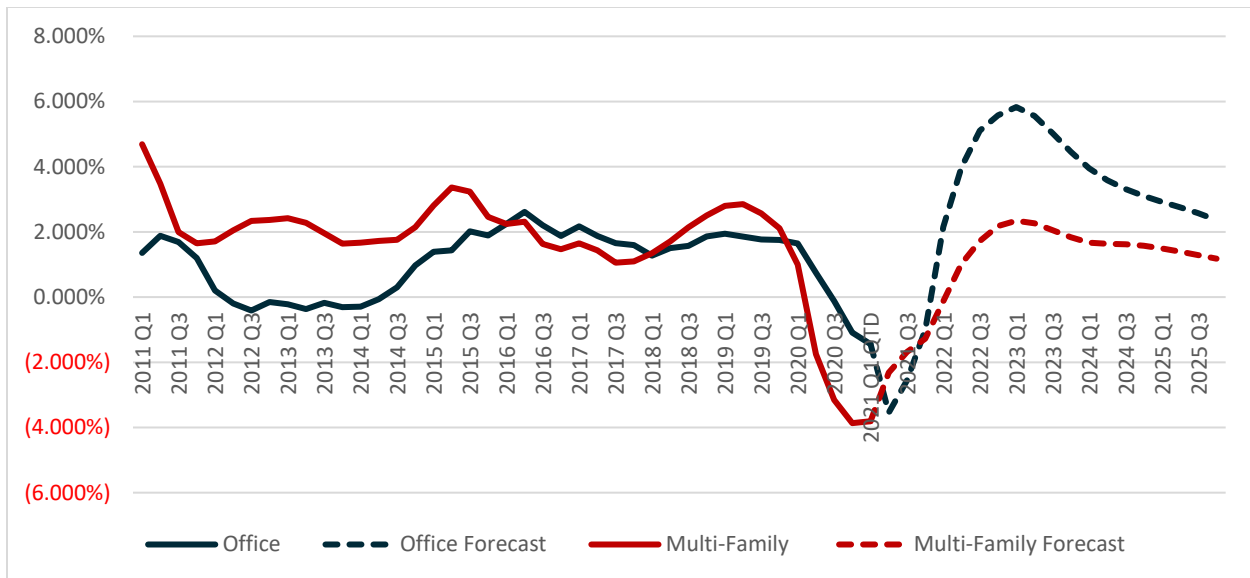
Figure 4. Forecast of Metropolitan Washington Office and Multi-Family Vacancy Rates



Source: CoStar

Below, Figure 5 details annual rent growth in the region's multi-family and office markets. Sustained positive rent growth is a leading indicator for the production of additional apartments and office buildings. The chart below indicates that both office and multi-family segments of the market are likely to resume rent growth by early 2022. This forecast suggests that office building owners are likely to endure elevated short-term vacancy rather than pursue a cost-intensive change to convert their building's use to residential, a less valuable, but potentially more stable use.

Figure 5. Forecast of Metropolitan Washington Office and Multi-Family Rent Growth



Source: CoStar

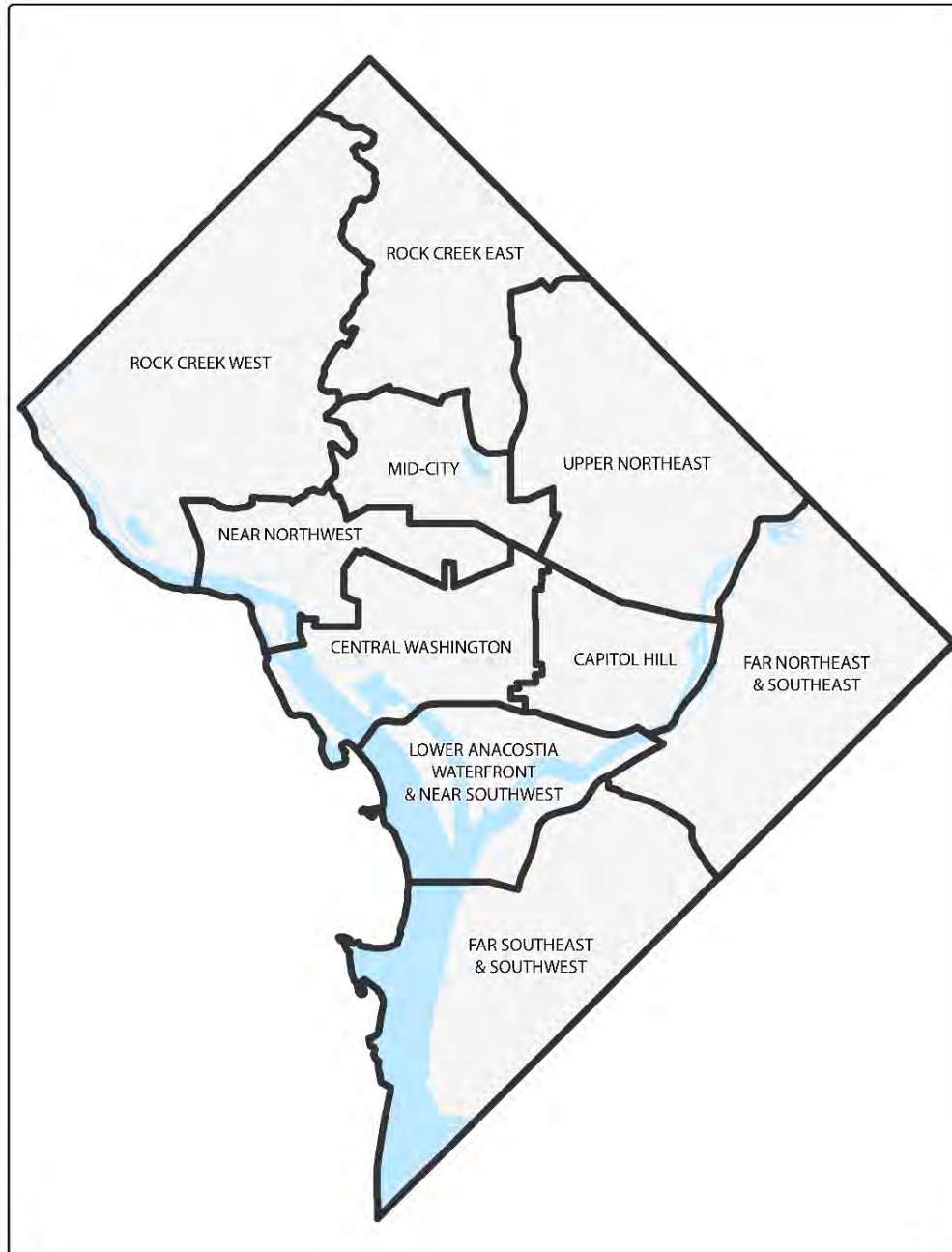
Together, these charts show that in the aggregate, at the regional level, few office buildings are likely to convert to residential use. However, prior to COVID-19 there were indications that some areas and specific buildings were not well positioned for continued use as office space. Subsequent sections of this assessment evaluate planning area and submarket conditions for potential conversions to better understand those opportunities in the District.

PLANNING AREAS: COMPARISON OF RENTS

This section compares housing and office rents across District Comprehensive Plan Planning Areas, in order to identify areas where it could be financially advantageous for a property owner to convert an office property to a residential property. Planning Areas, shown in Figure 6 below, are a uniquely beneficial framework for comparing housing and office values. They reflect geographic and economically distinct areas of the District. These areas are more reflective of on-the-ground distinctions between communities than Wards, while providing large enough areas to facilitate meaningful comparison of office and residential markets. This geography is helpful because localized office and residential market conditions are typically analyzed with smaller, sector-specific submarkets that differ significantly between office and residential markets. The combination of these factors enables Planning Areas to be an effective mid-scale geography to identify opportunities areas for conversion.

