



# City of Cambridge

## Executive Department

**LOUIS A. DePASQUALE**  
City Manager

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Deputy City Manager

January 22, 2021

Councillor Dennis Carlone  
Councillor Marc McGovern  
Chairs, Ordinance Committee

Dear Councillor Carlone and Councillor McGovern:

I am pleased to transmit in advance of the Ordinance Committee hearing scheduled for Wednesday, January 27, 2021 at 5:30pm, a memo, from the development economics consultant team led by Karl F. Seidman and Karp Strategies regarding a financial assessment of the MXD Amendments Zoning Petition submitted by the Cambridge Redevelopment Authority (CRA). This memo is in response to a Policy Order seeking a professional financial assessment of added value created for owner/petitioner-led up-zonings for developments of more than 50,000 square feet. It has been reviewed by staff in the Community Development Department, Assessing Department, Finance Department, and Budget Office.

The analysis is an independent estimation of the net increase in project value to a developer if the proposed zoning change is adopted, given reasonable assumptions and information obtained by the consultant about current market conditions and project costs. The net increase in value is compared to the estimated cost to the developer of accommodating the construction of an electrical transformer substation on the site.

It is hard to overstate the importance of this public benefit. This petition represents the culmination of a complex, multi-party effort led by the City to secure an alternative location for the planned electrical substation at 135 Fulkerson Street. If this proposal succeeds, it will positively impact the Wellington-Harrington neighborhood, Grand Junction Multi-Use Path, Kennedy Longfellow School and John A. Ahern Field while meeting the energy supply needs of the future. It will also enable the City's acquisition of 135 Fulkerson Street for public use, as part of the commitment by Alexandria Real Estate Equities.

It should be noted that this assessment is an estimate that includes many variables that can change due to external factors and that can significantly impact development values and costs. Moreover, this analysis reflects a snapshot in time, and cannot accurately predict future market conditions or performance. For example, the long-term impact of the COVID-19 Pandemic on the office and lab market is not fully known or understood at this time. As described in the memo, a developer undertaking a project from conception to completion carries significant risk as market conditions change. If unfavorable conditions lead to the project's costs exceeding its value, the development might not go forward and the associated benefits would not be realized.

I believe the analysis conducted herein demonstrates that the City will receive significant public benefits alongside a balanced increase in development potential to help realize this important project. The Planning Board and Ordinance Committee have both transmitted favorable recommendations on this petition.



I want to thank Karl Seidman and his team and City staff for their work on this report. I also want to thank the City Council, Eversource, the CRA and Boston Properties, Alexandria, and the neighborhood stakeholders who have helped bring the process to this critical point.

Sincerely,

A handwritten signature in cursive script that reads "Louis A. DePasquale".

Louis A. DePasquale  
City Manager

Attachment

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# MEMORANDUM

for

## THE CITY OF CAMBRIDGE

### Regarding Financial Analysis for the MXD Zoning Petition

Draft Memo 1/13/2020

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#### ● EXECUTIVE SUMMARY

**ZONING PETITION.** On September 17, 2020, the Cambridge Redevelopment Authority (CRA) in partnership with Boston Properties (BXP) and Eversource, submitted a zoning petition to amend Article 14 of the City Zoning Ordinance, which regulates development within the Kendall Center Mixed Use Development (MXD) District. The petition would facilitate the relocation of a proposed Eversource electrical substation from 135 Fulkerson Street to the Blue Garage<sup>1</sup> site within the MXD district. In exchange for making site investments needed to build the substation, BXP would be entitled to build an additional 800,000 square feet (SF) of commercial development at the site above what is currently permitted. The zoning petition would also accelerate the development of 400,000 SF of required multifamily housing and allow BXP to change its existing commitment to provide 80,000 SF of ownership housing as part of the project and replace it with rental housing units, among other minor modifications.

