



NEW HOMES AND RED TAPE IN BRITISH COLUMBIA: **Residential Land-Use Regulation** **in the Lower Mainland**

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Executive Summary

As an increasing number of people move to Canada's major cities, high housing prices persist in its most desirable markets. With growing concerns about housing affordability and prices, understanding how public policy affects the supply of new homes is critical. Following several major studies in the United States on this topic, the Fraser Institute's survey of housing developers and homebuilders collects data about how residential land-use regulation affects the supply of new housing. The data collected reflect the experiences and opinions of industry professionals across Canada. *New Homes and Red Tape in British Columbia: Residential Land-Use Regulation in the Lower Mainland* belongs to a series tallying the data to represent industry professionals' experiences and opinions of how residential development is regulated in cities across Canada. This report presents survey results for cities in British Columbia's Lower Mainland.

Unlike previous editions, this report accounts for the relative scale of survey respondents' home-building operations. Some have fewer than 20 units under development, while others have thousands, making it important to assign appropriate weight to their responses. In doing so, the averages presented in this edition of the *New Homes and Red Tape* series more closely reflect typical experiences across units, rather than across respondents.

Estimates of typical project-approval timelines in Lower Mainland cities range from approximately five months or less in the City of Langley and Pitt Meadows to over 18 months in the City of Vancouver and West Vancouver, where timelines are also rated the most uncertain. Reported compliance costs and fees add up to a low of \$4,300 per home built in Pitt Meadows and a high of almost \$78,000 per home in the City of Vancouver. The survey reports that zoning bylaws need to be changed to accommodate more than 60% of new residential development in 12 of 20 cities. Estimates of rezoning's effect on approval timelines range from having no substantial effect in Richmond and Port Coquitlam to adding ten months in Surrey.

Council and community opposition to residential development is perceived as strongest in cities where the value of dwellings is highest, raising questions about the causes and consequences of local resistance to new housing. The strongest opposition is reported in Vancouver, with West Vancouver close behind. This opposition is typically not perceived as a significant deterrent to building in the City of Langley and Port Coquitlam.

The index of residential land-use regulation tallies the results of five key components of regulation's impact—approval timelines, timeline uncertainty, regulatory costs and fees, rezoning prevalence, and impact from local council and community groups—in 19 cities that generated a sufficient number of responses to the survey. This index ranks the City of Langley as the least regulated in British Columbia's Lower Mainland and the City of Vancouver as the most.

1. Introduction

As an increasing number of people move to Canada's major cities, high housing prices persist in its most desirable markets. With growing concern about housing affordability and prices, understanding how public policy affects the supply of new homes is critical. Evidence of the importance of land constraints for determining differences in the supply of new housing, and price growth, across American housing markets is mounting (see Saiz, 2010 and Saks, 2008 for examples). Systematic comparisons of land-use regulations across Canadian cities can help identify where they are cost-effective and efficient, and where these regulations burden local economies and aspiring home-owners.

The Lower Mainland encompasses the Vancouver, Abbotsford-Mission, and Chilliwack metropolitan areas, and was home to 59.1% of British Columbia's population as of the 2016 census. This region, bounded to the north by mountains, to the west by the Pacific Ocean, and to the south by the border with the United States, faces unique geographical obstacles to growth ([figure 1](#)). Greater Vancouver's housing market has seen prices rise by 92% between June 2006 and June 2016 (MLS, 2016) while consumer prices rose by only 15.6% (Statistics Canada, 2016).

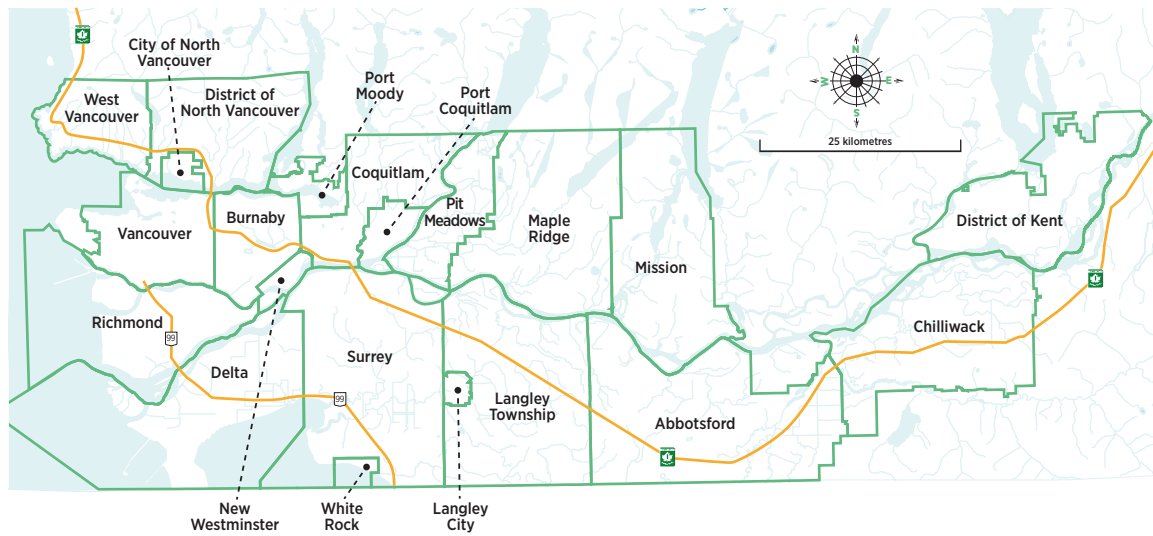
The Fraser Institute has conducted a survey of housing developers and home-builders to assess how residential land-use regulation affects the supply of new housing. The data collected represent the experiences and opinions of industry professionals across Canada. This report presents survey results for cities in British Columbia's Lower Mainland describing the length and uncertainty of approval timelines for residential development projects, compliance costs and fees, how frequently respondents must rezone property, and how they gauge local and political opposition to their projects.

Unlike previous editions, this report accounts for the relative scale of survey respondents' home building operations. Some have fewer than 20 units under development, while others have thousands, making it important to assign appropriate weight to their responses. In doing so, the averages presented in this edition of the *New Homes and Red Tape* series more closely reflect typical experiences across units, rather than across respondents.

The Fraser Institute's Survey of Land-Use Regulation continues work done in the United States, developing insights into policy outcomes in Canadian cities. Recent US work that inspired this survey includes that of Gyourko, Saiz, and Summers (2008) who conducted a nationwide survey measuring these regulatory

processes and their outcomes. Another series of surveys was used to understand land-use regulation in the San Francisco Bay Area, incorporating perspectives of city officials and residential developers (Calfee et al., 2007; Quigley, Raphael, and Rosenthal, 2008). For a more in-depth exploration of research into regulation's economic impacts, see Appendix 1 (p. 27).

Figure 1: Map of British Columbia's Lower Mainland showing boundaries of cities and municipalities included in survey



2. Data

2.1 Survey questionnaire

The Fraser Institute's Survey of Residential Land-Use Regulation was designed to capture key insights into residential development and building professionals' experiences with land-use regulation. Its design is an extension of work by Calfee et al. (2007). Their survey was meant to support data from city planning officials. We have modified their methods to form a stand-alone survey of residential developers and home builders describing land-use regulation. Respondents were directed to focus on municipalities and types of residential development with which they were familiar, giving accounts of:

- the typical length and uncertainty of approval time lines;
- typical regulatory compliance costs and fees;
- the role of politicians and community groups in residential development;
- the effects of zoning bylaws and official plans;
- uncertainty in possible land uses prior to application for building permit or rezoning

Responses were measured on scales that reflect directly measurable outcomes where possible (months, dollars, or proportion of projects affected), and clearly labeled 5-point scales otherwise. We distinguish single-family, clearly defined as single detached homes, from multiple dwelling developments, which we specify as including townhouse, semi-detached, and apartment units,¹ consistent with the definition of the Canada Mortgage and Housing Corporation (CMHC, 2014). The survey was administered electronically and distributed through developer and homebuilder trade associations. For a list of survey questions, see Appendix 5 (p. 35).

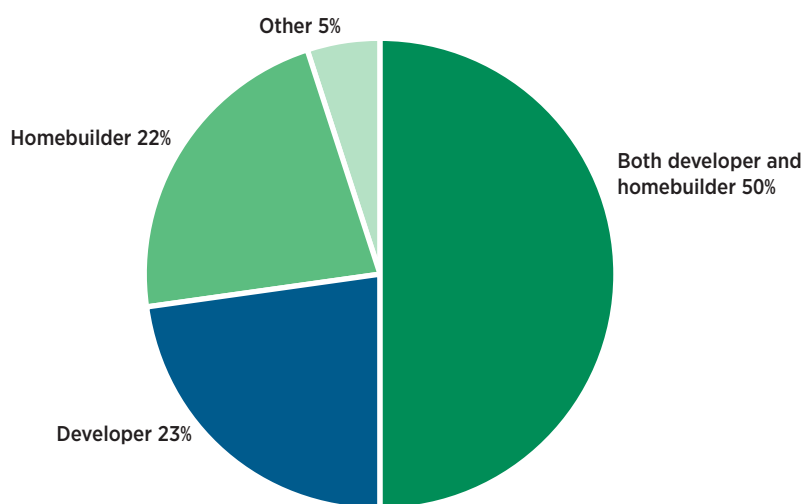
2.2 Survey response and the sample

The survey was conducted over two periods in the Fall of 2014 and the Spring of 2016, and distributed primarily through industry associations. The regulatory data used in this report were obtained from 60 respondents in the Lower Mainland.

1. High-rise condominiums are included in the category of multiple dwelling developments.

The average respondent answered questions for 6.5 cities. Although respondents' identities are not known, their answers generated a range of results that is similar to other reports on the residential development process in the Lower Mainland.² **Figure 2** illustrates that half of the survey respondents identified themselves as both developers and homebuilders, while the other half identified itself more narrowly.³ **Figure 3** shows that only 12% of respondents specialize in detached homes in the Lower Mainland. Over 70% of respondents who have worked on a single-family project in the past 10 to 12 years also produce multiple dwelling developments.

Figure 2: Respondents from British Columbia's Lower Mainland to the Survey of Residential Land-Use Regulation, by profession (%)

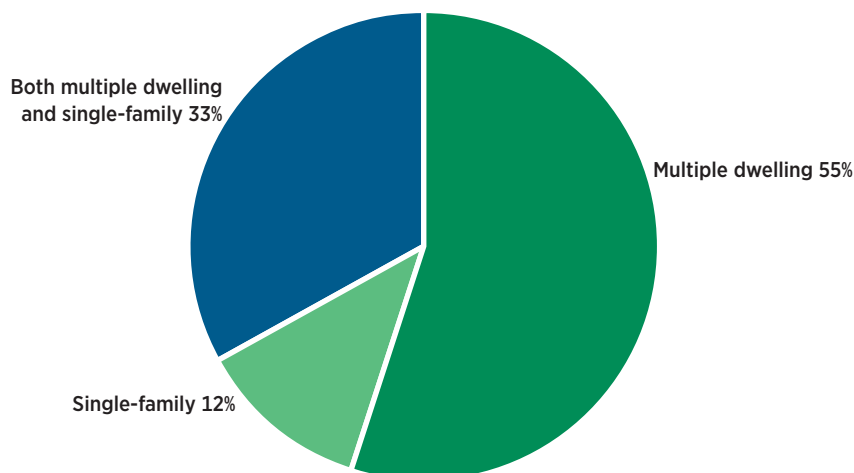


Note: Homebuilder or developer refers to a respondent who falls in one category but not the other. Many firms do several related types of work, but these two broad categories are useful for understanding the industry. Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

2. The *Getting to Groundbreaking* (G2G) series of reports by Simon Fraser University and a number of real-estate industry associations and municipal partners produced a similar range of per-unit costs (approximately \$10,000 to \$40,000) and average approval timelines (approximately 5 months to 20 months). However, our results are not directly comparable to G2G as we collect less detailed, but nationally comparable, data while the G2G releases focus on specific building types, such as townhouse development and four-storey wood-frame apartment buildings, in the Lower Mainland (both subsets of our multiple dwelling category).