OP analyzed the financial likelihood of Planning Areas to support office to residential conversions. This discussion focuses on four of the District’s total 10 Planning Areas—as these four areas have the greatest likelihood of supporting conversions: Rock Creek West, Central Washington, Upper Northeast, and Near Northwest. These Planning Areas were identified by comparing the findings of the office submarket conversion analysis (described in the following section) with a land use analysis. Central Washington was added as a benchmark since it is the District’s primary office market. Importantly, the Central Washington Planning Area contains aging Class C office space also evaluated for financial feasibility of conversion as part of this analysis.

Figure 6: DC Comprehensive Plan Planning Areas



Source: DC Office of Planning

Comparing office and residential rents by building class (see Table 2, below), several key takeaways emerge:

- Class A office is more valuable than Class A residential in every market
- Class A and Class C office buildings are significantly more valuable than Class A residential in Central Washington. This disparity indicates that conversions from office to residential use are unlikely in Central Washington because the premium on office use is too high. Due to limited if any unused FAR in Central Washington, redevelopment is even less likely than conversion in Central Washington.
- Rock Creek West has the clearest price advantage for converting office to residential use. It is the most likely to support conversion or redevelopment due to the significantly higher value for Class A Residential over Class C Office. Additionally, the configuration of typical office sites in the planning area efficiently accommodates residential uses through conversion or redevelopment.
- Conversions may be financially feasible in the Near Northwest Planning Area if an office building can be converted to a residential use without reducing its footprint or by incorporating additions.
- The Upper Northeast Planning Area is undergoing transition and may support conversions as part of larger redevelopment.

Table 2. Comparison of Commercial and Multi-Family Rents by Planning Area

Planning Area	Rock Creek West ²	Near Northwest	Central Washington	Upper Northeast
Rent Difference Per Square Foot Annual Office A to Residential A	\$1.06	\$10.62	\$20.03	N/A
Rent Difference Per Square Foot Office A to Office C	\$5.59	\$12.39	\$13.02	N/A
Rent Difference Per Square Foot Office C to Residential A	(\$4.53)	(\$1.77)	\$7.01	(\$7.45)

Source: CoStar, DC Office of Planning

Figure 7 depicts the spatial distribution of conversion feasibility based on the differences in office and residential rent shown in Table 2. The Rock Creek West Planning Area, followed by the Near Northwest and Upper Northeast Planning Areas, have greater likelihoods of supporting commercial to residential conversions than the District’s other seven Planning Areas (including Central Washington).

² RCW only has 4 Class A office buildings, which limits the reliability of figures for the planning area. Further analysis of the building stock was used to draw conclusions. UNE technically has one Class A office building according to CoStar, however that building is used as a restaurant incubator. This use is atypical and does not represent a true comparison.

Table 3. Market Feasibility of Commercial to Residential Conversion

Conversion Potential	Planning Areas			
	Rock Creek West	Near Northwest	Central Washington	Upper Northeast
Widespread	Likely	Somewhat Likely	Less Likely	Likely
Site Specific	Likely	Somewhat Likely	Less Likely	Likely

Likely
 Somewhat Likely
 Less Likely

Source: OP, analysis of CoStar data

Detailed Analyses for Individual Comprehensive Plan Planning Areas

Rock Creek West

This Planning Area is the most likely to support office to residential conversion and redevelopment due to the relative performance of the office and residential markets, based on analysis of achievable rents by building type and class.

Rock Creek West’s office market is notably weak as discussed in the following section addressing submarket performance indicators. The submarket discussion analyzes the Uptown Office Submarket, which has a similar boundary to the Rock Creek West Planning Area. The weakness is reflected by the small differential in rents between Class A and C office, as well as underperforming fundamentals including occupancy, net absorption, and rent growth, among others.

Rock Creek West’s residential market tells the opposite story. Class A residential buildings are nearly as valuable as Class A office and may be more profitable when the area’s elevated office vacancy rate, which is significant and sustained, is considered. The clearest opportunity for conversion is among Class C office buildings, which are worth significantly less per square foot than Class A residential buildings. This measure is conservative because the average building age for Class A apartment buildings in the Planning Area is older than the building age of typical Class A buildings citywide. Newer buildings in the Planning Area are likely to significantly exceed the current average for the class.

The newest multi-family buildings constructed in the Rock Creek West Planning Area command some of the highest rents per square foot in the District, while older Class A buildings have not achieved the same magnitude of rent growth seen in more dynamic Planning Areas. Specifically, residential buildings constructed in Rock Creek West since 2015 command \$1.22 more per square foot than typical Class A residential in the Planning Area. The new construction rents are a more accurate reflection of the rents an office conversion would seek to achieve than Class A rents in general.

Another important factor contributing to conversion likelihood is the configuration of office buildings. Rock Creek West office buildings frequently utilize lower proportions of their lots than more centrally located office buildings. As a result, the operating income each site can generate is fairly comparable between office and residential, which provides an advantage over more dense parts of the District.

Upper Northeast

This Planning Area may present opportunities for conversion and redevelopment of aging Class C office buildings to residential use.

Class A residential buildings in the Upper Northeast Planning Area earn \$7.45 more per square foot than Class C office, which indicates that the market would support conversions. Notably, the Planning Area does not have any conventionally defined Class A office buildings, indicating that redevelopment or reconstruction of these sites would most likely be residential. These conversions face two barriers: location and demand. Many of the area's office buildings are located in production, distribution, and repair (PDR) areas, which are not well suited to ad hoc redevelopment due to limited supportive facilities and amenities necessary to serve residential uses. Larger redevelopment is challenged by an elevated residential vacancy in the Planning Area due to a significant increase in supply over recent years that has outpaced demand.

Central Washington

Conversion and redevelopment opportunities in this Planning Area are unlikely in the short term, due to the high value of office buildings and decreasing demand for residential.

In Central Washington, Class C office buildings command \$7.01 more per square foot than do Class A residential buildings. Additionally, Class A office buildings command \$13.02 more per square foot than Class C office buildings, and Trophy Class office buildings command \$4.19 over the Class A office average. Within the Planning Area, Class C office vacancy is fairly low, at 6.27%, as a result of increasing competition for lower cost, centrally located office space. Based on previous trends, Class C office buildings are most likely to continue operating in their current configuration or upgrade to Class A in the out years as the District's office market recovers.

Class A office vacancy is a complicating factor in Central Washington. For several years, Class A office buildings have been carrying near record high vacancies due in part to demand for Trophy Class office space by many existing tenants in the Planning Area. Class A office vacancy in Central Washington is compounded by anemic job growth in the area contributing to elevated vacancy across the office market as the supply of office space expanded with new Trophy Class buildings. Looking forward, Class A office vacancy in this Planning Area is likely to reach historic levels and remain high over the next two to three years, which will limit demand for upgrading older office properties.

There may be some site-specific opportunities for office to residential conversion along the periphery of the Central Washington Planning Area, particularly to the north and west. Additionally, several large Class B office buildings mostly clustered in the western part of the Planning Area are at risk of losing major federal tenants. If these buildings lose their anchor tenants, it is possible that property owners may pursue a residential conversion or redevelopment if the outlook for Class A office deteriorates further.