As requested by a recent City Council Policy Order, an economic analysis was conducted to assess the additional real estate project value from this rezoning petition and estimate the developer's cost for the public benefits to be delivered in tandem with the new development allowed by the petition. Since many factors impact the final project value – factors that may change before the final project is complete – the estimates used in this memo are indicative of the magnitude of the zoning petition's impact in 2020 dollars and should not be construed as a precise determination of this impact.

**METHODOLOGY.** The analysis herein presents the results of a financial model created to estimate the change in project value to BXP that would occur under the proposed zoning petition. To estimate the net value of the new development, the model estimated the financial value of increasing the gross floor area (GFA) allowed under the petition by 800,000 SF and subtracted the associated development costs. This value was then compared to estimated costs to relocate the Eversource substation.

**IMPACT ON PROJECT VALUE.** The new 800,000 SF of commercial development allowed under the zoning petition would generate an estimated net value of \$286 million, based on typical developer investment return requirements in East Cambridge.

**DEVELOPER COST FOR BENEFIT COMMITMENTS<sup>2</sup>.** There are considerable costs associated with relocating the Eversource substation to the Blue Garage site including: (1) site prep and demolition; (2) construction of the substation vault; and (3) underground replacement of parking. The estimated combined cost for these three items, net of payments from Eversource, is between \$270.3 and \$334.7 million. Additional indirect costs include: (a) the expense to finance these three investments, which is estimated between \$12.9 and \$29.8 million; and (b) the lost revenue and value from demolition of the 250 Binney Street property, estimated at \$9.2 million. Total direct and indirect developer substation costs are estimated to range from \$292.3 to \$373.7 million.

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<sup>1</sup> The alternative substation site, known as the Blue Garage, is located on Parcel Two of the Cambridge Center Development Area between Binney Street, Galileo Galilei Way and Broadway.

<sup>2</sup> For the purpose of this analysis, a "community benefit" is an additional direct benefit offered or proposed within the zoning petition itself or a letter of commitment that is not otherwise required under existing city zoning or other regulations. Existing zoning requirements which may provide a community benefit but are unchanged by the petition are not included (e.g., incentive zoning payments).

## ● INTRODUCTION

In 2019, the City Council adopted a Policy Order requesting an economic analysis of rezoning petitions that increase the development potential of sites by more than 50,000 square feet (SF). The goal of this analysis is to assess the potential change in property value from the zoning petition and estimate the value of public benefits to be delivered in tandem with new development allowed by the petition. In 2020, Cambridge hired Karl F. Seidman Consulting Services and Karp Strategies (together, the Consulting Team) as an independent third-party to prepare this analysis.

## ● ZONING PETITION

On September 17, 2020, the Cambridge Redevelopment Authority (CRA) in partnership with Boston Properties (BXP) and Eversource submitted a zoning petition to amend Article 14 of the City Zoning Ordinance, which regulates development within the Kendall Center Mixed Use Development (MXD) District. The proposed amendment would facilitate the relocation of the proposed Eversource electrical substation at 135 Fulkerson Street to the alternative Blue Garage site within the MXD area (see Figure 1). This relocation would be made economically feasible primarily by allowing an additional 800,000 SF of gross floor area (GFA) of commercial development. Additional changes to development uses in the petition include:

- Removing the current requirement that 20% of the residential GFA (80,000 SF) be built as ownership housing, allowing the full project to be comprised of rental units.
- Accelerating the completion of the 400,000 SF of allowed multifamily residential development by requiring it to be built in single phase before or simultaneously with the construction of the new commercial development. This change was not material to the financial analysis since it does not impact the commercial project.
- An GFA exemption for up to 20,000 SF is allowed for the inclusion of education and training space. Since this represents a small amount of the total commercial space, it will have little impact on how the zoning petition impacts the project value.
- Reduction in ground floor occupancy of nonresidential uses for buildings with shorter frontages overall.

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**Figure 1. Map of Blue Garage Site**



**North Parcel  
Blue Garage Site**

## METHODOLOGY + DATA SOURCES

### Process

To complete its analysis, the Consultant Team employed the following four-step methodology:

**STEP 1** — In conjunction with the Cambridge Community Development Department (CDD) and CRA, **the development scenarios that could occur with the zoning petition were determined.** This initial step also identified the relevant developer-provided public benefits: site investments to allow the Eversource substation to be built at the MXD Blue Garage site.

