The Macro View on Micro Units

The Urban Land Institute Multifamily Housing Councils were awarded a ULI Foundation research grant in fall 2013 to evaluate from multiple perspectives the market performance and market acceptance of micro and small units.

Urban Land Institute

About the Urban Land Institute

The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. ULI is committed to

- Bringing together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs;
- Fostering collaboration within and beyond ULI's membership through mentoring, dialogue, and problem solving;
- Exploring issues of urbanization, conservation, regeneration, land use, capital formation, and sustainable development;
- Advancing land use policies and design practices that respect the uniqueness of both the built and natural environments;
- Sharing knowledge through education, applied research, publishing, and electronic media; and
- Sustaining a diverse global network of local practice and advisory efforts that address current and future challenges.

Established in 1936, the Institute today has more than 33,000 members worldwide, representing the entire spectrum of the land use and development disciplines. Professionals represented include developers, builders, property owners, investors, architects, public officials, planners, real estate brokers, appraisers, attorneys, engineers, financiers, academics, students, and librarians.

ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of the world's most respected and widely quoted sources of objective information on urban planning, growth, and development.

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About the ULI Foundation

The mission of the ULI Foundation is to serve as the philanthropic source for the Urban Land Institute. The Foundation's programs raise endowment funds, major gifts, and annual fund monies to support the key initiatives and priorities of the Institute. Philanthropic gifts from ULI members and other funding sources help ensure ULI's future and its mission of providing leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

The Foundation exists to support the content development and dissemination efforts of the Urban Land Institute and to educate the public—and those making decisions on behalf of the public—about responsible land use practice and patterns. Whether creating scholarship opportunities for worthy students, publishing original research on critical land use issues, or convening decision makers to discuss current industry developments, the ULI Foundation enables members to make a visible difference in communities around the world—and in the lives of countless individuals within those communities. The ULI Foundation has benefited from the generous philanthropy of many donors, who see in their giving an opportunity to provide for others through an organization that has meant so much in their own lives and careers.

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Acknowledgments

The Multifamily Research Committee wishes to thank ULI for creating ULI Grants and funding the research effort to provide hard data to inform ULI members and the industry at large about the performance, market acceptance, and current best practices of small and micro units. In addition, the committee thanks Mary Ann King, president of Moran and Company, for serving as its unofficial adviser and invaluable resource regarding internal ULI processes and for simply being available to answer any questions that arose over the course of the committee's work.

The committee especially thanks Equity Residential, Flaherty & Collins, Milestone Management, Riverstone Residential, and UDR for enabling it to conduct a comprehensive consumer survey of residents in properties owned or managed by these companies. Moreover, the committee acknowledges and thanks the companies that were interviewed for the purpose of obtaining developer and operator experience with small and micro units, including Holland Partner Group, JBG Companies, Panoramic Interest, Stage 3 Properties Inc., TCA Architects, Perkins Eastman, Village Green, and Waterton Residential. Without the generous cooperation and sharing of information, this research project would not have been possible.

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Executive Summary

A common perception exists that unit sizes in new apartments have been shrinking as developers seek higher density and higher revenue per square foot to offset rising land value and construction costs and to hold monthly rent at an affordable level relative to income. The ultimate incarnation of this trend has been the introduction—or the reintroduction—of very small units, often referred to as *micro units*. These very small (by traditional standards) apartments, leasing at approximately 20 percent to 30 percent lower monthly rent than conventional units, yet at very high value ratios (rent per square foot), have been offered or are being considered in urban and urbanizing locales, particularly high-density, expensive metropolitan markets such as Boston, New York, San Francisco, Seattle, and Washington, D.C. This research report explores this renewed trend in the United States and seeks to answer the following key questions:

- What exactly is a micro unit?
- How have smaller and micro-unit rental apartments performed in the marketplace compared with larger, more conventional apartments?
- Does the higher per square foot rent justify the higher construction cost?
- What are some of the examples across the country where micro units have been successfully developed and operated?
- What are the critical success factors and lessons learned from developers, owners, operators, and design professionals that have experience with this new breed of micro-unit community?
- What has been the experience of residents who have actually lived in one of these tiny apartments, what do they like and dislike, and what motivated them to consider a micro unit in the first place?
- What would motivate potential renters of conventional apartments to live in a smaller unit?
- Based on a compilation of all of the above, what is the likely future for micro units; is this a passing fad or a growing trend?

To answer these and other questions, the research team for this report analyzed hard data to understand the performance of smaller and micro units in the marketplace. The team also conducted consumer research with residents of micro units to understand their experience and satisfaction levels compared with occupants of conventional units. Finally, the team compiled case studies of micro-unit rental apartment communities and conducted a series of interviews with industry experts to identify best practices and lessons learned. The ultimate objective of this research is to gather and share innovative ideas that can contribute to the successful development of micro-unit communities in the future.

Some of the key findings, which the report provides in greater detail, follow:

- Although *micro unit* has no standard definition, a working definition is a small studio apartment, typically less than 350 square feet, with a fully functioning and accessibility compliant kitchen and bathroom. Under this definition, a 160-square-foot single-room-occupancy (SRO) unit that relies upon communal kitchen or bathroom facilities does not qualify as a true micro unit.
- Smaller and micro units outperform conventional units in the marketplace—they achieve higher occupancy rates and garner significant rental-rate premiums (rent per square foot) compared with conventional units. However, the stock of very small units is still quite limited, and it is difficult to know whether the performance of these smaller units is driven by their relative scarcity or whether significant pent-up demand for micro units actually exists.
- Both the consumer research and the case studies indicate that a segment of renters is indeed interested in the micro-unit concept; nearly a quarter of renters in conventional apartments indicate they would be interested or very interested in renting a micro unit. Depending upon one's perspective,

either this speaks to a potentially huge untapped market, or it remains a niche market.