3. The terms “developer” and “homebuilder” are not universally defined and share a degree of overlap. However, they are considered distinct professions by the Canadian Home Builders' Association (2011), and the Building Industry and Land Development Association, among others. In general, homebuilders are primarily concerned with the construction of new housing, but may also include renovators and contractors. Developers are primarily responsible for the servicing and subdivision of land. Many firms fill both of these roles.

Figure 3: Respondents from British Columbia’s Lower Mainland to the Survey of Residential Land-Use Regulation, by type of development (%)



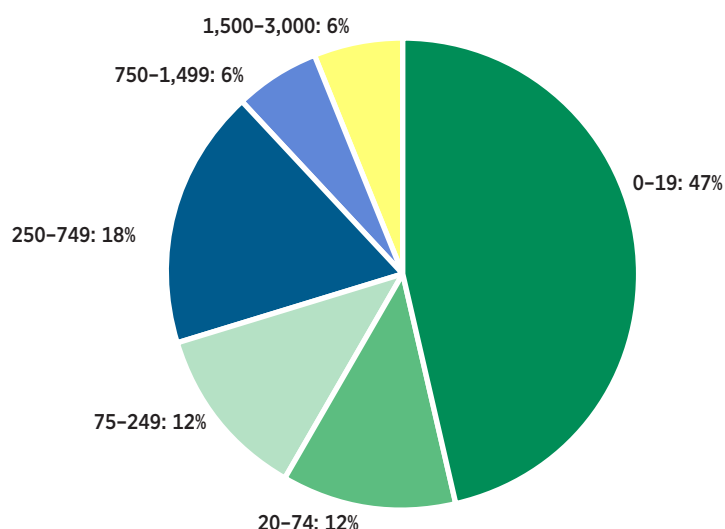
Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

This report presents several measures of regulation based on the survey data. We do not report results for categories based on fewer than three responses; we indicate where they are based on fewer than five. The number of cities presented in each section of our analysis varies alongside the number of responses to each question in our survey. Each figure presented in this study includes a regional average calculated across all responses from the Lower Mainland, rather than across cities. Since results are suppressed in cities with few respondents, the regional average of each indicator generally will not coincide with the average of city-level indexes presented.

Without knowing the market shares of companies responding to the survey it is difficult to calculate a meaningful response rate. For example, if one developer represents 60% of new homebuilding in one city, that developer's response is arguably more significant than all other responses from that city combined.⁴ Our survey attempts to approximate scale by asking respondents how many units they currently have in development. **Figure 4** shows that, of the respondents choosing to disclose scale of their operations in the Lower Mainland, the largest portion have fewer than 20 units underway, although the majority of respondents have larger operations. These scale estimates also allow for weights to be assigned to individual responses in the construction of the Index.

4. Conversely, one can speculate that it may be difficult for a new developer or homebuilder to compete successfully against incumbents, who know the nuances of each city's regulatory process. If this is true, more highly regulated cities would have fewer developers (each with a large market share) and the experiences of smaller firms are important.

Figure 4: Respondents from British Columbia's Lower Mainland to the Survey of Residential Land-Use Regulation, by number of units currently in development (%)



Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Table 1 reports characteristics of cities described in this report; all data are from 2011, the most recent census year for which all data are available. Vancouver is the most populous city listed despite several of its suburbs occupying more land. With single detached dwellings representing only 18% of the city's occupied stock, Vancouver is densely settled relative to the nearby District of North Vancouver and has characteristics similar to those of suburbs such as the City of North Vancouver and New Westminster.

The City of Vancouver was the most popular commuting destination for the first seven cities listed in table 1. Despite differences in reported dwelling values and form, it is useful to think of these cities as common homes for those working in the region's core. However useful, there are caveats to this interpretation. For example, over half of Richmond commuters work locally but the city can still be considered home for many who commute to Vancouver, the usual place of work for 27% of Richmond commuters. Commuting trends suggest that Chilliwack and Abbotsford, whose commuters tend to work locally, are relatively isolated from Vancouver's core; this is reflected in the comparatively low value of dwellings in these areas.

Table 1: City characteristics as of the 2011 census

	Population	Land area (km ²)	Single detached dwellings (%) ¹	Median dwelling value (\$) ²	Median commute time (min.) ³	Most common place of work and percentage of commuters	
Vancouver	603,502	115	18%	\$752,016	21	Vancouver	68%
Burnaby	223,218	91	25%	\$600,941	30		36%
District of North Vancouver	84,412	161	56%	\$850,744	21		33%
New Westminster	65,976	16	18%	\$400,729	30		30%
City of North Vancouver	48,196	12	15%	\$599,985	21		30%
West Vancouver	42,694	87	58%	\$1,299,894	21		38%
Port Moody	32,975	26	32%	\$539,932	31		27%
Surrey	468,251	316	42%	\$500,746	30	Surrey	45%
Langley City	25,081	10	25%	\$300,696	23		27%
White Rock	19,339	5	29%	\$450,494	26		42%
Maple Ridge	76,052	267	59%	\$449,365	31	Maple Ridge	35%
Pitt Meadows	17,736	87	46%	\$459,965	30		16%
Richmond	190,473	129	37%	\$601,945	21	Within city	55%
Abbotsford	133,497	376	44%	\$393,600	16		65%
Coquitlam	126,456	122	44%	\$599,465	30		24%
Langley Township	104,177	308	59%	\$501,361	25		36%
Delta	99,863	180	64%	\$562,181	26		30%
Chilliwack	77,936	262	59%	\$341,274	16		67%
Port Coquitlam	56,342	29	42%	\$489,678	31		21%
Mission	36,426	226	69%	\$399,607	26		31%
District of Kent	5,664	168	77%	\$324,838	15.5		50%

Notes: **1.** Percentage of occupied private dwellings. The census defines single detached dwellings as those with open space on all sides, and no dwellings either above or below. **2.** Dwelling values refer dollar amount (in CA\$2011) expected by the owner if the dwelling were to be sold. Reported for owner-occupied, non-farm dwellings. **3.** Minutes. Commute times refer to how many minutes it took for a person to travel from home to work. Reported for individuals age 15 years and older in private households who worked at some time between January 1, 2010 and May, 2011. Typically refers to place of employment and residence at the time of the survey.

Sources: Statistics Canada, 2013a, 2013b, 2012; authors' calculations.

3. Survey Results

3.1 Approval timelines

Survey respondents were asked to estimate approval timelines for standard single-family and multiple dwelling projects that do and do not require rezoning (a process described in section 3.3). Between one and four timeline entries per city are recorded for each respondent, depending on the types of work that they do in each city. For each type of work, respondents were asked to select one of 7 ordered choices: 2 months or less, 3 to 6 months, 7 to 10 months, 11 to 14 months, 15 to 18 months, 19 to 23 months, and 24 months or more.

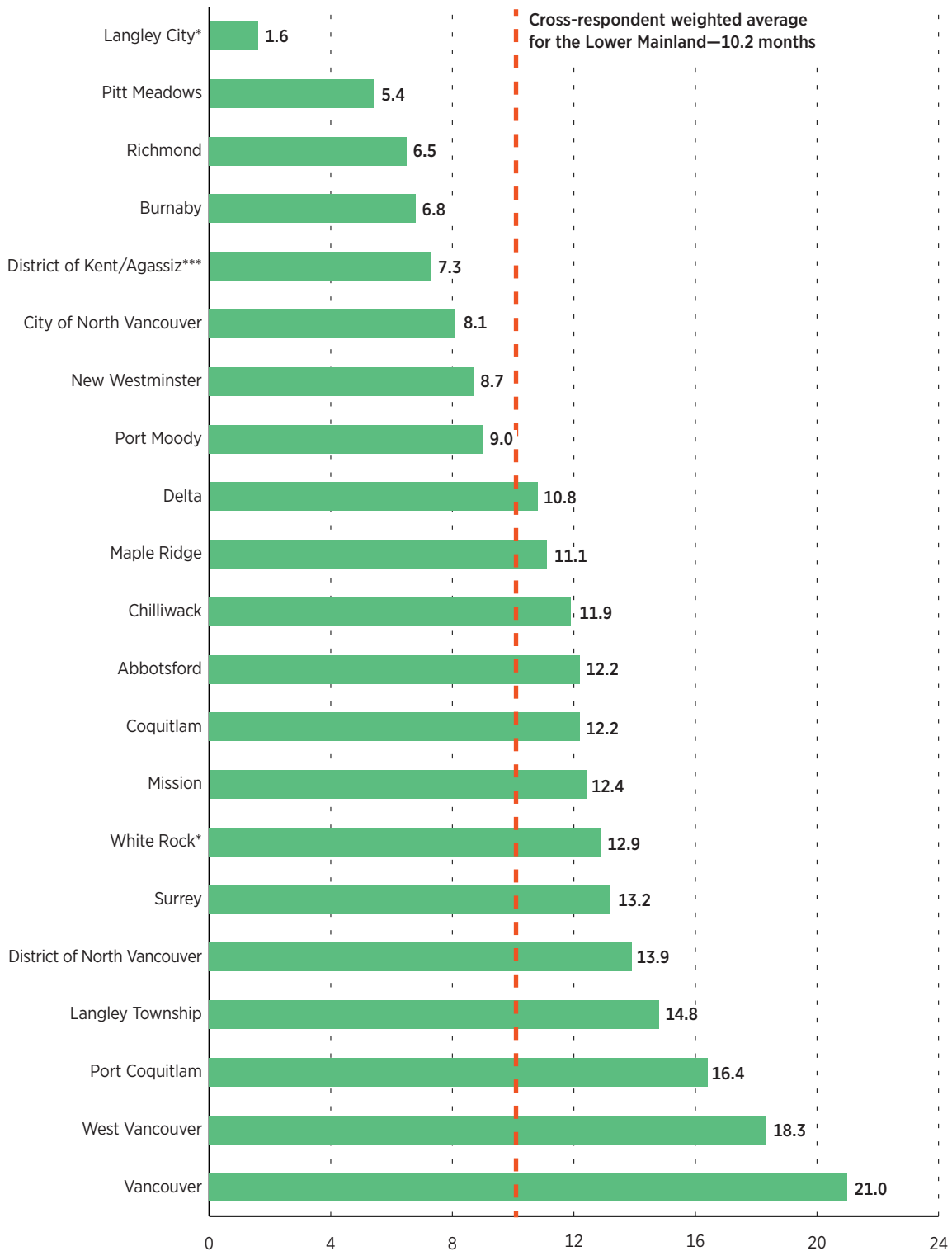
The Approval Timeline Index (ATI) is the city average of survey respondents' timeline estimates, weighted by the estimated scale of their operations. To calculate this average, each bin was assigned its midpoint.⁵ Respondents that input a timeline of three or more years were omitted from the Approval Timeline Index. These high outliers all refer to timelines with rezoning, making up less than 2% of all timeline entries requiring rezoning.

Of the 21 cities represented in [figure 5](#), a slight majority share reported timelines in the range of five to 15 months. Large variations in these timelines occur between cities at the low end (City of Langely and Pitt Meadows) and those the high end (Vancouver and West Vancouver) of the range. The difference between Pitt Meadows and the city of Vancouver itself represents close to a quadrupling of reported approval timelines. Additional measures of approval timelines, broken down by housing type (single-family or multiple dwelling) and by projects requiring rezoning compared to those not requiring rezoning, are presented in Appendix 3 (p. 29).

The Approval Timeline Index is influenced by the type of project done by survey respondents, which varies across cities. For example, the ATI for Burnaby (which uses data from 22 unique respondents) is based almost entirely on accounts of multiple dwelling development, since only four of these respondents described the approval process for single-family development in this city. The ATI is deliberately constructed this way, to represent the average approval timeline for typical housing developments in each city.

5. Timelines in months were assigned to bins as follows: 2 months or less is taken as 1 month; 3 to 6 months is taken as 4.5 months; 7 to 10 months is taken as 8.5 months; 11 to 14 months is taken as 12.5 months; 15 to 18 months is taken as 16.5 months; 19 to 23 months is taken as 21 months; and 24 months or more is taken as 28 months unless the respondent opted to input a timeline estimate (which the survey encouraged, but was not always done).