**STEP 2** — **The key financial parameters needed to complete the economic analysis of development scenarios were identified and estimated.** Examples of these parameters included rental and vacancy rates for the new construction office and lab space in Kendall Square, construction and other development costs, the financial returns for comparable development projects and costs associated with the developer provided public benefits<sup>3</sup>. To estimate these parameters, the Consultant Team:

- a. Reviewed real estate market reports from CoStar and other firms, City of Cambridge reports and public Security and Exchange filings by Boston Properties; analyzed building permit construction cost data for comparable projects; and
- b. Conducted 10 interviews, including with Boston Properties, Eversource, real estate brokers, construction firms and real estate consultants to the CRA.

**STEP 3** — **A financial model was prepared** and used to estimate the net operating income, project development costs and resulting project value under one development scenario for the new commercial development.

- **Project Value:** The project value for the commercial scenario was estimated based on dividing the expected net income by a required rate of return threshold for the type of use. A developer will only undertake or buy a project if it meets their standard for an investment return and they will fund a project based on this rate of return. For example, a developer with a 10% annual rate of return threshold will invest \$10 million to build a project that is expected to generate \$1 million in net income annually ( $\$1 \text{ million} / .10$ ) since the project will provide the developer with income equal to 10% of its total investment each year. More explanation of these return thresholds is provided below.
- **Development Costs:** In addition to the project value, the total project development costs were estimated based on data about construction and project soft costs (i.e., legal, engineering, design, insurance, taxes, fees, etc.)

<sup>3</sup> See Appendix A for the financial parameters used in the analysis.

- gained for comparable projects and from interviews.
- **Net Project Value:** The net impact of the zoning petition for the commercial development was calculated as the difference between the project value and total project development costs for the new space allowed under the zoning petition.

#### STEP 4

**The cost for developer public benefit commitments was estimated** using information obtained from Boston Properties, the CRA real estate consultants and other sources.

### Return Thresholds

As noted above, return thresholds were used to estimate the project value for the different development scenarios. Project developers face considerable financial risk when undertaking a project. Risks faced by developers include delays in obtaining project permitting, securing financing, and obtaining tenants for the project, which increase development costs and delay the receipt of income, all of which reduce investment returns. Another risk is unexpected changes in construction, financing or other costs which can increase development costs and lower actual returns. Finally, obtaining lower rents than expected due to changes in demand for space or increased competition from other developments can reduce project income and investment return.

Due to the time and risk involved in development, developers have a high return threshold, currently in the 6 to 7% range for Cambridge, depending on the development type and location. Investors, on the other hand, would acquire a property after it is built, leased and occupied, with the future income - at least over the lease terms - already established. Consequently, investors face less financial risk and have a lower return threshold, currently in the 4% to 5% range for Cambridge. The return threshold for a project developer was used for this analysis since it reflects the current status and risk for the project with Boston Properties as the site developer still at an early stage of development in which it faces considerable risks to complete the project within the projected costs (including the extensive site work and construction to accommodate the substation) and achieve the estimated rental income.

### Results

The results from this research and financial model analysis are presented below, beginning with an explanation of the development scenarios, and followed by the estimates for the zoning petition's impact on the financial value of the development and the value of proposed public benefits. All valuations and cost estimates are as of Q4 2020.

Since many factors impact the actual final project value, the estimates in this memo represent approximations based on current market and cost conditions. They are indicative of the general magnitude of the zoning petition's impact - not a precise determination of this impact.

## ● DEVELOPMENT SCENARIOS

### Commercial Scenario

The commercial portion of the existing MXD district is fully built-out so no new office and/or lab development can occur under existing zoning. Consequently, the single scenario analyzed herein was the development of a new 800,000 SF office/lab building, as allowed in the zoning petition<sup>4</sup>. Based on current market conditions, the project scale and developer, this scenario assumed 2/3 of the new space would be leased to life sciences firms for combined office/lab use and 1/3 leased would be leased as only office space. A small amount (5,000 SF) of ground floor retail space was included in this scenario.

