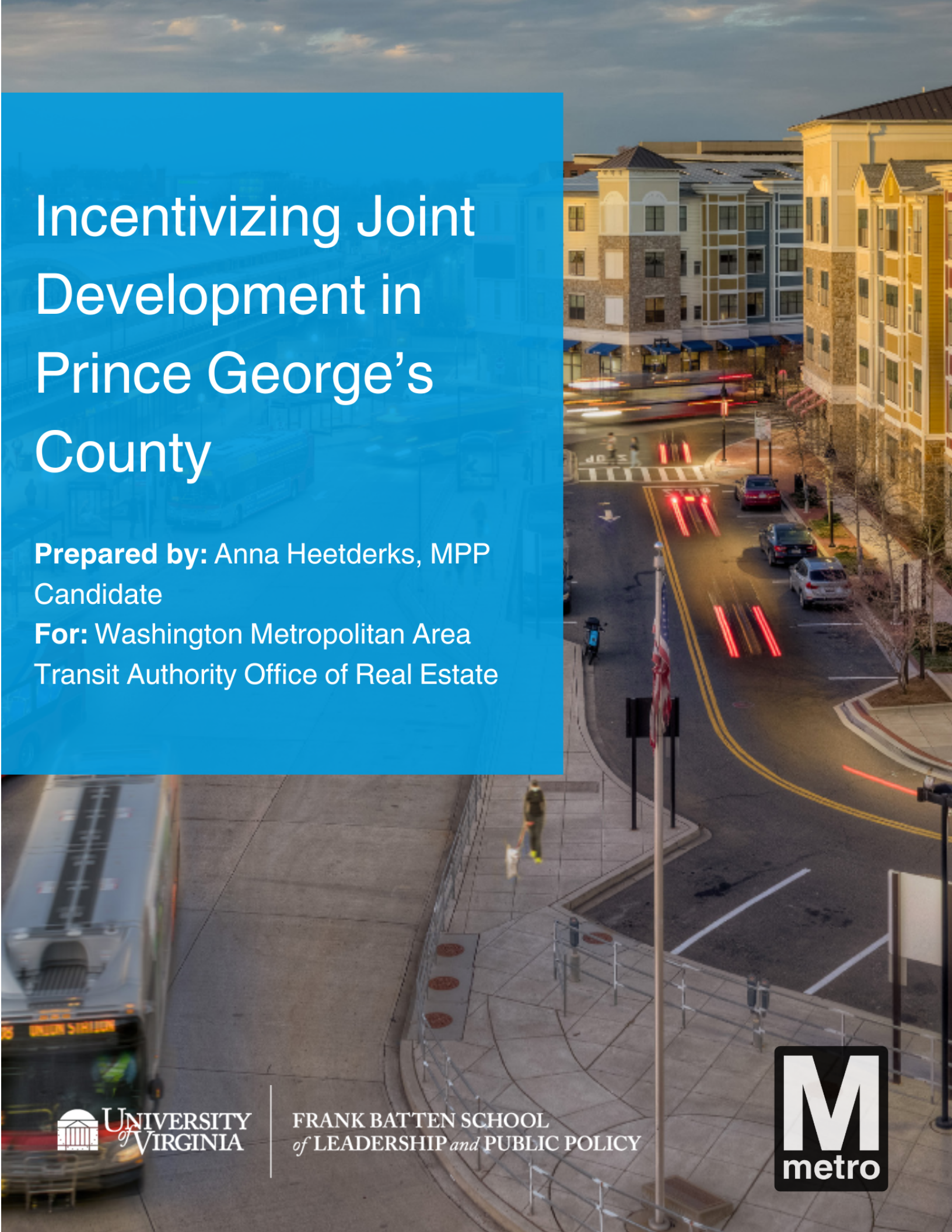

Incentivizing Joint Development in Prince George's County

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University of Virginia | Frank Batten School of Leadership and Public Policy

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Executive Summary

This report asses a range of options for more effectively incentivizing joint development in Prince George's County's Regional and Local Transit Centers that the WMATA Real Estate Office can take to the County. In their current state, County policies do not effectively target growth toward these priority areas, resulting in sprawl and inefficient use of land. This lack of joint development impedes WMATA's joint development goals and weakens its long-term revenue streams.

The report uses the criteria of effectiveness, cost, cost-effectiveness, affordable housing amenability, and complexity to evaluate three policy alternatives:

1. Expand Use of Tax Increment Financing to all Transit Priority Areas
2. Implement Form-Based Codes to Streamline Project Approval
3. Establish Points-Based Zoning to Promote TOD-Specific Outcomes

The results of the analysis suggest that establishing a points-based zoning system (Alternative 3) is the most promising path forward. While the other alternatives address only one of the primary barriers to development (financial or regulatory), Alternative 3 addresses both, through flexible benefits targeted at promoting dense, mixed-use, publicly beneficial development. While it is not the cheapest option, it is the most effective and performs well on all criteria.

To implement the points-based system, the report recommends that WMATA design a sample benefits structure and list of desired joint development features that it can present to Prince George's County. WMATA should also reach out to members of the County Council who are most amenable to joint development to gauge and cultivate support for the policy.

Mandatory Disclaimer and Honor Pledge

Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

Honor Pledge

“On my honor, I pledge that I have neither given nor received help on this assignment.”

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Introduction

Problem statement

The Washington Metropolitan Transit Authority (WMATA) is staring down a $750 million budget deficit, forcing the agency to consider significant fare increases and service cuts and threatening the quality of public transportation in the D.C. region. Joint Development on WMATA-owned land is key for increasing ridership and revenue, but local jurisdictions' policies and programs currently do not incentivize such development. The challenges associated with building on WMATA's remaining properties necessitate local investment, meaning the absence of effective policies on the local level impedes joint development and negatively impacts the long-term stability of the system.

Motivation

Joint development has long been a tenet of WMATA's mission to provide "safe, reliable, and affordable transportation" to the Washington, D.C. region (*WMATA 10-Year Strategic Plan*, 2022) by increasing ridership and generating revenue for the system and economic benefits for surrounding localities. However, high infrastructure costs and onerous standards mean joint development is comparatively more expensive for developers. In Prince George's County, this has resulted in sprawl, with developers choosing to build cheaper, single-family housing instead of the dense, mixed-use development that WMATA (and Prince George's County) seeks around transit stations. There have been attempts made to increase the relative costs of building sprawl as opposed to dense construction, but effectively stimulating joint development requires addressing the barriers that drive developers away in the first place.

Roadmap

This report follows the Eightfold Path method of policy analysis: define the problem, assemble evidence, construct alternatives, select criteria, project outcomes, confront tradeoffs, make a recommendation, and tell a story (Bardach & Patashnik, 2020). The report opens with a brief overview of the client (WMATA) and its interests related to the problem, then moves into analyzing the problem itself. A set of case studies places the problem in a broader context and suggests potential solutions, which are solidified into three policy alternatives that address the causes of the problem from different angles. Five criteria are employed to evaluate each alternative based on its projected outcomes, leading to a recommendation that considers the tradeoffs of choosing one

policy over the others. Lastly, the executive summary and conclusion provide a cohesive narrative that contextualizes the problem within WMATA's broader interests and purpose.

Client Overview

The Washington Metropolitan Area Transit Authority (hereafter referred to as WMATA or Metro) is the product of a 1967 compact with D.C., Maryland, and Virginia. Metro operates and oversees the rail, bus, and paratransit systems that service the greater Washington metro area. Aside from New Jersey Transit, it is the only system that extends across multiple states (Puentes, 2004). Metro is governed by a Board of Directors, consisting of two members from D.C., Virginia, Maryland, and the federal government. The agency's Real Estate Office holds primary responsibility for joint development and was the force behind 2022's 10-year joint development strategic plan.

Metro finds itself amid a funding crisis years in the making. Its founding document– the 1967 Interstate Compact– committed each jurisdiction to paying into the system but did not establish a dedicated funding source. Consequently, WMATA must ask each jurisdiction every year to contribute subsidies to fund the system, with each annual subsidy increase capped at 3% (George, 2021). This means funding is variable year-to-year and dependent on WMATA's relationships with local and state governments. In 2018, WMATA negotiated with Maryland and Virginia's governments to create a dedicated capital fund (Transit Authority Capital Fund Agreement, 2019), but no such agreement exists for operations funding. This stands in contrast to a system like New York's MTA, which is largely funded by dedicated taxes ("MTA Operating Budget Basics," n.d.). During the pandemic, WMATA offered subsidy relief to jurisdictions ("Future Financial Planning," 2022) which combined with the concurrent decline in commuter ridership to effectively dig the agency into a fiscal hole. In recent weeks, the governments of D.C., Maryland, and Virginia have stepped up to commit more funding to the system (Laris, 2024), but the crisis has revealed the need for stable sources of funding for the system, which is where joint development comes in. While joint development is a few degrees removed from the current funding gap, it plays an essential role in helping WMATA recoup infrastructure investment costs by encouraging ridership and creating several long-term revenue streams.

Joint development is a form of transit-oriented development (TOD) that involves building dense, mixed-use development on WMATA-owned land. The agency owns over 1,000 acres of land on and around stations, and over 500 acres are targeted for

development (*WMATA 10-Year Strategic Plan*, 2022). Joint development generates several sources of revenue for Metro. First, is the revenue generated from the lease payments made to WMATA by developers building on the land. Second is the fare revenue generated by increased ridership around developed stations. Density around stations is closely correlated with ridership since it involves putting people near public transit access. Lastly, and most salient to this analysis, is that dense, transit-oriented development raises property values (A. Mondschein, personal communication, October 2023), which generates significant property tax revenue. The underlying idea behind how this benefits WMATA is that this revenue will ultimately flow back to the agency through increased jurisdictional subsidies in a process described as indirect value capture (S. Segerlin, personal communication, October 2023). Metro has employed this strategy for quite some time. As one literature review notes, "WMATA is a textbook case of an entrepreneurial agency that recognized early on it could recoup part of its investment costs by sharing in the value added to land by transit. Value capture is a core principle of the organization" (Cervero et al., 2002). One mechanism by which this works is that increased tax revenue from WMATA-owned land generates political goodwill with local governments, who are more likely to pay into a system that provides tangible economic benefits to their region. Joint development will not solve the agency's immediate funding problems, but it is one way that WMATA can play the long game and shore up essential relationships and funding sources to preempt a future crisis.

Problem Background

Overview

Joint development (and transit-oriented development in general) faces several unique barriers. Dense development is inherently more expensive due to the high costs of materials like concrete (S. Segerlin, personal communication, October 2023). The regulatory environment is also not always friendly to joint development. Affordable housing requirements and onerous mixed-use zoning codes introduce more complexity into the process (A. Mondschein, personal communication, October 2023) and existing infrastructure like parking garages represents logistical challenges to construction. All these considerations mean that lenders are often hesitant to finance JD projects. Additionally, parking is an expectation for virtually all development projects, and TOD's inherent lack of parking represents a risk for lenders (A. Mondschein, personal communication, October 2023). More broadly, lenders are concerned about the uncertainty involved with JD projects. The timing and outcomes associated with TOD are often unclear, and local governing bodies that approve the

projects often work on unpredictable timelines. Financers and developers are risk-averse, and there is a significant amount of uncertainty associated with building transit-oriented development. As one local officer for economic development put it, “It’s hard to get developers to want to be pioneers.”