- The appeal of micro units is largely about economics, but place and privacy are all part of the equation. Most respondents interested in micro units are willing to consider them in exchange for a lower monthly rent (approximately 20 percent to 30 percent below that of a conventionally sized unit), a highly desirable (typically authentic, urban/urbanizing, walkable, trendy) location, and the ability to live alone.
- The target market profile for micro units is predominantly young professional singles, typically under 30 years of age, with most under 27 years of age, trending slightly more male than female. Secondary segments include some couples and roommates, some older move-down singles, and pied-à-terre users.
- Developing and operating a rental apartment community with micro units are more expensive, but the premium rent per square foot achieved more than makes up for the added cost.
- Developers and design professionals have come up with a number of creative solutions that ensure micro units are compliant with Fair Housing Amendment Act and accessibility requirements, livable, and actually feel larger than they really are. Such items include flexible furniture systems, high ceilings (more than nine feet), oversized windows, built-in storage, gadget walls, and movable kitchen islands.
- Rental apartment communities with micro units also emphasize what is outside the confines of the unit itself. Developers tend to offer an extensive array of amenities, intimate gathering spaces, and services to residents that enable them to experience community outside their micro unit.
- A definite shift has taken place toward a greater mix of smaller studio and one-bedroom apartments, and micro units are a growing trend across the country with a number of communities under construction and many more in the planning stages. However, to hedge their bets, some savvy developers are building in the flexibility to convert side-by-side micro units back into conventional one- and two-bedroom units, just in case the concept is a flash in the pan.

Definition of *Micro Unit*

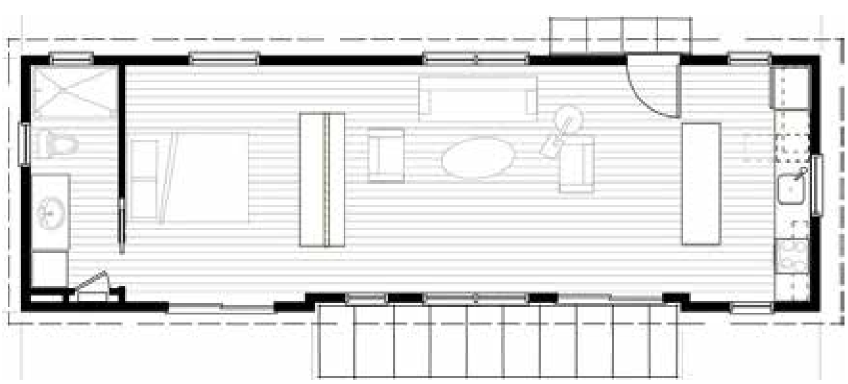
What exactly qualifies as a micro unit? A micro unit might be 300 square feet in New York City or 500 square feet in Dallas. This study learned that no standard definition exists. A micro unit is a somewhat ambiguous term that covers anything from a relatively small studio or one-bedroom apartment to a short-term lease, SRO unit with communal kitchen and common room areas. In fact, many in the industry are moving away from branding their units as *micro* because the term has begun to arouse negative connotations associated with higher density, overcrowding, and transient populations.

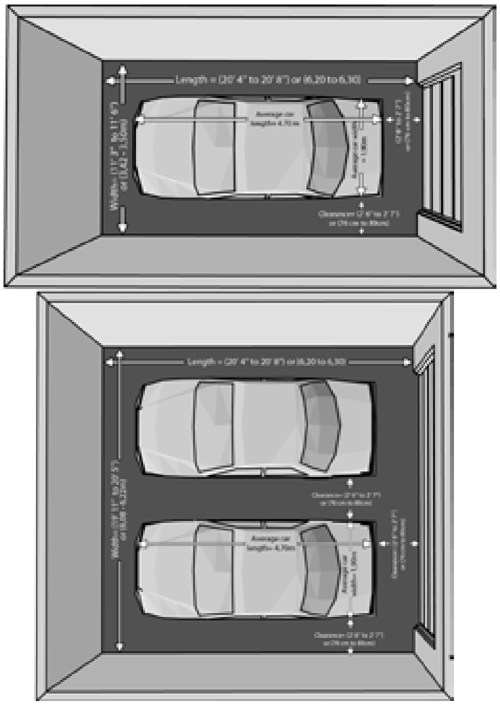
In New York City and Philadelphia, the minimum size requirement for a new dwelling unit is 400 square feet. However, former New York City mayor Bloomberg waived this requirement for the adAPT NYC competition, which defined micro apartments as studio apartments that range between 275 and 300 square feet and include fully functioning kitchens and accessible bathrooms. In the city of San Francisco, new legislation was passed allowing apartments as small as 220 square feet, so long as 70 square feet of this space is allocated to a bathroom and kitchen.

In the District of Columbia, the minimum size for an apartment is also 220 square feet but with no prescription regarding allocation of space within the unit. In Boston, the minimum size for a dwelling unit

The size of what qualifies as a micro unit is determined by the market in which it exists. An average micro unit on the East and West Coasts, such as those proposed in the adAPT NYC competition, can be around 300 square feet (top), but in some Midwestern and Texas markets, units, such as those designed by Urban Studio, can range between 400 and 500 square feet (bottom).

CURBED NY "MICRO DWELLINGS" (TOP); IDEABOX (BOTTOM)





In another perspective, micro units are larger than a one-car garage but smaller than a two-car garage.
DECOSOUP

is 450 square feet within one mile of public transit, but again this requirement was waived for a demonstration project in the Innovation District to allow development of smaller units. In some Midwestern and Texas markets, units ranging between 400 and 500 square feet are described as micro units. Seattle and Portland have no minimum size requirements, which probably explains why these markets are two of the best examples of cities demonstrating a tremendous amount of experimentation with very small units, including a wide range of communities offering SROs and micro units.