Another important factor is contraction of coworking, which drove new leasing of Class A prior to COVID-19. These businesses are at increased risk of leaving large portions of some buildings vacant during a period of historically low demand. Office buildings that are more than 10 years old that lose co-working tenants that occupied most or all floor area may be more likely to convert to residential use.

Completely vacant Class B and Class C buildings are the most likely portion of the Central Washington building stock to convert to residential use. Still, the strong likelihood that the office market will return necessitates that any residential conversion achieves a high-enough value to mitigate the opportunity cost

of conversion. As a result, buildings best suited for residential use, which can realize exceptional rent premiums, are much more likely to convert. Key factors for conversion include the following: slab-to-slab heights that accommodate Class A residential ceiling heights, a high ratio of the façade with open views to minimize the number of units that require discounted rents, and column spacing that allows for optimal layouts. Notably, demand for micro-units is likely to be very low, which may inhibit conversion of buildings with tighter column spacing.

Another factor limiting the likelihood of conversions in Central Washington is falling demand for apartments in the CBD. Fall 2020 CoStar analysis demonstrates that rents are falling the fastest in centrally located submarkets, which reduces the likelihood of office to residential conversions in Central Washington.

Conversions from hotels are more complex and depend on market segment, location, time since last renovation, capacity of the plumbing system, and the nature of any franchise agreements. However, despite these complicating factors, some hotels may present conversion opportunities in this Planning Area. Further analysis will be needed to better understand the potential for these conversions.

Near Northwest

Conversion and redevelopment opportunities in this Planning Area are limited to buildings in less prime locations and older office buildings.

The Near Northwest Planning Area may be able to support some office to residential conversions. Class A residential commands \$1.77 per square foot more than Class C office. Under stronger office market conditions, Class C office buildings in this area would be most likely to be upgraded to Class A office, which commands \$10.62 per square foot premium. The long-term opportunity cost of converting to a use with lower earning potential will limit the number of property owners that are likely to pursue this option. However, it is possible that less prime office locations may be reused or redeveloped as housing, which may have stronger demand than office in the short and medium-term.

Near Northwest may favor redevelopment of older office buildings facilitated by increased future land use capacity under OP's proposed Future Land Use Map. Similar to Central Washington, this Planning Area may support hotel to residential conversions under certain circumstances where building, financial, and business conditions align.

OFFICE SUBMARKET KEY INDICATORS ANALYSIS

Office Submarkets are a specialized geography used to analyze localized conditions within the regional office market. Submarkets are the smallest summary geography commonly used to analyze commercial real estate conditions and they are uniquely beneficial for developing an understanding of how business fundamentals differ within the District.

This section analyzes key indicators at the submarket level providing a detailed assessment of where the office market's real estate fundamentals are most likely to support conversions. In order to develop a fine-grained understanding of where commercial to residential conversions are most likely to be financially viable, OP conducted an analysis of the District's office submarkets' real estate fundamentals. Table 4, below, summarizes the submarket analysis using the same blue-color coding system as is used in Table 1. A map of the District's office submarkets is depicted by Figure 7.

The submarkets with the strongest conversion potential largely overlap the Planning Areas with the strongest potential. Table 4 shows that the Uptown Submarket (largely in the Rock Creek West Planning Area) has the strongest potential to support office to residential conversions followed by the Dupont Circle (in the Near Northwest Planning Area) and Northeast Submarkets (largely in the Upper Northeast Planning Area). Dupont Circle has more sites with conversion potential and the extent of conversions is likely to be driven by the strength of office demand recovery in more centrally located submarkets. The Northeast Submarket is less likely to support conversions in the next two years because a large portion of residential supply is currently delivering in the area. Conversions in this area may be part of larger site redevelopments.

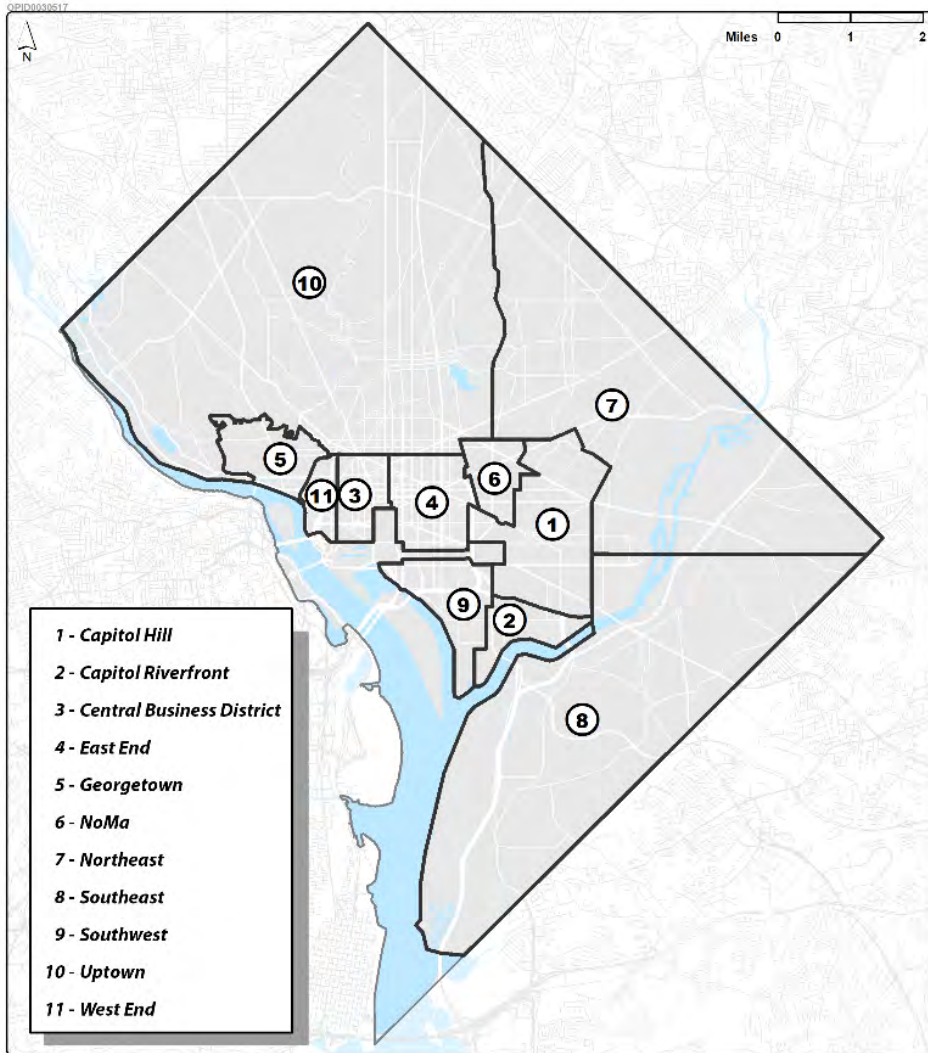
Table 4. Conversion Likelihood by Geographic Scale in Office Submarkets

Conversion Likelihood		Office Submarkets			
		Uptown	Dupont Circle	West End	Northeast
Geographic Scale of Conversion Opportunity	Widespread Opportunity				
	Clusters of Opportunity				
	Site Specific Opportunities				

Most Likely
 Somewhat Likely
 Less Likely

Source: OP analysis, of CoStar data

Figure 7. Washington, DC CoStar Office Submarkets



Source: CoStar

Office Vacancy

Office vacancy rates are a leading performance indicator for commercial real estate. Some vacancy is needed to prevent excessive speculation and to enable a fluid market. Additionally, episodically elevated vacancy rates can accompany markets that are in transition, which is often triggered by the departure of major tenants. However, persistently high vacancy rates at the submarket level indicate a structural change in demand, which may also suggest that the market may be responsive to conversions.

