

Draft Memorandum

To: Michael Buonocore, Interim Director
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From: Matt Kowta, MCP, Managing Principal
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Date: January 30, 2024

Re: Residential Development Cost Study Summary

Introduction

This memorandum summarizes the estimated residential development costs in cities similar to Portland as well as the relative financial impact of local Portland policies on the cost of delivering various residential development prototypes in the city. This analysis builds on the findings from the Portland Inclusionary Housing Calibration Study, which included market analysis and financial feasibility analysis testing of multifamily developments throughout the City of Portland. To inform this analysis, BAE conducted a series of stakeholder interviews with multifamily developers in the various cities, as well as in-depth discussions with Portland developers regarding the relative impact of local policies. This report provides a more detailed description of initial findings that were previewed at a July 2023 Council Work Session on housing production.

Comparison City Cost Analysis

To inform the relative cost of building residential projects in the City of Portland, the following section analyzes the cost of building the same residential development prototype in Portland and three other comparison cities, including Seattle, Denver, and Sacramento.

Methodology

In coordinating with City Staff, BAE selected a common residential development prototype to analyze for each comparison city. Based on a review of recent development trends in each city, this section summarizes the cost of delivering a six-story prototype on a one-half acre site with approximately 143 units. To estimate the construction cost of each prototype, BAE conducted a series of stakeholder interviews with developers and contractors in each comparison city in Spring 2023. Based on these stakeholder interviews, in addition to other public and private data sources, the following summarizes the estimated cost of building the same residential prototype in each city, including a breakdown of costs into categories such as land costs, hard costs, soft costs, and local system development charges or impact fees.

Portland Development Costs

As seen below in Table 1, the full cost of delivering the residential prototype in the City of Portland amounts to roughly **\$60.4 million, or \$423,000 per residential unit**. The most significant cost of building in Portland is associated with Hard Costs, which include labor and materials associated with the residential square footage. These costs amount to nearly \$250,000 per unit. Other significant costs include Soft Costs (\$55,000 per unit),¹ Land Acquisition Costs (\$50,000 per unit), and Parking Costs (\$30,000 per unit). The final costs to deliver the residential development prototype include local System Development Charges (SDCs), amounting to roughly \$16,000 per unit, as well as financing costs and a one-time developer fee, amounting to a nearly \$30,000 per unit combined.

Seattle Development Costs

The cost of building the same prototype in the City of Seattle is roughly 16 percent higher than building in Portland, equating to nearly **\$490,000 per unit**. Similar to Portland, Residential Hard Costs account for the largest share of the total development cost, amounting to nearly \$285,000 per unit. According to local stakeholders, the price of land in Seattle is roughly 60 percent higher than Portland, or equal to an estimated \$80,000 per unit. Soft Costs and Parking Costs in Seattle are between five and ten percent above the same costs in Portland, while local SDCs/Impact Fees in Seattle are well below Portland, at just \$350 per unit. According to interviews with local stakeholders and Seattle City staff, local impact fees are limited in Seattle as the city requires the improvement of adjacent infrastructure instead of a fee payment. For example, Seattle often requires developers to fund upgrades to transportation infrastructure within a short distance of the project instead of paying a transportation impact fee. This differs from the City of Portland approach where the City charges direct fees to developers to offset the impact on City services, including parks and transportation infrastructure. It is worth noting, however, that Seattle is currently considering implementing higher SDC/Impact fees to support citywide investment needs. Lastly, Financing Costs and Developer Fees are moderately higher in Seattle, primarily driven by the higher cost of building and the higher fees associated with financing and covering overhead costs during construction.

Denver Development Costs

The cost to build the six-story prototype in the City of Denver is roughly four percent less expensive compared to Portland, equating to roughly **\$407,000 per unit**. The primary difference is associated with the Hard Costs and Parking Costs. In Denver, these costs collectively amount to nearly \$250,000 per unit, compared to \$275,000 per unit in Portland. Land Costs in Denver are modestly higher than Portland, at \$65,000 per unit, though all land acquisition costs are dependent on site location and conditions. Soft Costs in Denver amount to \$45,000 per unit, which is roughly 16 percent less expensive than costs in Portland. According to local stakeholders, the lower soft costs are attributable to a transparent and fast

¹ Soft costs include fees for architecture, engineering, and legal, among other costs.

approval process, which reduces the time and costs associated with securing development entitlements. Developer Fees and Financing Costs in Denver are generally comparable to Portland, at between \$10,000 to \$20,000 per unit.

Sacramento Development Costs

Residential development costs in Sacramento are approximately 11 percent higher than Portland, or roughly **\$471,200 per residential unit**. Despite having similar Land Costs, the Residential Hard Costs (\$256,000 per unit), Soft Costs (\$72,000 per unit), and Local Impact Fees (\$25,000 per unit), are well above the same costs in Portland. The higher hard costs are primarily driven by the higher cost of labor relative to Portland, while the higher soft costs are associated with the more costly entitlement process which requires extensive environmental review and analysis. Due to the slightly higher cost of construction, financing fees and the developer fees are more costly in Sacramento, or between 15 and 45 percent more expensive.