Thus, the concept of micro units is to some degree relative to the market in which they exist. For the purposes of this research effort, a distinction was made between SRO units and micro-unit apartments with fully functioning kitchens and bathrooms. Although some trading range probably exists in the square footage depending upon the market, a good definition of a micro unit is a purpose-built, typically urban, small studio or one-bedroom using efficient design to appear larger than it is and ranging in size from as little as 280 square feet up to as much as 450 square feet (which roughly equates to 20 percent to 30 percent smaller than conventional studios in a given market). Many micro units under 350 square feet feature built-in storage units and flexible furniture systems (e.g., Murphy beds, hideaway kitchen modules, convertible tables, and so on) to make these smaller spaces work.

To put the size of a micro unit into perspective, a 300-square-foot micro-unit studio apartment is slightly larger than a one-car garage but considerably smaller than a two-car garage.

Approach

This study evaluates the market performance and market acceptance of small and micro units from multiple perspectives, including the following:

- Market performance—MPF Research, a division of RealPage Inc., took a data-driven look at performance metrics of small and micro units (as available), including rents, value ratios, and occupancy, compared to conventionally sized units. This analysis examined key characteristics of apartments completed during 2012–2013 in significant construction centers across the United States, documenting the evolution of typical unit size and mix compared to the product built previously. In addition, variations in occupancy and rent achievement performance are compared across unit size and floor plan categories to determine whether small units (not just micro units) have outperformed or underperformed other unit types in occupancy and rent rate premiums.
- Consumer research—Kingsley Associates conducted the apartment resident survey portion of this research to ascertain attitudes toward smaller and micro units by both conventional apartment renters and current micro-unit renters. The survey examined what interior, common area and neighborhood amenities, and locational conveniences would drive residents' decisions to rent a small or micro unit over other options; what amenities actually matter most to consumers when making the choice of where and what to rent; and what tradeoffs they would be willing to make in deciding to rent a small or micro unit.
- Best practices and lessons learned—RCLCO (Robert Charles Lesser & Co.) interviewed ULI Multifamily Council member participants and other developers, operators, and design professionals to obtain feedback on their experience and innovative ideas (both tested or under consideration) regarding micro units to shape and inform the debate. This input was also used to shape the survey instrument used in the consumer research component of this report previously described. RCLCO also conducted a series of case studies of existing rental apartment communities that had micro units. From this effort, RCLCO prepared a summary of best practices and lessons learned with smaller and micro units, including unit features and finishes, community amenities and services, locational characteristics, operating experience, and construction and operational costs.

Research Partners

The Multifamily Research Committee enlisted the services of MPF Research, Kingsley Associates, and RCLCO as research partners for this project. A brief corporate biography of each of these partners follows.

MPF

A division of RealPage, MPF Research has been providing apartment market trends and objective insights to the multifamily industry since 1961. With exclusive access to a completely unique data source and a solid foundation of sound statistical methodologies, MPF Research publishes 72 individual apartment market reports covering the top 100 markets nationally. MPF is relied upon to formulate and fine-tune business strategies in a variety of multifamily industry specialties, including investment, operations, and development. Visit the company website at www.realpage.com/mpf-research for additional information.

Kingsley Associates

Since 1985, real estate leaders have turned to Kingsley Associates to maximize their portfolio and organizational performance. With a depth and breadth of insight unmatched in the industry, Kingsley Associates is a leader in resident and tenant satisfaction surveys, client perception studies, employee engagement surveys, strategic consulting, and operations benchmarking. Learn more at www.kingsleyassociates.com.

RCLCO

Since its founding in 1967, RCLCO has been at the leading edge of real estate trends and issues, offering strategic guidance that is market-driven, analytically based, and financially sound. RCLCO's multidisciplinary team combines real-world experience with the analytical underpinnings drawn from thousands of consulting engagements and proprietary research to develop and implement plans that strengthen our clients' position in their markets, at every point in the market cycle. Visit the company website at www.rclco.com for addtional information.

Historical Market Performance

To assess the market response to very small, or micro, units, MPF Research examined key characteristics of apartments completed during 2012–2013 in significant construction centers across the United States and documented the evolution of typical unit size and mix compared to the product built in previous cycles. MPF also identified patterns in occupancy and rent achievement across unit size and floor plan categories.

The properties studied were located in the 35 metropolitan areas where U.S. deliveries were concentrated in 2012–2013; these metros accounted for 82 percent of all apartment product built in the nation's 100 biggest markets during this two-year period. (The specific communities included in the analysis totaled some 90,000 units in more than 400 properties, representing 41 percent of all units delivered in 2012–2013 in these 35 metros.)

To understand how product design has evolved, MPF compared characteristics of the newest generation of apartments with (a) those of properties built a decade earlier, in 2002–2003 (based on 920 properties with 220,000 units), and (b) those built in 2008–2009 (950 properties with 232,000 units), which represent the tail end of the last development cycle before the Great Recession briefly brought construction of conventional market-rate apartments to a virtual standstill. (All figures in this section are courtesy of MPF Research, Real Page Inc.)

Product Characteristics

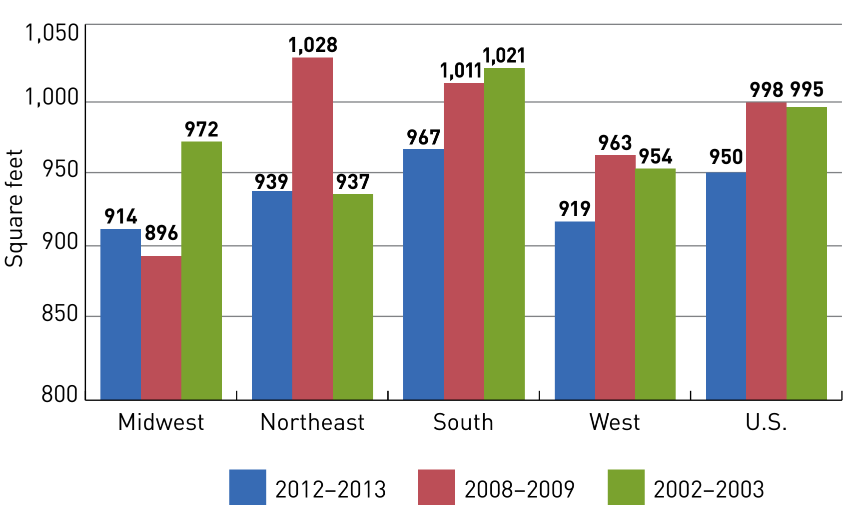
Confirming the general perception that exists in the industry, typical unit size has been shrinking. This shift is not as pronounced as some might think and, as discussed later, the key driver behind shrinking average unit size does not necessarily align with conventional wisdom.