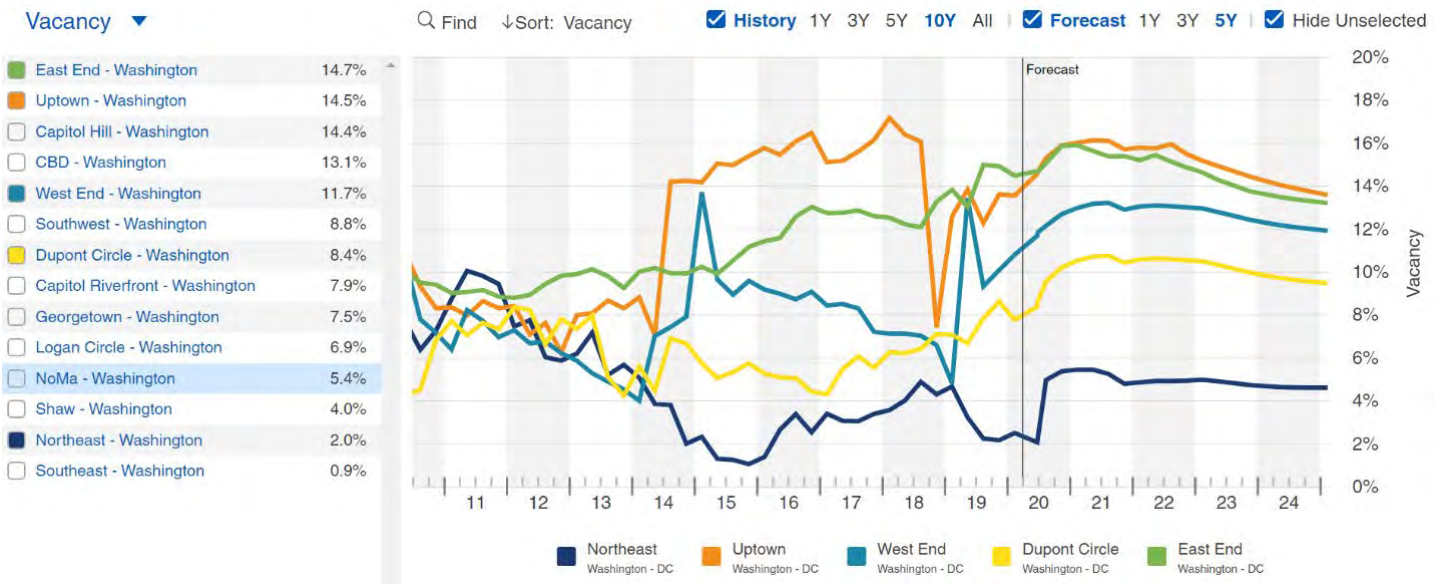
As shown in Figure 8, below, the Uptown Office Submarket has had and is likely to continue experiencing elevated levels of vacancy. This submarket has been a leading location where commercial properties have been converted to residential use.

Conversely, the East End Submarket's vacancy has been driven by new supply of Trophy Class office buildings that are slow to lease middle floors. In the West End Submarket, volatile vacancy rates indicate

the market is undergoing a period of change. Other fundamentals including rent per square foot and absorption indicate that the submarket is currently less likely to support conversion. However, the West End Submarket's volatility indicates that market conditions should be monitored. The Dupont Circle Submarket shows modest but steadily growing vacancy rates. However, they remain relatively low, indicating that vacancy is not likely to be a driving factor for conversion in the Submarket.

Importantly, the Central Business District Submarket, which had an elevated vacancy rate that was 13.1% in Q2 2020 was omitted from the chart below for clarity because the Submarket's other fundamentals including supply growth and rent per square foot indicate that it is unlikely to support widespread conversions.

Figure 8. Office Vacancy by Selected DC Submarkets



Source: CoStar

Office Rent Growth

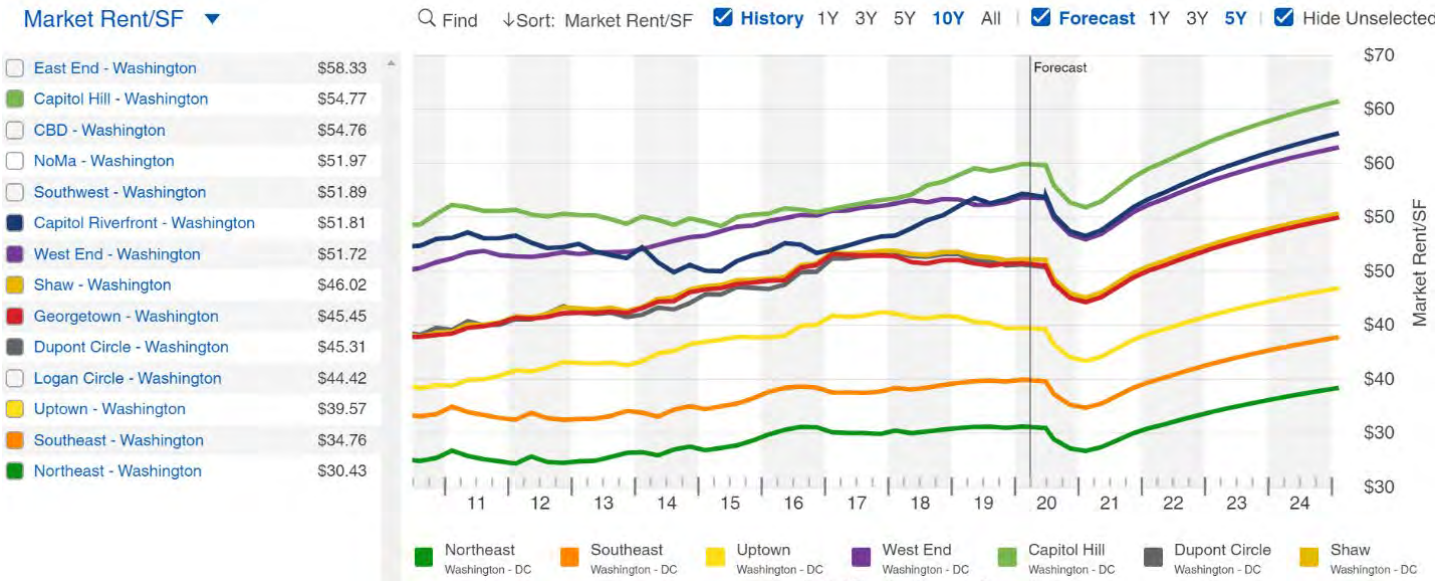
Rent growth is a strong indicator of potential investment profits, which helps identify where future investment is most and least likely. Submarkets with higher rent growth are more likely to attract additional investment, while Submarkets with lower rent growth may have difficulty attracting investment and may be more responsive to conversions.

As of October 2020, office rents in the District have only fallen 1% since March 2020. However, rent concessions and tenant improvement packages continued a near-decade-long climb, reaching the highest combined value on record of \$238 per square foot according to the real estate services firm Savills. Growing concessions and tenant improvement packages diminish rental rates as a key indicator. They may also indicate greater risks of significant declines in office values. As a result, absorption and vacancy rates are increasingly important factors to consider for contextualizing rent data.