## ● ZONING IMPACT ON PETITION VALUES

The new commercial development allowed under the zoning petition will generate a net value of real estate that Boston Properties can build in the MXD District. This net value from the additional commercial space is summarized in Table 1 and represents the project value of the new building under the zoning petition minus the development costs for the new building. Using developer investment return requirements, the increased GFA in the zoning petition would result in an estimated \$286 million in net project value.

**Table 1. Estimated Zoning Petition Impact on Project Value and Cost, in Millions**

Project Value	Amount
Office/Lab Building GFA	800,000 SF
Office/Lab Building NOI <sup>5</sup>	\$66,451,000
Project Value (developer return)	\$914,747,000
Building TDC <sup>6</sup>	\$628,708,000
Net Project Value	\$286,039,000

<sup>4</sup> The zoning petition also includes a GFA exclusion for up to 20,000 SF of education and training space built as part of the development. Since this space is optional, it is not included in the commercial development scenario analyzed herein.

<sup>5</sup> Net Operating Income. This amount is estimated based on current market rent and expected occupancy. Actual NOI when the project is built and occupied may be different as market conditions may change

<sup>6</sup> Total Development Costs. This amount is an estimate based on current construction and soft costs and the expected mix of lab, office and retail space. Actual costs may be different due to changes in construction and soft costs and the final mix of uses when the project is built.

Several factors impact and may ultimately change the resulting net project value:

- **Actual rents achieved in the commercial project leases.** This analysis assumes that the commercial office/lab space will be leased at \$93 per SF, based on one or two tenants occupying large portions of the development and negotiating a lower rent than current Kendall Square peaks, partly aided by competition from space available at other planned development projects in the neighborhood. If stronger demand for Kendall Square lab and/or office space occurs, and delays with other projects result in higher rents at the MXD project, then the gain in project value from the petition will be higher. Alternatively, if demand for space in Kendall Square declines, and the project achieves lower rents, the net value increase will be lower.
- **Net value is impacted by development costs.** If construction or other development costs are higher than estimated due to unexpected costs incurred, accelerated construction cost growth, or delays in securing development approvals, financing or leasing up the completed project, then actual development costs will be higher, resulting in a lower net value increase. Savings in development costs, on the other hand, will result in a higher increase in net project value.
- **Additionally, capital market changes may alter required returns for developers and potential future investors** – and, ultimately, how the increase in rental income with the zoning petition is valued by developers and investors. For example, continued low interest rates and low stock market returns may increase future investor interest in real estate assets and lower their return threshold. Within real estate assets, if other assets perform poorly and become less favored by investors, Cambridge lab and office space may become a more desirable asset with lower return thresholds than currently assumed. In these situations, future investors may be willing to pay more to acquire the completed project even if its income stream does not change. Similarly, developers may be able to raise capital at lower rates, reducing their return threshold.
- **Covid-19 impacts.** The future impacts of the Covid-19 pandemic are unknown at this time but could alter the project value and development costs. Long-term changes in the demand for office space and lab space may affect the rents achieved and the resulting project value. Changes in construction practices, material and labor costs could also alter construction costs; while new legal, regulatory or financial issues and processes can add to non-construction project soft costs.
- **Finally, the type of tenant and lease terms at the completed project alters its financial risks, and thus the desired return and value of the income stream.** If the commercial project is fully, or almost fully, leased to financially strong tenants with 15-20 year leases, investors will reduce their expected rate of return and pay more for the stabilized property, compared to one with financially riskier tenants and shorter leases.