Figure 5: The Approval Timeline Index (2016) for British Columbia's Lower Mainland—typical approval timeline, in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

3.2 Timeline uncertainty

In addition to the average approval time for a project, developers may also take the variation in approval times into account when considering projects. To assess the effect of timeline uncertainty in each city, we asked developers how this uncertainty affects both multiple dwelling and single-family development in each city. Responses are measured on a 5-point scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor. The Timeline Uncertainty Index is the average response to this question in each city, weighted by the estimated scale of respondents' operations (**figure 6**).

Uncertainty about timelines appears to be a relatively minor deterrent to development in many Lower Mainland municipalities. The three most notable exceptions to this generalization are West Vancouver, where the average response described timeline uncertainty as a strong deterrent to development, as well as the City of Langley and Pitt Meadows, where this factor does not present a deterrent to typical development.

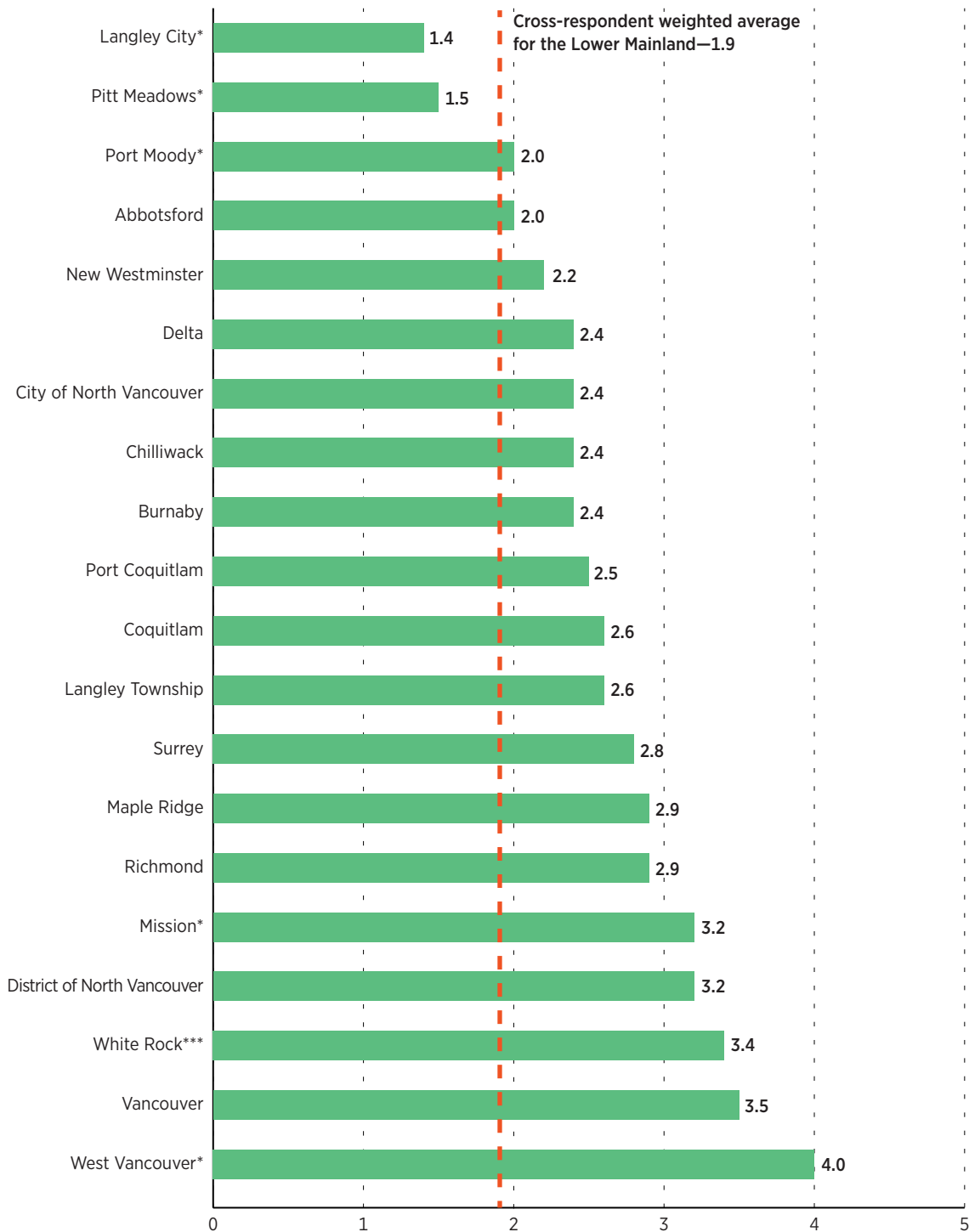
Approval timelines are an important component of established measures of residential land-use regulation (Gyourko, Saiz, and, Summers 2008; Quigley, Raphael, and Rosenthal, 2008). Long and uncertain approval timelines can make the supply of new housing less responsive to demand, with negative consequences for anyone looking to enter the market (see Green, Herzog, and Filipowicz, 2015b; Green, Filipowicz, Lafleur, and Herzog, 2016; and Mayer and Somerville, 2000 for a more detailed discussion).

3.3 Compliance costs and fees

We asked respondents to estimate the sum of regulatory compliance costs and fees accrued per dwelling unit built for standard single-family and multiple dwelling projects.⁶ The survey offered seven ordered choices: Less than \$1,000 per unit; \$1,000 to \$9,999 per unit; \$10,000 to \$19,999 per unit; \$20,000 to \$34,999 per unit; \$35,000 to \$49,999 per unit; \$50,000 to \$75,000 per unit; and more than \$75,000 per unit. Respondents had the option to specify a cost if they selected the highest bin, but this option was not exercised in the Lower Mainland.

6. Specifically, we asked for estimates of the cost (per dwelling unit) of the project approval and regulatory compliance process in each city. The survey specified that this includes all administration, processing, and direct compliance costs. Appendix 5 (p. 35) presents the exact wording of the survey questionnaire.

Figure 6: The Timeline Uncertainty Index (2016) for development in British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

The Cost and Fees Index (CFI) is the city average of survey respondents' compliance costs and fee estimates, weighted by the estimated scale of their operations. To calculate this average, each bin was assigned its midpoint,⁷ except the top bin, which was assigned \$82,500.

Figure 7 shows CFI ratings in the 19 Lower Mainland municipalities where we have enough data to reliably measure regulatory costs of residential development. The region's eastern suburbs of Pitt Meadows, Port Moody, New Westminster, Langley City, and Port Coquitlam all fall in the range of \$4,000 to \$10,000 per dwelling. It is interesting that Burnaby, which is adjacent to Vancouver, and Maple Ridge, an hour's drive from the region's core, share such similar CFI ratings.

At the opposite end of the CFI are Vancouver, Surrey, and Richmond, a diverse trio of cities (as observed in table 1) with reported compliance costs reaching a high of \$78,000 per new dwelling. These higher costs and fees are driven in part by the responses from developers having a greater scale of operations, perhaps due to the more complex nature of these projects. Although the CFI clearly indicates the intermunicipal variation of reported compliance costs and fees on residential development, what is less clear is the level of regulatory costs appropriate to help pay for the infrastructure and amenities required to service new housing.

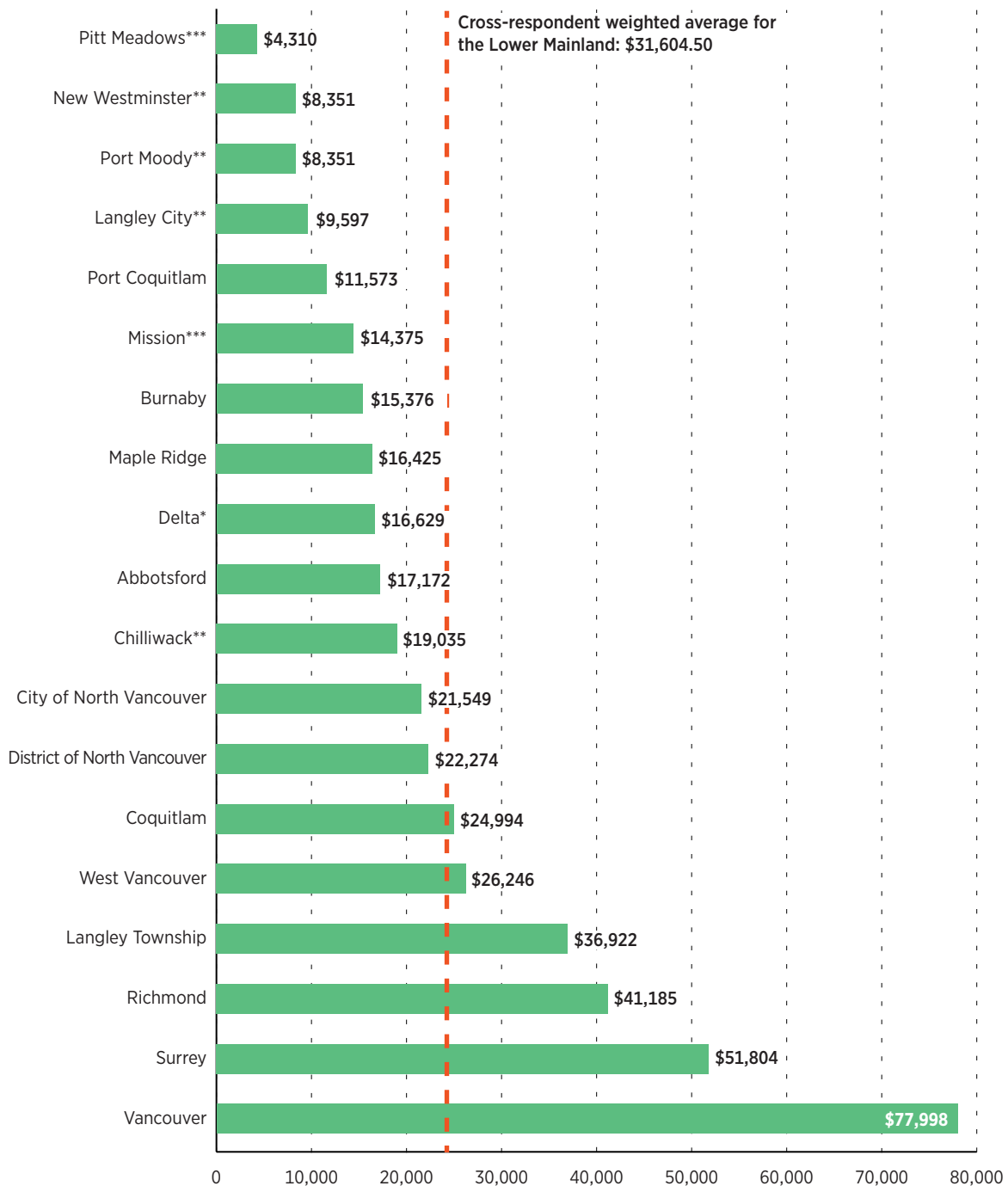
Servicing residential development can be subject to increasing returns to scale. Dense, inner-city development should generally be cheaper to service on a per-dwelling basis than homes built in new neighbourhoods (see Slack, 2002 for a discussion in the Canadian context). If regulatory costs largely represent the capital cost of servicing new neighbourhoods with new roads, sewers, and other infrastructure, they should be lowest in cities that are intensifying—growing by making existing communities denser—rather than creating new ones on greenfield land. However, Green, Herzog, and Filipowicz (2015b) show that trends in regulatory costs across Canada are the opposite of what one would expect if the CFI measures reasonable servicing costs. Instead, the data suggest that intensifying cities often have regulatory frameworks that are costly to navigate.

3.4 Rezoning

The need to change zoning bylaws can affect approval timelines and regulatory costs. Zoning bylaws “[state] exactly: how land may be used; where buildings and other structures can be located; the types of buildings that are permitted and how

7. Costs and fees in dollars per dwelling unit built were assigned to bins as follows: Less than \$1,000 per unit is taken as \$500; \$1,000 to \$9,999 per unit is taken as \$5,000; \$10,000 to \$19,999 per unit is taken as \$15,000; \$20,000 to \$34,999 per unit is taken as \$27,500; \$35,000 to \$49,999 per unit is taken as \$42,500; \$50,000 to \$75,000 per unit is taken as \$62,500; and More than \$75,000 per unit is taken as \$82,500.

