

Multifamily Cost of Regulation

2018 Special Study

Dr. Paul Emrath, National Association of Home Builders
Caitlin Walter, National Multifamily Housing Council



Regulation: Over 30 Percent of the Cost of a Multifamily Development

June 12, 2018

Paul Emrath, National Association of Home Builders

Caitlin Walter, National Multifamily Housing Council

Many Industry experts have become concerned about affordability of rental housing in America, and how difficult it has become to address the problem through new construction. According to the report on [America's Rental Housing 2017](#) published by the Joint Center for Housing Studies at Harvard University, “The lack of new, more affordable rentals is in part a consequence of sharply rising construction costs, including labor and materials.” The Harvard report goes on to say, “Tight land use regulations also add to costs by limiting the land zoned for higher-density housing and entailing lengthy approval processes.”

Recently, the [National Association of Home Builders](#) (NAHB) and the [National Multifamily Housing Council](#) (NMHC) undertook a joint research effort to find out how much government regulation adds to the cost of building new multifamily housing. Results show that well over 90 percent of multifamily developers typically incur hard costs of paying fees to local jurisdictions, both when applying for zoning approval, and again when local jurisdictions authorize the construction of buildings.

However, government regulation can impose costs in other ways as well. Over 90 percent of multifamily developers also incur costs of delays caused by sometimes lengthy approval processes, development standards that go beyond what would ordinarily be done, changes to building codes over the past decade, and OSHA requirements. Other regulations, such as requiring developers to dedicate land to the government, are somewhat less common, but can be quite costly when they are encountered. The bottom line is that regulation imposed by all levels of government (whether local, state or federal) accounts for 32.1 percent of the cost of an average multifamily development.

A substantial amount of regulation is well intentioned and some of it undoubtedly serves a worthwhile purpose. Few would argue, for example, that basic safety standards for structures and workers are unnecessary. But regulation that exceeds 30 percent of a project’s development costs raises questions about how thoroughly governments are considering the consequences of their actions. Are they aware of how much regulation currently exists? Do they realize how multiple regulations with conflicting standards can cause delays and increase costs? And do they understand the extent to which these increased costs translate into higher rents and make it difficult to build new housing that families with modest incomes can afford?

Survey Design

While the assertion that regulations increase the cost of multifamily development is commonly heard, the extent to which this happens is not easy to measure, and currently does not exist on a national scale. The only way to gather data that is at all comprehensive is from multifamily developers, as they are the only ones who experience a wide range of the various forms regulation can take. NAHB and NMHC set out to accomplish this through a survey of both memberships. The purpose of the survey was to quantify how much regulation exists and how much it is adding to the cost of developing new multifamily properties.

Multifamily developers do not, in general, have accounting systems designed to tease out these regulatory costs. So NAHB and NMHC crafted questions that most developers would be able to answer. The questions asked developers about the typical projects they build. The questions covered various delays and costs incurred at different stages of the development process. Developers were asked to provide all hard costs as a percent of total development cost for their typical projects (see Appendix 2).

The survey was conducted in the fourth quarter of 2017. A total of 40 usable responses were received from multifamily developers, evenly split between NAHB and NMHC members (with no duplication). The developers who responded reported building multifamily projects in all regions of the country, and the typical projects they build vary widely: from fewer than 5 apartments to more than 400, and from under \$2 million in total development costs to more than \$100 million.

NMHC and NAHB combined the results with information from other survey collections and public data sources, such as typical terms on construction loans and the average time it takes to complete different phases of a project, to estimate the final costs (see Appendix 1).

Types of Regulation

Regulatory costs fall into several categories—fees, development standards, building codes, land dedicated to public purposes, etc. The range of these regulations can be broad, and the cost of complying with them substantial. Figure 1 shows the incidence of different types of regulations imposed on multifamily developers, as well as the average cost of complying with those regulations when they do exist.

Figure 1: Incidence and Typical Magnitude of Regulatory Costs

| Type of Cost | Share of Developers' Projects Subject to the Cost | Average Cost When Present (as a Share of Total Development Costs) |
|---|---|---|
| Cost of applying for zoning approval | 98% | 4.1% |
| Interest costs on refundable fees charged when site work begins | 50% | 0.5% |
| Other (non-refundable) fees charged when site work begins | 93% | 4.5% |
| Development requirements that go beyond the ordinary | 95% | 6.3% |
| Land dedicated to the government or otherwise left unbuilt | 50% | 4.3% |
| Fees charged when building construction is authorized | 93% | 4.2% |
| Cost of complying with affordability mandates (e.g., inclusionary zoning) | 30% | 5.7% |
| Cost increases from changes to building codes over the past 10 years | 98% | 7.2% |
| Cost of complying with OSHA requirements | 90% | 2.6% |
| Pure cost of delay (i.e., even if regulation imposed no other type of cost) | 98% | 0.7% |

The first significant interaction between a multifamily developer and the government usually occurs when the developer applies for zoning approval to allow multifamily housing to be built on a particular parcel of land. The U.S. Constitution gives states the authority to regulate land use; and, although states sometimes try to influence land use patterns in various ways, they most often leave this up to local governments. Local governments, in turn, pass zoning ordinances that divide their territories into districts and specify how land in each district can be used (single-family versus commercial versus multifamily, for example). It's not impossible for a developer to acquire land that allows multifamily structures to be built on it without going through a rezoning process or obtaining some type of exemption to an existing ordinance, but this is the exception rather than the rule.

The typical projects of almost all the respondents (98 percent) were subject to costs at the zoning approval stage. When they exist, these costs average 4.1 percent of the total development costs. Regulatory costs incurred at this stage can include fees paid directly to a government, but may also include other types of costs. For example, the developers may have to pay for environmental impact, archeological or other types of studies.

Although local governments have the authority to approve development, existing environmental laws also give a role to the federal government. A developer may need to obtain a wetlands, stormwater and/or endangered species-critical habitat permit, each of which is overseen by a different federal government agency. Many states manage the wetlands permits under federal guidance, and states and local jurisdictions may have their own sets of requirements. Indeed, it can be difficult to identify which level of government is ultimately responsible for some regulation, and trying to reconcile conflicting requirements is one factor that can drive up the cost of compliance.