Conclusion

Based on the above analysis, the cost of building a six-story multifamily development in Portland is comparable to Denver, but more than 10 percent less expensive relative to Seattle and Sacramento. As noted above, Hard Costs are the largest factor of the overall construction costs, which include labor and materials. These costs are a function of the cost of materials locally, as well as wages and availability of local general contractors. In Portland, these costs are among the lowest of the comparison cities, primarily associated with access to cheaper materials (primarily lumber) and lower wages relative to the other cities. Land prices are also a significant driver of development costs and are dependent on local market conditions and existing landowner expectations for land prices. In established markets like Seattle, these land costs tend to be higher due to the expected future growth in residential demand and real estate investment interest, while markets like Portland currently have lower land costs due to the lower residential rental rates and less perceived market strength.

Soft Costs and SDC/Impact Fees are partially influenced by the local jurisdiction. Soft costs are primarily associated with the pre-development process, including the approval and entitlement process with the local jurisdiction. In Portland, these costs are similar to the comparison jurisdictions, indicating the local approvals process is not dramatically increasing the cost of construction. However, stakeholder interviews in all cities indicated that a faster approval process will lead to lower soft costs and more developer/investor interest due to reduced risk during pre-development. In terms of SDC/Impact Fee charges, the City of Portland has relatively low fees compared to Denver and Sacramento, indicating that local fees are not excessively contributing to the cost of housing production relative to comparison cities.

Table 1: Development Cost Comparison Summary

City of Portland



6-Story Podium Prototype

City of Seattle



6-Story Podium Prototype

City of Denver



6-Story Podium Prototype

City of Sacramento



6-Story Podium Prototype

Development Cost	City of Portland			City of Seattle			City of Denver			City of Sacramento		
	Total Cost	Per Unit	Per GSF	Total Cost	Per Unit	Per GSF	Total Cost	Per Unit	Per GSF	Total Cost	Per Unit	Per GSF
Land Cost	\$7,150,000	\$50,000	\$72	\$11,440,000	\$80,000	\$115	\$9,295,000	\$65,000	\$94	\$7,150,000	\$50,000	\$72
Hard Cost	\$34,779,150	\$243,211	\$350	\$40,741,290	\$284,904	\$410	\$35,838,000	\$250,615	\$361	\$36,652,500	\$256,311	\$369
Parking Cost	\$4,320,000	\$30,210	\$43	\$4,680,000	\$32,727	\$47	incl above	n.a.	n.a.	\$4,320,000	\$30,210	\$43
Soft Costs	\$7,819,830	\$54,684	\$79	\$8,175,832	\$57,174	\$82	\$6,450,840	\$45,111	\$65	\$10,243,125	\$71,630	\$103
SDC / Impact Fees	\$2,332,293	\$16,310	\$23	\$50,698	\$355	\$1	\$2,574,000	\$18,000	\$26	\$3,575,000	\$25,000	\$36
Financing Costs	\$2,487,296	\$17,394	\$25	\$2,870,373	\$20,073	\$29	\$2,388,361	\$16,702	\$24	\$3,679,273	\$25,729	\$37
Developer Fee	\$1,552,157	\$10,854	\$16	\$2,038,746	\$14,257	\$21	\$1,696,386	\$11,863	\$17	\$1,754,097	\$12,266	\$18
Total Development Cost	\$60,440,726	\$422,662	\$608	\$69,996,939	\$489,489	\$704	\$58,242,587	\$407,291	\$586	\$67,373,995	\$471,147	\$678
<i>% of Portland Costs</i>		<i>100%</i>			<i>116%</i>			<i>96%</i>			<i>111%</i>	

Sources: BAE, 2023.

Local Policy Cost Impact Analysis

In addition to an assessment of development costs in comparison cities, the following section analyzes the relative impact of local Portland policies on the cost of building various housing development prototypes. The housing prototypes include the six-story multifamily housing prototype previously defined for the peer cities cost comparison, as well as several additional residential development prototypes. To begin, BAE estimated the development cost of each residential prototype to set a baseline cost of construction under current conditions. Based on discussions with City staff, BAE then analyzed the relative financial impact of four local policies. The four policies are informed by the 2023 survey conducted by the City of Portland Bureau of Development Services (BDS) seeking input from the real estate development community on impediments to new residential development.

Residential Prototypes

BAE created a series of residential development prototypes to estimate the total development cost of a range of residential typologies throughout Portland. These prototypes range from medium-density townhomes to high-density residential developments:

Townhome Prototype: The Townhome prototypes is a four-unit development on a 10,000 square foot site, achieving a density of 17 dwelling units per acre. On average the units are approximately 1,500 square feet, for a total of 6,000 square feet of residential development.