Figure 7: The Cost and Fees Index (2016) for British Columbia's Lower Mainland—typical regulatory cost, \$ per dwelling unit



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

they may be used; [and] the lot sizes and dimensions, parking requirements, building heights and setbacks from the street” (Ontario, Ministry of Municipal Affairs and Housing, 2010).⁸ It is difficult to accurately measure the impact of zoning on the housing supply; we cannot observe how a city would grow without its current regulation. The prevalence of rezoning (the process of amending the zoning designation assigned to a given parcel) is our most objective measure of zoning’s impact on development.⁹

Our survey asked respondents whether they rezone property. Those who do were asked to estimate how frequently their multiple dwelling and single-family projects require rezoning in each city by selecting one of five bins: Never; Rarely (about 25% of projects); Sometimes (about half of projects); Frequently (about 75% of projects); and Always. The Rezoning Index is the average percentage of respondents’ projects estimated to require rezoning in each city, weighted by the estimated scale of their operations.¹⁰ It is reported in [figure 8](#) and broken down by development type where possible in Appendix 5 (p. 35).

According to survey evidence, the overwhelming majority of residential development in the Lower Mainland requires rezoning. Our survey also suggests that only a third of projects in White Rock require rezoning, and even fewer in Pitt Meadows. Conversely, the vast majority of new units built in Burnaby and Vancouver require rezoning. For the average Lower Mainland respondent, 55% of development requires rezoning,¹¹ in line with the average in the rest of Canada.

The added complexity of the rezoning process can potentially increase project approval timelines. Survey respondents who describe approval timelines both with and without rezoning allow us to estimate the average effect of the rezoning process on approval timelines. We do this by calculating the differences in these timelines

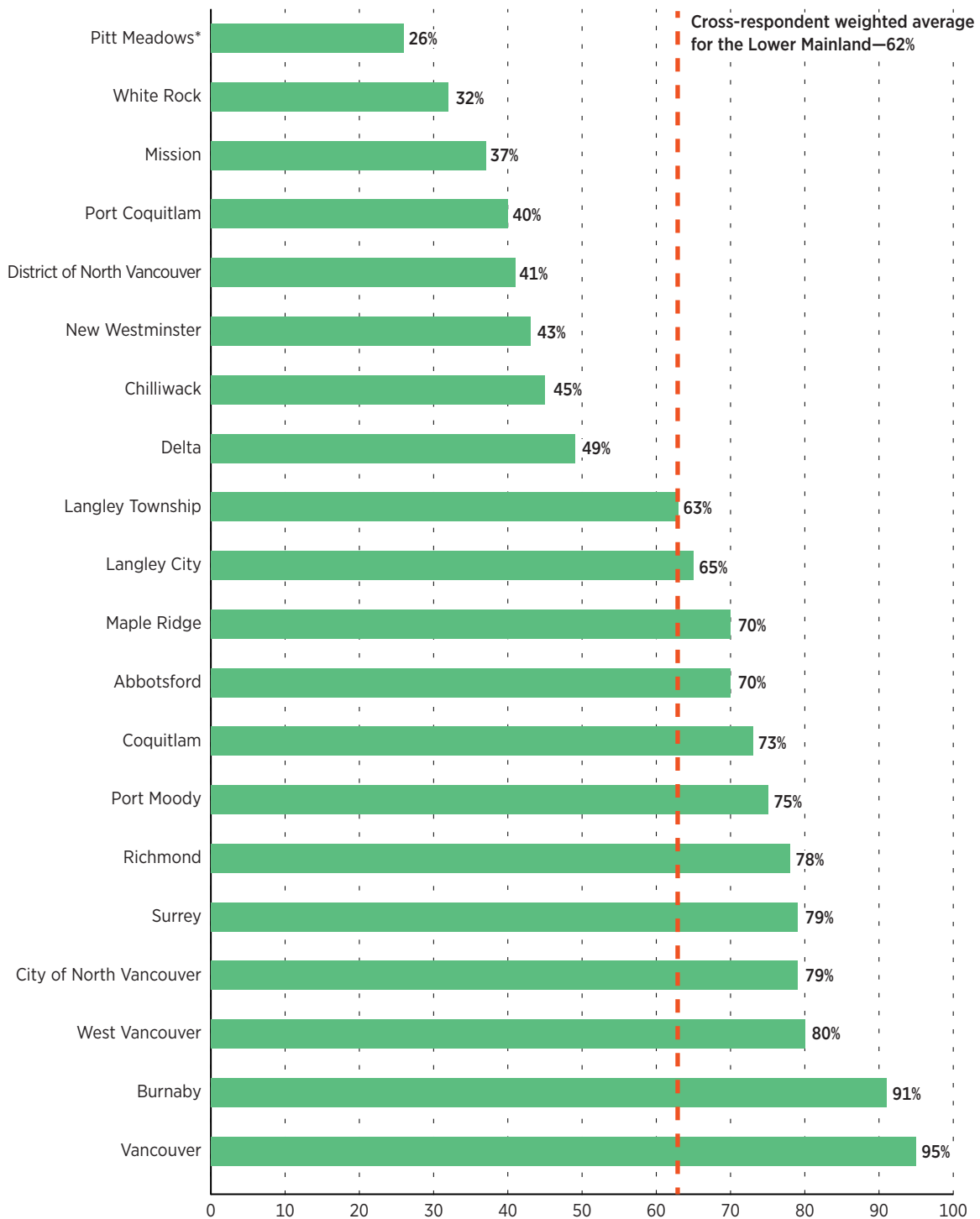
8. This definition was selected for its brevity and its broad applicability. For a more detailed definition of zoning, as practised in British Columbia, see British Columbia, Ministry of Community, Sport & Cultural Development, 2015.

9. Conceptually, the prevalence of rezoning measures how compatible land-use regulation is with demand by counting the proportion of building done by survey respondents that requires amendment to existing zoning regulation. This measure does not capture zoning’s ability to prevent externalities; it indicates the amount of land with zoning regulation that developers and city planners have agreed to change.

10. To compute the rezoning index, survey responses were coded as follows: never or indicated that respondent does not rezone land is taken as 0; rarely (about 25% of projects) is taken as 25%, sometimes (about half of projects) is taken as 50%, frequently (about 75% of projects) is taken as 75%, and always is taken as 100%.

11. This average is calculated across all responses (without weighting by scale of operations) in the Lower Mainland (not across cities), and includes responses for cities not listed in figure 8.

Figure 8: The Rezoning Index (2016) for British Columbia's Lower Mainland—percentage of residential development requiring rezoning



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

for each respondent in each city, then averaging across responses.¹² Data from across Canada suggest that for the average developer outside of the Lower Mainland, rezoning adds 3.8 months to a typical project's approval timeline.¹³ In the Lower Mainland, this average rises to 5.19 months (5.3 months when weighted by the scale of the respondents' operations), increasing the incentive to avoid rezoning.¹⁴

Figure 9 presents the estimated effect of each city's rezoning process on the time needed to approve standard residential developments. Vancouver and Surrey both add over ten months to approval timelines alongside the rezoning process. This effect is accentuated in Vancouver by its even higher incidence of rezoning. Curiously, respondents who build both with and without rezoning in Richmond report shorter average timelines with rezoning. Respondents in Pitt Meadows report being able to avoid rezoning, with survey data from this city suggesting that only a quarter of new development is rezoned and that this process adds less than three months to approval timelines on average. A similar outcome is suggested in Port Coquitlam.

3.5 Council and community

We asked developers how local council and community groups affect single-family and multiple dwelling development. Responses are measured on a 5-point scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and [5] Would not pursue development due to this factor. The Council and Community Index (CCI) is the average response to these questions for each city, weighted by the estimated scale of their operations (**figure 10**).

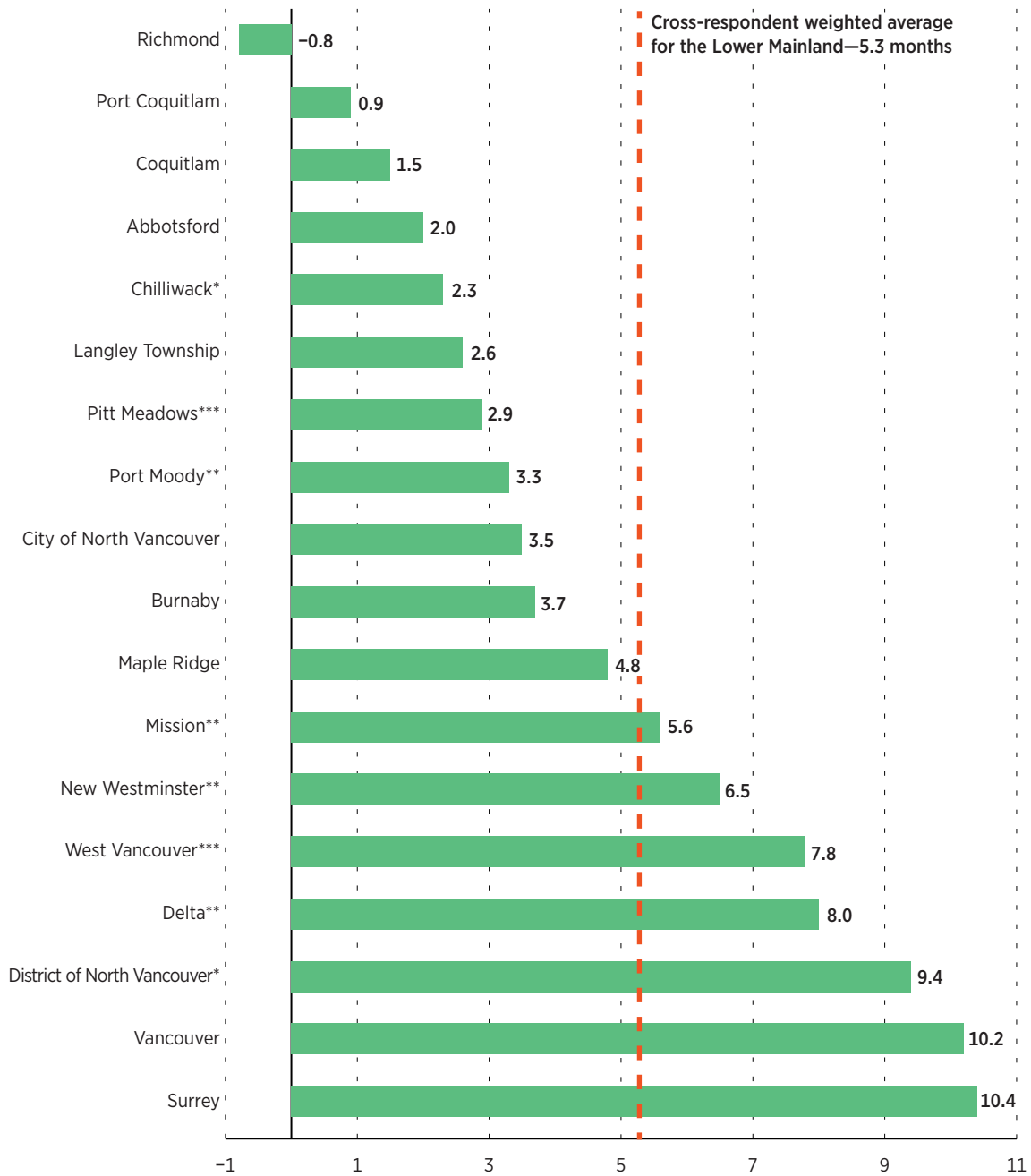
The strongest council and community opposition to new housing projects is concentrated in the City of Vancouver and West Vancouver, while the eastern suburbs of the City of Langley, Port Coquitlam, and Pitt Meadows have the least of this sort of opposition. In general, our survey suggests that council and community opposition presents a deterrent to development in only a handful of Lower Mainland cities. On the other hand, on average, no jurisdiction except the City of Langley shows a tendency to encourage development.

¹². Differences between timelines with and without rezoning are calculated for every survey respondent in each city, separately for single-family and multiple dwelling developments. Data from surveys without a response for either rezoning or non-rezoning timelines for a particular dwelling type and city are dropped. This statistic is only reported in cities where at least three respondents describe timelines with and without rezoning for either dwelling type.

¹³. The national average effect of rezoning on approval timelines is 4.11 months when the Lower Mainland is included.

¹⁴. These averages were computed across individual responses, not across cities. Averaging across the cities shown in figure 8 will produce different results.