It is also common for governments to impose fees on a multifamily development when site work begins. Many communities charge impact, utility hook-up and other fees at this point. Impact fees are fees that are charged only on a new development and are supposed to be used only for capital improvements. State legislation establishes the types of impact fees local governments can charge. Examples are impact fees for the construction of new schools, roads, water facilities, sewer facilities, stormwater management, parks, fire, police, libraries, solid waste management, and general government. Some states allow all of these, while a select few of states do not allow them, such as Virginia. There are consultants who travel the country and specialize in calculating the maximum impact fees local governments can legally charge. Moreover, as a recently published [University of California, Berkeley paper](#) documented, cities often charge additional fees, negotiated on a case-by-case basis at different points in the development process, to allow a project to be built.

According to the 2012 [Census of Governments](#), there are roughly 90,000 local governments in the U.S., and a particular development may be subject to fees from more than one of them—for example, from a municipality, a water district, and a school district with overlapping jurisdictions. The overwhelming majority (93 percent) of the typical projects of multifamily developers in the NAHB-NMHC survey pay fees at this stage of the process. When they exist, these fees average 4.5 percent of total development costs.

Some local governments charge developers guarantee or other fees that are refundable when the project is completed. Although these fees are also usually imposed when site work begins, the survey treats them separately, due to the different cost implications. If the fee is eventually refunded, the developer ultimately pays only the interest that accrues on the development and construction loans until that happens. Half of respondents' typical projects were subject to these fees; which, when present, averaged half a percent of the total development cost.

Many local governments require new development to conform to community design standards. This may include standards for streets and sidewalks, parking, height of buildings, landscaping and the architectural design of individual buildings. These standards impose little extra cost if they don't significantly exceed the developer's ordinary practices. In the absence of regulation, for example, developers will still ordinarily provide spaces for walking and parking, landscaping, and employ architects who attempt to design buildings that are attractive to potential tenants. The NAHB-NMHC survey asked multifamily developers specifically about the cost of standards that go beyond what they would otherwise do.

Almost all (95 percent) of the typical projects of the developers surveyed were subject to design standards that go beyond what the developer would otherwise do. When these beyond-ordinary requirements were present, they accounted for an average of 6.3 percent of the overall development cost. Energy efficiency is a worthwhile objective, but NMHC and NAHB have argued that the up-front cost needs to be kept within reasonable bounds. NMHC and NAHB have supported some recent changes to the IECC but opposed others as not cost-effective. Not surprisingly, manufacturers of building products advocate for code changes that mandate more use of their products, and tend to be less concerned than NMHC and NAHB about costs. Past [analysis by NMHC](#) on previous code cycles (which remain in effect in many states) has shown that changes to the IECC have the potential to drive up construction costs by over \$3,000 per apartment (depending on type of building and climate zone) and argued that subsequent savings on utility bills come nowhere near justifying the cost.

Half of the typical projects required developers to dedicate land to the government or otherwise leave it unbuilt. This requirement can take many forms, such as creating a park on the property or reserving part of the property for the government to use in some way. In these cases the developer must pay for the land but is not allowed to derive revenue

from it, driving up the cost per unit for the housing that can be built. For those projects subject to this regulation, it represented an average of 4.3 percent of total development cost.

Almost all of respondents (93 percent) paid some sort of fee when construction in their typical project was authorized. This could be limited to a building permit fee, but additional impact, hook-up or other fees may also be charged at this point. When they exist, the fees charged at this point average 4.2 percent of development costs, large enough to suggest that they often encompass more than the building permit fees.

Local jurisdictions are increasingly beginning to consider imposing affordability mandates to attempt to create new affordable housing. These mandates without any offsetting incentive like a tax exception typically create few units and effectively tax some housing units (and their occupants) to subsidize others. The easiest way to see this is in cases where developers pay a fee to avoid the requirement—that amount gets added to the overall amount the developer must pay, thus raising the rents required. But even if they don't pay a fee, the regulation may require them to lose money on some of the housing they build, which is effectively a tax, resulting in higher rents on non-subsidized apartments. Almost one-third (30 percent) of developers who responded indicated that their typical projects incurred costs related to complying with such mandates. These costs, when they exist, averaged 5.7 percent of total development costs, enough to result in substantially higher rents.

The NAHB-NMHC survey also asked developers about the cost implications of changes to building codes over the past ten years. Most jurisdictions have been enforcing building codes for decades, and the codes have been updated and refined many times over that span. Most have adopted a version of national model codes, which have been in widespread use since the 1950s. These are updated every three years, and the number of refinements considered and voted upon during each three year cycle runs into the thousands.

Virtually no one would argue against public standards for basic soundness and safety of residential structures, but over the decades codes have expanded well beyond this and are increasingly being used as a vehicle to advance various policy objectives. A leading example is energy efficiency. There is now a model [International Energy Conservation Code®](#) (IECC).

Energy efficiency is a worthwhile objective, but NMHC and NAHB have argued that the up-front cost needs to be kept within reasonable bounds. NMHC and NMHC have supported some recent changes to the IECC but opposed others as not cost-effective. Not surprisingly, manufacturers of building products advocate for code changes that mandate more use of their products, and tend to be less concerned than NMHC and NAHB about costs.

This is another area where the federal government has become increasingly involved. The Environmental Protection Agency, the Federal Emergency Management Agency, and the Department of Energy (DOE), all actively participate in the development of national model codes, proposing changes to national model codes and testifying in favor of them during code hearings. DOE also has a share of its budget set aside for persuading state and local jurisdictions to adopt more stringent codes. Representatives from NAHB who witnessed all of the recent code hearings have criticized federal agencies for supporting certain code changes that removed flexibility and limited builders' options, driving up costs without improving energy efficiency, to the benefit of specific product manufacturers.

Nearly all (98 percent) of developers said changes in building codes over the past 10 years increased development costs in their typical projects, and these costs, when they exist, average 7.2 percent of total development costs.

Nine out of ten developers said complying with requirements of the Occupational Safety and Health Administration (OSHA) increased costs in their typical projects, and these costs, when present, average 2.3 percent of total development costs. Again, few would argue that safety standards for construction workers are unnecessary. In recent years, however, OSHA has issued a substantial number of regulations imposing costly compliance requirements all without providing any evidence that they would actually improve safety in the residential construction industry. In the [Beryllium rule](#), for example, the evidence of a health risk came from workers in manufacturing industries or performing abrasive blasting activities. In the [Volks rule](#), OSHA was criticized as doing little beyond driving up record keeping costs for businesses (and possibly violating the statute of limitations in the process).