All these barriers demonstrate the necessity of policies that make joint development projects more attractive to developers. Most jurisdictions do offer incentives to developers, usually taking the form of tax abatements or fee waivers (S. Segerlin, personal communication, October 2023). However, WMATA’s local jurisdictions largely lack a strategy for allocating those incentives. Developers are receiving benefits but are not building TOD because the incentive structure contains no mechanism to commit them to doing so. WMATA’s dependence on its jurisdictions to provide the investment needed to make joint development happen means that the current lack of strategy for developer incentives represents a significant problem. As long as developers are not convinced that building TOD is in their best interest, progress on joint development goals will be stalled.

Prince George’s County

While the incentives problem persists across all WMATA’s jurisdictions, Prince George’s County, Maryland stands out for several reasons. First, over a third of sites targeted for joint development (15 out of 40) are located in Prince George’s County (hereafter referred to as the County), meaning it has disproportionate significance for WMATA’s joint development goals. Second, transit-oriented development is a priority for the County, meaning leadership is more likely to be receptive to policy proposals that seek to stimulate TOD. PLAN 2035, the County’s strategic plan drafted in 2014, outlines eight Regional Transit Districts and eight Local Transit Centers that align with WMATA’s stations targeted for development and recommends directing future growth toward those areas, particularly the Regional Transit Districts PLAN 2035 further designates three of the Regional Transit Centers (Prince George’s Plaza Metro, New Carrollton Metro, and Largo Town Center Metro) as Downtown districts and stipulates that they should be transit-oriented (Maryland-National Park and Planning Commission, 2015).

The County currently has some incentives on the books for transit-oriented development. These include an expedited permitting process and reduced impact fees for TOD projects. However, the County has struggled to effectively direct growth toward these designated urban centers, including transit centers. In the spring of 2023, county executive Angela Alsobrooks announced a plan for $400 million worth of new

development along the historically underdeveloped Blue Line corridor, representing a step forward for transit-oriented development in the area (Drain, 2023). However, much of the development is oriented around FedEx Field, whose continued viability and existence are uncertain given the Washington Commanders' plans for a new stadium (Fortier, 2024). This means it is important to attract and sustain development over the long run that is not dependent on the stadium for its viability. The Blue Line development challenges are part of a broader issue involving developers choosing to build single-family sprawl throughout the county rather than in the urban cores. In October 2023, County Council Member Thomas Dernoga introduced an ultimately failed proposal that would cap the total number of new residential construction at 2,400 units, 2,100 of which would need to be built within the Beltway. Dernoga cited PLAN 2035's goals as the impetus for the proposal. "Even though that's [development in urban centers] the policy, it has not been implemented," he said. "Actually, we've been sprawling all over the place" (Domen, 2023). The building cap was designed to function as a negative incentive to force developers into building in the County's designated growth areas (including transit centers). However, building industry representatives pointed out that the proposal did nothing to address the barriers to such development, including the high costs of building in those areas and the preponderance of red tape stalling the development approval process (Domen, 2023). These critiques indicate that the County cannot rely on just disincentivizing development outside its growth areas—it must design policies that make TOD attractive to developers.

Literature Review

Existing case studies and literature reveal several potential interventions that can help address and overcome the barriers associated with transit-oriented development. Several approaches emerge from the literature, some of which are broad and widely utilized, such as tax-increment financing, and some of which are more niche and less directly geared toward incentivizing transit-oriented development, such as form-based codes.

Economic Incentives

Economic incentives for development include measures such as tax abatements and other favorable tax structures, cash assistance, and low-interest financing (Bartik, 2005). Three general categories of incentives exist: discretionary, competitive, and statutory; however, most economic development incentives are discretionary (Bartik, 2005).

For transit-oriented development, economic incentives often take the form of grants, impact fee reductions, and tax abatements (Cervero et al., 2002). Such benefits generate high opportunity costs to local governments through lost revenue, highlighting the importance of what is known as the "but-for" test when granting incentives—that is, incentives should only be used if the desired development would not happen without them. Tax incentives in particular carry a high potential to go wrong in several directions. It is in the interest of businesses to claim more of an incentive than they need, which creates inefficiencies and raises opportunity costs. Additionally, if there are too many tax incentives in a given region, it dilutes their effectiveness in attracting investment (Kenyon et al., 2013). This implies that if localities want to use tax incentives to attract TOD, they should use them judiciously, carefully analyzing site conditions and challenges in order to determine an amount that minimizes unnecessary opportunity costs, and limiting their use to areas where TOD is desired.

The evidence suggests that clear and rational incentive regimes are central to effective incentives (Bartik, 2005). For joint development, this may involve defining specific criteria and performance standards for developers to qualify for incentives. For example, incentives could be tied to the development of high-density TOD projects, focusing on walkability and public transit accessibility. By making these standards public and transparent, local governments can ensure that incentives go toward projects that align with their vision of joint development. This alternative would also require an evaluative mechanism to ensure that developers are not just agreeing to the performance standards but also meeting them (Pew Charitable Trusts, 2015).

Tax Increment Financing

Tax increment financing is a widely used financing tool that captures the value a new development generates and directs it back into infrastructure construction and funding within that development. As one case study notes, "The key to TIF is that public investment spurs private investment that would not otherwise occur." The end goal of TIF is to raise the property values in an area above what they would be otherwise to spur economic development and revitalization (Garcia, 2002). Thus, TIF is generally used to revitalize economically depressed areas (Environmental Protection Agency, 2013) but also has a history of use for TOD purposes. Available case studies substantiate the idea that TIF significantly raises property values where it is applied (Garcia, 2002), which in turn increases property tax revenue.

The city of Dallas stands out as a notable example of a locality that embraces TIF as a tool for economic revitalization and to promote transit-oriented development. Dallas

has 19 different TIF districts, several of which are centered on local Dallas Area Regional Transit (DART) stations with the explicit purpose of stimulating transit-oriented development. There is an entire TIF district dedicated to encouraging TOD; the district's mission states "Redevelopment of the Lancaster Corridor and encouragement of transit-oriented mixed-use development (TODs) around DART stations are top City priorities" (*TOD TIF District*, 2023). In its emphasis on promoting TOD, Dallas represents a decent analog to Prince George's County. By all counts, Dallas's TIF strategy has proven successful, with aggregate property values in TIF districts growing over 600% between their inception and 2023, resulting in $238 million in property taxes that would not have been generated otherwise (*Memorandum*, 2024). In 2019, the TOD TIF district alone was projected to generate almost $140 million in incremental revenue by 2038 (Florida Center for Community Design and Research, 2019).

Incentive Zoning and Density Bonuses

Incentive zoning is one attempt to create a "rational incentive regime." In the words of one FTA literature review, it "involves providing rewards to developers for doing things that create public benefits," (Cervero, 2002) where public benefits can mean anything from improved air quality to transit access to public spaces such as parks and plazas. Typically, these rewards take the form of density bonuses (rather than economic incentives), which allow developers to build more height and square footage than would normally be allowed and thus make it easier for them to recoup the costs of construction. Per the Journal of the American Planning Association, "Incentive zoning works by enticing developers to provide a community benefit in return for increasing their ability to make a profit" (Homsy et al., 2023). Incentive zoning is commonly used to promote the construction of affordable housing, with developers receiving extra density in exchange for building more affordable housing units.

Whether density bonuses effectively incentivize desired development features is a matter of debate. One assessment evaluated the impact of a California density bonus statute that aimed to incentivize developers to build housing restricted to low or moderate-income residents or elderly residents (Johnston et al., 1990) and found that only 19% of the California cities and counties that had adopted the programs had granted bonuses to more than three projects, suggesting limited developer interest. Cities and counties that offered bonuses above the mandated 25% level and provided additional incentives like fast permit processing tended to see greater participation, indicating the state's required bonus may have been too small to attract developers on its own (Johnston et al., 1990). This is because building affordable housing comes with its own set of costs, and for a rational developer, the marginal value of the bonus must

exceed the marginal cost associated with each additional unit of affordable housing for the bonus to be worth it. Like affordable housing, TOD also comes with higher-than-average construction costs, meaning density bonuses might not be a panacea.

This case study reveals a fundamental liability of incentive zoning—misalignment between the value of the incentive and the cost of providing the benefit. Equally problematic is the inverse, where the value the developer derives from the bonus exceeds the value provided by the public benefit. Chicago, the first city to use incentive zoning, conducted a study that revealed the bonuses the city awarded to developers were disproportionately high compared to the resulting public benefits (Morris, 2000).

Form-Based Codes

One less conventional approach to incentivizing TOD that surfaced in case studies and literature was the form-based code. Rather than offering developers a direct incentive, form-based codes constitute a fundamental shift in local zoning practices by specifying the form of development in a given zone rather than the use. Form-based codes contain built-in incentives for developers because they make the project approval process significantly more straightforward (Environmental Protection Agency, 2014). The poster child for form-based codes is the Columbia Pike Initiative in Arlington, Virginia. Arlington County used form-based codes to lay out desired multi-family, pedestrian-friendly development along the three-mile thoroughfare. The code succeeded in catalyzing development along Columbia Pike, resulting in over 1 million square feet of commercial space, 3,000 new residential units, significant pedestrian infrastructure, and increased transit ridership (*Using Form-Based Codes*, n.d.). Developers cited the time and money saved by the more streamlined approval process as reasons for their interest and investment in the area, while the predictability of the standards and guidelines minimized pushback from residents and activists (*Zoned In*, 2019). The success of form-based codes in a TOD context shows that explicit incentives are not always necessary to stimulate development.

Alternatives and Criteria

Criteria

Effectiveness

While joint development aims to yield many desirable outcomes for WMATA, including ridership and real estate revenue, for this analysis, effectiveness is weighted towards

Prince George's County's interests since it will be taking on the burden of adopting and implementing the policy. Thus, property tax revenue represents the best measure of a policy's effectiveness. This outcome supports WMATA's indirect value capture strategy and reflects the long-term goals for joint development, but most importantly, it aligns with the County's interests by increasing its pool of revenue (which also benefits WMATA politically). The County relies heavily on residential property taxes for revenue compared to neighboring cities and counties (Drain, 2023). One of PLAN 2035's goals is to increase the commercial tax base to decrease reliance on property tax revenue (Maryland-National Park and Planning Commission, 2019). TOD's mixed-use nature promises to expand both the residential and commercial tax bases, increasing both tax revenue streams.