The average unit size for the nation's 2012–2013 completions registers at 950 square feet, which is almost 50 square feet less than the norms recorded in 2002–2003 (995 square feet) and 2008–2009 (998 square feet).

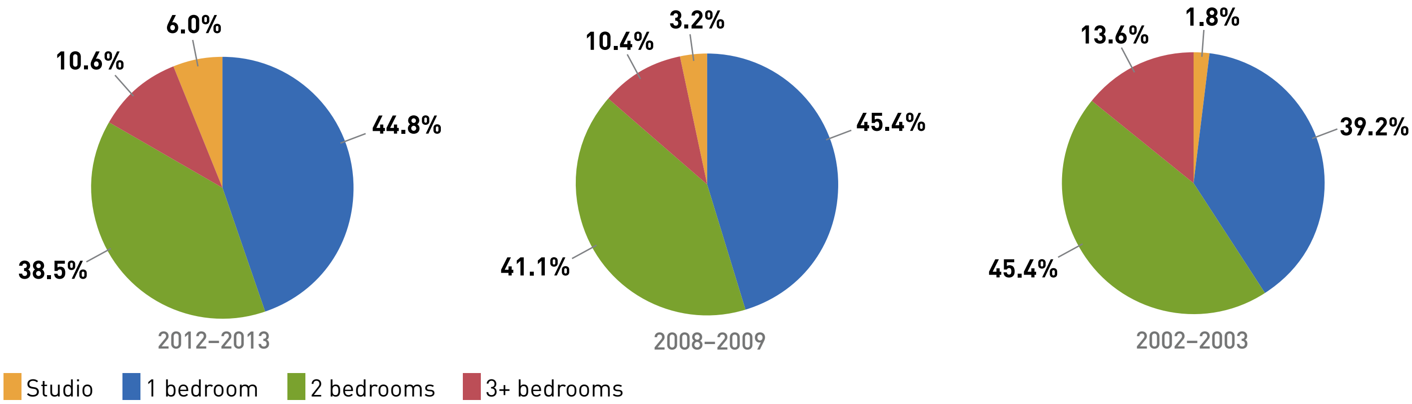
Metros in the South and West regions of the United States accounted for the biggest portions of supply completed in each period examined and most clearly illustrate the general trend toward smaller average unit size. Apartments built in the South during 2012–2013 average 967 square feet, compared with norms of 1,021 square feet for the 2002–2003 deliveries and 1,011 square feet for 2008–2009 completions. In the West, average unit size is down to 919 square feet, falling from norms of 954 square feet in the 2002–2003 stock and 963 square feet in 2008–2009's new supply.

With less new product delivered across the Midwest and Northeast regions, the evolution of average unit size there is less clear-cut. In the Midwest, average size for the most recent round of completions comes in at 914 square feet, smaller than the 2002–2003 deliveries but a little bigger than in 2008–2009 additions. In the Northeast, unit size for 2012–2013 deliveries averages 939 square feet, virtually unchanged from the 2002–2003 standard but down drastically

Average Unit Size by Region (Three Development Cycles)



Bedroom Type by Development Cycle, United States



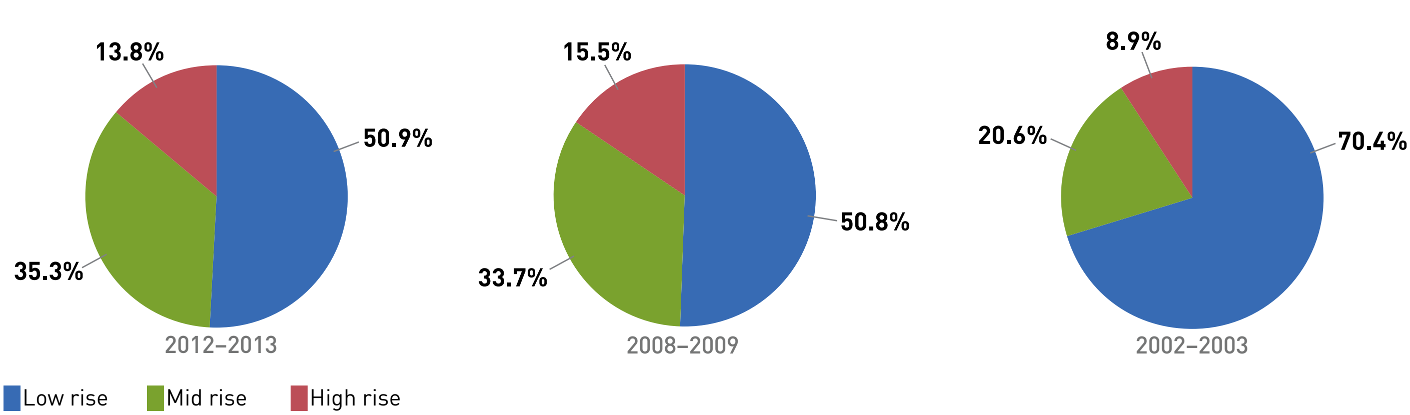
from the figure recorded in 2008–2009. The very large units built in the Northeast during 2008–2009 appear out of line with other point-in-time readings, perhaps influenced by the possibility of sale as condominiums.

The dominant influence behind the general trend toward smaller average unit size is a shift in the mix of unit types. Studio and one-bedroom units account for 50.9 percent of the 2012–2013 completions, marginally higher than 2008–2009's 48.6 percent share but up drastically from 2002–2003's norm of 41.0 percent. Clearly driving the move toward more studio and one-bedroom units, the share of 2012–2013's new supply in urban core settings—downtown or downtown-adjacent locales—is significantly higher than the urban core's share in 2008–2009 or 2002–2003. Because singles living alone and couples or roommate households dominate the apartment-resident base in the typical urban core environment, building product that features more studio and one-bedroom units simply makes sense.