## ● COST OF DEVELOPER BENEFIT COMMITMENTS

Boston Properties has agreed to undertake and cover the cost for multiple changes to the Blue Garage site to accommodate the Eversource substation. These site investments include (a) site preparation and demolition of the existing Blue Garage and 250 Binney Street building; (b) construction of the vault to house the underground substation; and (c) construction of replacement underground parking. Table 2 presents low and high cost estimates for these investments. The higher cost estimates reflect figures provided by Boston Properties while lower estimates are from amounts provided by the CRA's independent cost estimator (PM & C). These direct costs incurred by Boston Properties are estimated to total between \$283.2 million and \$347.7million. Eversource is assumed to compensate Boston Properties \$12.9 million for the prepared vault (the price it paid for the Fulkerson Street site) for a net cost ranging from \$270.3 to \$334.7 million.

**Table 2. Developer-Assumed Direct Costs Related to the Eversource Substation**

Direct Costs	Low Estimate	High Estimate
Site Prep/Demolition	\$19,809,000	\$32,750,000
Substation Vault	\$116,330,000	\$144,000,000
Replacement Parking	\$147,061,000	\$170,910,000
<b>Total Direct Costs</b>	<b>\$283,200,000</b>	<b>\$347,660,000</b>
Less Eversource Payment	-\$12,929,000	-\$12,929,000
<b>Total Net Direct Costs</b>	<b>\$270,271,000</b>	<b>\$334,731,000</b>

Boston Properties faces two additional indirect costs related to the Eversource substation, summarized in Table 3. First, Boston Properties will have to complete work for the Eversource substation before it can construct the new office/lab building and finance these costs until the office development is completed – when it can refinance these costs as part of long-term financing for that building. The estimated cost of this financing, referred to as ‘financial carry,’ assumes that these costs have to be financed for two years, and ranges from \$12.9 million and \$29.8 million. The low estimate is based on Boston Properties financing these costs with corporate debt while the high estimate assumes financing with shareholder equity, which has a higher cost.<sup>7</sup> A second indirect cost is lost rent for the 250 Binney Street building during the expected three-year time period when it is demolished to accommodate needed construction at the site and not yet replaced with a new building. The estimated value of this lost rent in 2020 dollars is \$9.2 million.

**Table 3. Developer-Assumed Indirect Costs Related to the Eversource Substation**

Indirect Costs	Low Estimate	High Estimate
Financial Carry for Substation Costs	\$12,852,000	\$29,755,000
Lost Value from 250 Binney Street	\$9,189,000	\$9,189,000
<b>Total Indirect Costs</b>	<b>\$22,041,000</b>	<b>\$38,944,000</b>

<sup>7</sup> Debt was assumed to have a 2.35% interest rate—the average yield for BBB rated corporate debt during the 4th quarter of 2020. Equity financing was assumed to have a cost of 4.35% based on Boston Properties' current dividend yield.

Boston Properties' total cost to accommodate the Eversource substation, inclusive of direct and indirect costs and after compensation from Eversource, is estimated at between \$292 and \$374 million.

**Table 4. Developer-Assumed Total Costs Related to the Eversource Substation**

Costs	Low Estimate	High Estimate
Total Direct Costs	\$270,271,000	\$334,731,000
Total Indirect Costs	\$22,041,000	\$38,944,000
<b>Total Combined Direct and Indirect Costs</b>	<b>\$292,312,000</b>	<b>\$373,675,000</b>