Tax revenue as a measure of effectiveness refers to the incremental revenue a given development generates above the baseline of what it would generate in the absence of the intervention. It is measured in annual revenue tax revenue over 30 years and discounted at a rate of 7% per OMB guidance. The exact determination of revenue varies by alternative but is primarily based on case study numbers and assessed property values in the places where the alternative was implemented. Each alternative is evaluated based on the net present value (NPV) amount of the projected total revenue it generates. The most effective policy is that which will generate the most total revenue.

All revenue calculations and assumptions are detailed in Appendix (#).

Cost

According to members of Prince George's County Council, the County currently faces a "tight budget" (Beachum, 2023a). Thus, this second criterion encompasses the costs that the alternative imposes on Prince George's County. While WMATA does bear some development costs, primarily improvements to or replacement of their infrastructure (such as stations, parking lots, and parking garages), the cost burden of designing, implementing, and maintaining a policy falls on the County. Costs include upfront financial costs (such as bond financing), administrative and labor costs, maintenance costs, and opportunity costs. Opportunity costs are defined as any foregone revenue from taxes and impact fees that would otherwise be captured in the absence of the policy.

Cost estimates are primarily calculated based on costs reported in the case studies (adjusted for inflation) and reasonable assumptions. Costs for each alternative are

calculated over 30 years and discounted at a rate of 7%. Each alternative is evaluated based on the NPV estimate of the total costs it imposes on Prince George's County. All cost calculations and assumptions are detailed in Appendix A.

Cost-Effectiveness

This criterion measures the cost incurred per dollar of tax revenue. The most cost-effective policy will have the lowest dollar amount of cost for each extra dollar of revenue. It is important to note that this estimate does not reflect the results of a cost-benefit analysis and does not assess whether the benefits of the alternative outweigh the costs.

Affordable Housing Amenability

Affordable housing is a recurring concern in the literature surrounding transit-oriented development, in conversations with WMATA contacts and local stakeholders, in regional news, and in Prince George's County's official documents. Housing affordability is a particular concern for transit-oriented development because one of TOD's selling points is that it increases the value of both the land it is built on and the land surrounding it. This is good news for localities, who benefit from the corresponding increase in property tax revenue, but bad news for residents potentially priced out of the area as a result.

WMATA acknowledges the importance of affordable housing in their Joint Development Program Guidelines, stating that they "support the Washington region's housing and affordable housing production goals… Joint Development projects must abide by the local jurisdiction's affordable housing laws and policies and developers should work closely with the local jurisdiction to achieve the local government's affordable housing goals for the project" (Washington Metropolitan Transit Authority, 2020). WMATA's strategic plan for joint development also mentions affordable housing amenability as a goal and ties joint development to increased housing supply. Meanwhile, the County's housing plan explicitly mentions leveraging TOD to increase the supply of quality affordable housing.

Affordable housing amenability is measured by the alternative's likelihood of achieving 75% affordable housing in resulting residential development by 2030, in accord with the county's goal of having 75% of new residential units built by 2030 be affordable. The ideal policy in terms of equity would align with the County's proposed strategies to increase affordable housing and would maximize the likelihood that at least 75% of the resulting development consist of affordable residential units. Each alternative receives

a rating of low, medium, or high based on its predicted amenability to County's 75% goal.

Complexity

Complexity deals with ease of implementation. To be feasible, a policy must minimize the drain on Prince George's County's planning and regulative capacity. Transit-oriented development is a priority for the County, but it is not the only priority, and it is in WMATA's best interest to advocate for policies that place as little additional burden as possible on County administration. Complexity also partially dictates political feasibility, as alternatives that require more time and resources are a harder sell to County Council and executives.

To evaluate the complexity of each alternative, this analysis asks a set of yes/no questions:

1. **Does the alternative require substantive changes to existing rules, regulations, and/or codes?** Substantive changes to laws and regulations on the books would require county administrators and staff to study and analyze the proposed changes and draft text amendments, a work- and time-intensive process that would likely require shifting resources from other parts of the County's planning departments.
2. **Does the alternative require new training and/or outside expertise to implement and sustain?** This question measures the time and learning costs associated with the policy. The answer is determined by the extent to which the policy requires bringing in knowledges and resources outside the County's current set of competencies. The higher the learning costs, the more the policy drains the County's administrative capacity.
3. **How lengthy and complex is the implementation process?** The longer the implementation timeline on the alternative, the higher the opportunity costs for the County. In addition, the likelihood of the policy becoming bogged down and superseded by other, more pressing priorities increases with complexity and the time it takes to implement.

To systematically apply these questions to each alternative, the following rubric is employed:

Alternative

Does the alternative require substantive changes to existing rules, regulations, and/or codes?	1=substantive changes 0=no substantive changes
Does the alternative require new training and/or outside expertise to implement and sustain?	1=new training or outside expertise required 0=no new training or expertise
Is the implementation process long and/or complex?	1=long and complex 0=short and minimally complex

Each policy receives a score out 3, with a lower score indicating lower complexity.

Alternatives

Alternative 1: Expand Use of Tax Increment Financing to all Transit Priority Areas

Tax increment financing (TIF) is a popular mechanism for catalyzing economic development. TIF involves a local government designating an area as a special tax district, selling bonds to investors, and investing the money in a fund designated for development and infrastructure improvements in that district. The locality then uses that fund to reimburse developers for construction costs and sets aside the incremental tax revenue the new development generates to service the debt on the initial bond. That is, the marginal (incremental) increase in tax revenue generated by new development is used to service the debt on the bonds that financed the development in the first place and to fund continued infrastructure improvements in the district until the district expires (usually after 30 years). TIF is designed to "correct market failures in an attempt to improve efficiency" by incentivizing dense, high-value development instead of sprawl (Greenbaum and Landers, 2014). TIF benefits developers by covering their upfront infrastructure costs, removing much of the financial risk and uncertainty that accompanies joint development, and offering a predictable funding mechanism. The commitment to allocate incremental tax revenue to improvements in the development assures developers that there will be a dedicated funding source for the development efforts over the life of the TIF district.

Prince George's County is familiar with TIF as a tool for transit-oriented development (TOD). On the state level, Maryland has promoted TIF as a best practice for TOD. In 2009, the state amended its TIF laws to give local governments more "flexibility and opportunity" (Maryland Department of Planning, n.d.) to use TIF to finance TOD. The law also allowed local governments to issue bonds using the state economic

development agency's authority, removing the risk and burden of local governments having to issue bonds on their authority. Meanwhile, Prince George's County's general plan (known as PLAN2035), designated eight Regional Transit Districts and specifically recommended that the County enact legislation to establish a TIF district for each area (Maryland-National Planning and Park Commission, 2015). In the fall of 2023, the County passed a bill authorizing $9 million in tax increment financing bonds for the Largo Town Center development district to be used for construction and infrastructure improvements. Expanding the use of TIF via similar legislation to all of Prince George's County's Regional Transit Districts and the smaller Local Transit Centers as defined in PLAN2035 would be a tested, familiar strategy for attracting transit-oriented development.

TIF comes with a few downsides. It results in high opportunity costs to the County because annual tax revenue stays in the district rather than flowing into the general fund. There is also always the risk that the development does not generate enough revenue to pay for itself. However, transit-oriented development has a well-documented positive effect on property values (Duncan, 2011; "Value Capture," n.d.), making this scenario unlikely. Additionally, the state of Maryland allows localities to issue bonds using the state's authority ("TOD Best Practices," n.d.), which further minimizes risk to the County.

Alternative 2: Implement Form-Based Codes to Streamline Project Approval

Cost is not all that turns developers off TOD. Red tape, uncertainty about timelines, and slow approval processes are among the most frequently cited barriers to development in Prince George's County. Regulatory uncertainty turns off both developers and the lenders they depend on to finance projects. Thus, financial incentives are not the only lever the County can pull to stimulate TOD. If TIF functions as a financial incentive, form-based codes function as regulatory incentives by simplifying zoning ordinances, clarifying expectations for what the development should look like, and streamlining the approval process (*Form-Based Codes: A Step-by-Step Guide for Communities*, 2014). In contrast to traditional zoning codes, which dictate land use, form-based codes (FBCs) specify the form and design of the development. FBCs are well-suited to transit-oriented development because TODs possess distinct physical features (see Appendix E). A 2014 report from Prince George's County notes that "Clearly defined design standards and form can achieve a more predictable physical result, which allows for more control in shaping the TOD area" (Zoning Best Practices, 2014), while the Form-Based Codes Institute emphasizes the role of FBCs in

creating “predictable physical outcomes” (“Form-Based Codes Institute,” n.d.). For TOD, these could include prescribing features that promote walkability (e.g., short blocks and wide sidewalks) and other forms of non-automotive mobility (e.g., bike infrastructure and parking maximums to limit car dependence), in addition to well-designed public spaces like parks.

Form-based codes lend themselves well to the County and WMATA’s joint development vision. The development goals laid out in PLAN2035 include establishing “a by-right development approval process and fast track permit process for the Downtowns with clear and consistent regulatory standards and processes and shortened review periods” (Maryland-National Planning and Park Commission, 2015) and in 2014, the Prince George’s County planning department recommended applying form-based codes to transit-oriented development projects in part because it would remove barriers created by the county’s complicated, multi-stage public hearing and approval process (Zoning Best Practices, 2014). FBCs have built-in incentives for developers because they lay out a clear pathway to approval and reduce the time costs and uncertainty of the traditional application process. Instead of having to submit a proposal and waiting for the county to call it up for review, developers could review the FBC and design their project in accordance with the code, knowing that if it meets the specifications, it will be approved. In this way, FBCs make the approval process by-right, where developers have guaranteed approval if they meet a set of standards.

Prince George’s County has an expedited permitting process for TOD development projects, but implementing form-based codes would bypass that process altogether, essentially pre-approving certain types of construction and design. Implementing FBCs is a lengthy process, however. It would require the Maryland-National Capital Park and Planning Commission (MNCPPC), which oversees planning and development in Prince George’s County, to repeal existing zoning ordinances for TOD areas and replace them with form-based codes– a potentially onerous process.

Alternative 3: Establish Points-Based Zoning to Promote TOD-Specific Outcomes

If TIF benefits developers financially and form-based codes benefit them bureaucratically, incentive zoning falls somewhere in between. It rewards developers who build in designated zones with benefits that can include impact fee reduction, school surcharge waivers, tax abatements, and density bonuses. Incentive zoning is commonly used to promote the construction of affordable housing, with developers

receiving benefits (usually in the form of increased density) for building more affordable housing units.

One innovative model of incentive zoning is the points-based system used by Prince George's County's neighbor, Montgomery County. In 2010, the County established a system where developers could earn "public benefits points" (Kronenberg et al., 2023) when they built within designated zones and included certain public amenities or features in the development (which, depending on the overlay zone, include proximity to transit). Developers can then redeem these points for extra height and density, lowering their overall costs. Like form-based codes, Montgomery County's system also serves to clarify expectations for developers upfront and make the review process more efficient. Incentive zoning's advantage is its flexibility, and the County has an unmined opportunity to implement a points system similar to Montgomery County's that specifically rewards transit-oriented development. The County can create zone overlays for its transit priority areas and establish a points system weighted toward transit-specific features such as pedestrian-friendly infrastructure and parking limits. The County also has flexibility in deciding which benefits to include. Montgomery County relies on density bonuses, where developers can cash in their points for increased building height but research suggests such bonuses are not necessarily a sufficient incentive in the long run ("Density Bonus," n.d.)—particularly given the current high costs of construction materials. Impact fee waivers are another common incentive.