Surface-Parked Multifamily Prototype: Located on a half-acre site, the surfaced-parked apartment project includes 40 total units, with a mix of studios, one-bedroom units, and a limited number of two-bedroom units. The project includes 28,500 total square feet of residential development, with 20 parking spaces provided in a surface parking lot.

Tuck-Under Multifamily Prototype: Achieving slightly higher densities, the Tuck-Under Apartment prototype is a four-story project with 64 units on a half-acre site. The parking is provided at-grade and wrapped by 2,500 square feet of ground-floor retail space. The project includes 45,375 total square feet, averaging roughly 700 square feet per residential unit.

Podium Multifamily Prototype: With a first-floor concrete podium, the six-story residential prototype includes 143 units on a half-acre site. The prototype includes 72 parking spaces, at a ratio of 0.5 spaces per unit, in an underground parking garage. In total, the project includes nearly 100,000 square feet of space, including 3,500 square feet of ground-floor space.

High-Rise Multifamily Prototype: Reaching the highest density, the 30-story high-rise apartment project includes 532 residential units on a half-acre site. Similar to the podium apartment prototype, this project includes an underground parking garage with 266 parking spaces, at a ratio of 0.5 spaces per unit. In total, the project includes roughly 365,000 square feet, including 4,500 square feet of ground-floor retail space.

Prototypical Development Costs

The following section summarizes the development cost of each residential prototype, distributed by critical development cost factors. Table 2 summarizes the baseline costs for each prototype.

Prototype 1: Townhome Prototype

In total, the cost of building the four-unit townhome prototype is estimated at **\$2 million, or \$506,000 per unit**. Due to the lower-density project, the land costs account for roughly \$100,000 per unit. Hard Costs are the largest cost, at roughly \$277,500 per unit, although these costs are much lower on a per square foot basis due to the lower density nature of the project and use of cheaper building materials relative to higher-density projects. Soft costs account for another \$55,500 in costs per unit, which includes costs for architecture, engineering, and legal, among other costs. SDC fees are highest for this prototype, at roughly \$33,000 per unit, primarily driven by the larger unit sizes. Other costs, including financing costs and a one-time developer fee, combine for another \$40,000 in costs per unit.

Prototype 2: Surface-Parked Multifamily Prototype

Driven by the smaller unit sizes, the surface-parked prototype costs an **estimated \$11.5 million, or nearly \$290,000 per unit**. This prototype is assumed to be in a location with cheaper land costs, at an estimated \$20,000 per unit. Hard Costs amount to \$185,250 per unit, driven by the smaller unit sizes and use of the cheaper Type-V wood-framed construction. Soft costs are estimated at \$41,000 per unit, with an additional \$20,000 in costs per unit associated with financing costs and developer fees. Portland SDC fees are estimated at roughly \$18,800 per unit.

Prototype 3: Tuck-Under Multifamily Prototype

The tuck-under multifamily prototype is only moderately more expensive than the surface-parked prototype, driven by the increased cost of tuck-under parking versus surface parking. The total cost of this prototype is estimated at **\$20 million, or just over \$300,000 per unit**. This includes a land cost of \$30,000 per unit, plus \$185,000 per unit in hard costs. The parking costs are slightly above the surface-parked prototype, at \$7,500 per unit. Soft costs are estimated at \$42,000 per unit, while local SDCs account for another \$18,000 per unit, both similar to the lower-density prototype. Financing costs and developer fees add another \$20,000 per unit.




Prototype 4: Podium Multifamily Prototype

Driven by the taller building height and required building materials, the estimated cost of podium multifamily prototype is roughly **\$60.4 million, or \$422,700 per unit**. This includes \$50,000 in land cost per unit, as well as \$243,000 in hard costs per unit. Given the provision of underground parking, the parking costs amount to nearly \$30,000 per unit, much higher than the lower-density prototypes. Local SDCs account for another \$16,000 per unit, while financing costs and a one-time developer fee add another \$30,000 in per unit costs.

Prototype 5: High-Rise Multifamily Prototype

With the highest total cost, the high-rise multifamily prototype has an estimated cost of **\$262 million, or nearly \$500,000 per unit**. Due to the required use of Type-I construction materials, including concrete or steel construction, the hard costs are the highest among the prototypes, amounting to nearly \$285,000 per unit, plus another \$30,000 in costs per unit to provide underground parking. Land costs are estimated at roughly \$75,000 per unit, as the sites that can accommodate a high-rise prototype tend to be in the strongest markets, associated with the highest land prices. SDC fees are comparable to the other prototypes, at nearly \$16,000 per unit, with another \$32,000 in costs per unit associated with financing costs and a one-time developer fee.