Figure 9 shows that the Uptown Submarket experienced the most pronounced decline in office rent growth. While the Georgetown, Shaw, and Dupont Circle Submarkets showed slight declines in rent preceded by steady growth earlier in the decade. The Southeast Submarket and Northeast Submarket

trended up slightly; however, their low market rents indicate weaker demand overall. The Capitol Hill, Capitol Riverfront, and West End Submarkets' office rents have generally performed well, but not outstandingly, in recent years. Rents on this chart reflect base rents and do not include other occupancy expenses associated with typical triple net office leases.

Figure 9. DC Office Submarkets Market Rents Per Square Foot



Source: CoStar

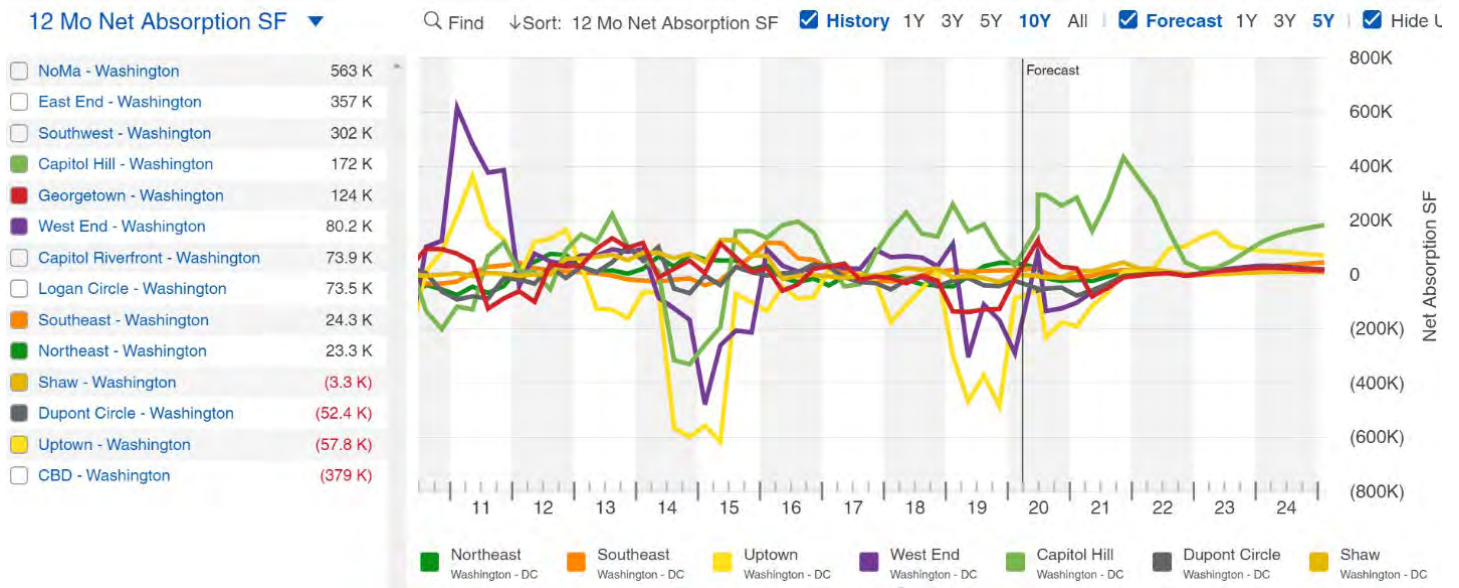
Net Absorption Office

Churn between office tenants coming and going within an office submarket is a constant. Net absorption tracks whether more office space is being leased or vacated during each quarter. Episodic changes indicate trends, such as large tenants moving to other submarkets or lease-up of new buildings, which introduce new capacity. Generally, steady or growing net absorption indicates a healthy submarket and persistently negative net absorption indicates weakening demand for the submarket.

Figure 10 shows that four submarkets had negative net office absorption over the past year. The Uptown Submarket had the most significant negative absorption; notably, the Submarket is not expected to experience positive absorption in the foreseeable future. The West End Submarket stands out for its volatility. A period of high net absorption a decade ago followed by two periods of steep negative net absorption in more recent years indicate a market in transition. Prior to COVID-19, volatility in the West End Submarket reflected both the demand for and increasing supply of top-quality, centrally located office space.

Growth in the Northeast Submarket partially reflects its large geographic area along with accelerating real estate development. In this Submarket, office space distributed across a significant number of smaller properties has been a factor in past performance and several larger projects, such as Senator Square, near the Minnesota Benning Metro Station, are part of the forecast for future absorption.

Figure 10. Office Submarket 12-Month Net Absorption



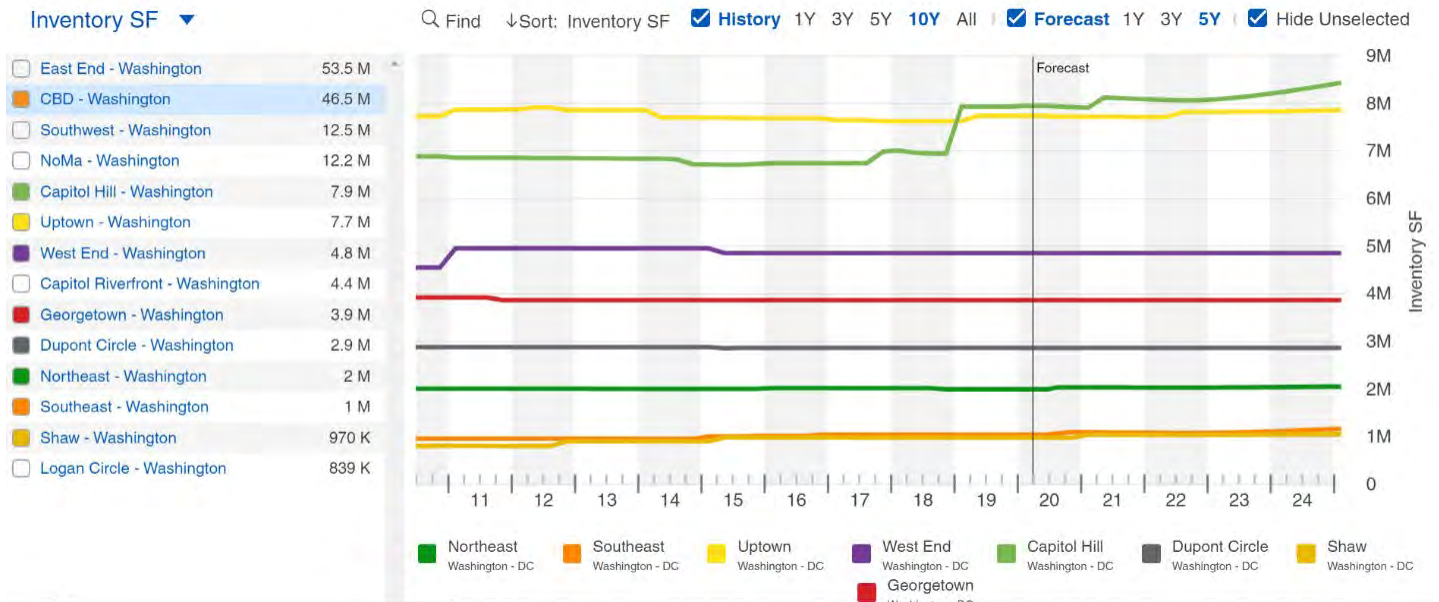
Source: CoStar

Office Submarket Inventory

Inventory is the amount of office space available within a submarket. Inventory growth reflects delivery of new buildings, while contraction indicates demolition or use change. Many of the District’s submarkets have little, if any, open land. In these areas, new construction typically replaces existing structures with larger or more dense structures, which reflect smaller changes to inventory. However, in emerging submarkets, such as Capitol Riverfront and NoMA, changes in use have facilitated millions of square feet of net new office space. Due to this structural difference, emerging markets were withheld from the chart below. Additionally, the scale was adjusted to omit the CBD Submarket, which has more than four times as much office space as the next-largest established submarket. Focusing on established office submarkets outside the CBD Submarket enables a smaller y-axis scale that shows key differences between these submarkets.