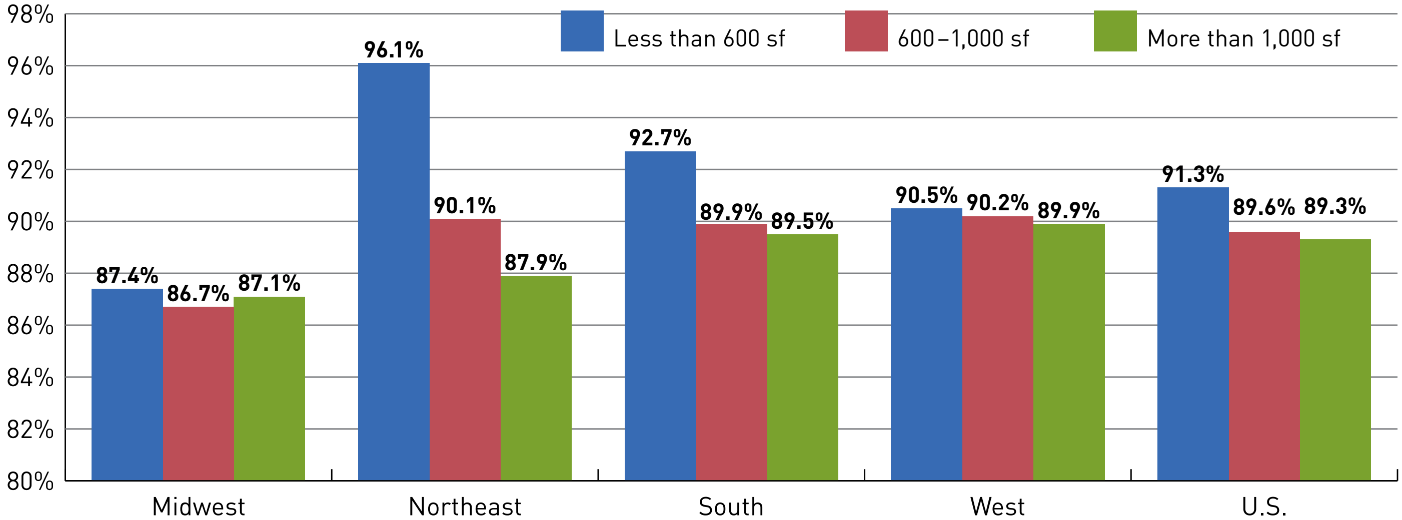
Over the course of the past decade, the share of deliveries in two-bedroom configuration has declined to 38.5 percent from 45.4 percent. And for units with three or more bedrooms, 2012–2013 completions came in at 10.6 percent of the additions, down from 13.6 percent ten years earlier.

The shift in unit-type emphasis will be interesting to watch over the next phase of the current development cycle. While near-term completions of urban core properties will continue to be disproportionately heavy relative to the historical norm, the suburbs are increasingly seeing recent starts and thus anticipate 2015–2016 completions. However, the jump in suburban construction does not necessarily translate to a shift back toward larger units. New suburban product in this cycle also tends to be focused in higher-density neighborhoods that are hubs for employment, transportation, or entertainment. Thus, a sizable percentage of studio and one-bedroom units is appropriate for this style of suburban project. In addition, developers are not surprisingly backing away from units with three or

Building Type by Development Cycle, United States



Occupancy by Unit Size (2012–2013 Development Cycle), United States



more bedrooms to an even greater degree in suburban settings, ceding families with children to the single-family-home rental sector.

Illustrating that current development is focused on high-density urban core settings or medium- to high-density suburban hubs, the share of deliveries found in mid-rise and high-rise buildings has surged during the past decade. (MPF Research defines high-rise projects as those with seven or more stories. For mid-rise buildings the height is four to six stories, with low-rise properties totaling one to three floors.) Mid- and high-rise buildings account for 49.1 percent of 2012–2013's completions—two-thirds higher than the 29.6 percent share a decade earlier. The shift toward higher density was already occurring by the end of the building cycle that ran from the late 1990s through 2009, as the mid- or high-rise share of 2008–2009 product almost matched the most recent wave of new supply.

Perhaps surprising is that the industry is reducing average unit size by increasing the mix of smaller studio and one-bedroom units, rather than by decreasing floor plan sizes. The typical one-bedroom unit is shrinking today, but the shift is not drastic. The average size for a one-bedroom apartment in 2012–2013 completions is 763 square feet, compared with 779 square feet a decade ago and 800 square feet on average in 2008–2009. Average unit sizes for studios (now at 545 square feet) and two-bedroom units (now at 1,104 square feet) do not show any distinct trend across the three periods studied.

In contrast, units with three or more bedrooms are getting larger. The average three-bedroom unit is now 1,410 square feet, increasing from 1,377 square feet in 2008–2009 and 1,329 square feet in 2002–2003, perhaps targeting a growing number of downsizing baby boomers.