Table 2: Current Residential Development Costs by Prototype

Characteristics	Prototype 1 Townhome		Prototype 2 Surface Parked MFR		Prototype 3 Tuck-Under MFR		Prototype 4 Podium MFR		Prototype 5 High-Rise MFR	
(Photo Example)										
Total Units	4		40		64		143		532	
Development Cost	<u>Total Cost</u>	<u>Per Unit</u>	<u>Total Cost</u>	<u>Per Unit</u>	<u>Total Cost</u>	<u>Per Unit</u>	<u>Total Cost</u>	<u>Per Unit</u>	<u>Total Cost</u>	<u>Per Unit</u>
Land Cost	\$400,000	\$100,000	\$800,000	\$20,000	\$1,920,000	\$30,000	\$7,150,000	\$50,000	\$39,900,000	\$75,000
Hard Cost	\$1,110,000	\$277,500	\$7,410,000	\$185,250	\$11,797,500	\$184,336	\$34,779,150	\$243,211	\$150,968,700	\$283,776
Parking Cost	n.a.	n.a.	\$100,000	\$2,500	\$480,000	\$7,500	\$4,320,000	\$30,210	\$15,960,000	\$30,000
Soft Costs	\$222,000	\$55,500	\$1,652,200	\$41,305	\$2,701,050	\$42,204	\$7,819,830	\$54,684	\$30,047,166	\$56,480
SDC / Impact Fees	\$132,628	\$33,157	\$752,240	\$18,806	\$1,167,232	\$18,238	\$2,332,293	\$16,310	\$8,333,518	\$15,665
Financing Costs	\$82,230	\$20,558	\$472,507	\$11,813	\$796,701	\$12,448	\$2,487,296	\$17,394	\$10,813,734	\$20,327
Developer Fee	\$77,343	\$19,336	\$311,608	\$7,790	\$508,274	\$7,942	\$1,552,157	\$10,854	\$6,483,694	\$12,187
Total Development Cost	\$2,024,201	\$506,050	\$11,498,555	\$287,464	\$19,370,757	\$302,668	\$60,440,726	\$422,662	\$262,506,812	\$493,434

Sources: BAE, 2023.

Development Cost Impact of Local Policies

Based on the same prototypes summarized above, the following section analyzes the relative cost impact of four local policies, including direct fees, land use requirements, and review requirements. As noted above, the selection of these policies was influenced by a survey of residential developers, conducted by BDS, which highlighted a range of local policies that are potentially impeding the production of housing throughout Portland.

System Development Charges

The City of Portland charges System Development Charges (SDCs) on development projects in the city in order to offset the project impacts on City infrastructure. This includes fees for environmental services, such as the sanitary and stormwater sewer system; parks and recreation; transportation infrastructure; and water infrastructure. These fees are charged to the development at the issuance of a building permit, though projects may currently defer the fee payment by up to 24 months. The following analysis summarizes the current fees, including the total fee amount and the percent of total development costs, as well as the impact of potential revisions to the SDC charges.

Cost Impact Methodology

The SDC payment for each residential unit is dependent on the project characteristics, such as unit type and sizes. To calculate the SDC fees for each prototype, BAE compared the project characteristics to the City's SDC fee schedule.²

Development Cost Impact

As summarized below, and discussed in the previous section, SDC costs range from \$15,000 to \$35,000 per unit, depending on the prototype. Depending on the prototype, this ranges from just \$132,600 in total costs to the lower-density townhome project, up to \$8.3 million in total SDC fees for the high-rise prototype. However, due to the higher cost of constructing higher-density buildings, these SDC fees actually account for a larger share of the overall development costs in smaller buildings. As seen below in Table 3, the total SDC fees account for between six and seven percent of total costs for the townhome, surface-parked multifamily, and tuck-under multifamily prototypes. As the development costs increase for the higher-density prototypes, the SDC fees account for between three and four percent of total costs.

While the City may not wish to consider a full reduction in SDC fees, the bottom of Table 3 also shows the relative impact of a 25 percent reduction in the overall SDC fees. As shown, the impact of a slight reduction in SDC fees would translate to modest overall cost savings. For all prototypes, a 25 percent reduction in SDCs would reduce total development costs between 0.8 and 1.6 percent.

² City of Portland System Development Charges (SDCs) available at: <https://www.portland.gov/bds/current-fee-schedules/system-development-charges-sdcs#toc-when-you-might-pay-system-development-charges>

Table 3: System Development Charges Cost Impact

Development Cost	Prototype 1 Townhome	Prototype 2 Surface Parked MFR	Prototype 3 Tuck-Under MFR	Prototype 4 Podium MFR	Prototype 5 High-Rise MFR
Land Cost	\$400,000	\$800,000	\$1,920,000	\$7,150,000	\$39,900,000
Hard Cost	\$1,110,000	\$7,410,000	\$11,797,500	\$34,779,150	\$150,968,700
Parking Cost	n.a.	\$100,000	\$480,000	\$4,320,000	\$15,960,000
Soft Costs	\$222,000	\$1,652,200	\$2,701,050	\$7,819,830	\$30,047,166
SDC / Impact Fees	\$132,628	\$752,240	\$1,167,232	\$2,332,293	\$8,333,518
Financing Costs	\$82,230	\$472,507	\$796,701	\$2,487,296	\$10,813,734
Developer Fee	\$77,343	\$311,608	\$508,274	\$1,552,157	\$6,483,694
Total Development Cost	\$2,024,201	\$11,498,555	\$19,370,757	\$60,440,726	\$262,506,812