The County currently has a school and public safety surcharge reduction for qualifying projects, which includes developments located within a quarter of a mile from a Metro station. It could build on this policy by allowing developers to exchange points for a further reduction of the impact fee. Tax abatements (the most valuable incentive monetarily) are also an option. One possible approach would be to combine all three types of incentives to create a tiered "rewards" system where the incentives increase in value as points accumulate. Montgomery County's program employs such a tier system.

A common critique of incentive zoning is that it results in unmerited handouts for developers. However, by carefully targeting the incentives to the desired outcome (dense, transit-oriented development), the county can ensure that the proposed projects serve its (and WMATA's) development objectives. Prince George's County can do this by working with the MNCPPC and WMATA to establish TOD-specific performance standards and incentives for the County's regional transit districts and local transit centers.

Findings

Alternative 1

Effectiveness: projected tax revenue increase of $292,761,628.80 over 30-year lifespan

Based on numbers from the TIF districts in Dallas, TX detailed in Appendix B, implementing TIF is projected to increase property tax revenue per acre by $292,761,628.80 over the 30-year lifespan of the project.

Cost: $48,891,596 over 30 years

TIF is very costly. Because TIF is such a hands-on approach for local governments, it incurs high administrative costs, which constitutes the bulk of the costs. Opportunity costs are also high with TIF. This is because until at least Year 17 of the project (Year 23 if assuming a set-aside for affordable housing), all the property tax revenue the district generates stays in the district rather than flowing into the County's coffers, resulting in steep opportunity costs of foregone revenue. The total cost is quite sensitive to changes in the amount set aside for infrastructure improvements (see Appendix C).

Cost-Effectiveness: $0.17 per $1 of tax revenue

TIF incurs a cost of $0.17 per dollar of property tax revenue.

Affordable housing amenability: Medium

The main threat TIF poses to housing affordability is that it tends to raise property values both within the district and surrounding it, which can result in residents, particularly those with lower incomes, being priced out of the area (Mathur and Smith, 2012). The good news is that the incremental revenue TIF generates can flow toward funding affordable housing in the district. Several states and localities have incorporated affordable housing set-asides into their TIF policy. Utah, for example, requires 20% of TIF revenue go to affordable housing within the district and Portland, Oregon requires 45% of revenue be designated for affordable housing ("How TIFs Can Be Used for Affordable Housing," n.d.). the County could create a similar set-aside; however given that the first priority for revenue will be to pay off the cost of development and fund infrastructure improvements, plus the additional cost that building affordable housing incurs for developers (McAnaney, 2024), the affordable housing set-aside will likely be insufficient to reach the County's 75% goal by 2030.

Based on this assessment, TIF expansion rates medium in terms of amenability.

Complexity: 1/3

Does the alternative require substantive changes to existing rules, regulations, and/or codes? The County frequently employs TIF, including for TOD projects, and PLAN2035 specifically recommends its use for its larger Downtown districts (Maryland-National Park and Planning, 2015). Due to the County's familiarity with TIF, it would not involve substantially changing existing rules or codes.

Does the alternative require new training and/or outside expertise to implement and sustain? County staff and officials are already familiar with the mechanism and implementation of TIF. Expanding it to new districts could introduce site-specific challenges but would still require minimal new training.

How lengthy and complex is the implementation process? To create a new TIF district, the County Council must pass first pass a resolution approving the proposal, which can be done in one fell swoop. However, the Council must also pass a bill to approve the amount of the bond. This is a longer process. The bill must be presented and referred, then introduced, then enacted, subjected to a public hearing, and finally, signed. The Council needing to sign off on every single new TIF district introduces a level of uncertainty into adoption and implementation, making it relatively complex.

Alternative 1: TIF Expansion	
Does the alternative require substantive changes to existing rules, regulations, and/or codes?	0
Does the alternative require new training and/or outside expertise to implement and sustain?	0
Is the implementation process long and/or complex?	1

Based on this assessment, TIF expansion rates 1/3 on complexity.

Alternative 2

Effectiveness: projected tax revenue increase of $374,391,227.24 over 30-year lifespan

Based on incremental tax revenue reported from four case studies, implementing form-based codes is projected to result in $374,391,227.24 of increased tax revenue over 30 years. This increase underscores the positive effect of FBCs on property values and tax revenue ("Smart Growth Tactics," 2007).

Cost: $3,585,099.38 over 30 years
Due to the complexity of the research and design process and the need for outside expertise, form-based codes come with high upfront costs in the form of training and consultants to aid in the design and adoption process. Labor—hiring extra planners to design and administer the code—accounts for the remainder of the cost, but it is the only variable cost.

Cost-Effectiveness: $0.01 per $1 of tax revenue
FBCs incur a cost of $0.01 per dollar of property tax revenue.

Affordable housing amenability: Medium
The County can embed affordable housing requirements and incentives in form-based codes. For example, the Columbia Pike FBC allows additional density if the developer adds as many affordable units as there are existing units ("Columbia Pike Form Based Code 1:1," 2024). Prince George's County could follow a similar formula but use a ratio where for every 1 unit of market-rate housing, the developer must build 3 units of affordable housing. This would meet the 75% goal. However, the County would likely need to employ significant incentives (such as increased density) to make this ratio financially viable for developers as it is doubtful the "soft cost" benefits of a streamlined approval process would be sufficient to make building according to the FBC attractive to developers if the affordable housing requirement is this high. The Columbia Pike Form-Based Code in Arlington created a Transit-Oriented Affordable Housing Fund to subsidize the cost of affordable housing infrastructure ("Using Form-Based Codes," n.d.). the County would almost certainly need to do something similar to achieve anything close to the 75% goal. Realistically, in the absence of incentives, the County will have to accept a lower percentage of affordable housing.

Based on this assessment, form-based codes rate medium in terms of amenability.

Complexity: 3/3
Does the alternative require substantive changes to existing rules, regulations, and/or codes? Yes. Implementing form-based codes for the County's Local Transit Centers would require significantly overhauling portions of the existing zoning code.

Does the alternative require new training and/or outside expertise to implement and sustain? The FBC approach to zoning is drastically different from the conventional approach the County currently uses. Thus, the County planners' expertise is likely to be limited and would necessitate bringing in outside consultants to advise the process ("Form-Based Codes," n.d.).

How lengthy and complex is the implementation process? Designing and implementing FBCs is both lengthy and complex, with a 6-month timeline and high learning costs ("Post-Adoption Form-Based Code Administration," 2000). Constructing an effective form-based code requires deciding which specific features are desirable for TOD and laying those out in detail specific enough to promote the desired development outcome but flexible enough that developers are not turned off by overly onerous design requirements.

Alternative 2: Form-Based Codes	
Does the alternative require substantive changes to existing rules, regulations, and/or codes?	1
Does the alternative require new training and/or outside expertise to implement and sustain?	1
Is the implementation process long and/or complex?	1

Based on this assessment, form-based codes rate 3/3 on complexity.

Alternative 3

Effectiveness: projected tax revenue increase of $706,564,297.38 over 30-year lifespan

Tax revenue was calculated based on the land values of a sampling of projects built under Montgomery County's points system. Based on these calculations, implementing a points-based system is projected to increase tax revenue by $706,564,297.38. The goal of points-based incentive zoning is to drive high-density development, which leads to higher property values and more property tax revenue. The numbers from Montgomery County's incentive zones indicate that this is the case.

Cost: $25,495,510 over 30 years
The nature of the incentives largely dictates the costs of the points-based system. For density bonuses only, the only major cost is to WMATA for infrastructure, and total cost is just $3,324,189. Including the impact fee reduction option brings the cost to $25,495,509.97. The most expensive option is the tax credit, which adds $104,948,435.78 in opportunity costs and brings the total cost to $108,272,625.16. Taking the median of all three yields a cost of $25,495,510 over 30 years.

Cost-Effectiveness: $0.04 per $1 of tax revenue
The average cost-effectiveness of points-based incentive zoning (calculated based on the median cost noted) is $0.04 per $1 of tax revenue.

Affordable housing amenability: Medium
Points-based incentive zoning is conducive to an inclusionary zoning approach, where developers receive incentives in exchange for agreeing to build a certain percentage of affordable units ("What Is Inclusionary Housing?," n.d.). Inclusionary zoning provisions would be easy to incorporate into the points system, by weighting the proportion of affordable units relatively more heavily when setting points amounts. Instead of mandating a certain proportion of housing be affordable, this alternative lets developers determine how close to the 75% goal they want to build. The lack of an ultimatum represents a compromise of sorts—developers likely will not choose to build 75% affordable housing of their own volition, but the positive incentive increases the chances of achieving a goal closer 75% compared to an all-or-nothing requirement.

Based on this assessment, points-based incentive zoning rates medium in terms of amenability.

Complexity: 1.5/3
Does the alternative require substantive changes to existing rules, regulations, and/or codes? Implementing the points-based system would involve writing a Zoning Text Amendment (ZTA) to the existing zoning code (Kronenburg, et al., 2023). Thus, this alternative adds to existing rules but does not amend existing ones.

Does the alternative require new training and/or outside expertise to implement and sustain? Since the points-based system is new to the County, there would be a learning curve, but Montgomery County's proximity would make knowledge sharing easier. County planners could rely on existing partnerships between the two counties, such as the Maryland-National Park and Planning Commission, for guidance and knowledge from their Montgomery counterparts.

How lengthy and complex is the implementation process? Having an existing blueprint for the policy in a neighboring county makes implementation more straightforward than it would be otherwise. However, establishing the nature, amounts, and mechanics of the incentive system in a way that effectively promotes the goals of TOD would take time. It is challenging and time-consuming to match bonuses to desired features in a way that is proportional (Morris, 2000).

Alternative 3: Points-Based Incentive Zoning	
Does the alternative require substantive changes to existing rules, regulations, and/or codes?	0.5
Does the alternative require new training and/or outside expertise to implement and sustain?	0.5
Is the implementation process long and/or complex?	0.5

Based on this assessment, points-based incentive zoning rates 1.5/3 on complexity.