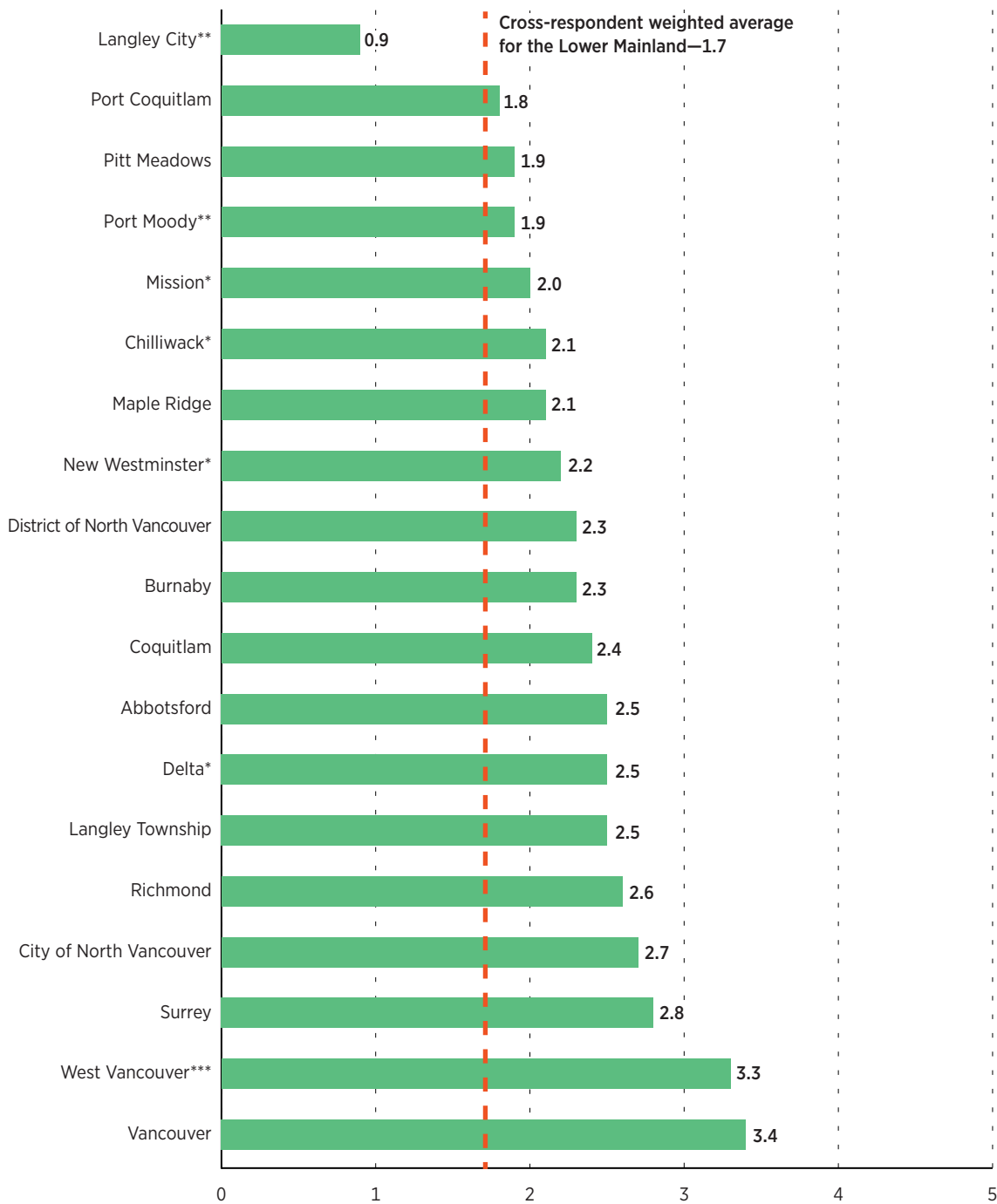
Figure 9: The effect of the rezoning process on approval timelines in British Columbia's Lower Mainland (2016)—city-level averages in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Figure 10: The Council and Community Index (2016) for British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Some suggest that incumbent homeowners have an incentive to block new development, restricting the housing supply and increasing the market value of their property. Hilber and Robert-Nicoud (2013) formalize this argument, predicting that owners of developed land will favour stringent land-use regulation. Turning to data gathered from American metropolitan areas, the authors find a positive relationship between the share of developed land in 1992 and a measure of regulation in 2005; this evidence for their theory is supported by several statistical techniques.¹⁵ To the extent that this effect also occurs in Canada, it can be measured by the CCI.

Figure 11 shows that the CCI is positively correlated with dwelling values reported to the *2011 National Household Survey* (with a correlation coefficient of 0.653).¹⁶ While this relationship is not necessarily causal—other factors such as the attractiveness of a neighbourhood may be driving both the CCI and dwelling values—it is difficult to rule out the hypothesis that homeowners may deter residential development to increase their property values.

3.6 Predictability of possible land-uses

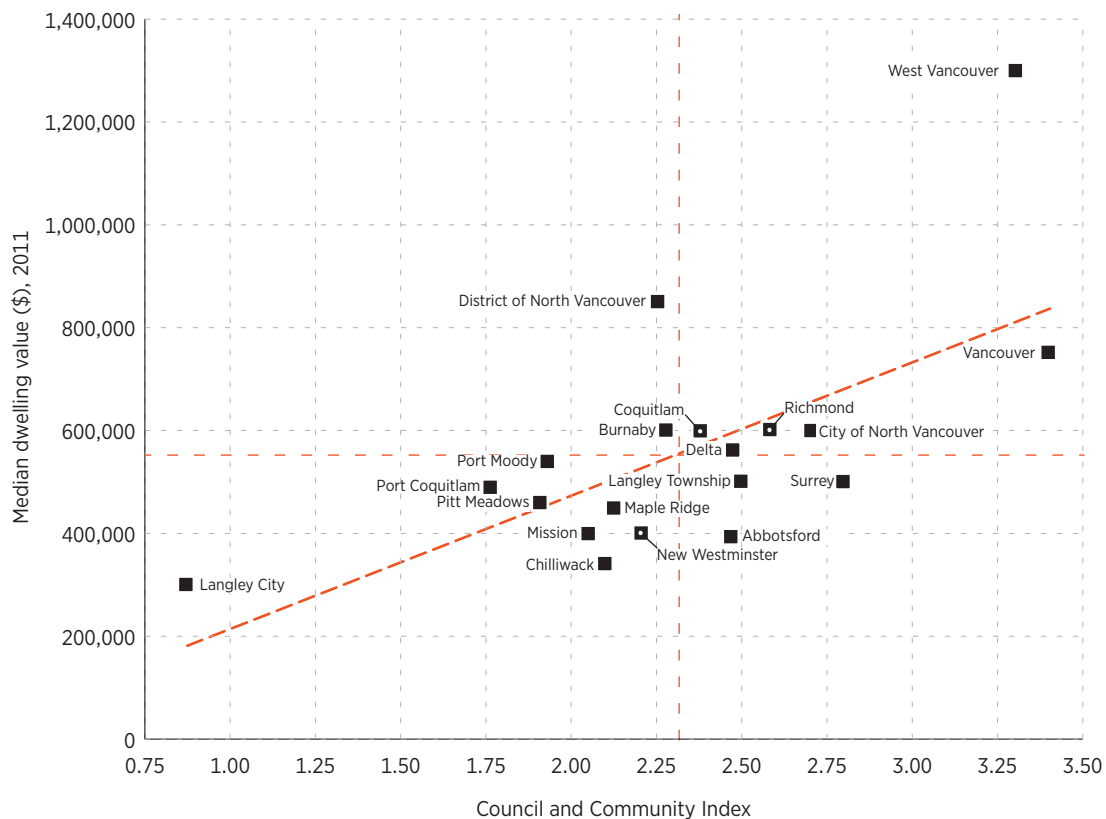
The effects of uncertainty, as measured by the Timeline Uncertainty Index (TUI) and Council and Community Index (CCI), tend to slow the supply of new housing in highly desirable neighbourhoods (Green, Filipowicz, Lafleur and Herzog, 2016). Beyond these indices' measures of uncertainty, we introduced a question asking 2016 respondents how uncertainty in the end uses of land allowed by the regulator, prior to applying for rezoning or building permits, affects development. For example, having a better idea of whether it is possible to build a residential community in a municipality may influence the likelihood of its construction there. This question is not included in the composite index.

Like the CCI and TUI, responses to this question are measured on a 5-point scale: [1] encourages development; [2] not a deterrent to development; [3] mild

¹⁵. Hilber and Robert-Nicoud (2013) estimate the effect of historical share of developed land and homeownership rate on current measures of regulation by two-stage least squares, using coastal access and the percentage of households with married couples and no children as instruments. In addition to a strong effect of developed land on regulation, Hilber and Robert-Nicoud find mixed evidence that past homeownership rates have led to more intense land-use regulation in the United States. The authors also control for household wages, population density, the Democratic Party's vote share, and regional effects.

¹⁶. The OLS regression line shown has a slope indicating an increase of \$300,472 in dwelling values ratings for a one-point increase in the CCI. Assuming homoscedasticity—which is not rejected by a Breusch-Pagan (1979) test (P-value = 0.8224)—the 95% confidence interval (CI) for this slope runs from 122,351 to 478,594.

Figure 11: Council and Community Index (2016) and median 2011 dwelling values (\$) in British Columbia's Lower Mainland



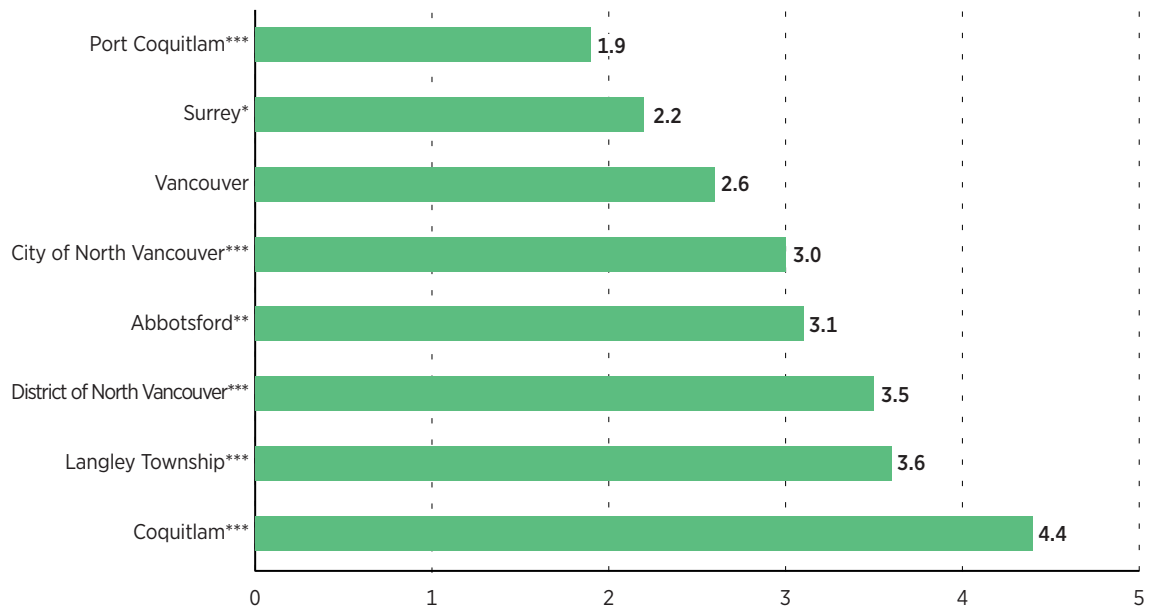
Notes: **1.** The correlation coefficient between the CCI and city level median dwelling values is 0.657 and the trend line is fit by ordinary least squares. **2.** The vertical and horizontal dotted lines indicate the mean values of each axis.

Sources: Statistics Canada 2013a; Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

deterrent to development; [4] Strong deterrent to development; and [5] would not pursue development due to this factor. The Land-Use Possibilities Index (LPI) is the average response to these questions for each city, weighted by the estimated scale of their operations ([figure 12](#)).

The strongest deterrent to development as a result of less predictable land-use possibilities is reported in the District of North Vancouver, while this effect is least present in the eastern suburb of Port Coquitlam, where it not only poses no deterrent to development, but verges on encouraging it. The LPI detects a mild deterrent to development in most cities in the Lower Mainland.