Policy Adjustments**System Development Charges**

Total SDC Costs	\$132,628	\$752,240	\$1,167,232	\$2,332,293	\$8,333,518
% of Project Costs	6.6%	6.5%	6.0%	3.9%	3.2%
25% Fee Reduction	\$33,157	\$188,060	\$291,808	\$583,073	\$2,083,380
% of Project Costs	1.6%	1.6%	1.5%	1.0%	0.8%

Sources: BAE, 2023.

Bicycle Parking Requirement

The City's bike parking policy requires that multifamily developments of five or more units provide long-term parking for bicycles. While the parking requirements allow a variety of long-term parking space configurations, local developers indicated the majority of buildings provide one bicycle parking room on the ground floor of buildings. The following analysis estimates the number of required bike parking spaces for each prototype, as well as the associated size of a ground-floor bicycle parking room.

Cost Impact Methodology

For each residential prototype, BAE calculated the number of required bicycle parking spaces, based on the City's Parking, Loading, and Transportation and Parking Demand Management Code (Chapter 33.266). Using this same code, BAE then estimated the size of a bicycle parking room provided within the new project. While the code allows a certain portion of spaces to be included in-unit in a dedicated alcove, for the purposes of this analysis all spaces were assumed to be provided in a common bike parking room. In order to estimate the cost of providing this bicycle parking room, BAE used two different approaches:

Development Cost Approach: The development cost approach estimates the total cost of providing a bike parking room. This is calculated based on a per-square foot building cost assumption, applied to the size of the bicycle parking room. This approach assumes that any changes in the bicycle parking requirement would translate to a developer reducing the project square footage to eliminate the bike parking room. This approach may apply to projects that locate the bike parking room in an underground garage, or as a separate room at-grade that would not otherwise be used for residents or retail tenants.

Foregone Revenue Approach: The foregone revenue approach assumes that any changes to the bicycle parking requirements would translate to projects building more residential units in the place of the current bicycle parking rooms. Similar to the above approach, BAE first calculated the square footage of a bicycle parking room. Instead of specifically calculating the development cost, the revenue approach assumes this square footage is instead designed as rentable residential units, at a similar construction cost. BAE then applied a rental rate assumption, of \$3.75 per square foot, and calculates the increased value of the overall project given the addition of rentable space. This is done by dividing the net operating income generated by the new space by an investor’s target yield-on-cost, which is a metric used to estimate the investment value of a stabilized income stream.

Development Cost Impact

To assess the impact of the bicycle parking requirement on project costs, BAE first estimated the number of required bicycle parking spaces and the associated size of a dedicated bicycle parking room. According to the City’s policy, multifamily developments are required to provide either 1.1 or 1.5 bicycle parking spaces per unit, depending on the project location. The bulk of areas that are likely to accommodate multifamily housing are located in areas where the code requires 1.5 spaces per unit. Thus, BAE estimated the prototypes, with the exception of the Townhome prototype, will provide the following bicycle parking facilities:

<u>Characteristics</u>	<u>Prototype 1</u> <u>Townhome</u>	<u>Prototype 2</u> <u>Surface Parked</u> <u>MFR</u>	<u>Prototype 3</u> <u>Tuck-Under</u> <u>MFR</u>	<u>Prototype 4</u> <u>Podium</u> <u>MFR</u>	<u>Prototype 5</u> <u>High-Rise</u> <u>MFR</u>
<u>Bicycle Parking Requirement</u>					
Required Spaces	None	60	96	215	798
Required Room Size (SF)	n.a.	1,224	1,958	4,376	16,279

Following this estimate, BAE then calculated the impact based on the development cost approach and foregone revenue approach. Table 4 below summarizes the impact of reducing the local requirement from 1.5 bicycle parking spaces per unit to 1.0 spaces and 0.5 spaces per unit. As seen below, reducing the bicycle requirement from 1.5 to 1.0 spaces per unit is estimated to reduce project costs by between 0.8 and 2.0 percent. As seen below, the foregone revenue approach yields a higher percent reduction due to the higher value of renting these spaces to residents, rather than simply eliminating the space from the project. By reducing the requirement to 0.5 spaces per unit, the impact roughly doubles for each prototype, resulting in a reduction in costs of between 1.7 and 4.0 percent. For both potential policy adjustments, the reduction in requirement bicycle parking has a larger impact on the smaller multifamily projects, primarily driven by the lower overall development cost associated with the project.