Even when regulation imposes no direct costs, it can have a financial impact if it delays the development and construction process. If it takes longer to begin leasing and earning income on a property, it will take longer to pay off any development and construction loans and more interest will accrue.

Some regulatory delay is inevitable, as it will naturally take some time for local building departments to review and approve plans and respond to requests for inspections. Precisely how long it is reasonable for a developer to wait for approvals and inspections is open to debate, but there are examples that clearly seem excessive. One [academic study](#), for example, found that it took an average of 788 days to prepare a submission and receive approval for an individual federal wetlands permit.

Virtually all the developers (98 percent) said complying with regulations caused some sort of delay for their typical projects. For these projects, NMHC and NAHB estimated that average additional interest was 0.7 percent of total development costs. This is a “pure” cost of delay that regulation would cause even if it imposed no other type of cost. It is calculated by subtracting every other type of regulatory cost, then estimating the additional interest accruing on the share of the remaining development cost that is typically financed.

Total Cost of Regulation

To estimate how much in total the government regulations described above add to multifamily development costs, it is necessary to take both the incidence and magnitude of the various types of regulation into account—in other words, to average in the “zeroes” when a particular regulation does not apply. Figure 2 shows that, when this is done, the listed categories taken together on average account for 32.1 percent of development costs for a multifamily project.

Among the listed categories, average cost is highest for changes to building codes over the past 10 years (7.0 percent of total development costs), followed by development standards imposed by government that go beyond what the developer would ordinarily do. It is interesting that government control over how a project is built can be more costly than actual fees charged, but unsurprising given that they can be time consuming and thus cost more.

Figure 2: Government Regulation as a Share of Multifamily Development Costs

| Type of Cost | Lower Quartile | Average | Upper Quartile |
|---|----------------|--------------|----------------|
| Cost of applying for zoning approval | 1.1% | 4.0% | 5.3% |
| Interest costs on refundable fees charged when site work begins | 0.0% | 0.2% | 0.2% |
| Other (non-refundable) fees charged when site work begins | 1.9% | 4.2% | 5.5% |
| Development requirements that go beyond the ordinary | 1.1% | 5.9% | 8.4% |
| Land dedicated to the government or otherwise left unbuilt | 0.0% | 2.1% | 3.3% |
| Fees charged when building construction is authorized | 1.1% | 3.9% | 5.4% |
| Cost of complying with affordability mandates (e.g., inclusionary zoning) | 0.0% | 1.7% | 2.6% |
| Cost increases from changes to building codes over the past 10 years | 5.2% | 7.0% | 7.1% |
| Cost of complying with OSHA requirements | 1.3% | 2.3% | 2.3% |
| Pure cost of delay (i.e., even if regulation imposed no other type of cost) | 0.1% | 0.7% | 1.2% |
| TOTAL ESTIMATED REGULATION AS A SHARE OF DEVELOPMENT COSTS | 21.7% | 32.1% | 42.6% |

Affordability mandates, when they exist, are nearly as costly as relatively recent changes to building codes and beyond-ordinary development starts, but overall have a smaller average impact on costs because they are encountered less frequently. In contrast, regulatory delays are encountered very frequently, but have a comparatively small average impact on costs because they are limited to the extra interest that accrues on development and construction loans.

Refundable fees have the smallest impact of any of the types of regulatory costs listed, both because they apply only half of the time and because they are limited to the interest that accrues until they are refunded.

To illustrate the variability in regulatory costs, in addition to averages, Figure 2 shows the upper and lower quartiles (costs are below the lower quartile for 25 percent of respondents, and above the upper quartile for 25 percent). While on average regulation accounts for 32.1 percent of total multifamily development costs, the quartiles give a range of 21.7 to 42.6 percent.

Although the cost components sum to the bottom line total for the averages in Figure 2, the components of the upper and lower quartiles do not. The ten components in the “lower quartile” column in particular sum to considerably less than 21.7 percent. The implication is that multifamily developers can minimize some types of regulatory costs depending on where they operate—but not all of them proportionately at the same time.

Costs Not Captured

Although the NAHB-NMHC survey sought to be as comprehensive as possible, the above results do not capture everything. Some government actions impact development costs in a way a multifamily developer can’t reasonably be expected to quantify. For example, federal immigration policy may affect the supply of construction labor, and tariffs can affect prices of building materials like lumber¹ and steel. Developers do not in general have a way of evaluating how much the prices they pay for labor and materials are influenced by these federal policies.

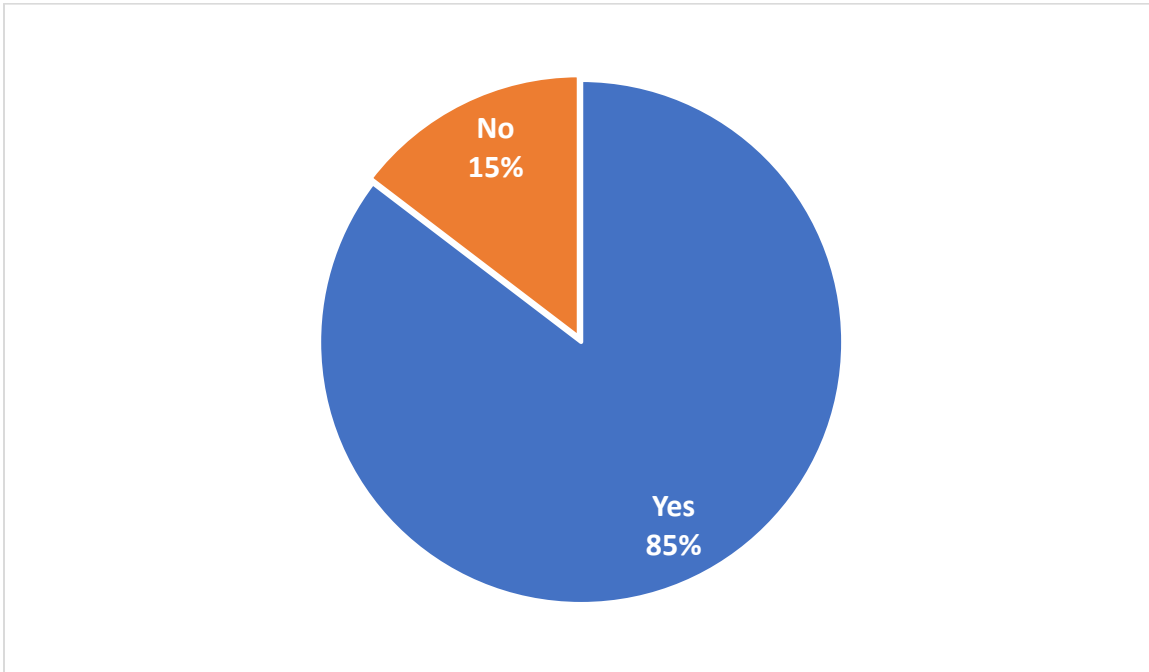
The survey asked developers about delays due to government regulation, but there can be multiple reasons for those delays not all unambiguously tied to a government action. One is neighborhood opposition to the development. At the local level, governments may encourage or facilitate local groups who oppose multifamily development. An obvious way to do this is by allowing local groups to sue any developer who proposes to build multifamily housing, but there are many more subtle ways to encourage opposition.