Figure 12: The Land-Use Possibilities Index (2016) for British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development;

4. An Index of Residential Land-Use Regulation

In presenting results of the Survey of Residential Land-Use Regulation, we have described many important pathways through which regulation affects the Lower Mainland's housing market. It is useful to have a single measure of land-use regulation, summarizing all of these dimensions so, in this section, we present an Index of Residential Land-Use Regulation for the Lower Mainland as a summary statistic of regulation.

We use a common standardization technique to produce our index, which ranks cities by their relative performance on each dimension of regulation. Appendix 2 (p. 28) describes this process in detail. We compute the index of regulation for the 19 Lower Mainland cities with at least three survey responses behind each of its components. Thus, our ranking of cities is dependent on the availability of high-quality data for each city. Some cities come in below our quality standard for only one of the index's components, but are nonetheless omitted.

4.1 Results

Condensing our survey-based measures of regulation into a single index has the advantage of creating a data-driven method to rank cities from least to most regulated. The Index of Residential Land-Use Regulation is negative in cities that are less regulated than average and positive in the Lower Mainland's most regulated cities. It is presented alongside its component measures of regulation in [table 2](#).

Of the cities ranked, the City of Langley tops the Index of Residential Land-Use Regulation. This is driven by good ratings on approval timelines, regulatory costs, and council and community opposition, despite a moderate ranking on the rezoning index. The City of Vancouver ranked the lowest, scoring on all measures. In general, cities in the region's eastern part rank higher than cities in the region's west.

Table 2: Index of Residential Land-Use Regulation

Rank	Jurisdiction	Approval Timeline Index (ATI)	Council and Community Index (CCI)	Cost and Fees Index (CFI)	Rezoning Index (RZI)	Timeline Uncertainty Index (TUI)	Aggregate Index
1	City of Langley	1.6	0.9	\$9,596.77	65%	1.4	-1.81
2	Pitt Meadows	5.4	1.9	\$4,309.70	26%	1.5	-1.65
3	New Westminster	8.7	2.2	\$8,350.88	43%	2.2	-0.79
4	Port Moody	9.0	1.9	\$8,350.88	75%	2.0	-0.60
5	Port Coquitlam	16.4	1.8	\$11,573.37	40%	2.5	-0.47
6	Chilliwack	11.9	2.1	\$19,035.09	45%	2.4	-0.41
7	Delta	10.8	2.5	\$16,628.93	49%	2.4	-0.29
8	Mission	12.4	2.0	\$14,375.00	37%	3.2	-0.28
9	Abbotsford	12.2	2.5	\$17,171.84	70%	2.0	-0.11
10	Burnaby	6.8	2.3	\$15,376.10	91%	2.4	-0.08
11	Maple Ridge	11.1	2.1	\$16,424.84	70%	2.9	0.02
12	District of North Vancouver	13.9	2.3	\$22,274.33	41%	3.2	0.07
13	City of North Vancouver	8.1	2.7	\$21,549.42	79%	2.4	0.12
14	Coquitlam	12.2	2.4	\$24,993.52	73%	2.6	0.24
15	Richmond	6.5	2.6	\$41,184.53	78%	2.9	0.42
16	Langley Township	14.8	2.5	\$36,921.57	65%	2.6	0.48
17	Surrey	13.2	2.8	\$51,803.78	79%	2.8	0.98
18	West Vancouver	18.3	3.3	\$26,245.61	80%	4.0	1.61
19	Vancouver	21.0	3.4	\$77,998.13	95%	3.5	2.53

Note: The Index of Residential Land-Use Regulation is the standardized sum of its components, rescaled to have a standard deviation of one. It can be read as a Z-score.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

5. Professionals' Concerns and Policy Recommendations

Seven respondents in the Lower Mainland provided comments in addition to their answers to the survey's questions. The issues described include opposition by council, community, and city staff to development projects, as well as regulatory stringency, and timeline uncertainty or extension due to rezoning. These comments identify specific concerns surrounding land-use regulation in the Lower Mainland.

Community Amenity Contribution

The most frequent issue to arise in comments is the Community Amenity Contribution (CAC) process. Unique to select British Columbian municipalities, CACs are developer contributions triggered when a site being developed requires rezoning. Unlike Development Cost Charges, which are commonly applied as a fixed cost per square foot, CACs are negotiated agreements aimed at funding off-site community amenities ranging from libraries to public art. In spite of provincial attempts to establish best practices for CACs, comments suggest that these charges can increase costs, and are often applied through a relatively opaque process.

Application of regulations

There is concern and frustration with the inconsistency and inefficiency with which regulations are often applied in the Lower Mainland. One comment points to disagreement between city council and planning staff deterring development in some cities. Burnaby and Coquitlam are noted as having agreement between city council and planning staff, creating an incentive to build. Conversely, the City of Vancouver is described in another comment as being a prohibitively costly location for business when compared to other major Canadian or American cities.

Local opposition

Local opposition was identified as a deterrent to development in several Lower Mainland communities. One comment uses the acronym "NIMBY", or *Not-In-My-Back-Yard*, a label describing the "protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their

neighbourhood” (Dear, 1992). Originally associated with opposition to public facilities like prisons and landfills, NIMBY attitudes sometimes challenge new homes or higher densities inserted into existing communities. One comment suggests that extensive provisions for community involvement in intensifying neighbourhoods can limit development, pointing out that the interests of a minority of residents sometimes take precedence over professional planning.

Unintended consequences

Finally, some respondents suggested that well-intentioned policies can increase the cost of housing in unexpected ways. One respondent makes the point that city planners tend to favour very specific types of mid-rise development. The respondent explains that these developments can be of worse value than high-rises, which have economies of scale, and less dense mid-rise, which they say can be built as inexpensive wood-frame buildings.

6. Conclusion

Our data show strong variability in how homebuilders and developers experience regulation across cities in British Columbia's Lower Mainland. We find that reported approval timelines, and how they are affected by the rezoning process, vary significantly across cities. Equally strong variation is reported for regulatory costs and fees associated with the development process: there are large differences between neighbouring municipalities like the City and Township of Langley. Council and community opposition to residential development is perceived as strongest in cities where dwelling values are highest, raising questions about the causes and consequences of local resistance to new housing.

Further work will analyse the results of the Survey of Residential Land-Use Regulation in major cities across Canada. The information produced will enable the systematic comparison of land-use regulation across municipalities, and can be used to understand regulation's consequences for housing markets and regional economies.¹⁷ It can play a role in identifying situations where regulation constitutes a burden on the housing market, and those where regulations are cost-effective and efficient. Continued measurement will help us understand the role of public policy in Canada's urban landscape.

¹⁷ Data from last year's three publications in the New Homes and Red Tape series (Green, Herzog, and Filipowicz, 2015a, 2015b, 2015c) was at the heart of *The Impact of Land-Use Regulation on Housing Supply in Canada* (Green, Filipowicz, Lafleur, and Herzog, 2016), which compared regulation data with dwelling stock growth between 2006 and 2011.

Appendix 1. Constructing the Index

The first step in constructing the Index of Residential Land-Use Regulation was the careful selection of its components. If any two components of the index are perfectly correlated, they may measure the same effect: adding them both would essentially be double counting. **Table A1.1** presents measures of the correlation between the five main, and single omitted,¹⁷ measures of regulation discussed in section 3.

Table A1.1: Correlations between measures of regulation¹

	Approval Timelines	Cost and Fees	Council and Community	Timeline Uncertainty	Land-Use Possibilities	Rezoning Index
Approval Timelines	1					
Costs and Fees	0.57	1				
Council and Community	0.67	0.71	1			
Timeline Uncertainty	0.76	0.58	0.73	1		
Land-Use Possibilities ²	0.33	0.20	0.03	0.60	1	
Rezoning Index	0.14	0.57	0.51	0.30	0.05	1

Notes: [1] This table presents pearson correlation coefficients computed across cities of the Lower Mainland. [2] Coefficients with the Land-Use Possibilities Index are drawn from a smaller sample of cities, listed in figure 12 (p. 21).

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

The measures of regulation we derived from our survey are, in general, positively related across the cities for which we compute an index of regulation. As noted at the end of section 3.5, responses to a question about planning objectives are highly correlated with the council and community index. We do not use our measure of the effect of planning objectives when constructing an aggregate index. The rezoning index appears to be the most unique, positively correlated with measures of council and community opposition and exhibiting a negative relationship with regulatory costs. Average approval timelines are positively correlated with all other measures, its correlation with timeline uncertainty is particularly strong.

¹⁷ See the conclusion of section 3.4 and the progression of Appendix 2 for a discussion of the omitted measure of regulation.

We use the standardized sum¹⁸ of the Average Approval Timelines, Timeline Uncertainty, Cost and Fees, Rezoning, and Council and Community Indices as our Index of Residential Land-Use Regulation. For each city, this index captures the frequency, and severity, of deviations from average levels of each of its components in the Lower Mainland. This index is centered around zero, positive for cities that score worse than average on many components of regulation, and negative for cities that score better than average.

¹⁸. We standardize each component of our index by subtracting its mean (calculated using cities included in the overall index) and dividing by its standard deviation (calculated using the same cities). Each city is assigned an index value by summing across the standardized components.

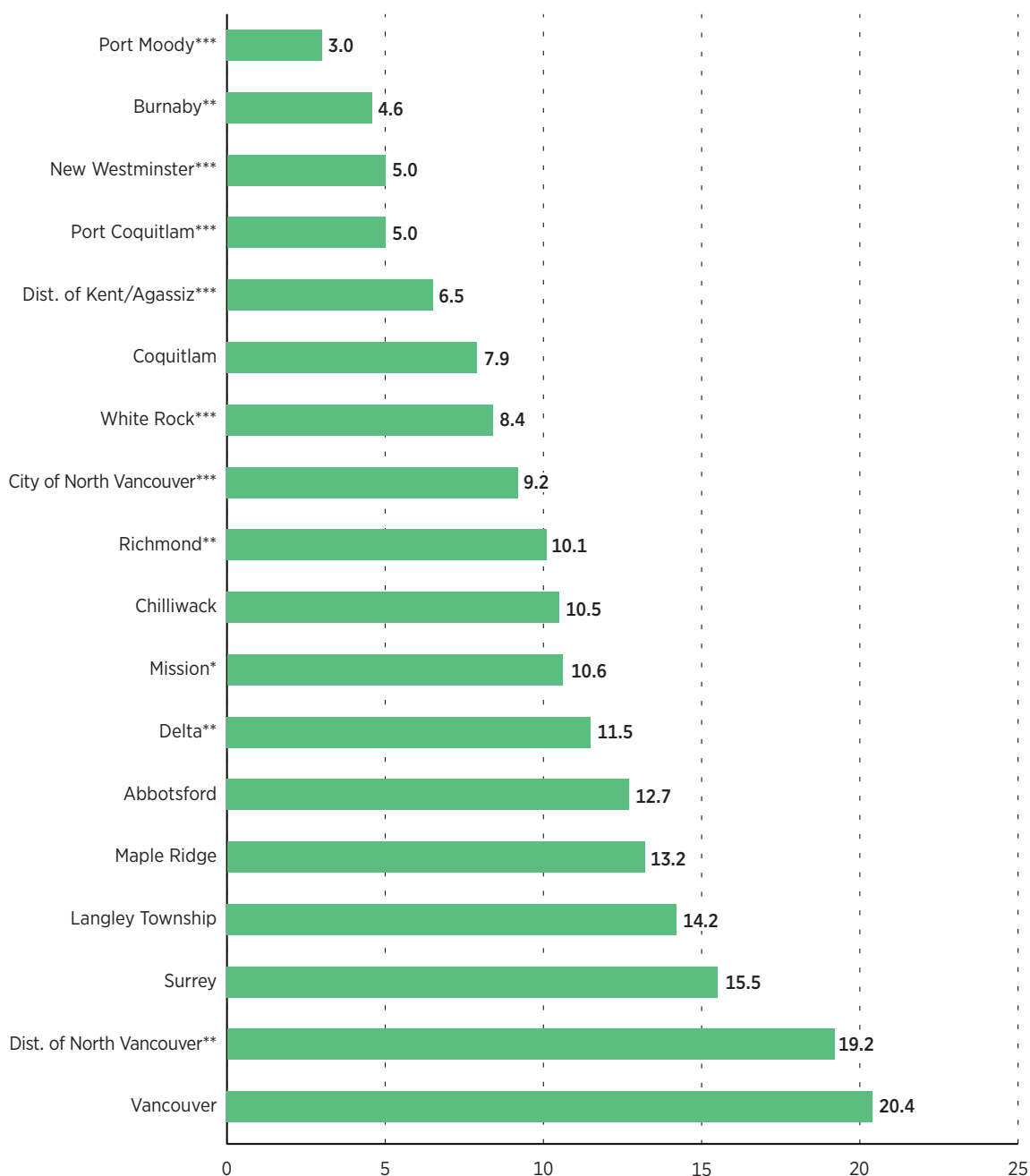
Appendix 2. Weighting the sub-indices by scale of respondents' operations

Unlike previous reports in the *New Homes and Red Tape* series, this study includes the use of weights in the production of the Index's five component sub-indices, based on the estimated scale of respondents' operations (number of units currently under development). In doing so, we report averages across housing units rather than averages across respondents, giving a new perspective to survey results. Weighting the sub-indices was achieved through a two-step process.