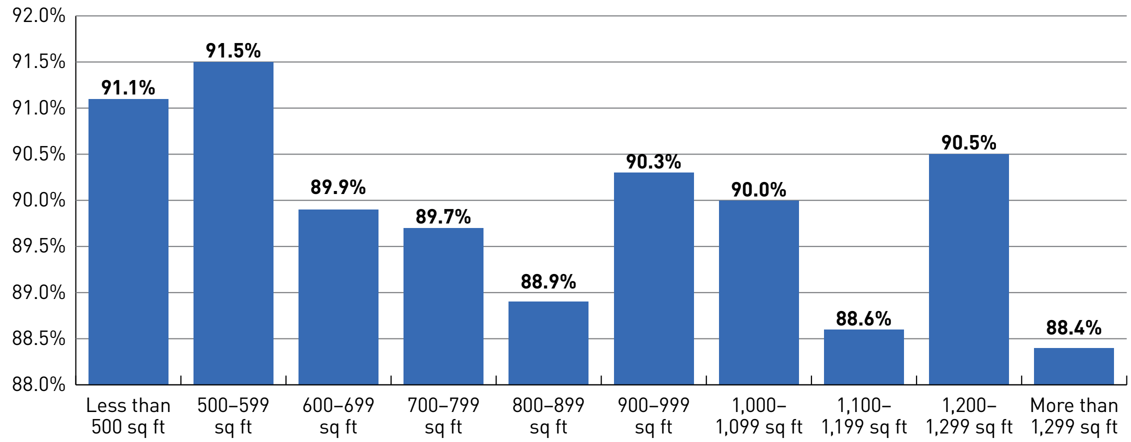
Occupancy Performance

In general, smaller units enjoy higher overall occupancy rates.

Small units with less than 600 square feet were the top occupancy performers in recently finished developments as of early 2014. These units reported noticeably higher occupancy (91.3 percent) than the 89.6 percent rate for mid-sized units from 600 to 1,000 square feet and the 89.3 percent in large units of more than 1,000 square feet.

Although early 2014 occupancy was strongest in the small-unit segment across every part of the country, the premium did not reach meaningful levels in the West or Midwest. The biggest premium registered in the Northeast, where occupancy in small units outperformed mid-sized units by 600 basis points and large units by 820 basis points. Important to remember, however, is that those units in the Northeast do not account for a large share of the nation's total stock added in 2012–2013. More significant in boosting the country's overall occupancy premium for smaller units, then, was the advantage for these units in the construction-heavy southern region. Small units built in the South

Occupancy by Detailed Unit Size (2012–2013 Development Cycle), United States



during 2012–2013 were 92.7 percent full as of early 2014. That performance topped the occupancy rate for the region's mid-sized units by 380 basis points and surpassed the occupancy norm for large units by 420 basis points.

In more fine-grained unit-size categories, the most significant premiums registered among units smaller than 500 square feet (91.1 percent occupied), in the 500- to 599-square-foot range (91.5 percent occupied), in the 900- to 999-square-foot segment (90.1 percent occupied), the 1,000- to 1,099-square-foot range (90.0 percent occupied), and the 1,200- to 1,299-square-foot category (90.5 percent occupied).

It is perhaps tempting to make pronouncements regarding popularity of units in various size segments based on those occupancy rates. In particular, on the surface the smallest units seem to be the rock stars. In fact, however, a strong relationship tends to exist between occupancy performance and the absolute number of units in that unit-size segment: the fewer the number of units built in any category, the higher the occupancy rate in that niche. For example, units of less than 500 square feet represent only 2.7 percent of the 2012–2013 completions studied, and the 500- to 599-square-foot segment is just 5.2 percent of the spectrum.

If a particular size niche is an outperformer for occupancy, it is the 1,000- to 1,099-square-foot category, given that segment constitutes a comparatively hefty 14.0 percent of the entire stock studied. This product may appeal to roommates who are also seeking affordable monthly rent (just as very small units offer smaller monthly rents).

Rental-Rate Performance

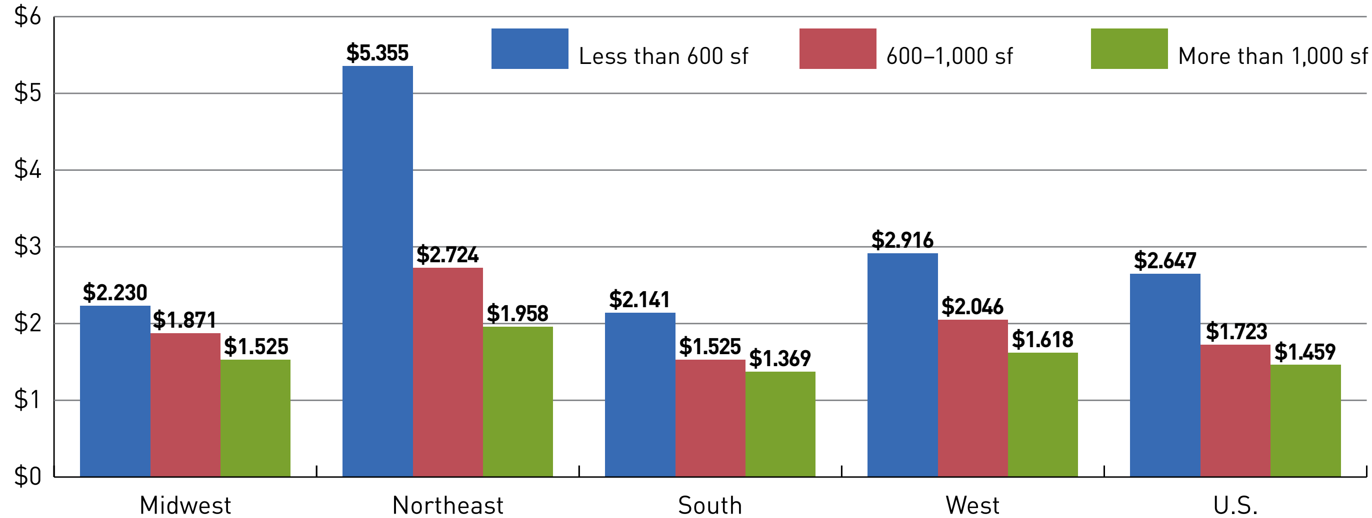
Communities completed in 2012–2013 achieved effective rents for new leases of $1.684 per square foot as of early 2014. This pricing represented an 11 percent premium over rates of $1.576 per square foot for the 2008–2009 vintage stock and a 22 percent premium over pricing of $1.383 per square foot for the inventory built in 2002–2003.