A developer may have to devote time and financial resources to deal with this opposition, by meeting with local groups before seeking zoning approval, for instance. To quiet the opposition, developers may find it necessary to make concessions to local groups, such as reducing size of the buildings so that land costs are allocated to fewer apartments and cost per apartment is increased. In an extreme case, local opposition may be able to cause a local government to reverse its decision to approve a project after the developer has already invested heavily in it. In many of these cases, there is an obvious cost to neighborhood opposition, but how much responsibility the local government bears for it may not always be clear. It is not uncommon for developers to hire consultants to debunk claims made by opposition to a project.

Figure 3 below shows that the overwhelming majority (85 percent) of the developers responding to the NAHB-NMHC survey have experienced added costs or delays due to such opposition.

¹ The effects of the current lumber tariffs are estimated in [Impact of the Canadian Lumber Duties on the U.S. Economy in 2018](#).

Figure 3: Have you experienced added costs or delays due to neighborhood opposition to multifamily construction?

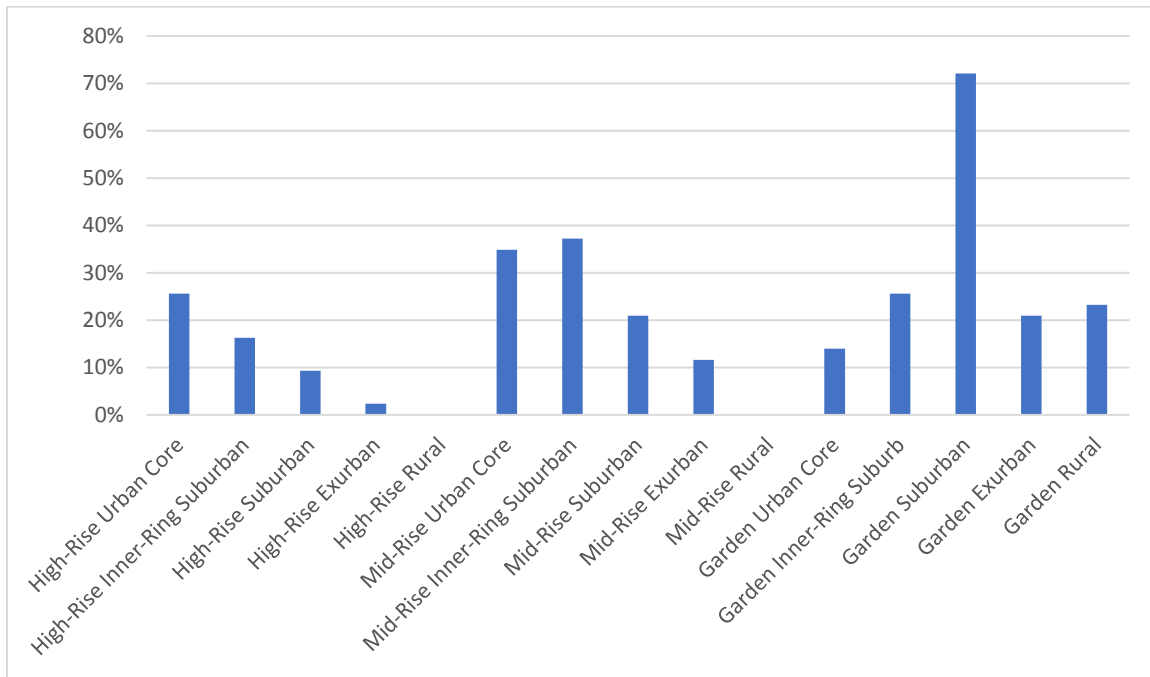


Profile of Respondents and Their Typical Projects

The range of costs highlights that not all development projects are the same. Costs can vary by jurisdiction, as well as by geographic location and type of project—garden apartments on undeveloped land can be much less complicated to build than a high-rise in an urban area, for example. Respondents were able to choose more than one option as to their typical project type.

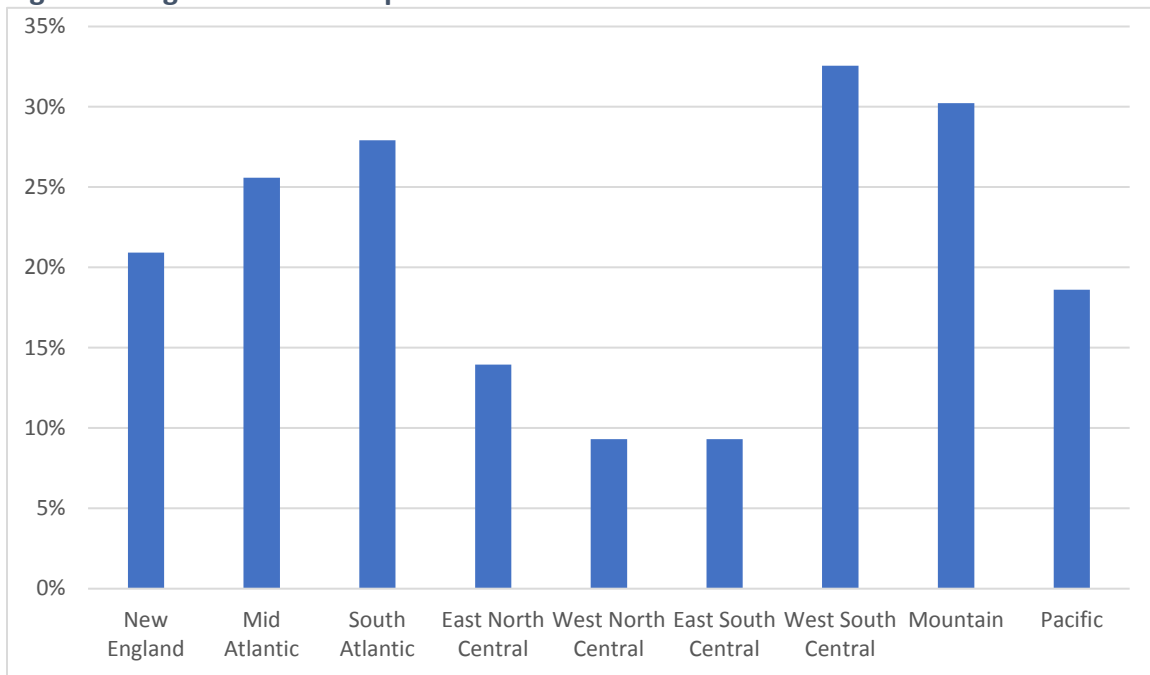
Respondents built a variety of product types that also varied by location (see Figure 4). The most common type of project was a garden development in the suburbs (72 percent). Mid-rise projects were the next common, with 35 percent building mid-rise developments in urban areas, and 37 percent building similar projects in inner-ring suburbs. About one-quarter (26 percent) of developers reported that they typically build high-rise apartments in urban settings.