Outcomes Matrix

Table 1: Unweighted Analysis				
Goals	**Criteria**	**Alternative 1: TIF expansion**	**Alternative 2: FBCs**	**Alternative 3: Points-based zoning**
Effectiveness	Increase in property tax revenue generated	$292,761,628.80	$374,391,227.24	$706,564,297.38
Cost	Financial impact on the County	$48,891,596	$3,585,099.38	$25,495,510
Cost-Effectiveness	Cost per $1 increase in tax revenue	$0.17	$0.01	$0.04
Affordable housing amenability	Likelihood of meeting 75% affordable housing target	Medium amenability	Medium amenability	Medium amenability
Complexity	Ease of implementation	1/3	3/3	1.5/3

Recommendation

Evaluating the alternatives against the criteria and comparing them to each other indicates that the best course of action for Prince George's County is **Alternative 3: Points-Based Incentive Zoning**. The points-based system emerges as the most effective alternative and is cost-effective as well. Its success in the County's neighboring county lends the approach even more credibility, reduces implementation complexity, and bodes well for its ability to stimulate development and tax revenue in the County's growth priority areas, particularly the Local Transit Centers.

Proceeding with this alternative does come with tradeoffs. It means forgoing the ease of implementation of TIF expansion and the low cost and impressive cost-effectiveness of form-based codes. And as with the other alternatives, the implications for affordable housing are uncertain. However, the overarching advantage of Alternative 3 is that it performs well across all criteria. Alternatives 1 and 2 both receive low marks on certain criteria—cost and cost-effectiveness for Alternative 1 and complexity for Alternative 2 – but Alternative 3 rates above average on all criteria. It performs well at increasing revenue and keeping costs low and performs well enough at everything else. Overall, points-based incentive zoning achieves an outcome of common interest to Prince George's County and WMATA at a reasonable cost and reasonable effort.

Implementation

Next steps:

For Prince George's County:

The responsibility for managing implementation falls chiefly with the County's Planning Board and Planning Department. The first step in implementation is to generate a list of desired TOD-specific features for development in incentive zones to include. The next step is to determine what types of benefits to include and to design a structure for how they will be earned and allocated. Figure 1 in the Client Overview section of this report displays a sampling of features distinctive to TOD and Appendix D contains Montgomery County's menu of benefits, both of which would be good starting points for the County.

Codifying the features and benefits would require passing a Zoning Text Amendment (ZTA), which would also designate PLAN 2035's Regional Transit Centers and Local Transit Centers as commercial-residential zones where the points-based system would apply. After passing the ZTA, the Planning Department should devise a set of user-friendly, illustrated implementation guidelines modeled on Montgomery County's for the use of developers, citizens, and planners. The guidelines should clearly define each benefit and include a research-backed analysis of its significance to PLAN 2035's goals. Clear guidelines are essential for conveying expectations to developers and combatting the uncertainty that stands as a major barrier to TOD.

For WMATA:

WMATA can facilitate implementation by drawing up a sample benefits structure and set of desired features. Coming to the County with a specific proposal makes the

policy an easier sell by removing some of the burden of implementation from the County. It also gives WMATA significant influence in shaping the system to its advantage, for example by specifically incentivizing the use of WMATA land.

Stakeholders

The County Council stands out as the preeminent political stakeholder since it must approve the Zoning Text Amendment that establishes the policy. Outgoing Chair and Council veteran Thomas Dernoga has made smart growth a top priority of his legislative career, and current Chair Jolene Ivey laid out "smart development" as a priority for her term (Beachum, 2023b). District 3 Council Member Eric Olson has also spoken about prioritizing both affordable housing and transit-oriented smart growth (Beachum, 2023a). The other major political player is County Executive Angela Alsobrooks, who was the force behind the recent redevelopment along the Blue Line and authored a plan calling for increased density and development around transit stations (Goffman, 2021). However, Alsobrooks is currently running for a U.S. Senate seat, meaning she may not be the most attentive or effective ally— particularly if she wins in November. Thus, in the interest of policy sustainability, WMATA should specifically target persuasive efforts toward Dernoga, Ivey, and Olson.

Outside this group of political actors, developers and the building industry in Prince George's County represent a key stakeholder. The head of the Maryland Building Industry Association (MBIA) has advocated for adopting the points-based system. In the words of an MBIA consultant: "The way to do that [direct growth to inside the Beltway] is to make it easier and more attractive to develop inside the Beltway, not try to make it harder and more expensive to develop outside the Beltway" (Domen, 2023). Therefore, it is reasonable to expect support for the policy from the development community.

Resources

The resources involved would primarily be personnel and staff. Cost calculations account for hiring three additional planners to design and administer the program. The County might also need to reallocate existing planners within the department to support the system's design and implementation and designate a point person to oversee the system. The County should also draw on Montgomery County's resources. This could look like site visits to CR zones in Montgomery or hosting workshops in partnership with Montgomery's planners. Given that the deadline to propose changes to the FY25 budget (March 15) has passed, any budget allocations to the Planning Department will need to wait until FY26.

Messaging

Historically, the County Council has been unfriendly to zoning measures it views as overly favoring developers (DePuyt, 2022). Therefore, WMATA needs to frame the points-based system as a structure that requires developers to serve the interests of "smart," community-centered development. Part of this strategy involves avoiding the loaded word "incentive" altogether since it carries connotations of handouts and special favors to developers. Essentially, WMATA's message to the County should communicate the following:

> You (Prince George's County) are looking to redirect growth inside the Beltway (especially to transit-oriented and adjacent areas), and the structures and policies in place are not accomplishing this goal. This points-based system (which has shown to be effective in neighboring Montgomery County) would do that and in the process generate tax revenue over and above what the properties would otherwise generate.

This message centers the County's development interests and highlights revenue generation as the desired outcome.

Evaluation

The County should continuously (e.g. every 5-10 years) evaluate whether the points-based system is redirecting growth to Regional Transit Districts and Local Transit Centers and raising property tax revenue in the designated zones. First and foremost, this means collecting and keeping careful track of data on all projects, including the type of development, features included, and benefits received, and employing impact analyses to understand the outcomes the points-based system generates. Montgomery County is currently conducting an extensive analysis of its system and employs a public-facing dashboard containing detailed data, including every development project built under the system and the features included ("Interactive Development Dashboard," n.d.). The County can use this data to conduct impact analyses and cost-effectiveness analyses to determine whether the revenue generated in the zones is worth the continued investment. The County could also consider employing cost-benefit analyses that encompass other desirable outcomes in addition to property tax revenue (such as affordable housing, changes in transit ridership, utilization of public spaces, and sales tax revenue from surrounding businesses). The results from the analyses will indicate whether the existing benefits structure is effective (i.e., sufficient to cover costs developers incur and efficiently allocate benefits)

and if it needs changes. In addition to these quantitative methods, the County should also solicit input from stakeholders, including developers, WMATA, and residents.

Conclusion

This report seeks to provide WMATA with options it can present to Prince George's County for stimulating joint development. These options approach the problem from several different angles, giving the County several different levers to pull. They demonstrate that incentivizing development can take many different shapes. All the alternatives have distinct strengths and are all viable options for the County. Out of all these good options, the best appears to be the points-based incentive zoning program modeled on Montgomery County's. It is the most effective, generating the highest levels of property tax revenue. By adopting the system, Prince George's County can effectively direct growth to the places it wants it, in the process expanding WMATA's revenue streams. The recommended policy thus represents not only a revenue-generating force for the County but also an investment in the long-term health of Metro.

Appendix A: Cost Assumptions and Calculations

All costs are calculated over 30-year project lifespan and discounted at 7%.

Alternative 1: TIF Expansion

- Administrative costs are drawn from a sampling of TIF districts in Dallas
    - Yearly administrative costs calculated based on yearly average for sampling of Dallas TIF districts
    - Average cost per district for Dallas TIF districts multiplied by 16 districts (8 Regional Transit Centers + 8 Local Transit Centers)
- Bond amount based on average initial bond size for sampling of Dallas TIF districts, and amounts Prince George's County approved for Largo TIF district
- Opportunity cost equals total tax revenue until the bond is paid off; thereafter it equals the amount set aside for infrastructure improvements
    - The exact amount varies by the amount of the infrastructure improvement set-aside fund. The cost-effectiveness analyses account for 15% of revenue and 30%. The total NPV costs change only slightly in response to changes in the set-aside amount.
    - Cost and cost-effectiveness figures used in alternatives analysis are the average of total NPV costs between the scenario with a 15% set-aside fund and a 30% set-aside.

Administrative costs								
	Acres	Year 1	Year 2	Year 3	Year 4	Year 5	Average for district	Per acre
Dallas Cedars TIF District (245 acres)	245.00	$34,292.04	$104,901.98	$41,314.40	$48,305.90	$83,165.00	$62,395.86	$254.68
Dallas TOD TIF District (1,641.6 Acres)	1641.60	$58,204.69	$120,593.64	$59,034.98	$85,442.98		$80,819.07	$49.23
Dallas Maple/Mockingbird TIF District (331.3	331.00	$48,746.11	$44,530.77	$49,831.16	$53,415.30	$60,630.00	$51,430.67	$155.38
Davis Garden TIF	700.00	$38,206.37	$48,270.74	$59,415.62	66,655.17	$73,410.04	$57,191.59	$81.70
Fort Worth	448.00	37,396.14	$115,100.09	54,741.19	$56,979.04	89,509.77	$70,745.25	$157.91
City Center	92.50	86,488.18	190,478.26	84,087.02	81,937.24	68,035.21	$102,205.18	$1,104.92
Cypress Waters TIF District	960.00	36,880.06	$121,248.67	49,855.11	$42,877.78	57,917.49	$61,755.82	$64.33
Average	631.16	$48,601.94	$106,446.31	$56,897.07	$62,230.49	$72,111.25	$69,506.21	$266.88
Est. total admin cost to County	$1,112,099.30							

Alternative 2: Form-based codes

Training costs=online webinars from the Form-Based Codes Institute

Source https://formbasedcodes.org/webinars/
Total $550

Cost to hire 3 new planners to design and administer program
Source: https://askwonder.com/research/strategic-consulting-firm-rates-vmi6dttly
average salary: $83,428.00
yearly cost: $250,284.00

Alternative 3: Points-based zoning

Cost to hire 3 new planners to design and administer program

average salary $83,428.00
yearly cost $250,284.00

Opportunity cost of impact fee waivers

regular school surcharge $19,826.00
WMATA school surcharge $11,560.00
regular public safety surcharge $9,362.00
WMATA public safety surcharge $3,123.00
current school surcharge reduction (per project) $8,266.00
current public safety surcharge reduction (per project) $6,239.00

total reduction $14,505.00
school surcharge percent reduction -41.69272672
public safety percent reduction -66.64174322
50% school surcharge reduction fee $9,913.00
70% public safety surcharge reduction $2,808.60
new school surcharge reduction (opportunity cost) $9,913.00
new public safety surcharge reduction (opportunity cost) $6,553.40

total fee reduction (total opportunity cost per project) $16,466.40

Average acres per project 1.192105263
Average impact fee reduction (opportunity cost) per acre $13,812.87

Opportunity cost of tax credits-- based on PGC's revitalization tax credit

year 1 100% reduction
year 2 66% reduction
year 3 33% reduction

Cost of lunchtime workshops with Montgomery County planners

boxed lunch $15.00
est. number of attendees $12.00

Est. number of workshops	$4.00
total	$720.00
round up	$1,000.00

Appendix B: Revenue Assumptions and Calculations

Calculated per acre over 30-year project lifespan, discounted at 7%

To find total revenue for county:

- Derive incremental revenue/acre from case studies and calculations
- Multiply by 1,605.12 (estimate of acres available to County for development)

Estimate of number of available, publicly-owned acres (numbers not available for all areas):

Regional transit centers			**Local transit centers**	
Largo	22		Addison rd	33.00
Branch Ave	37.9		West Hyattsville	27.50
College park	371		Landover	31.20
Greenbelt	**371**		Capitol Heights	16.11
Suitland	359		Morgan Blvd	25.00
Prince George's Plaza	22		Southern Ave	19.30
New Carrolltton	52.7		Cheverly	30.20
			Naylor Road	10.70
Average	176.514		**Average**	24.13
Total acres of land in RTCs (Average acres x 8)	1412.11		Total acres of land in Local Transit Centers (Average acres x 8)	193.01
Total acres	**1605.12**			

Alternative 1: TIF Expansion

Source: Dallas TIF District reports ("Tax Increment Financing," n.d.)