Table 4: Bicycle Parking Requirement Cost Impact

Development Cost	Prototype 1	Prototype 2	Prototype 3	Prototype 4	Prototype 5
	Tow nhome	Surface Parked MFR	Tuck-Under MFR	Podium MFR	High-Rise MFR
Land Cost	\$400,000	\$800,000	\$1,920,000	\$7,150,000	\$39,900,000
Hard Cost	\$1,110,000	\$7,410,000	\$11,797,500	\$34,779,150	\$150,968,700
Parking Cost	n.a.	\$100,000	\$480,000	\$4,320,000	\$15,960,000
Soft Costs	\$222,000	\$1,652,200	\$2,701,050	\$7,819,830	\$30,047,166
SDC / Impact Fees	\$132,628	\$752,240	\$1,167,232	\$2,332,293	\$8,333,518
Financing Costs	\$82,230	\$472,507	\$796,701	\$2,487,296	\$10,813,734
Developer Fee	\$77,343	\$311,608	\$508,274	\$1,552,157	\$6,483,694
Total Development Cost	\$2,024,201	\$11,498,555	\$19,370,757	\$60,440,726	\$262,506,812

Policy Adjustments**Reduce to 1.0 Spaces per Unit**Cost Approach

Cost of Bike Parking Spaces	n.a.	\$106,080	\$169,728	\$510,510	\$2,251,956
Percent of Project Cost	n.a.	0.9%	0.9%	0.8%	0.9%

Revenue Approach

Foregone Annual Revenue	n.a.	\$18,360	\$29,376	\$65,637	\$244,188
Project Value of Lost Revenue	n.a.	\$220,970	\$363,950	\$836,436	\$3,111,776
Percent of Project Cost	n.a.	1.9%	1.9%	1.4%	1.2%

Reduce to 0.5 Spaces per UnitCost Approach

Cost of Bike Parking Spaces	n.a.	\$212,160	\$339,456	\$1,021,020	\$4,503,912
Percent of Project Cost	n.a.	1.8%	1.8%	1.7%	1.7%

Revenue Approach

Foregone Annual Revenue	n.a.	\$36,720	\$58,752	\$131,274	\$488,376
Project Value of Lost Revenue	n.a.	\$441,940	\$727,901	\$1,672,872	\$6,223,553
Percent of Project Cost	n.a.	3.8%	3.8%	2.8%	2.4%

Sources: BAE, 2023.

First Floor Active Use Requirement

In various plan districts and overlay zones throughout Portland, the City requires active uses on the first floor of residential developments. While the definition of “active use” is flexible, interviews with local stakeholders indicated the primary use provided to meet this requirement is ground-floor commercial and retail spaces. In certain areas, there are prohibitions specifically on including housing at the ground level. Due to current challenges with the retail environment, these new spaces often remain vacant for extended periods which have negative cost impacts on the newly developed project. The following section analyzes the impact of eliminating ground-floor retail space from new medium- and high-density residential developments.

Cost Impact Methodology

Prototype 3 through Prototype 5, including the tuck-under multifamily development, podium multifamily development, and high-rise development, include ground-floor retail to meet the City’s first floor active use requirement. The following analysis calculates the impact of unoccupied retail space on the overall project using two methodologies, including:

Assume Vacant Retail Space: The vacant retail space approach calculates the cost of providing ground-floor retail space that does not generate ongoing revenue. To calculate this, BAE applied the hard cost per square foot of the project to the retail square footage for each prototype and assumed no corresponding operating revenue.

Convert Retail Space to Residential: The second approach to calculating the impact of the first-floor active use requirement is to assume the space would instead be designed as residential space. This redesign of the building would translate to two cost impacts. The first is a cost savings of not providing commercial tenant improvement (TIs) for the ground-floor retail space, which are additional costs provided by the developer to build-out the retail spaces for specific tenants. In addition to cost savings, assuming this space is intended for residential tenants translates into higher annual revenue, given that applicable residential rents are higher than applicable commercial rents. To estimate this impact, the analysis calculates the difference between annual net operating income generated by residential space compared to retail space. This difference in annual income is converted to an increase in project value by dividing the change in income by a developer-required yield-on-cost, a metric used to estimate the current value of annual income to real estate investors.

Development Cost Impact

As seen below in Table 5, the impact of the first floor active use requirement varies based on the prototype, primarily based on the share of commercial space as a percent of the overall project square footage. For smaller projects, this ground-floor space represents a larger share of the total project, and therefore has a larger impact on the project costs. For larger projects, the ground-floor uses are a more limited share of overall project square footage and translate into a smaller impact on the project. Using the “No Retail Tenant” approach, the impact of the first floor active use requirement is estimated at between \$675,000 to \$2.0 million, depending on the prototype. On a percent basis, this increases the cost of the lower-density tuck-under multifamily project (Prototype #3) by an estimated 3.5 percent, though it has a more limited impact of 0.7 percent on the high-rise multifamily prototype (Prototype #5).

Based on the alternative cost estimating methodology, which assumes the ground-floor space is instead designed as residential space, the prototypes yield a financial benefit of between \$300,000 and \$600,000 depending on the prototype. This financial benefit, in the form of cost savings and increased revenue, translates to roughly 1.6 percent of the project costs for the tuck-under multifamily development and just 0.2 percent of the estimated costs for the high-rise multifamily development.