The smaller unit size of the newest product would typically achieve higher rent per square foot, explaining a portion of these premiums in average rent per square foot. However, the current pricing premium for 2012–2013 vintage units of less than 600 square feet is especially sizable. Typical rents of $2.647 in these small units top the rates of units in the 600- to 1,000-square-foot category by 54 percent and exceed the pricing of units of more than 1,000 square feet by 81 percent.

The most notable pricing premium for small units is seen in the Northeast region. In that part of the country, square-foot pricing for units below 600 square feet tops the rates for mid-sized units by 97 percent and surpasses large-unit rents by 174 percent. Again, the inventory of new units in the Northeast (and in the Midwest) is fairly small and vulnerable to big variation when making comparisons.

More statistically significant, then, are the premiums seen in the South and West, which have many more new-generation projects. In the South, units less than 600 square feet achieve price premiums of 40 percent over mid-sized units and 56 percent over large units. In the West, price premiums for

Rent per Square Foot by Unit Size (2012–2013 Development Cycle)



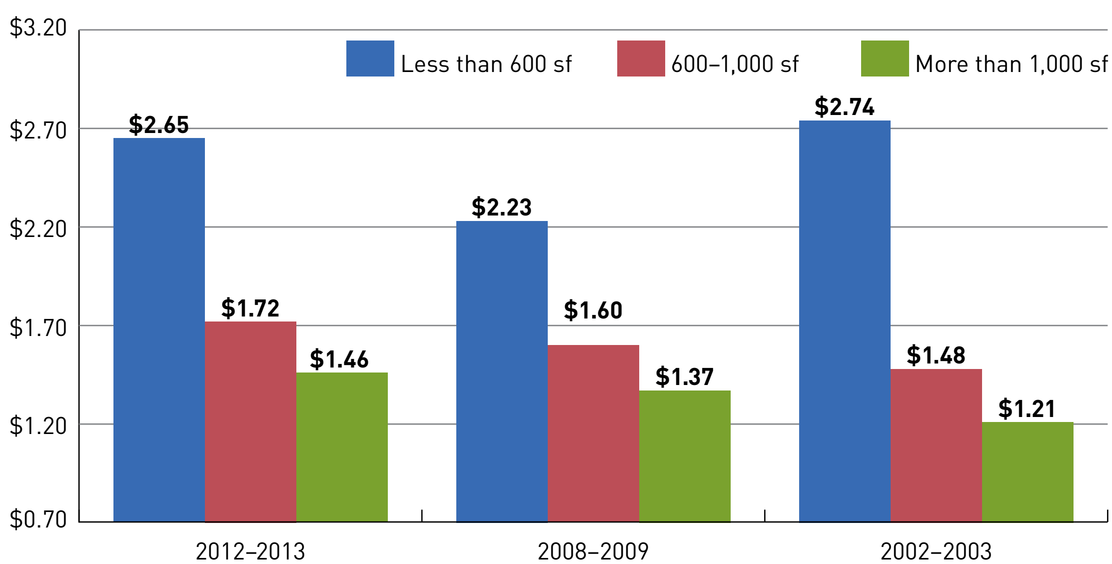
small units reach 43 percent over their mid-sized counterparts and a whopping 80 percent over the large units.

By comparison to earlier completions, the small-unit premium is substantial in the 2008–2009 stock but not as big as in the newest units. In contrast, small units from 2002–2003 command gigantic price premiums over larger models. On the surface, these decade-old small units are getting rents that exceed pricing for the newest small units as well as those from 2008–2009. The reason behind those huge rents for small units built in 2002–2003 lies in geography. An outsized share of the tiny units from 2002–2003 are found in the Northeast generally and New York specifically, where pricing is higher relative to other locales across the country.

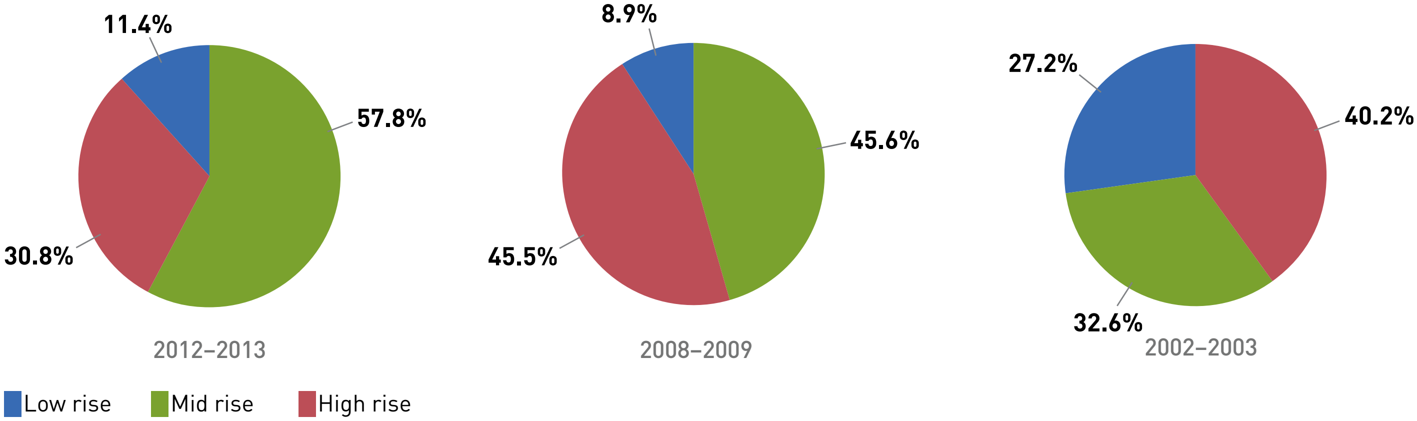
Performance of Properties with Units Less Than 500 Square Feet

Digging deeper into the performance of the smallest units now offered in the U.S. apartment market, MPF Research specifically analyzed properties completed in 2012–2013 with at least some units of sizes less than 500 square feet.