- 1 We assigned each respondent's reported range of units currently under development a midpoint (0–19 = 10; 20–74 = 47; 75–249 = 167; 250–749 = 500; 750–1,499 = 1125; 1,500–3,000 = 2250). For responses not including scale estimates, we imputed the median scale of Lower Mainland respondents (47).
- 2 We weighted responses by respondents' scale relative to city-level averages, using the following formula:
(respondent scale/cross-respondent city average scale) × unweighted respondent result.

Appendix 3. Approval Timelines by Housing Type and Rezoning

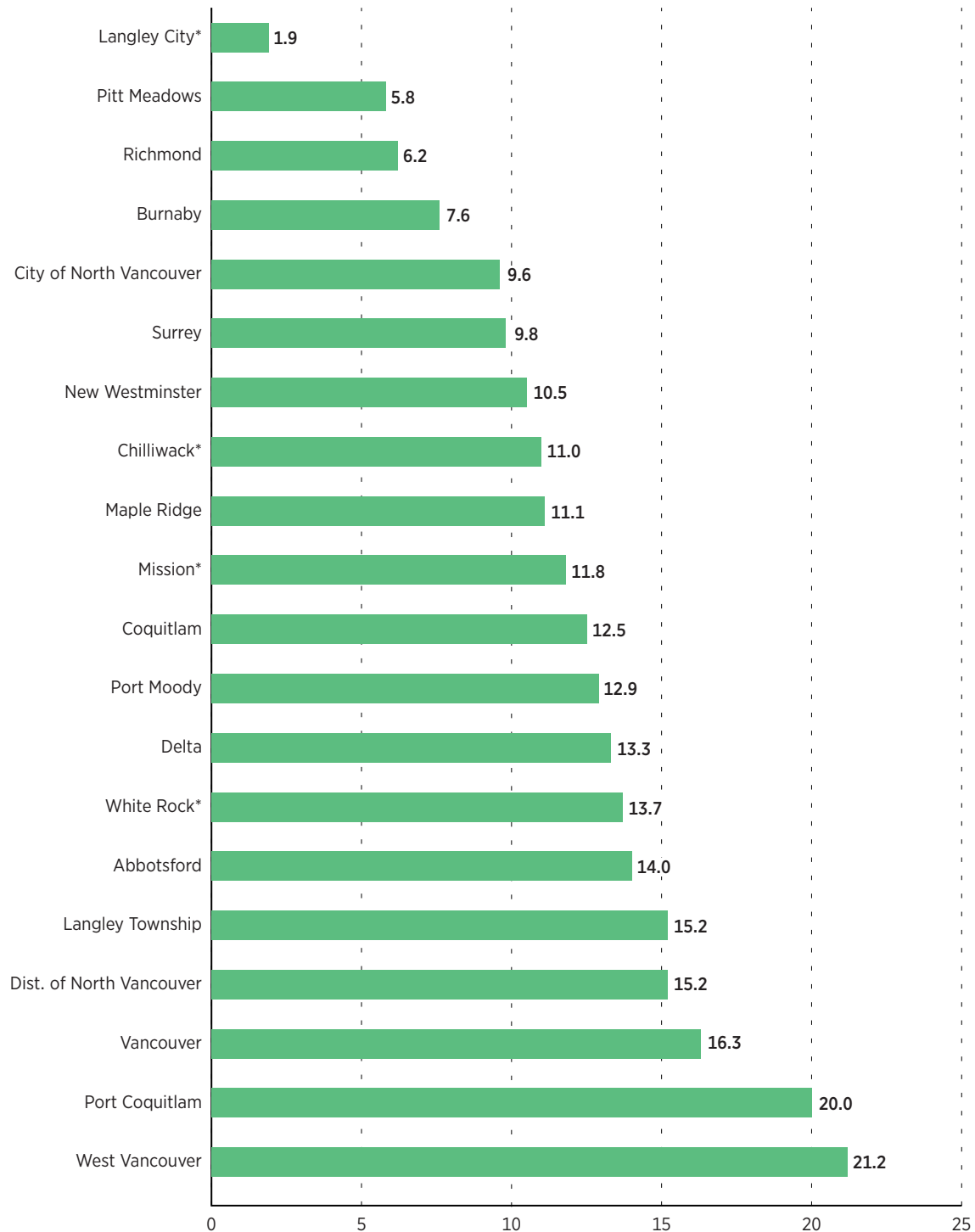
Figure A3.1: Average approval timelines (months, 2016) for single-family development in British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

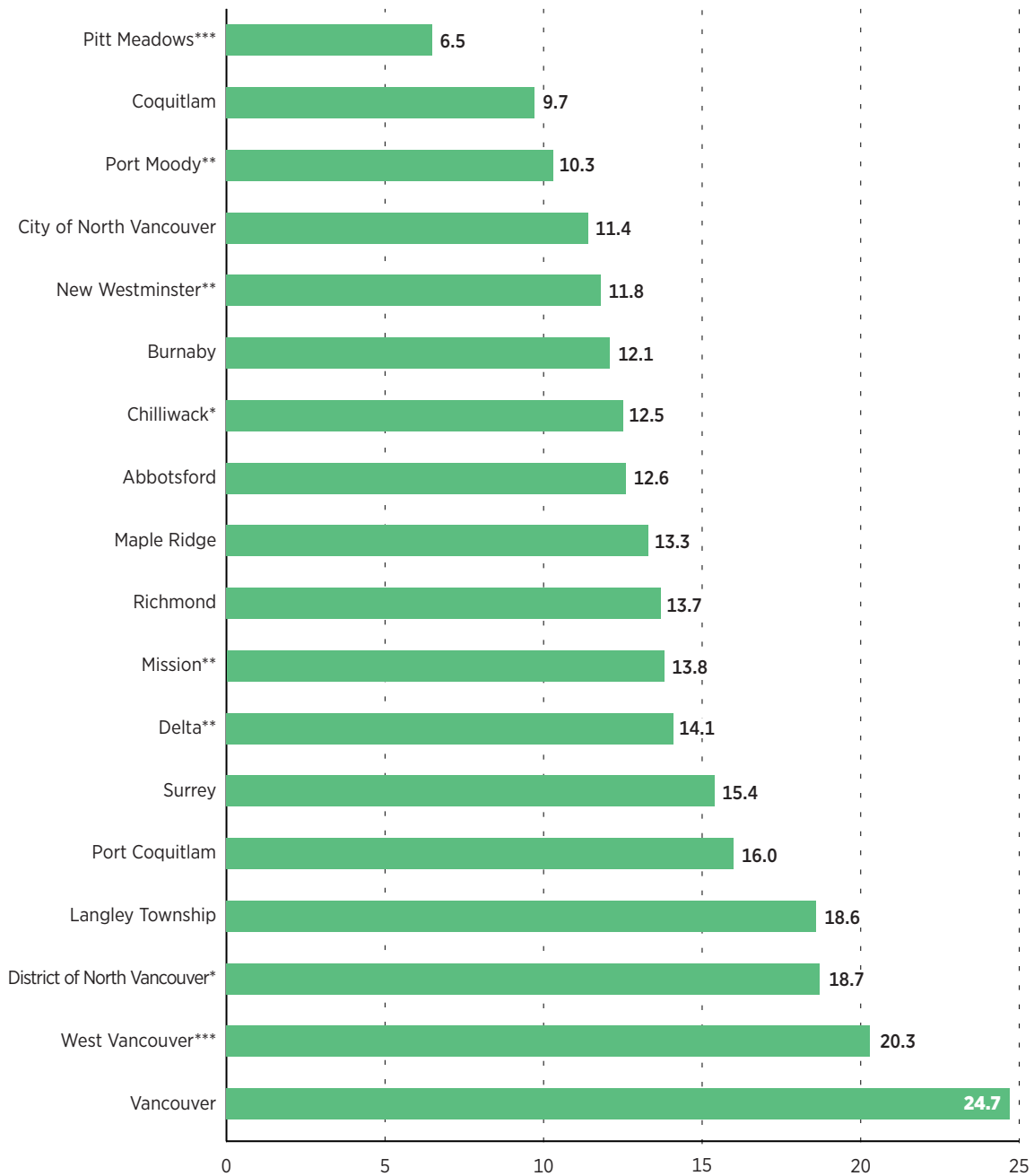
Figure A3.2: Average approval timelines (months, 2016) for multiple dwelling development in British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

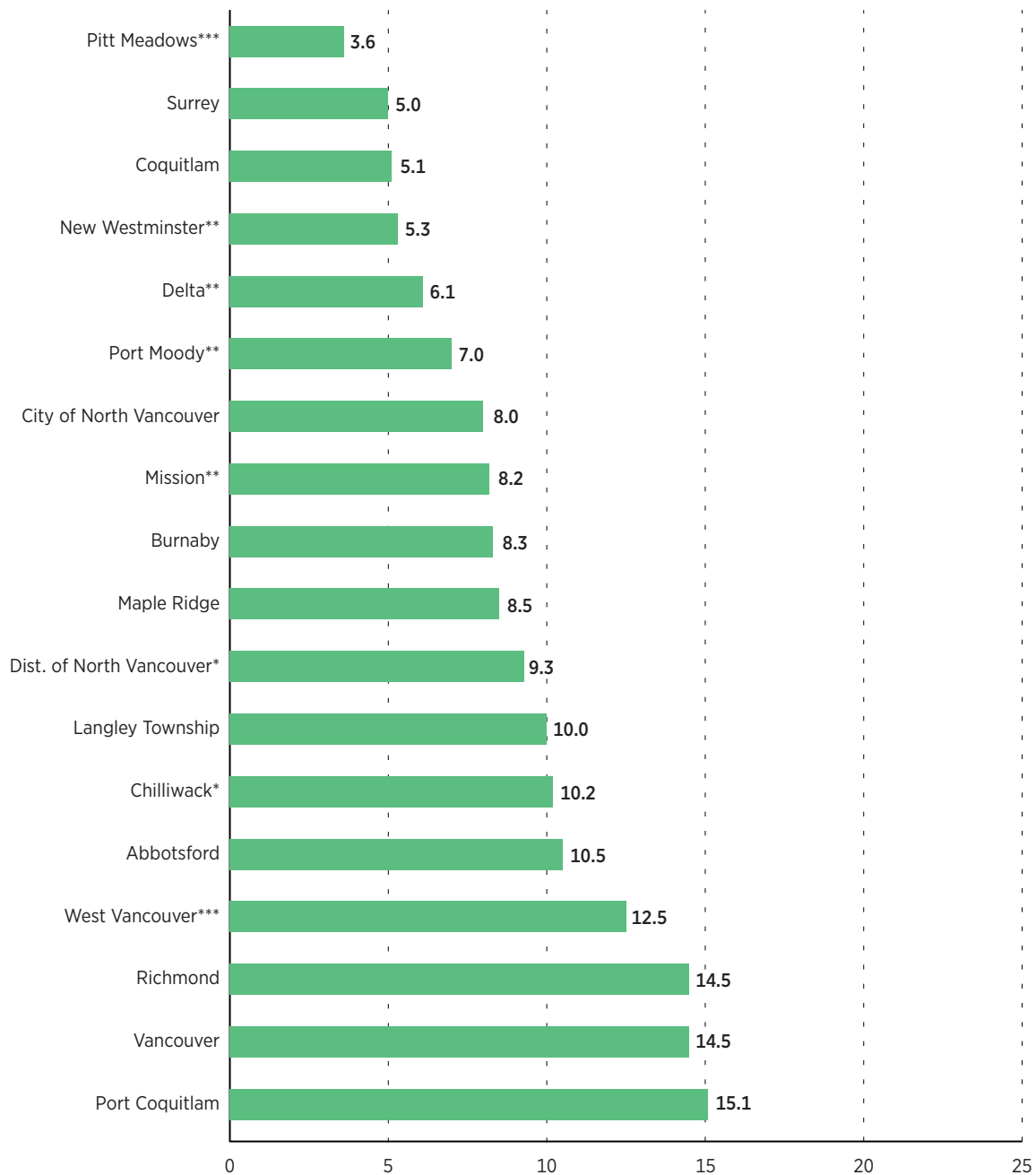
Figure A3.3: Average approval timelines (months, 2016) for development in British Columbia's Lower Mainland requiring rezoning