Figure 4: Type and Location of Multifamily Projects



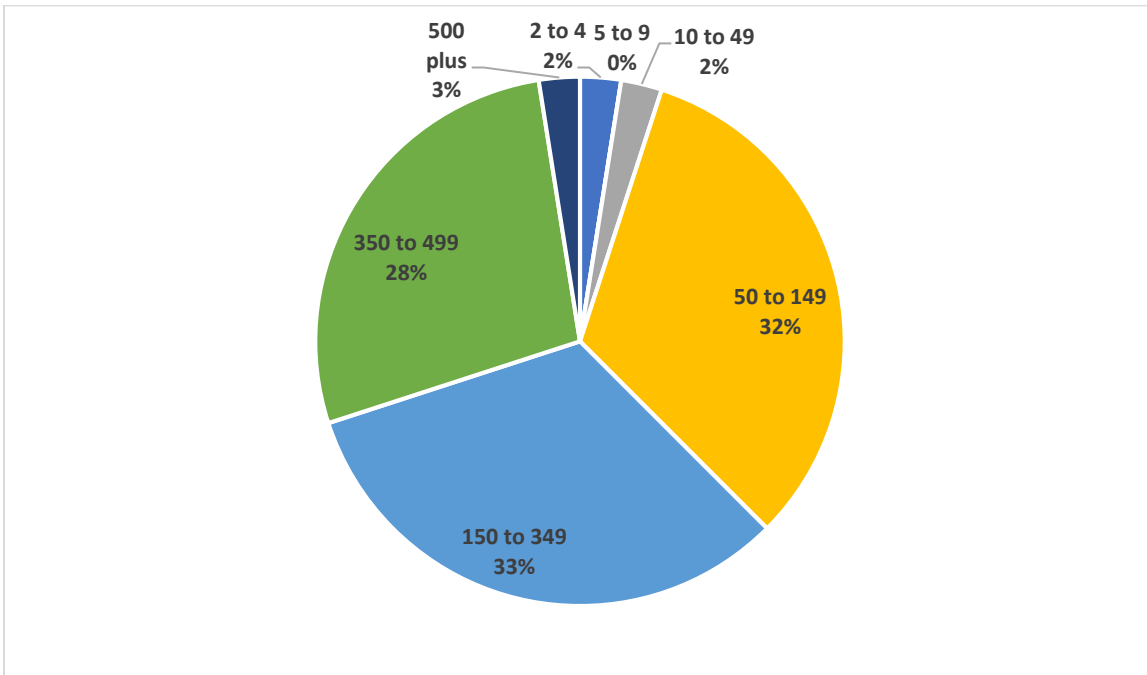
All regions of the United States were represented in the survey sample as well. The largest percentage of developers operated in the West South Central (33 percent) and Mountain (30 percent) regions (see Figure 5). The South Atlantic and Pacific regions featured the highest distribution of multifamily permits in the U.S. in 2017 and had the third and fifth largest distribution of respondents, respectively.

Figure 5: Regions Where Respondents Build



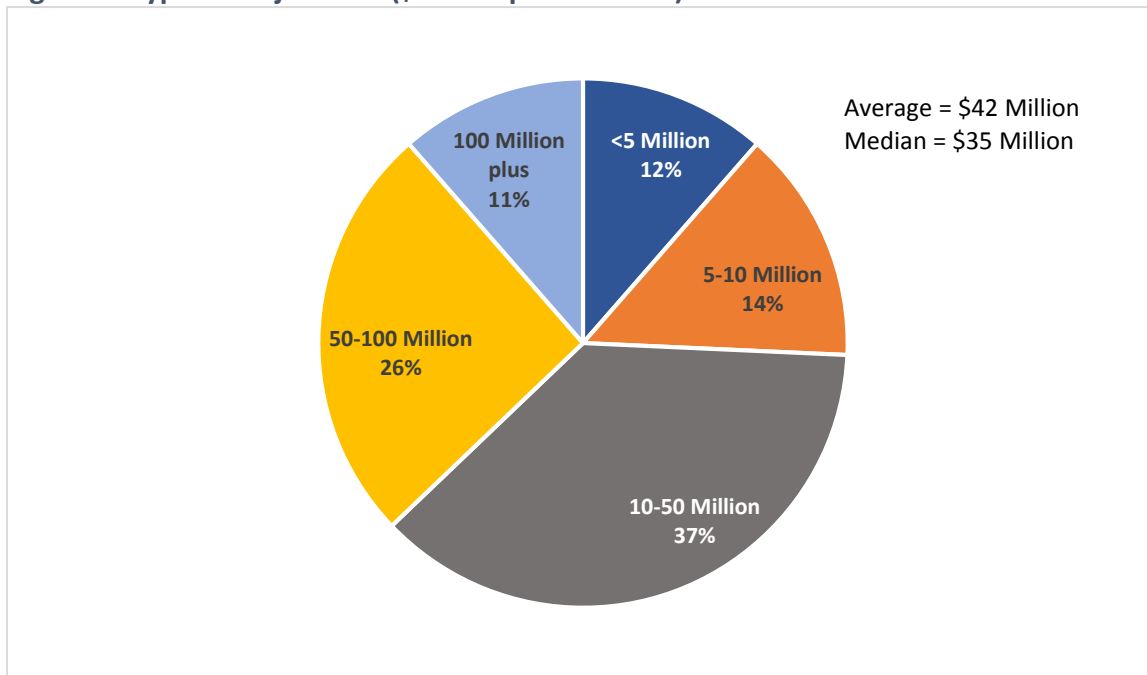
A fairly wide range of typical development size was represented by respondents as well (Figure 6). A small portion of respondents (4 percent) typically built projects fewer than 50 units or greater than 499 units (3 percent), while the remaining respondents were relatively evenly split between 50 to 149 units (32 percent), 150 to 349 units (33 percent), and 350 to 499 units (28 percent).