Yearly incremental tax revenue							
District	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Average**
City Center TIF District	$6,948,959.35	$7,630,095.81	$7,933,146.89	$6,638,761.73	7,791,576.27		$7,388,508.01
Cypress Waters TIF District	$3,333,306.54	4,225,506.74	$5,589,207.59	$5,507,430.20	$5,765,329.14		$4,884,156.04
Dallas Cedars TIF District	$1,287,050.55	$1,646,005.92	$1,949,507.05	$1,987,421.35	$2,110,973.00		$1,796,191.57
Dallas Maple/Mockingbird TIF District						$5,892,325.00	$5,892,325.00
Dallas TOD TIF District	$2,201,224.89	$2,304,847.90	$2,513,851.63	$3,159,546.54	$3,547,513.99	$3,801,007.00	$2,921,331.99
Davis Garden TIF District						$3,424,376.00	$3,424,376.00
Deep Ellum	$2,983,944.29	$4,359,596.24	$4,811,978.47	$5,854,241.52	$7,081,019.27		$5,018,155.96
Design District	$4,601,701.93	$5,364,752.98	$5,305,902.61	$5,094,822.75	$5,873,172.80		$5,248,070.61
Downtown Connection	$30,965,100.76	$35,604,508.91	37,321,278.11	40,908,752.27	$39,783,760.00		$36,199,910.01
Farmers Market	$3,775,417.66	$3,557,600.01	$3,631,623.08	$3,092,606.95	$3,580,149.70		$3,527,479.48
Fort Worth Avenue TIF District	$2,313,328.83	$2,286,813.37	$3,564,307.53	$3,401,354.17	$3,619,263.47		$3,037,013.47
Grand Park South TIF District	$170,710.18	$207,439.60	$267,170.42	$259,412.16	$506,096.48		$282,165.77
Mall Area Redevelopment TIF District	$644,416.03	616,319.26	586,071.65	$443,868.18	1,076,798.12		$673,494.65
Oak Cliff Gateway TIF District	$2,989,777.13	$4,001,121.30	$4,739,254.19	$5,059,805.37	$6,434,705.48		$4,644,932.69
Skillman Corridor TIF District	$4,097,006.67	$4,398,932.49	$5,468,821.02	$5,438,304.54	$6,169,510.54		$5,114,515.05
Southwestern Medical TIF District	$1,480,138.47	$1,585,202.15	$969,993.03	$961,181.69	$1,078,314.52		$1,214,965.97
Sports Arena	10,966,733.43	$11,741,762.70	$12,107,981.05	$14,208,620.79	$12,977,968.00		$12,400,613.19
University TIF District	$172,415.55	$892,972.96	$1,561,566.18	$1,634,374.40	$1,995,361.63		$1,251,338.14
Vickery Meadow TIF District	3,367,387.43	3,374,883.18	$3,510,604.59	$3,230,803.38	$3,490,723.88	$0.00	$2,829,067.07

Yearly incremental tax revenue per acre								
District	**Acreage**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Average**
City Center TIF District	92.5	$75,123.88	$101.57	$78,107.64	$85.00	$91,670.96	$0.00	$40,848.18
Cypress Waters TIF District	960	$3,472.19	$1,216.96	$4,592.78	$1,199.15	$4,807.85	$0.00	$2,548.15
Dallas Cedars TIF District	245	$5,253.27	$313.33	$6,221.90	$319.42	$6,608.69	$0.00	$3,119.44
Dallas Maple/Mockingbird TIF District	331	$0.00					$17,801.59	$8,900.79
Dallas TOD TIF District	1641	$1,341.39	$1,404.54	$1,531.90	$1,925.38	$2,161.80	$2,316.27	$1,780.21
Davis Garden TIF District	700	$0.00	$0.00	$0.00	$0.00	$0.00	$4,891.97	$815.33
Deep Ellum	210	$14,209.26	$20,759.98	$22,914.18	$27,877.34	$33,719.14	$0.00	$19,913.32
Design District	292	$15,759.25	$18,372.44	$18,170.90	$17,448.02	$20,113.61	$0.00	$14,977.37
Downtown Connection	266.5	$116,191.75	$133,600.41	$140,042.32	$153,503.76	$149,282.40	$0.00	$115,436.77
Farmers Market	114.8	$32,886.91	$30,989.55	$31,634.35	$26,939.08	$31,185.97	$0.00	$25,605.98
Fort Worth Avenue TIF District	448	$5,163.68	$5,104.49	$7,956.04	$7,592.31	$8,078.71	$0.00	$5,649.21
Grand Park South TIF District	228	$748.73	$909.82	$1,171.80	$1,137.77	$2,219.72	$0.00	$1,031.31
Mall Area Redevelopment TIF District	270.5	$2,382.31	$2,278.44	$2,166.62	$1,640.92	$3,980.77	$0.00	$2,074.84
Oak Cliff Gateway TIF District	453	$6,599.95	$8,832.50	$10,461.93	$11,169.55	$14,204.65	$0.00	$8,544.76
Skillman Corridor TIF District	882	$4,645.13	$4,987.45	$6,200.48	$6,165.88	$6,994.91	$0.00	$4,832.31
Southwestern Medical TIF District	302	$4,901.12	$5,249.01	$3,211.90	$3,182.72	$3,570.58	$0.00	$3,352.56
Sports Arena	193	$56,822.45	$60,838.15	$62,735.65	$73,619.80	$67,243.36	$0.00	$53,543.23
University TIF District	458	$376.45	$1,949.72	$3,409.53	$3,568.50	$4,356.68	$0.00	$2,276.82
Vickery Meadow TIF District	179.65	$18,744.15	$18,785.88	$19,541.36	$17,983.88	$19,430.69	$0.00	$15,747.66
Average	$435	$19,191	$17,539	$23,337	$19,742	$26,091	$1,316	$17,421

Multiplied by 1,605.12 acres = $22,826,031.56 in incremental property tax revenue/year

Alternative 2: Form-based codes

Source: 4 case studies analyzed in report from Smart Growth America (*Zoned In*, 2019).

- Average yearly incremental revenue compared to base case, across 4 different areas
- Parcels range from 400-1500 acres; midpoint/average = 950 acres
- Divide average incremental revenue/average acreage = annual incremental revenue per acre

Form-based code average property tax revenue $47,163,282.53
Base case average revenue $25,998,718.44
Average incremental revenue $21,164,564.09
Acreage range 400-1500
Average acreage 950
Average incremental revenue per acre $22,278.49
Multiplied by 1,605.12 acres = $29,190,526.27 in incremental property tax revenue/year

Alternative 3: Points-based zoning

- Difference between property tax revenue generated at base value and tax revenue projected at current assessed value
- Because base value is used to calculate phase-in value

Data sources:

- Montgomery County's Interactive Development Dashboard
- Maryland SDAT Real Property Data search

Tax rates calculated as if properties were in PGC and subject to PGC tax rates

Projected property tax revenue per project						
Address	Acreage	Base value	Current value	Base property tax revenue	New property tax revenue based on current valuation	Incremental change in property tax revenue
7607 Old Georgetown Rd	0.92	$9,979,500.00	$12,825,000.00	$99,795.00	$128,250.00	$28,455.00
12710 Twinbrook Pkwy	0.8	$2,480,100.00	$2,960,200.00	$24,801.00	$29,602.00	$4,801.00
12500 Ardennes Ave	1.31	$7,459,600.00	$14,235,500.00	$74,596.00	$142,355.00	$67,759.00
8015 Old Georgetown Rd	1.83	$3,609,700.00	$20,990,600.00	$36,097.00	$209,906.00	$236,071.20
11141 Georgia Ave	0.51	$44,176,200.00	$40,656,100.00	$441,762.00	$406,561.00	-$43,649.24
819 Silver Spring Ave	0.19	$1,027,800.00	$1,012,400.00	$10,278.00	$10,124.00	-$190.96
7000 Wisconsin Ave	0.34	$67,909,400.00	$76,519,100.00	$679,094.00	$765,191.00	$106,760.28
4725 Cheltenham Dr	0.24	$2,351,200.00	$4,413,100.00	$23,512.00	$44,131.00	$20,619.00
4824 Edgemoor Ln	0.18	$1,494,100.00	$1,567,300.00	$14,941.00	$15,673.00	$732.00
8000 Wisconsin Av	0.07	$1,657,200.00	$1,963,800.00	$16,572.00	$19,638.00	$3,066.00
1040 Spring St	0.86	$17,700,000.00	$18,340,800.00	$177,000.00	$183,408.00	$6,408.00
7316 Wisconsin Ave	0.56	$11,311,100.00	$11,311,100.00	$113,111.00	$113,111.00	$0.00
4918 St Elmo Ave	0.47	$60,062,500.00	$70,405,500.00	$600,625.00	$704,055.00	$80,890.16
8605 Cameron St	0.36	$3,473,400.00	$3,473,400.00	$34,734.00	$34,734.00	$0.00
7750 Wisconsin Ave,	2.26	$608,997,600.00	$614,868,400.00	$6,089,976.00	$6,148,684.00	$58,708.00
10540 Metropolitan Ave	1.59	$22,208,100.00	$25,545,800.00	$222,081.00	$255,458.00	$41,387.48
15251 Siesta Key Way	5.09	$96,709,900.00	$99,986,700.00	$967,099.00	$999,867.00	$32,768.00
9305 Corporate Blvd,	3.32	$48,600,300.00	$49,168,800.00	$486,003.00	$491,688.00	$5,685.00
8525 Chevy Chase Lake Te	1.75	$149,346,600.00	$152,043,400.00	$1,493,466.00	$1,520,434.00	$33,440.32
Average	1.192105	$61,081,805.26	$64,330,894.74	$610,818.05	$643,308.95	$35,984.75