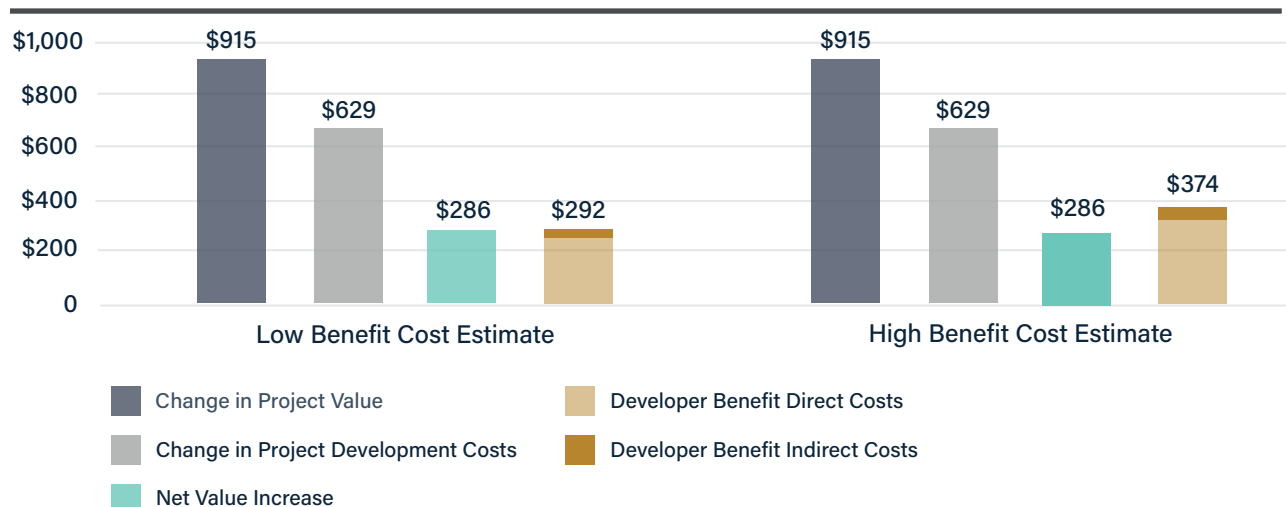
## ● CONCLUSION

Approval of the MXD zoning petition will enable an increase in the net value for of the new 800,000 SF commercial building permitted under the zoning petition. The estimated net value for this new development is \$286 million. These estimates reflect the risk and investment return thresholds for a developer undertaking the project from conception through completion. That value is subject to variability based on how market rents, development costs and other factors change between 2020 and the project's completion and occupancy.

Boston Properties has committed to undertake multiple investments needed to prepare the Blue Garage site to accommodate the Eversource substation at this site. The estimated combined direct and indirect costs for these investments range from \$292 to \$374 million.

Figure 2 compares the estimated increase in project value from the MXD zoning petition with high and low cost estimates for Boston Properties' provision of the public benefit of preparing the Blue Garage site for the Eversource substation.

**Figure 2. Comparison of Net Value Change and Developer Benefit Costs, in Millions**



## ● APPENDIX A | ASSUMPTIONS USED IN FINANCIAL MODELS

Table A.1. Office/Lab Development Assumptions for Financial Model of MXD Zoning Petition

Parameter	Kendall Square/MXD Petition
<b>Development Costs</b>	
TDC	
Land Costs	\$11.78 PSF based on CRA LDA
Construction - Core	\$400/GFA SF
Construction - TI Allowance/Lab	\$200/SF
Construction - TI Allowance - Office/Retail	\$90/SF
Soft Costs	30%
<b>Revenue</b>	
Life Sciences Office/Lab Rent	\$93 NNN
Office Rent, Other Tenants	\$93, Gross
Vacancy Rate	5%
Leasable Space/GFA	.95%
Building Operating Costs	\$19/SF
Tenant Mix	67% Life Science/Lab; 33% Office
Retail Rent	\$32 NNN
Eversource Site Consideration	\$12.9 Million
Loss Revenue from 250 Binney St.	3 years rent at \$70 NNN in 2020 dollars
<b>Financing</b>	
Return on Cost	6.75%

Table A.2. Site Parking and Demolition Costs

Site Work/Demolition Costs	
Site Work/Demolition	BXP/PM&C Estimates
Eversource Vault	BXP/PM&C Estimates
Underground Parking Garage	BXP/PM&C Estimates
Financial Carry for Costs	Estimated Costs for Demolition/Substation Vault/ Replacement Parking financed for 2 Years at BXP estimated cost of debt (low) and dividend yield (high)

## ● APPENDIX B | FINANCIAL MODEL RESULTS

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<b>Financial Parameter</b>	<b>Estimated Amount (\$ Million)</b>
Net Operating Income	\$62
Project Value, Developer Return	\$915
Land Costs	\$89
Construction Costs	\$443
Soft/Other Development Costs	\$96
Total Development Costs	\$629