Figure 6: Typical Project Size (No. of Units)



In terms of financial costs, the cost was even more widely distributed (see Figure 7). The average cost of a typical development project for these developers was \$42 million. Over one-third (37 percent) of respondents had a typical project size of \$10-\$50 million.

Figure 7: Typical Project Size (\$Development Costs)



Summary and Conclusion

As the above discussion has demonstrated, multifamily development can be subject to a bewildering array of regulatory costs, including a broad range of fees, standards, and other requirements imposed at different stages of the development and construction process. In view of this, it may not be surprising that regulation imposed by all levels of government accounts for 32.1 percent of multifamily development costs on average, and one-fourth of the time reaches as high as 42.6 percent.

Although local governments generally have authority for approving development and adopting building codes, state and federal governments are becoming increasingly involved in the process. Sometimes the federal involvement is readily apparent, as when issuing stormwater permits or enforcing OSHA requirements. At other times, the federal involvement is less obvious. Examples include federal participation in model building codes, and attempts to influence local development through conditions for obtaining grants or other sources of funding. Indirect influences like these sometimes make it impossible to untangle which level of government is ultimately responsible for a given dollar of regulatory cost.

The current estimate that government regulation accounts for 32.1 percent of total development costs is almost certainly understated to some extent, as it was not possible to account for items like the effects of tariffs on building materials or the extent to which local jurisdictions may empower their citizens to oppose multifamily housing in their communities. Average costs could be even higher now or in the near future due to regulations taking effect since the multifamily projects in the survey were completed. For example, OSHA's [Silica Rule](#) went into effect in late 2017, a regulation that industry groups have criticized as [unreasonably onerous and unnecessarily costly](#). Similarly, local jurisdictions are just beginning to adopt the [2018 versions](#) of the model international building codes. Home Innovation Research Labs has [recently estimated](#) that the difference between the 2018 and 2015 versions of the codes can add thousands of dollars onto the cost of a multifamily building. As is typically the case, federal agencies supported several of the cost-increasing changes to the codes.

When the cost of multifamily development rises, it unavoidably translates to higher rents and reduced affordability of rental housing. Multifamily developers can not secure financing to build their projects unless they can demonstrate to lenders that the rents will be sufficient to cover costs and pay off the loans.

The purpose of this article is not to argue that all regulation is bad and should be eliminated, but to raise awareness of how much regulation currently exists, how much it costs, and to encourage governments to do a thorough job of considering the implications for housing affordability when proposing and implementing new directives.

Appendix 1:

Assumptions Used in the Calculations

In order to calculate a final effect on development costs, many of the NAHB-NMHC survey responses need to be combined with additional information. Primarily these are assumptions about the terms of development and construction loans, and how long construction typically takes, and how to allocate costs to different stages of the development and construction process. This appendix lists all the assumptions used in the calculations and gives the sources for each.

Loan terms

1.0 point charged for all land acquisition, development, and construction (AD&C) loans, based on results from a Quarterly Finance Survey (QFS) that NAHB was conducting in the early to mid-2000s.

A 7.65 percent interest rate on all AD&C loans. The QFS indicates that rates are typically set one point above prime, and 6.65 percent is NAHB's estimate of the prime rate that would prevail in the long run under neutral Federal Reserve policy.

The estimates also assume that three-fourths of any category of costs are financed, based on typical AD&C loan-to-value ratios in the QFS.

Construction Lags

The source for information lags not directly collected in the NAHB-NMHC questionnaire is the [Survey of Construction](#), conducted by the Census Bureau and partially funded by the Department of Housing and Urban Development. Preliminary estimates are taken from the published annual tables, averaged over the 2001-2016 period:

If project is 2-4 units

- Authorization to start = 1.71 months
- Start to completion = 10.87 months

If project is 5-9 units

- Authorization to start = 1.95 months
- Start to completion = 11.64 months

If project is 10+ units

- Authorization to start = 1.94 months
- Start to completion = 13.21 months

The NAHB-NMHC survey collected data on how much time regulation adds to the development process. To assign this to a particular phase of the development the following assumptions are used.

The regulatory delay is split and attributed half to the lag between applying for zoning approval and the beginning of site work, and half to the period after site work begins. If half of the regulatory delay exceeds the lag between applying for approval and beginning of site work, the excess is also attributed to the period after site work begins. It is first assumed that the resulting regulatory delay is

attributable to the period between the start of site work and the start of building construction, minus 3 months (the assumed minimum time it would take to do site work in the absence of regulation, based on conversations with developers). If any regulatory delay remains after being allocated to the zoning approval and site work periods, it is then attributed to the building construction period, and the start-to-completion lag is adjusted upward beyond the SOC-based average, accordingly.

The analysis assumes all loans are paid off when the buildings are completed.

Cost Breakdown

To implement the process described in the paragraph above and calculate a “pure” cost of delay (i.e., the effect regulatory delay would have even if the regulation imposed no other cost), estimates of costs incurred during different phases of the development process are needed.

The breakdown is based on the split between lot and construction costs in NAHB’s Construction Cost Surveys (averaged over surveys conducted since 2000) and the Census Bureau’s “nonconstruction cost factor” for raw land. The calculations also assume three-fourths of these costs are financed, based on typical AD&C loan-to-value ratios in the QFS.