Projected property tax revenue per acre				
Address	Acreage	Base per acre property tax revenue	New per acre property tax revenue	Per acre incremental change
7607 Old Georgetown Rd	0.92	$108,472.83	$139,402.17	$30,929.35
12710 Twinbrook Pkwy	0.8	$31,001.25	$37,002.50	$6,001.25
12500 Ardennes Ave	1.31	$56,943.51	$108,667.94	$51,724.43
8015 Old Georgetown Rd	1.83	$19,725.14	$114,702.73	$94,977.60
11141 Georgia Ave	0.51	$866,200.00	$797,178.43	-$69,021.57
819 Silver Spring Ave	0.19	$54,094.74	$53,284.21	-$810.53
7000 Wisconsin Ave	0.34	$1,997,335.29	$2,250,561.76	$253,226.47
4725 Cheltenham Dr	0.24	$97,966.67	$183,879.17	$85,912.50
4824 Edgemoor Ln	0.18	$83,005.56	$87,072.22	$4,066.67
8000 Wisconsin Av	0.07	$236,742.86	$280,542.86	$43,800.00
1040 Spring St	0.86	$205,813.95	$213,265.12	$7,451.16
7316 Wisconsin Ave	0.56	$201,983.93	$201,983.93	$0.00
4918 St Elmo Ave	0.47	$1,277,925.53	$1,497,989.36	$220,063.83
8605 Cameron St	0.36	$96,483.33	$96,483.33	$0.00
7750 Wisconsin Ave,	2.26	$2,694,679.65	$2,720,656.64	$25,976.99
10540 Metropolitan Ave	1.59	$139,673.58	$160,665.41	$20,991.82
15251 Siesta Key Way	5.09	$189,999.80	$196,437.52	$6,437.72
9305 Corporate Blvd,	3.32	$146,386.45	$148,098.80	$1,712.35
8525 Chevy Chase Lake Te	1.75	$853,409.14	$868,819.43	$15,410.29
Average	1.192105	$492,518.06	$534,562.82	$42,044.75

Multiplied by 1,605.12 acres = $55,089,387.98 in incremental property tax revenue/year

Appendix C: Cost-Effectiveness

Alternative 1: TIF Expansion

TIF Cost-Effectiveness (30% infrastructure improvement)						
Year	Upfront cost to county (bond debt)	Administrative costs	Opportunity cost	Infrastructure Improvement Fund (30%)	Bond repayment (divide cost of bond over 10 year repayment period)	Effect: Incremental Tax Revenue
1	$12,128,252	$1,112,099.30	$0.00	$0.00	$0.00	$0.00
2		$1,039,345.14	$0.00	$0.00	$0.00	$0.00
3		$971,350.60	$0.00	$0.00	$0.00	$0.00
4		$907,804.30	$6,485.36	$4,225.61	$2,259.75	$22,826,031.56
5		$848,415.23	$6,061.09	$3,949.17	$2,111.92	$21,332,739.78
6		$792,911.43	$5,664.57	$3,690.81	$1,973.75	$19,937,139.98
7		$741,038.72	$5,293.99	$3,449.36	$1,844.63	$18,632,841.10
8		$692,559.55	$4,947.65	$3,223.70	$1,723.95	$17,413,870.19
9		$647,251.92	$4,623.97	$3,012.80	$1,611.17	$16,274,645.04
10		$604,908.33	$4,321.47	$2,815.70	$1,505.77	$15,209,948.63
11		$565,334.89	$2,631.50	$2,631.50	$0.00	$14,214,905.27
12		$528,350.37	$2,459.34	$2,459.34	$0.00	$13,284,958.19
13		$493,785.39	$2,298.45	$2,298.45	$0.00	$12,415,848.78
14		$461,481.67	$2,148.09	$2,148.09	$0.00	$11,603,596.99
15		$431,291.28	$2,007.56	$2,007.56	$0.00	$10,844,483.17
16		$403,075.96	$1,876.22	$1,876.22	$0.00	$10,135,031.00
17		$376,706.51	$1,753.48	$1,753.48	$0.00	$9,471,991.59
18		$352,062.16	$1,638.77	$1,638.77	$0.00	$8,852,328.58
19		$329,030.05	$1,531.56	$1,531.56	$0.00	$8,273,204.28
20		$307,504.72	$1,431.36	$1,431.36	$0.00	$7,731,966.62
21		$287,387.59	$1,337.72	$1,337.72	$0.00	$7,226,137.03
22		$268,586.53	$1,250.21	$1,250.21	$0.00	$6,753,399.09
23		$251,015.45	$1,168.42	$1,168.42	$0.00	$6,311,587.94
24		$234,593.88	$1,091.98	$1,091.98	$0.00	$5,898,680.32
25		$219,246.62	$1,020.54	$1,020.54	$0.00	$5,512,785.34
26		$204,903.38	$953.78	$953.78	$0.00	$5,152,135.83
27		$191,498.49	$891.38	$891.38	$0.00	$4,815,080.22
28		$178,970.55	$833.07	$833.07	$0.00	$4,500,074.97
29		$167,262.20	$778.57	$778.57	$0.00	$4,205,677.54
30		$156,319.81	$727.63	$727.63	$0.00	$3,930,539.76
TOTAL NPV	$12,128,252	$14,766,092	$67,227.70	$54,196.77	$13,030.93	##############
Total NPV Cost	$26,961,572					
Total NPV Effect	$292,761,628.80					
Cost-Effectiveness	$0.09					

TIF Cost-Effectiveness (15% infrastructure improvement)						
Year	Upfront cost to county (bond debt)	Administrative costs	Opportunity cost	Infrastructure Improvement Fund (15%)	Bond repayment (divide cost of bond over 10 year repayment period)	Effect: Incremental Tax Revenue Per Acre
1	$12,128,252	$1,112,099.30	$0.00	$0.00	$0.00	$0.00
2		$1,039,345.14	$0.00	$0.00	$0.00	$0.00
3		$971,350.60	$0.00	$0.00	$0.00	$0.00
4		$907,804.30	$3,426,164.48	$3,423,904.73	$2,259.75	$22,826,031.56
5		$848,415.23	$3,202,022.88	$3,199,910.97	$2,111.92	$21,332,739.78
6		$792,911.43	$2,992,544.75	$2,990,571.00	$1,973.75	$19,937,139.98
7		$741,038.72	$2,796,770.79	$2,794,926.17	$1,844.63	$18,632,841.10
8		$692,559.55	$2,613,804.48	$2,612,080.53	$1,723.95	$17,413,870.19
9		$647,251.92	$2,442,807.93	$2,441,196.76	$1,611.17	$16,274,645.04
10		$604,908.33	$2,282,998.06	$2,281,492.30	$1,505.77	$15,209,948.63
11		$565,334.89	$2,132,235.79	$2,132,235.79	$0.00	$14,214,905.27
12		$528,350.37	$1,992,743.73	$1,992,743.73	$0.00	$13,284,958.19
13		$493,785.39	$1,862,377.32	$1,862,377.32	$0.00	$12,415,848.78
14		$461,481.67	$1,740,539.55	$1,740,539.55	$0.00	$11,603,596.99
15		$431,291.28	$1,626,672.47	$1,626,672.47	$0.00	$10,844,483.17
16		$403,075.96	$1,520,254.65	$1,520,254.65	$0.00	$10,135,031.00
17		$376,706.51	$1,420,798.74	$1,420,798.74	$0.00	$9,471,991.59
18		$352,062.16	$1,327,849.29	$1,327,849.29	$0.00	$8,852,328.58
19		$329,030.05	$1,240,980.64	$1,240,980.64	$0.00	$8,273,204.28
20		$307,504.72	$1,159,794.99	$1,159,794.99	$0.00	$7,731,966.62
21		$287,387.59	$1,083,920.55	$1,083,920.55	$0.00	$7,226,137.03
22		$268,586.53	$1,013,009.86	$1,013,009.86	$0.00	$6,753,399.09
23		$251,015.45	$946,738.19	$946,738.19	$0.00	$6,311,587.94
24		$234,593.88	$884,802.05	$884,802.05	$0.00	$5,898,680.32
25		$219,246.62	$826,917.80	$826,917.80	$0.00	$5,512,785.34
26		$204,903.38	$772,820.37	$772,820.37	$0.00	$5,152,135.83
27		$191,498.49	$722,262.03	$722,262.03	$0.00	$4,815,080.22
28		$178,970.55	$675,011.25	$675,011.25	$0.00	$4,500,074.97
29		$167,262.20	$630,851.63	$630,851.63	$0.00	$4,205,677.54
30		$156,319.81	$589,580.96	$589,580.96	$0.00	$3,930,539.76
TOTAL NPV	$12,128,252	$14,766,092	$43,927,275.25	$43,914,244.32	$13,030.93	$292,761,628.80
Total NPV Cost	$70,821,620					
Total NPV Effect	$292,761,628.80					
Cost-Effectiveness	$0.24					

Alternative 2: Form-based codes

Year	Consultants	Training (online webinars)	Labor	Effect: Yearly Tax Revenue
1	$261,360.00	$550.00	$250,284.00	$0.00
2			$233,910.28	$0.00
3			$218,607.74	$0.00
4			$204,306.30	$29,190,524.32
5			$190,940.47	$27,280,865.67
6			$178,449.03	$25,496,136.14
7			$166,774.80	$23,828,164.62
8			$155,864.30	$22,269,312.73
9			$145,667.57	$20,812,441.80
10			$136,137.91	$19,450,880.19
11			$127,231.69	$18,178,392.70
12			$118,908.13	$16,989,152.05
13			$111,129.09	$15,877,712.20
14			$103,858.96	$14,838,983.36
15			$97,064.45	$13,868,208.75
16			$90,714.44	$12,960,942.76
17			$84,779.85	$12,113,030.62
18			$79,233.50	$11,320,589.36
19			$74,050.00	$10,579,990.06
20			$69,205.61	$9,887,841.17
21			$64,678.14	$9,240,973.06
22			$60,446.86	$8,636,423.42
23			$56,492.39	$8,071,423.76
24			$52,796.63	$7,543,386.69
25			$49,342.64	$7,049,894.10
26			$46,114.62	$6,588,686.08
27			$43,097.78	$6,157,650.54
28			$40,278.30	$5,754,813.59
29			$37,643.27	$5,378,330.46
30			$35,180.62	$5,026,477.06
Total NPV	$261,360.00	$550.00	$3,323,189.38	$374,391,227.24
Total NPV costs	$3,585,099.38			
Total NPV effect	$374,391,227.24			
Cost-effectiveness	**$0.01**			