Table 5: First Floor Active Use Requirement Cost Impact

	Prototype 1	Prototype 2	Prototype 3	Prototype 4	Prototype 5
<u>Development Cost</u>	Townhome	Surface Parked MFR	Tuck-Under MFR	Podium MFR	High-Rise MFR
Land Cost	\$400,000	\$800,000	\$1,920,000	\$7,150,000	\$39,900,000
Hard Cost	\$1,110,000	\$7,410,000	\$11,797,500	\$34,779,150	\$150,968,700
Parking Cost	n.a.	\$100,000	\$480,000	\$4,320,000	\$15,960,000
Soft Costs	\$222,000	\$1,652,200	\$2,701,050	\$7,819,830	\$30,047,166
SDC / Impact Fees	\$132,628	\$752,240	\$1,167,232	\$2,332,293	\$8,333,518
Financing Costs	\$82,230	\$472,507	\$796,701	\$2,487,296	\$10,813,734
Developer Fee	\$77,343	\$311,608	\$508,274	\$1,552,157	\$6,483,694
Total Development Cost	\$2,024,201	\$11,498,555	\$19,370,757	\$60,440,726	\$262,506,812

Policy Adjustments**First Floor Active Use Requirement**Assuming No Retail Tenant

Cost of Non-Leased Retail Space	n.a.	n.a.	\$676,000	\$1,260,000	\$1,909,000
Percent of Project Cost	n.a.	n.a.	3.5%	2.1%	0.7%

Allow Residential

Cost Savings (No TIs)	n.a.	n.a.	\$250,000	\$350,000	\$450,000
Project Value of New Revenue	n.a.	n.a.	\$66,372	\$92,920	\$119,469
Total Financial Benefit	n.a.	n.a.	\$316,372	\$442,920	\$569,469
Percent of Project Cost	n.a.	n.a.	1.6%	0.7%	0.2%

Sources: BAE, 2023.

Design Review Process

The final policy tested is the Design Review process, which requires an additional level of review for projects located in designated areas throughout the city. According to interviews with local stakeholders, this process can add roughly three months to the development timeline, as well as requiring more soft costs to accommodate modifications to architectural and engineering documents in response to design review input.

Cost Impact Methodology

The impact of design review translates to increased costs in two ways: (1) approximately three additional months of the approvals process; and (2) soft cost increases. The impact of the longer approval process is estimated by applying the required return on cost to the pre-development costs, or the land price and portion of soft costs, for a three-month period. This assumes that a developer has used funds to purchase a site and support certain pre-development costs. The funds used must yield a return, and the longer approval process leads to higher required return. The second cost impact is an increase in soft costs in order to facilitate the design review process. According to local developers, softs costs are roughly five percent higher in areas with design review requirements. To estimate the impact of the increased soft costs, the analysis applies a five percent reduction in soft costs that would be achieved if projects did not require design review.

Development Cost Impact

As summarized below in Table 6, the design review process adds nearly one percent to overall project costs for all prototypes, except the townhome prototype which would not be subject to design review. The soft cost savings represent the larger cost impact, while the value of the longer approval process is more significant for the larger projects, due to the larger upfront costs associated with land and pre-development costs.

Table 6: Design Review Cost Impact

Development Cost	Prototype 1 Townhome	Prototype 2 Surface Parked MFR	Prototype 3 Tuck-Under MFR	Prototype 4 Podium MFR	Prototype 5 High-Rise MFR
Land Cost	\$400,000	\$800,000	\$1,920,000	\$7,150,000	\$39,900,000
Hard Cost	\$1,110,000	\$7,410,000	\$11,797,500	\$34,779,150	\$150,968,700
Parking Cost	n.a.	\$100,000	\$480,000	\$4,320,000	\$15,960,000
Soft Costs	\$222,000	\$1,652,200	\$2,701,050	\$7,819,830	\$30,047,166
SDC / Impact Fees	\$132,628	\$752,240	\$1,167,232	\$2,332,293	\$8,333,518
Financing Costs	\$82,230	\$472,507	\$796,701	\$2,487,296	\$10,813,734
Developer Fee	\$77,343	\$311,608	\$508,274	\$1,552,157	\$6,483,694
Total Development Cost	\$2,024,201	\$11,498,555	\$19,370,757	\$60,440,726	\$262,506,812

Policy Adjustments

Design Review

Value of Longer Approvals (3 Months)	n.a.	\$15,967	\$34,750	\$123,085	\$648,471
Soft Cost Reduction	n.a.	5%	5%	5%	5%
Soft Cost Savings	n.a.	\$82,610	\$135,053	\$390,992	\$1,502,358
Total Financial Benefit	n.a.	\$98,577	\$169,803	\$514,076	\$2,150,829
Percent of Project Cost	n.a.	0.9%	0.9%	0.9%	0.8%

Sources: BAE, 2023.