Figure 11 shows that among submarkets outside of the CBD Submarket, the Capitol Hill and Uptown Submarkets have the largest inventory. The biggest takeaway is that the Uptown Submarket’s large inventory combined with weakening fundamentals presents some of the strongest opportunities for office to residential conversion.

Figure 11. Office Submarket Inventory



Source: CoStar

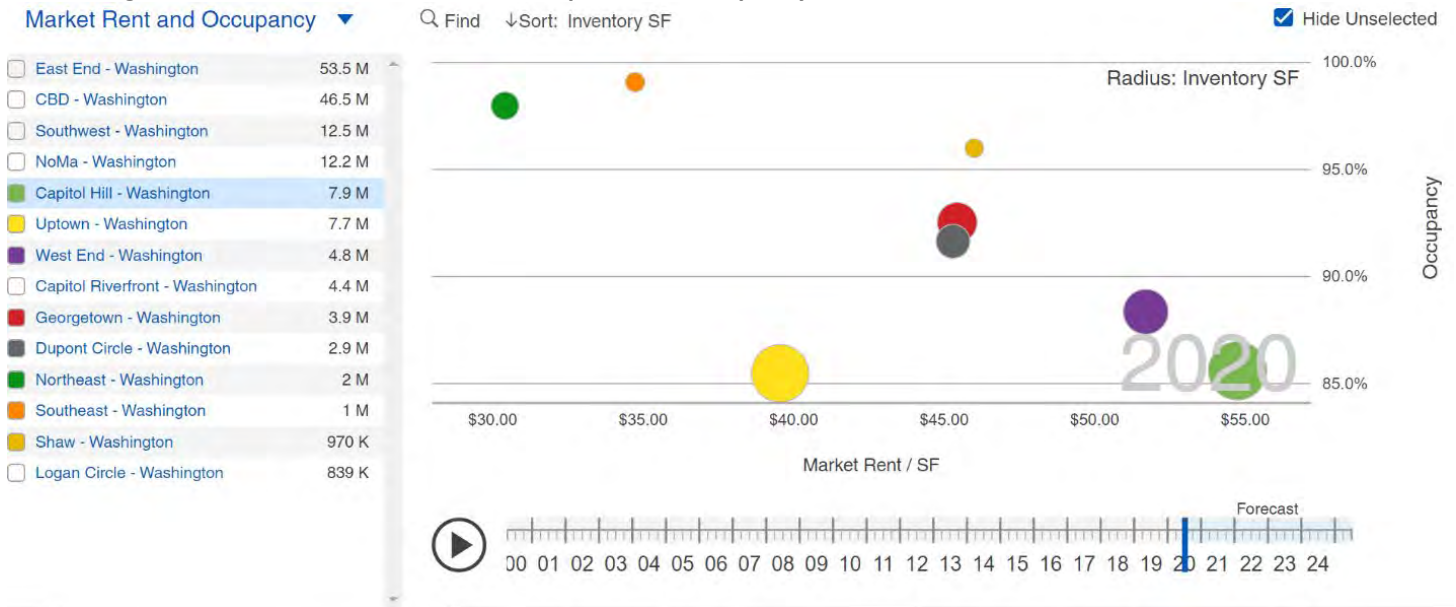
Rent vs. Occupancy

The key performance indicators of office market performance are often interdependent. One particularly useful pair of indicators is rent and occupancy, which work together to generate a building’s operating income. In some cases, a submarket may have high occupancy at the expense of relatively low rents (see for example, the Northeast Submarket shown as the dark green dot in upper left-hand corner of Figure 12 below). This combination of factors indicates low demand relative to other submarkets. One reason these submarkets have such high occupancy is that long-term vacant office space, which is typically obsolete in configuration and/or finish, is frequently taken off the market, deflating total inventory and artificially inflating occupancy. Occupancy above 95% indicates a market that may have too little inventory, excessively low prices, or artificially small inventory.

The healthiest submarkets will establish rents that generate vacancy rates between 8% and 12%. Figure 12 shows how the Georgetown and Dupont Circle Submarkets are in this range. These are some of the District’s best-established submarkets outside of the CBD. However, it is important to note that other market fundamentals in these submarkets, such as rent growth, indicate that they may be relatively less attractive prospects for future investment. The value of office buildings in these submarkets already reflects the combination of high-rents and occupancy, meaning that a future investor may have difficulty earning a large enough return to outweigh other investment opportunities.

Figure 12 illustrates how both Uptown and Capitol Hill are relatively large submarkets, at 7.7 and 7.9 million square feet, respectively. Each of these submarkets has a high vacancy rate, approaching 15%. A key difference between these submarkets is Capitol Hill’s \$55 per square foot market rent is near the District’s average of \$53 per square foot, while the Uptown Submarket generates less than \$40 per square foot. Notably, the Capitol Hill Submarket has also experienced growing inventory, which may be applying downward pressure on occupancy. Conversely, the combination of high vacancy, low rents, and declining absorption indicate that the Uptown Submarket may be a strong candidate for office to residential conversion.

Figure 12. Office Submarket Rent Compared to Occupancy



Source: CoStar

Rent Growth vs. Occupancy Growth

The combination of rent and occupancy growth are good indicators of where real estate investors are likely to continue investing or make new investments. Submarkets with consistently declining rent and occupancy are most likely to support use changes. The chart below reflects Q2 2020 conditions among the District’s established office submarkets.

Based on Figure 13, below, the Uptown and Dupont Circle Submarkets demonstrate particularly weak fundamentals including rents falling at a rate between 1% and 1.5% per year along with occupancy growth that is falling by as much as 2% per year. The Capitol Hill and West End Submarkets each have stronger fundamentals, including annual rent growth of 0.5% to 1% per year, and more than 2% occupancy growth per year, indicating these submarkets are less likely to support conversions. Sustained rent growth below 2% a year indicates that a submarket is losing value because inflation is likely to outstrip the value or rent growth.

Figure 13. Office Market Rent Growth Compared to Occupancy Growth



Source: CoStar

DESIGN AND ARCHITECTURE CONSIDERATIONS

Design and Architecture considerations are essential to the conversion potential of a specific commercial building or site. OP has identified the following design considerations for commercial to residential conversions, as informed by a review of prior architectural analysis from the Golden Triangle BID and the Downtown BID, along with site-specific assessments.

Building construction and configuration are among the leading factors that support or inhibit a commercial to residential conversion. Research from the Downtown and Golden Triangle BIDs indicates that many but not all of the District’s commercial building typologies can be cost effectively converted to residential use. Their study identified seven office building typologies that are present in Downtown and found that three of those have high potential to support conversions: wedge, cube, and light slab (light slab is a subset of slab style office buildings depicted in Figure 14. The distinction between slab and light slab construction is the thickness of the horizontal concrete slabs separating floors in reinforced concrete buildings.)