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Figure A3.4: Average approval timelines (months, 2016) for development in British Columbia's Lower Mainland not requiring rezoning

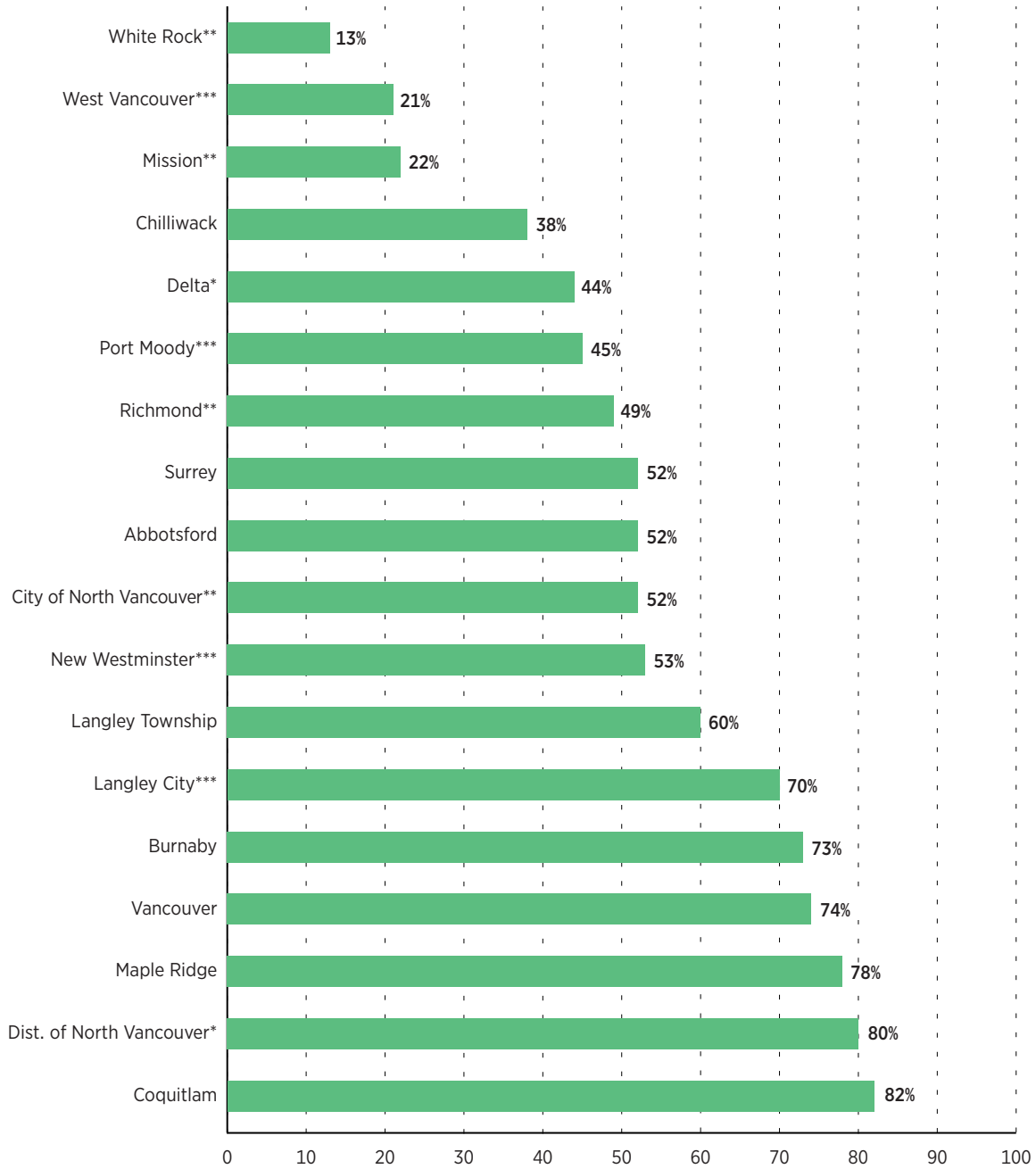


Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Appendix 4. Rezoning by Housing Type

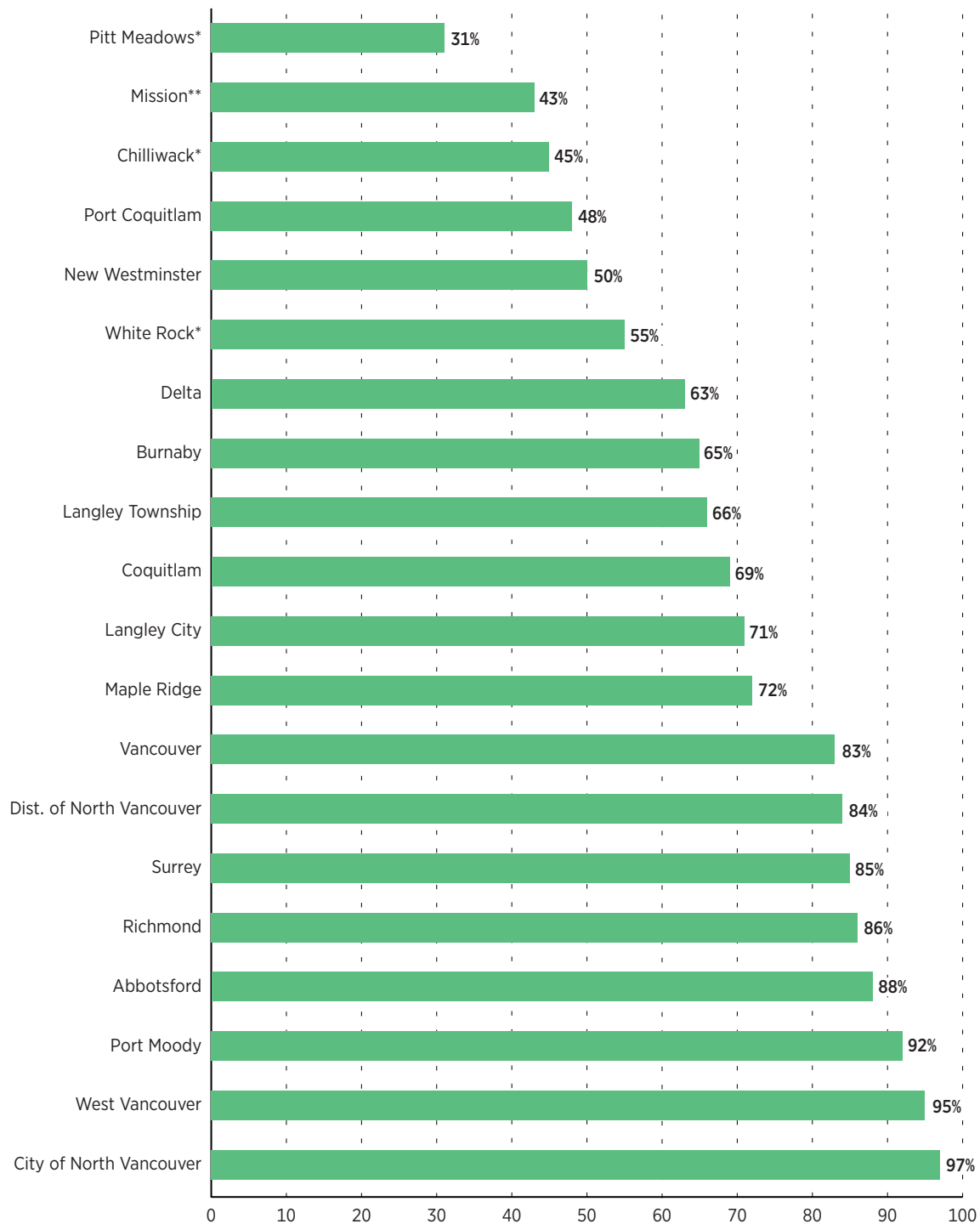
Figure A4.1: The Rezoning Index (%) for single-family development in British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Figure A4.2: The Rezoning Index (%) for multiple dwelling development in British Columbia's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation, 2014, 2016; authors' calculations.

Appendix 5. Survey Questions

Note: questions 7, 8, 9, 10, 11, and 12 are replicated for MULTIPLE DWELLING developments.

- 1** Please go through the following regions and select those with cities that you are FAMILIAR with (in terms of residential development). Please select AS MANY AS POSSIBLE.

Respondents were presented with 19 regions to choose from.

- 2** What type of work does your organization do? (Check all that apply)

The options include land development, new home building, legal services, engineering, architecture and design, and other.

- 3** How many residential units does your organization currently have under development?

Respondents select from a 6-bin range from “0–19” to “1,500–3,000”, with the option of manually inputting a larger number of units currently under development.

- 4** What TYPES of development projects has your organization worked on in the past 10 years? (Check all that apply)

The options include “Single-Family” and “Multiple Dwelling”, both of which were described in more detail.

- 5** Please go through the following cities and select those that you are FAMILIAR with. Please select AS MANY AS POSSIBLE.

Respondents were presented with all cities available within the region(s) selected.

- 6** Does your organization rezone property?

Yes/no answer.

- 7** Approximately how often do your SINGLE-FAMILY developments REQUIRE REZONING in each city?

Respondents select from a 5-bin range from “Never” to “Always”.

- 8** Approximately how much TIME do you expect to spend getting PROJECT APPROVAL for standard SINGLE-FAMILY projects that REQUIRE REZONING in each city? From the filing date of the first stage of the approval process to the day you would be allowed to begin construction.

Respondents select from a 7-bin range from “2 months or less” to “24 months or more”, with the option of manually inputting a longer timeline.

- 9** Approximately how much TIME do you expect to spend getting PROJECT APPROVAL for standard SINGLE-FAMILY projects that DO NOT REQUIRE REZONING in each city? From the filing date of the first stage of the approval process to the day you would be allowed to begin construction.

Respondents select from a 7-bin range from “2 months or less” to “24 months or more”, with the option of manually inputting a longer timeline.
- 10** At the outset of your standard SINGLE-FAMILY projects, how does the amount of UNCERTAINTY in the TIME needed for the project APPROVAL PROCESS affect development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.
- 11** For your standard SINGLE-FAMILY projects, which of the following BEST APPROXIMATES the COST (per dwelling unit) of the PROJECT APPROVAL and REGULATORY COMPLIANCE process in each city? Please give a rough estimate that includes ALL ADMINISTRATION, PROCESSING, and DIRECT COMPLIANCE COSTS (permitting and review fees, community amenity contributions, development cost levies, inspection costs, relevant legal fees, etc.). There is no need to refer to a *pro forma* or other detailed records; a thoughtful estimate is sufficient.

Respondents select from a 7-bin range from “Less than \$1,000 per unit” to “More than \$75,000 per unit”, with the option of manually inputting a higher per-unit cost.
- 12** How do local COUNCIL and COMMUNITY groups affect your SINGLE-FAMILY development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.
- 13** Before applying for rezoning or building permits, how does UNCERTAINTY in the END USES OF LAND allowed by the regulator affect development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.
- 14** Are there any other comments or relevant information that you wish to add?

An open comment box was provided to respondents.

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