Resulting assumptions:

- Only the cost of applying for zoning occurs at the very start of the development process. Financing costs associated with this are charged to the regulatory cost of the application and not counted in the pure cost of delay.
- 10.2 percent of total development represent costs financed by a land acquisition loan at the start of the site work phase.
- 10.8 percent of total development costs represent costs financed by a development loan during the site work phase, assuming draws on the loan occur on average halfway through this phase.
- 54.0 percent of total development costs represent costs incurred after building construction has started and financed with a construction loan, again assuming draws on the loan occur on average halfway through the site work phase.

Appendix II.

NAHB-NMHC Multifamily Regulations Cost Survey Questionnaire

1. What type of multifamily projects do you typically build in what areas? *Select all that apply*

| | Urban Core | Inner-Ring Suburban | Suburban | Exurban | Rural |
|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| High-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mid-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Garden/Low-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. What regions do you build in? Please select all that apply.

- | | |
|--|--|
| <input type="checkbox"/> New England (CT, ME, MA, NH, RI, VT) | <input type="checkbox"/> East South Central (AL, KY, MS, TN) |
| <input type="checkbox"/> Mid Atlantic (NJ, NY, PA) | <input type="checkbox"/> West South Central (AR, LA, OK, TX) |
| <input type="checkbox"/> South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV) | <input type="checkbox"/> Mountain (AZ, CO, ID, NM, MT, UT, NV, WY) |
| <input type="checkbox"/> East North Central (IN, IL, MI, OH, WI) | <input type="checkbox"/> Pacific (AK, CA, HI, OR, WA) |
| <input type="checkbox"/> West North Central (IA, KS, MN, MO, NE, ND, SD) | |

3. Including units you may start before the end of the year, how many multifamily units will your company start in 2017? _____

When answering this survey, please refer all your answers to the typical (most common) multifamily project your company builds.

Respond only for your local office/division, if you are part of a larger company.

4. How many units does your typical project have?

- | | |
|------------------------------------|--|
| <input type="checkbox"/> 2-4 units | <input type="checkbox"/> 150-349 |
| <input type="checkbox"/> 5-9 | <input type="checkbox"/> 350-499 |
| <input type="checkbox"/> 10-49 | <input type="checkbox"/> 500 units or more |
| <input type="checkbox"/> 50-149 | |

5. What is the total dollar amount spent on development costs in your typical project?

\$ _____

Land Use & Planning Regulations

6. For a typical piece of land, how much does it cost to apply for zoning approval as a % of total development cost? (Include costs of fiscal or traffic impact or other studies, and any review or other fees that must be paid by time of application. Please enter "0" if application costs are Zero percent).

_____ %

7. For a typical project , how many months does it take between the time you apply for zoning approval and the time you begin site work?

_____months

8a. When you begin site work, do you pay any guarantee or other fees that are refundable when the project is completed?

Yes No

8b. If “yes” in question 8A, how much are those refundable fees, as a % of total development costs?

_____%

9. Other than the refundable fees mentioned in question 8a, how much does it cost to comply with regulations when site work begins, as a % of total development costs? (Include costs of complying with environmental or other regulation as well as the cost of hook-up or impact or other fees.) Please enter "0" if cost of complying with these regulations is Zero percent).

_____%

10. How much do development requirements that go beyond what you would otherwise do (in terms of property layout, landscaping, materials used on building facades, etc.) add to your cost, as a % of total development costs? (Please enter "0" if the jurisdiction’s requirements don’t go beyond what you would normally do).

_____%

11. In the typical case, what is the value of any land that must be dedicated to the local government or otherwise left unbuilt (for parks, open green space, etc.), as a % of total development cost? (Please enter "0" if dedicating land is required infrequently).

_____%

12. How many months does it take between the time you begin site work and the time you obtain authorization to begin construction of the apartment building(s)?

_____months

13. How much extra time (in months) overall does complying with regulations add to the development process? (Please enter "0" if regulations typically cause no delay).

_____months

14. When you obtain authorization to begin construction, how much do you pay in additional fees, as a % of total development costs? In many cases, this will be only a permit fee, but include any additional impact or hook-up or inspection fees if they kick in at this time. (Please enter "0" if fees paid during or after construction are Zero percent).

_____%

15a. In the typical case, does a jurisdiction have inclusionary zoning/affordable housing requirements that apply to your project?

Yes No

15b. In the typical case, how much do these requirements (or a fee in lieu of affordable housing) cost as a percent of total development costs? (Please enter "0" if inclusionary zoning/affordable housing mandates/fees in lieu of affordable housing are encountered infrequently).

_____ %

Construction/Building Regulations

16. Over the past 10 years, how much have changes in construction codes and standards added to the cost of building a typical multifamily project, as a % of total development costs? (Please enter "0" if code changes have had minimal impact on costs).

_____ %

17. How much does complying with OSHA or other labor regulations cost, as a % of total development cost? (Please enter "0" if labor regulations have no impact on development costs).

_____ % Don't know/use of subs makes it impossible to estimate

18. Have you experienced added costs or delays due to neighborhood opposition to multifamily construction?

Yes No

Appendix 1:

Assumptions Used in the Calculations

In order to calculate a final effect on development costs, many of the NAHB-NMHC survey responses need to be combined with additional information. Primarily these are assumptions about the terms of development and construction loans, and how long construction typically takes, and how to allocate costs to different stages of the development and construction process. This appendix lists all the assumptions used in the calculations and gives the sources for each.

Loan terms

1.0 point charged for all land acquisition, development, and construction (AD&C) loans, based on results from a Quarterly Finance Survey (QFS) that NAHB was conducting in the early to mid-2000s.

A 7.65 percent interest rate on all AD&C loans. The QFS indicates that rates are typically set one point above prime, and 6.65 percent is NAHB's estimate of the prime rate that would prevail in the long run under neutral Federal Reserve policy.

The estimates also assume that three-fourths of any category of costs are financed, based on typical AD&C loan-to-value ratios in the QFS.

Construction Lags

The source for information lags not directly collected in the NAHB-NMHC questionnaire is the [Survey of Construction](#), conducted by the Census Bureau and partially funded by the Department of Housing and Urban Development. Preliminary estimates are taken from the published annual tables, averaged over the 2001-2016 period:

If project is 2-4 units

- Authorization to start = 1.71 months
- Start to completion = 10.87 months

If project is 5-9 units

- Authorization to start = 1.95 months
- Start to completion = 11.64 months

If project is 10+ units

- Authorization to start = 1.94 months
- Start to completion = 13.21 months

The NAHB-NMHC survey collected data on how much time regulation adds to the development process. To assign this to a particular phase of the development the following assumptions are used.