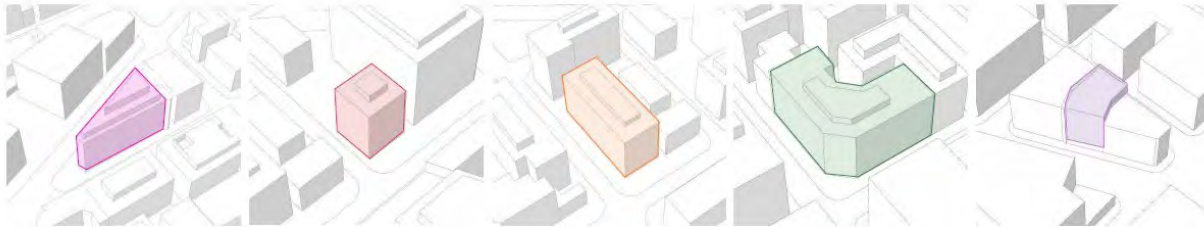
Among these three building typologies, wedge buildings have the strongest conversion potential because they typically have floor plates with depths comparable to residential buildings and afford the most frontage with unobstructed views. Cube buildings, which are typically located on the corner of a block, also present important opportunities for conversion. However, the strongest candidates have at least three building faces that afford predominately unobstructed views. Light slab buildings present a different type of opportunity, their construction facilitates more cost-effective floor plate modification to enable light access. However, these buildings may be less able to support structural additions due to lower load capacity compared to other types of construction.

Column and slab spacing are also important considerations. In reinforced concrete buildings, slabs form the horizontal structure between floors and columns form the vertical structure within floors. Slab spacing will likely need to be sufficient to meet Class A residential standards requiring 9.5 feet clear. These heights

will enable the converted building to achieve market rate rents that make conversion financially viable. Column spacing is another important consideration. Column spacing narrower than a typical one-bedroom apartment is likely to produce inefficient layouts with units that have limited access to daylight. Preliminary research indicates that column spacing under 20 feet is likely to be challenging for conversions; however, further study on column spacing would be beneficial for developing a greater understanding of this potential impediment.

Figure 14. Central Washington Building Typologies

WEDGE	CUBE	SLAB	EL	BLINDER
Triangular plates, resulting from Washington's urban plan.	Square floor plates, either corner or mid-block, open on four sides.	Wide lease bay, greater than 40', exceeding residential planning depths, resistant to conversion.	Narrow lease bay, less than 40', corresponding to residential planning depths.	Impact plates with limited/no opening on side walls, resistant to conversion.



Source: Gensler analysis of design parameters for urban office to residential conversion

Structural capacity to support vertical additions is also important. Most conversions of office buildings to residential use remove building floor area and/or generate higher than typical rates of unleaseable building area. The ability for a building to support a vertical addition both structurally and in terms of its maximum allowable zoning envelope (which is itself guided by Comprehensive Plan future land use policy), can be a deciding factor. Additions can offset losses of leasable building area from the original office building configuration. As a result, residential buildings may be more feasible by reducing the financial gap caused by modifying the structures of office building to support residential use.

Hotels present several additional considerations. The capacity of plumbing stacks can be a key factor. Apartment buildings with dishwashers and washing machines generate much higher volumes of wastewater than typical hotel rooms. This difference can require new plumbing stacks for conversion, which reduces cost efficacy significantly. Banquet and restaurant facilities can be challenging to cost effectively incorporate in conversions. Buildings with these elements have been most effectively converted to luxury senior housing, which provides onsite programming and services. Extended stay hotels have been found to provide some of the best conversion opportunities because their unit dimensions, plumbing, and mechanical equipment is most similar to the needs of apartment buildings.

Analysis of Building Quality and Its Impact on Conversion

Building quality is one of the leading factors in assessing the likelihood of commercial to residential conversions. This analysis uses data from the real estate information firm CoStar. CoStar uses a proprietary building quality rating system in addition to the conventional “Class A / B / C” system. The proprietary system ranks properties on a “Five Star” scale, with “1-Star” designating the lowest quality, and “5-Star” the highest. This star system is particularly helpful for analyzing the District’s Class A properties that

segment into two categories: “trophy class” and “commodity grade.” The 4-Star rating is used for properties that straddle the conventional break between Class A and B properties. This is helpful because these buildings historically perform well in the District, serving robust demand from numerous government and nonprofit tenants. Similarly, 3-Star buildings straddle the divide between class B and C, with more emphasis on conventionally defined Class B properties. And lastly, 1-Star and 2-Star buildings represent the lowest quality, including obsolete buildings. Obsolete buildings do not conform to current market standards for a variety of reasons including level of amenity, state of repair, and structural configuration, such as ceiling heights.

Prior to COVID-19, 4-Star and 5-Star office buildings had been posting elevated vacancy due to high demand for top-floor space in trophy class buildings, declining space per employee, and limited demand for additional office space among the District’s leading industries. These factors drove higher vacancy rates because they generated demand for new 5-Star Trophy Class office buildings that cannibalized demand for existing 4-Star Class A buildings. Conversely, vacancy had been relatively low in 3-Star buildings due to high demand for affordably priced, centrally located office space.

Under the most likely economic forecast scenario, office vacancy in buildings ranked as 4- and 5-Star is likely to remain high, while vacancy in buildings ranked as 3-Star is likely to increase significantly. The highest quality office buildings are not likely candidates for office to residential conversion, because their long-term revenue potential is much greater as an office building. Notably, vacancy in 3-Star properties is expected to continue growing for nearly a year after vacancy rates drop in the top-quality buildings. These 3-Star buildings are the most likely to undergo office to residential conversions because they are most likely to require recapitalization, which may be best supported by a shift to residential use.

Breaking down the residential market by building quality shows the inverse: top quality buildings are expected to see a steep and pronounced surge in vacancy due to large amounts of new supply being delivered during a period of reduced demand. Lower quality residential buildings are likely to see little if any change due to potential increased demand from tenants trading down in order to achieve lower housing costs.

OP has less access to information about hotel building quality. However, the limited available CoStar data indicates that centrally located hotels are typically rated as high-quality buildings that are less likely to convert for residential use. While a small number of hotels outside of Central Washington are more likely to include properties with lower building quality that may be more conducive to conversion.

APPENDIX A: METHODOLOGY

This analysis was conducted in the following three steps:

- 1) Regional Market Analysis
- 2) Planning Area Analysis
- 3) Submarket Analysis

Findings are derived from these steps to then identify specific properties and characterize varying levels of potential for office to housing conversion or redevelopment.

Regional Market Analysis

Supply and demand are analyzed for the region's office and residential markets in order to provide the context necessary to assess place-based opportunities. Supply and demand are assessed using CoStar market data on quarterly vacancy, quarterly absorption, and quarterly supply.

The COVID-19 public health emergency is injecting an unprecedented level of uncertainty into the global economic outlook. This analysis compares office and multi-family vacancy rates and rent growth trends at the metropolitan level. It evaluates macro-economic conditions that may support or resist conversions of office buildings to residential use. Conversions are more likely if office vacancy is forecasted to remain elevated while multi-family vacancy is forecast to be low.

Rent growth is a key indicator for new apartment and office construction, respectively. It indicates that supply is tight and demand is growing, which means that an investor can make a reasonable profit developing new buildings. Forecasts of rent growth help identify the likelihood that an office building owner may agree that their asset has declined in value and therefore may be a better fit for a different, type of use, such as residential.