Other Local Requirements

Through the BDS survey and BAE's stakeholder interviews, there are other local policies and actions that influence the cost of building in the City of Portland. The most common policy noted by stakeholders is infrastructure upgrade requirements. This includes items such as transportation management infrastructure (e.g., traffic signals and bike lane stripping). These costs are often passed along to developers, leading to higher construction costs. Other infrastructure upgrade costs passed along to developers include utility upgrades, such as power infrastructure and water/sewer capacity upgrades. In addition to infrastructure upgrade requirements, developers also noted the local tree mitigation policy as an added cost of residential development. The development community indicated that the mitigation fee associated with the loss of trees on a development site is not the main challenge, but rather the complication associated with receiving the approval of tree replacement plans. The developers specifically identified situations where the development process was delayed due to tree mitigation planning, which translated into increased costs due to additional site planning documents and project delays. Given all of these costs are site-dependent, the estimated costs are excluded from the above analysis.

Local Policy Cost Summary

While the impact of each policy will differ based on the prototype and project location, Table 7 below summarizes the range of cost impact for the four policies analyzed. As seen below, assuming the maximum cost impact of each policy for each development prototype, together the policies impact the cost of development by between six and 14 percent, or between \$32,000 and \$43,000 per unit. Assuming the low-end of the cost impact, the combined impact of the policies ranges from two to five percent of the total development cost for each prototype, or between \$8,000 to \$15,000 per unit. As noted previously, the SDCs account for the largest cost of the various policies analyzed as part of this study. Bicycle parking requirements account for the second highest cost, ranging from one to four percent of total cost, primarily driven by the size and cost of providing the required bicycle parking rooms. First floor-active use requirements have a significant impact on project value in smaller buildings, however they have a more limited impact on larger buildings due to the reduced share of the total project building. Lastly, the design review process has an estimated impact of roughly one percent of the total project cost, primarily associated with the increased soft costs to navigate the design review process.

Table 7: Local Policy Impact Summary

Characteristics	Prototype 1 Tow nhome			Prototype 2 Surface Parked MFR			Prototype 3 Tuck-Under MFR			Prototype 4 Podium MFR			Prototype 5 High-Rise MFR		
(Photo Example)															
	Cost Impact	Per Unit	% of Cost	Cost Impact	Per Unit	% of Cost	Cost Impact	Per Unit	% of Cost	Cost Impact	Per Unit	% of Cost	Cost Impact	Per Unit	% of Cost
Standard Fees and Charges															
High Estimate (waive all fees)	\$132,628	\$33,157	6.6%	\$752,240	\$18,806	6.5%	\$1,167,232	\$18,238	6.0%	\$2,332,293	\$16,310	3.9%	\$8,333,518	\$15,665	3.2%
Low Estimate (25% Reduction)	\$33,157	\$8,289	1.6%	\$188,060	\$4,702	1.6%	\$291,808	\$4,560	1.5%	\$583,073	\$4,077	1.0%	\$2,083,380	\$3,916	0.8%
Bike Parking Requirement															
High Estimate (0.5 spaces/unit)	n.a.	\$0	n.a.	\$441,940	\$11,048	3.8%	\$727,901	\$11,373	3.8%	\$1,672,872	\$11,698	2.8%	\$6,223,553	\$11,698	2.4%
Low Estimate (1.0 spaces/unit)	n.a.	\$0	n.a.	\$106,080	\$2,652	0.9%	\$169,728	\$2,652	0.9%	\$510,510	\$3,570	0.8%	\$2,251,956	\$4,233	0.9%
First Floor Active Use Requirement															
High Estimate (Eliminate Space)	n.a.	\$0	n.a.	n.a.	\$0	n.a.	\$676,000	\$10,563	3.5%	\$1,260,000	\$8,811	2.1%	\$1,909,000	\$3,588	0.7%
Low Estimate (Allow Residential)	n.a.	\$0	n.a.	n.a.	\$0	n.a.	\$316,372	\$4,943	1.6%	\$442,920	\$3,097	0.7%	\$569,469	\$1,070	0.2%
Design Review	n.a.	\$0	n.a.	\$98,577	\$2,464	0.9%	\$169,803	\$2,653	0.9%	\$514,076	\$3,595	0.9%	\$2,150,829	\$4,043	0.8%
Total Estimated Policy Impact (High)	\$132,628	\$33,157	6.6%	\$1,292,757	\$32,319	11.2%	\$2,740,936	\$42,827	14.1%	\$5,779,241	\$40,414	9.6%	\$18,616,900	\$34,994	7.1%
Total Estimated Policy Impact (Low)	\$33,157	\$8,289	1.6%	\$392,717	\$9,818	3.4%	\$947,711	\$14,808	4.9%	\$2,050,580	\$14,340	3.4%	\$7,055,634	\$13,262	2.7%

Sources: BAE, 2023.