The regulatory delay is split and attributed half to the lag between applying for zoning approval and the beginning of site work, and half to the period after site work begins. If half of the regulatory delay exceeds the lag between applying for approval and beginning of site work, the excess is also attributed to the period after site work begins. It is first assumed that the resulting regulatory delay is

attributable to the period between the start of site work and the start of building construction, minus 3 months (the assumed minimum time it would take to do site work in the absence of regulation, based on conversations with developers). If any regulatory delay remains after being allocated to the zoning approval and site work periods, it is then attributed to the building construction period, and the start-to-completion lag is adjusted upward beyond the SOC-based average, accordingly.

The analysis assumes all loans are paid off when the buildings are completed.

Cost Breakdown

To implement the process described in the paragraph above and calculate a “pure” cost of delay (i.e., the effect regulatory delay would have even if the regulation imposed no other cost), estimates of costs incurred during different phases of the development process are needed.

The breakdown is based on the split between lot and construction costs in NAHB’s Construction Cost Surveys (averaged over surveys conducted since 2000) and the Census Bureau’s “nonconstruction cost factor” for raw land. The calculations also assume three-fourths of these costs are financed, based on typical AD&C loan-to-value ratios in the QFS.

Resulting assumptions:

- Only the cost of applying for zoning occurs at the very start of the development process. Financing costs associated with this are charged to the regulatory cost of the application and not counted in the pure cost of delay.
- 10.2 percent of total development represent costs financed by a land acquisition loan at the start of the site work phase.
- 10.8 percent of total development costs represent costs financed by a development loan during the site work phase, assuming draws on the loan occur on average halfway through this phase.
- 54.0 percent of total development costs represent costs incurred after building construction has started and financed with a construction loan, again assuming draws on the loan occur on average halfway through the site work phase.

Appendix II.

NAHB-NMHC Multifamily Regulations Cost Survey Questionnaire

1. What type of multifamily projects do you typically build in what areas? *Select all that apply*

| | Urban Core | Inner-Ring Suburban | Suburban | Exurban | Rural |
|-----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| High-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mid-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Garden/Low-Rise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. What regions do you build in? Please select all that apply.

- | | |
|--|--|
| <input type="checkbox"/> New England (CT, ME, MA, NH, RI, VT) | <input type="checkbox"/> East South Central (AL, KY, MS, TN) |
| <input type="checkbox"/> Mid Atlantic (NJ, NY, PA) | <input type="checkbox"/> West South Central (AR, LA, OK, TX) |
| <input type="checkbox"/> South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV) | <input type="checkbox"/> Mountain (AZ, CO, ID, NM, MT, UT, NV, WY) |
| <input type="checkbox"/> East North Central (IN, IL, MI, OH, WI) | <input type="checkbox"/> Pacific (AK, CA, HI, OR, WA) |
| <input type="checkbox"/> West North Central (IA, KS, MN, MO, NE, ND, SD) | |

3. Including units you may start before the end of the year, how many multifamily units will your company start in 2017? _____

When answering this survey, please refer all your answers to the typical (most common) multifamily project your company builds.

Respond only for your local office/division, if you are part of a larger company.

4. How many units does your typical project have?

- | | |
|------------------------------------|--|
| <input type="checkbox"/> 2-4 units | <input type="checkbox"/> 150-349 |
| <input type="checkbox"/> 5-9 | <input type="checkbox"/> 350-499 |
| <input type="checkbox"/> 10-49 | <input type="checkbox"/> 500 units or more |
| <input type="checkbox"/> 50-149 | |

5. What is the total dollar amount spent on development costs in your typical project?

\$ _____

Land Use & Planning Regulations

6. For a typical piece of land, how much does it cost to apply for zoning approval as a % of total development cost? (Include costs of fiscal or traffic impact or other studies, and any review or other fees that must be paid by time of application. Please enter "0" if application costs are Zero percent).

_____ %

7. For a typical project , how many months does it take between the time you apply for zoning approval and the time you begin site work?

_____months

8a. When you begin site work, do you pay any guarantee or other fees that are refundable when the project is completed?

Yes No

8b. If “yes” in question 8A, how much are those refundable fees, as a % of total development costs?

_____ %

9. Other than the refundable fees mentioned in question 8a, how much does it cost to comply with regulations when site work begins, as a % of total development costs? (Include costs of complying with environmental or other regulation as well as the cost of hook-up or impact or other fees.) Please enter "0" if cost of complying with these regulations is Zero percent).

_____ %

10. How much do development requirements that go beyond what you would otherwise do (in terms of property layout, landscaping, materials used on building facades, etc.) add to your cost, as a % of total development costs? (Please enter "0" if the jurisdiction’s requirements don’t go beyond what you would normally do).

_____ %

11. In the typical case, what is the value of any land that must be dedicated to the local government or otherwise left unbuilt (for parks, open green space, etc.), as a % of total development cost? (Please enter "0" if dedicating land is required infrequently).

_____ %

12. How many months does it take between the time you begin site work and the time you obtain authorization to begin construction of the apartment building(s)?

_____ months

13. How much extra time (in months) overall does complying with regulations add to the development process? (Please enter "0" if regulations typically cause no delay).

_____ months

14. When you obtain authorization to begin construction, how much do you pay in additional fees, as a % of total development costs? In many cases, this will be only a permit fee, but include any additional impact or hook-up or inspection fees if they kick in at this time. (Please enter "0" if fees paid during or after construction are Zero percent).

_____ %

15a. In the typical case, does a jurisdiction have inclusionary zoning/affordable housing requirements that apply to your project?

Yes No

15b. In the typical case, how much do these requirements (or a fee in lieu of affordable housing) cost as a percent of total development costs? *(Please enter "0" if inclusionary zoning/affordable housing mandates/fees in lieu of affordable housing are encountered infrequently).*

_____ %

Construction/Building Regulations

16. Over the past 10 years, how much have changes in construction codes and standards added to the cost of building a typical multifamily project, as a % of total development costs? *(Please enter "0" if code changes have had minimal impact on costs).*

_____ %

17. How much does complying with OSHA or other labor regulations cost, as a % of total development cost? *(Please enter "0" if labor regulations have no impact on development costs).*

_____ % Don't know/use of subs makes it impossible to estimate

18. Have you experienced added costs or delays due to neighborhood opposition to multifamily construction?

Yes No