Data for this analysis are drawn from *CoStar*, a commercial real estate information service. The analysis also uses a scenario that addresses downside risks to commercial real estate based on data provided by *Oxford Economics*. The scenario was selected due to the impact of widespread and largely successful remote work in the region's Business and Professional Service Sector as well as the Government Sector. The success of these programs and employee preference indicate that though the economy as a whole is likely to recover more quickly, the office and multi-family portions of the real estate market are likely to recover more slowly.

Planning Area Analysis

Conversion potential is also analyzed using by the geographies defined in the District's *DC Comprehensive Plan* as "Planning Areas" (see Figure 2). Boundaries of these Planning Areas remain constant, unlike Census Tracts, Wards and other boundaries that are adjusted over time. Using Planning Areas helps align the conversion analysis with the Mayor's October 2019 *Housing Equity Report*, which established housing production targets by Planning Area, providing the ability to directly compare the conversion feasibility (examined in this report) to the housing production goals contained in the *Housing Equity Report*.

This analysis focuses on four of the District's 10 Planning Areas: Rock Creek West, Near Northwest, Central Washington, and Upper Northeast. These were identified based the findings of this report's office submarket analysis and outputs from OP's *Development Capacity Model* that used four primary screening criteria: number of parcels that (1) have significant development capacity on or directly adjacent to parcels

with significant development capacity; (2) contain office buildings built between 1950 and 1990; (3) properties are not historic landmarks; (4) properties are privately owned. These were established in prior development capacity research conducted by OP. (Note: historic buildings can and do convert from commercial to residential use. However, feasibility must be assessed on a site by site basis, which is beyond the scope of this study.)

Within each Planning Area, rents per square foot per year were assessed for Class A and C office buildings as well as Class A residential buildings. This analysis approximates the average operating income achieved by Class A office buildings in the District to set a benchmark for what a renovated Class C office building could achieve. Similarly, the average value per square foot for Class A residential buildings in the District is used as the benchmark for the value per square foot converting an existing office use could achieve.

Class B office buildings are not included in the analysis. Historical data indicate they generally perform well due to high demand for quality lower cost office space. Demand is high in part because the stock of Class B buildings has been contracting due to more than a decade of upgrades and redevelopment of these buildings to Class A standards. A strong majority of Class B office buildings are located in and near downtown submarkets that have sustained demand for decades. The long-term value of office buildings in these densely developed parts of the District is likely to outweigh shorter-term opportunities for residential buildings, which would have difficulty fully utilizing large floor plate buildings with limited street frontage. Where appropriate, future studies may investigate the conversion potential for these buildings in greater detail.

Submarket Analysis

The business fundamentals of the office market are analyzed at the submarket level. Submarket data are drawn from CoStar and consist of delineated mutually exclusive geographic areas that represent distinctive areas within the broader office market. Office submarkets differ from residential submarkets. A map of DC's CoStar office submarkets is provided in Figure 5.

Business fundamentals including vacancy, absorption, and rent growth are assessed for each office submarket by comparing to previous years and assessing forecasts of each metric over the next five years.

Office submarkets are especially well suited to identifying place-based opportunities in and near Downtown, whereas other geographies, such Planning Areas, tend to be less sensitive to market variations. In Central Washington, office submarkets are much finer grained than Planning Areas, while in the areas beyond the Central Washington submarket grow exponentially, becoming larger than Planning Areas in the parts of the District farthest from downtown.

APPENDIX B: OFFICE-TO-AFFORDABLE HOUSING TASK FORCE LIST OF CONVERSIONS 2002 TO 2018

Figure 2. District of Columbia Office-to-Housing Conversions, 2002-2018

Year	Building/Building Address	New Use	Developer	Office				Hotel		Other
				Office SF	SF	Units	Afford	SF	Rooms	SF
Completed										
2002	806 15th St NW -- Sofitel Hotel	Hotel	Sofitel	54,000	154,000	-	-	154,000	237	-
2008	733 15th St NW --The Woodward	Residential -- Apartments	SJG Properties	164,000	164,000	189	-	-	-	-
2009	1255 25th St -- WestEnd25	Residential -- Apartments	Vornado	273,000	273,000	283	-	-	-	-
2013	1151 Fourth St SW -- The Lex	Residential -- Apartments	Urban Atlantic/JBG	198,000	198,000	266	-	-	-	-
2014	1150 Fourth St SW -- The Leo	Residential -- Apartments	Urban Atlantic/JBG	200,000	200,000	264	-	-	-	-
2015	1522 K St NW -- Hyatt Place	Hotel	Songy Highroads	80,000	-	-	-	80,000	164	-
2016	1100 Penn Ave NW -- Old Post Office	Hotel	Trump Hotels International	375,000	-	-	-	375,000	270	-
2017	2501 M St NW	Residential -- Condos	Tasea Invsmnt Co & Auger	98,000	98,000	59	-	-	-	-
2017	300 D St SW	Museum of the Bible	Museum of the Bible	391,000	-	-	-	-	-	391,000
2017	1025 15th St NW -- Architect Hotel	Hotel	Honey Bee Hospitality	29,000	-	-	-	29,000	50	-
2018	1255 22nd St NW -- Legacy West End	Residential -- Apartments	1255 22nd Street Lap	116,000	178,000	197	15	-	-	-
2018	4000 Brandywine St NW -- Frequency	Residential -- Apartments	Urban Investment Properties	50,000	50,000	100	8	-	-	-
2018	1108 16th St NW -- The Adele	Residential -- Condos	Red Multifamily Dev/Ellisdale	19,000	19,000	13	-	-	-	-
2019	4000 Connecticut Ave NW	School PK--12th Grade	Whittle School & Studios	650,000	-	-	-	-	-	650,000
				2,697,000	1,334,000	1,371	23	638,000	721	1,041,000
Under Construction										
	2100 2nd St SW -- Riverpoint	Residential -- Apartments	Akridge, Western	609,265	500,000	450	36	-	-	-
	1900 Half St SW	Residential -- Apartments	Douglas Development	478,000	481,000	462	37	-	-	15,000
	3900 Wisconsin Ave NW	Mixed Use	Roadside	228,000	-	-	-	148,000	145	80,000
	2225 Georgia Ave NW	Residential -- Apartments	Howard University	123,000	123,000	176	176	-	-	-
				1,438,265	1,104,000	1,088	249	148,000	145	95,000
Planned										
	4620 Wisconsin Ave NW	Residential -- Apartments	Urban Investment Properties	130,000	130,000	146	12	-	-	-
	515 22nd St NW	Residential -- Apartments	Insight	102,000	102,000	153	13	-	-	-
	3939 Wisconsin Ave NW	School	Sidwell Friends	40,000	-	-	-	-	-	40,000
	4250 Connecticut Ave NW	School	UDC (buying from Bernstein)	213,000	-	-	-	-	-	213,000
	4000 Wisconsin Ave NW	Residential -- Apartments	Donohoe Development	492,000	716,000	716	70	-	-	-
	5151 Wisconsin Ave NW	Residential -- Apartments	Donohoe Development	105,000	180,000	280	22	-	-	17,000
	1724 Kalorama Rd NW	Add'l residential units	Jubilee Housing	27,000	27,000	47	4	-	-	-
				1,109,000	1,155,000	1,342	121	-	-	270,000
			Total Completed, Under Construction and Planned	5,244,265	3,593,000	3,801	393	786,000	866	1,406,000

Source: DowntownDC BID