Alternative 3: Points-based zoning

Panel A: Density Bonus Incentive			
Year	**Training/learning costs (lunch workshops)**	**Labor costs**	**Effect: Yearly Tax Revenue**
1	$1,000	$250,284.00	$0.00
2		$233,910.28	$0.00
3		$218,607.74	$0.00
4		$204,306.30	$55,089,387.98
5		$190,940.47	$51,485,409.33
6		$178,449.03	$48,117,204.98
7		$166,774.80	$44,969,350.45
8		$155,864.30	$42,027,430.33
9		$145,667.57	$39,277,972.27
10		$136,137.91	$36,708,385.30
11		$127,231.69	$34,306,902.15
12		$118,908.13	$32,062,525.37
13		$111,129.09	$29,964,976.98
14		$103,858.96	$28,004,651.38
15		$97,064.45	$26,172,571.39
16		$90,714.44	$24,460,347.09
17		$84,779.85	$22,860,137.47
18		$79,233.50	$21,364,614.46
19		$74,050.00	$19,966,929.40
20		$69,205.61	$18,660,681.68
21		$64,678.14	$17,439,889.42
22		$60,446.86	$16,298,962.08
23		$56,492.39	$15,232,674.84
24		$52,796.63	$14,236,144.71
25		$49,342.64	$13,304,808.14
26		$46,114.62	$12,434,400.13
27		$43,097.78	$11,620,934.70
28		$40,278.30	$10,860,686.64
29		$37,643.27	$10,150,174.43
30		$35,180.62	$9,486,144.32
Total NPV	$1,000	$3,323,189.38	$706,564,297.38
Total NPV costs	$3,324,189		
Total NPV effect	$706,564,297.38		
Cost-effectiveness	**$0.00**		

Panel B: Impact Fee Waiver Incentive				
Year	Impact fee waiver	Training/learning costs (lunch workshops)	Labor costs	Effect: Yearly Tax Revenue
1	$22,171,320.59	$1,000	$250,284.00	$0.00
2			$233,910.28	$0.00
3			$218,607.74	$0.00
4			$204,306.30	$55,089,387.98
5			$190,940.47	$51,485,409.33
6			$178,449.03	$48,117,204.98
7			$166,774.80	$44,969,350.45
8			$155,864.30	$42,027,430.33
9			$145,667.57	$39,277,972.27
10			$136,137.91	$36,708,385.30
11			$127,231.69	$34,306,902.15
12			$118,908.13	$32,062,525.37
13			$111,129.09	$29,964,976.98
14			$103,858.96	$28,004,651.38
15			$97,064.45	$26,172,571.39
16			$90,714.44	$24,460,347.09
17			$84,779.85	$22,860,137.47
18			$79,233.50	$21,364,614.46
19			$74,050.00	$19,966,929.40
20			$69,205.61	$18,660,681.68
21			$64,678.14	$17,439,889.42
22			$60,446.86	$16,298,962.08
23			$56,492.39	$15,232,674.84
24			$52,796.63	$14,236,144.71
25			$49,342.64	$13,304,808.14
26			$46,114.62	$12,434,400.13
27			$43,097.78	$11,620,934.70
28			$40,278.30	$10,860,686.64
29			$37,643.27	$10,150,174.43
30			$35,180.62	$9,486,144.32
Total NPV	$22,171,320.59	$1,000	$3,323,189.38	$706,564,297.38
Total costs	$25,495,509.97			
Total effect	$706,564,297.38			
Cost-effectivenes	$0.04			

Panel C: Tax Credit					
Year	Tax credit (opportunity cost per acre)	Training/learning costs (lunch workshops)	Labor costs	Effect: Yearly Tax Revenue	
1	$0.00	$1,000.00	$250,284.00	$0.00	
2	$0.00		$233,910.28	$0.00	
3	$0.00		$218,607.74	$0.00	
4	$55,089,387.98		$204,306.30	$55,089,387.98	
5	$33,980,370.16		$190,940.47	$51,485,409.33	
6	$15,878,677.64		$178,449.03	$48,117,204.98	
7			$166,774.80	$44,969,350.45	
8			$155,864.30	$42,027,430.33	
9			$145,667.57	$39,277,972.27	
10			$136,137.91	$36,708,385.30	
11			$127,231.69	$34,306,902.15	
12			$118,908.13	$32,062,525.37	
13			$111,129.09	$29,964,976.98	
14			$103,858.96	$28,004,651.38	
15			$97,064.45	$26,172,571.39	
16			$90,714.44	$24,460,347.09	
17			$84,779.85	$22,860,137.47	
18			$79,233.50	$21,364,614.46	
19			$74,050.00	$19,966,929.40	
20			$69,205.61	$18,660,681.68	
21			$64,678.14	$17,439,889.42	
22			$60,446.86	$16,298,962.08	
23			$56,492.39	$15,232,674.84	
24			$52,796.63	$14,236,144.71	
25			$49,342.64	$13,304,808.14	
26			$46,114.62	$12,434,400.13	
27			$43,097.78	$11,620,934.70	
28			$40,278.30	$10,860,686.64	
29			$37,643.27	$10,150,174.43	
30			$35,180.62	$9,486,144.32	
Total NPV	$104,948,435.78	$1,000.00	$3,323,189.38	$706,564,297.38	
Total costs	$108,272,625.16				
Total effect	$706,564,297.38				
Cost-effectivenes	**$0.15**				

Appendix D: Montgomery County Benefits Menu

Table 2: List of Public Benefits in the Incentive Density Implementation Guidelines

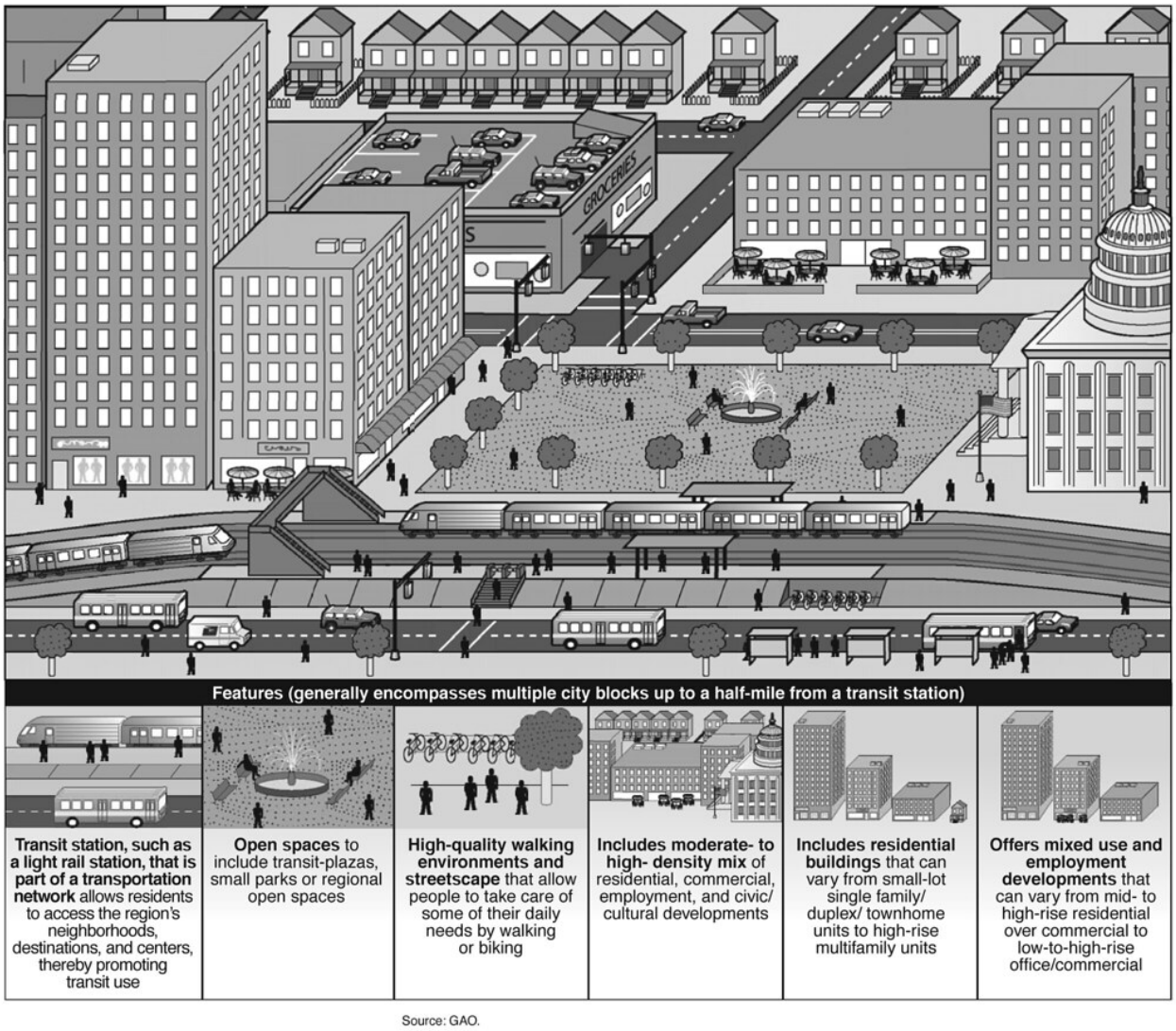
Category 1:	**Major Public Facility**	**Maximum Points (a)**
Subcategories:	None. Planning Board approves or denies the choice of public facility included in a project	70
Category 2:	**Transit Proximity**	
Subcategories:	None. Points awarded based on distance and type of transit.	50
Category 3:	**Connectivity and Mobility**	
Subcategories:	Advance Dedication	30
	Minimum Parking	10
	Neighborhood Services	15
	Public Parking	25
	Through-Block Connection	20
	Transit Access Improvement	20
	Streetscape Improvement	20
	Trip Mitigation	20
	Way Finding	10
Category 4:	**Diversity of Uses**	
Subcategories:	Adaptive Buildings	15
	Care Centers	20
	Dwelling unit Mix	10
	Enhanced Accessibility	20
	Live/Work	15
	MPDU (b)	n.a.

Category 5:	**Quality Building and Site Design**	**Maximum Points (a)**
Subcategories:	Architectural Elevations	20
	Exceptional Design	10
	Historic Resource Protection	20
	Public Art	20
	Public Open Space	15
	Structured Parking	20
	Tower Step-Back	10
Category 6:	**Protection and Enhancement of the Natural Environment**	
Subcategories:	Building Lot Terminations	30
	Cool Roof	10
	Energy Conservation and Generation	15
	Habtat Preservation and Restoration	20
	Recycling Facility Plan	10
	Transferable Development Rights	20
	Tree Canopy	15
	Vegetated Area	10
	Vegetated Roof	15
	Vegetated Wall	10
Category 7:	**Retained Buildings**	
Subcategories:	None	100

Source: Kronenburg, R., Sharma, A., & Bilal, A. (2023). Incentive Zoning Update**:** Improving the Public Benefits Points System for CR and Employment Zones. *Montgomery Planning*. https://montgomeryplanningboard.org/wp-content/uploads/2023/04/Incentive_Zoning_Update_Scope_of_Work_Final.pdf

Appendix E: Features of Transit-Oriented Development

Figure 1: Representation of a Transit-Oriented Development and Key Components



Source: GAO.

Source: Government Accountability Office

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