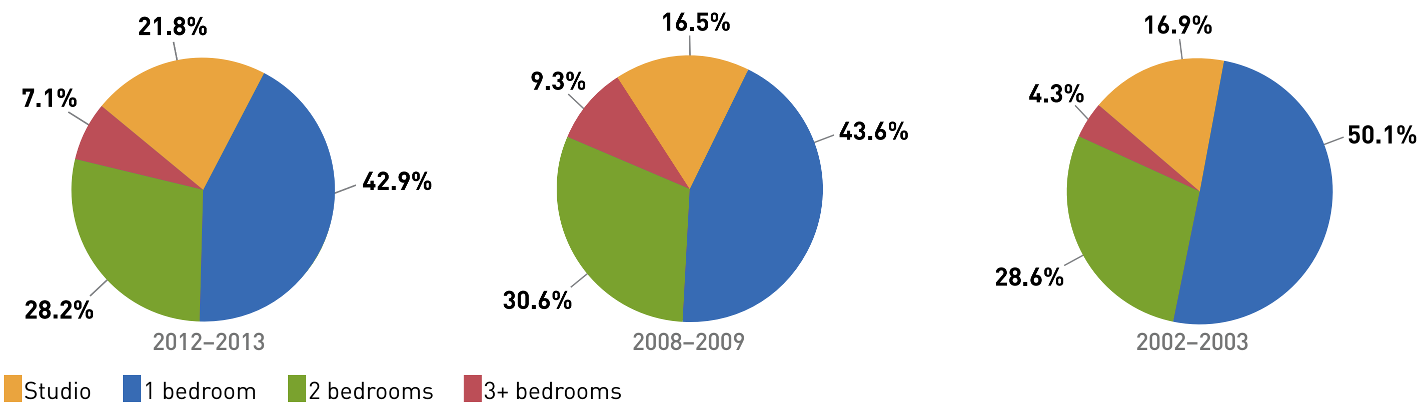
Rent per Square Foot by Unit Size (Three Development Cycles), United States



Building Type with Units Less Than 500 Square Feet by Development Cycle, United States



Unit Type with Less Than 500 Square Feet by Development Cycle, United States



Not surprisingly, these units are found almost exclusively in urban core settings. Nine times out of ten, these very small units are found in mid-rise and high-rise buildings, rather than in low-density communities. The exception is that almost 30 percent of the 2002–2003 buildings with ultra-small units were low rise in design.

The properties that include any units with less than 500 square feet not surprisingly have overall unit mixes that are comparatively heavy on studio and one-bedroom floor plans. Studio and one-bedroom units constitute 64.7 percent of the total selection in the 2012–2013 inventory, 60.1 percent in the 2008–2009 stock, and 67.1 percent in the 2002–2003 mix.

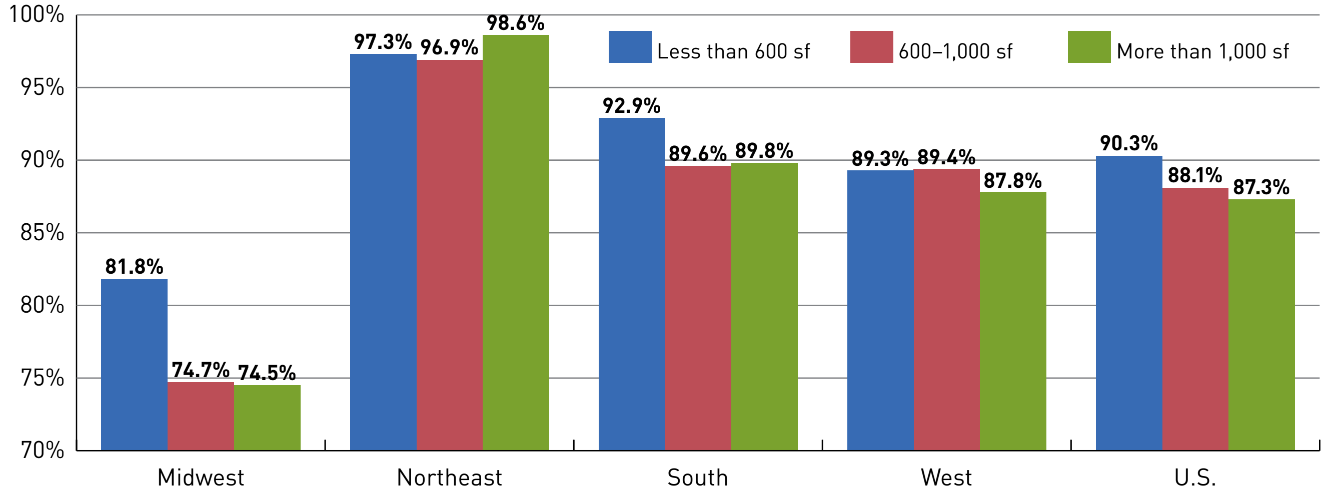
In these 2012–2013 completions that have apartments under 500 square feet in size, small units are the top occupancy performers. Units that meet the broader "small" designation of less than 600 square feet were 90.3 percent occupied as of early 2014, compared with occupancy rates of 88.1 percent in the mid-sized units of 600 to 1,000 square feet and 87.3 percent in the large units of more than 1,000 square feet.

The early 2014 occupancy premium for small units registered primarily in the South and Midwest regions, with minimal differences in occupancy by unit size posted across the Northeast and the West.

In developments that offer very small units, these sub-500-square-foot models ranked among the top achievers as of early 2014. Not only were these ultra-small units 91.1 percent occupied, but they also comprise a significant 19.8 percent of the total mix in this sample set. For slightly larger units of 500 to 599 square feet, early 2014 occupancy was 88.9 percent, with that segment accounting for 11.2 percent of the total mix.

A comparable occupancy level (91.1 percent) was also seen in units of 900 to 999 square feet, with marginally smaller or larger models also more than 89 percent full. Units of 800 to 899 square feet ac-

Occupancy by Unit Size for Properties with Units Less Than 500 Square Feet (2012–2013 Development Cycle), United States

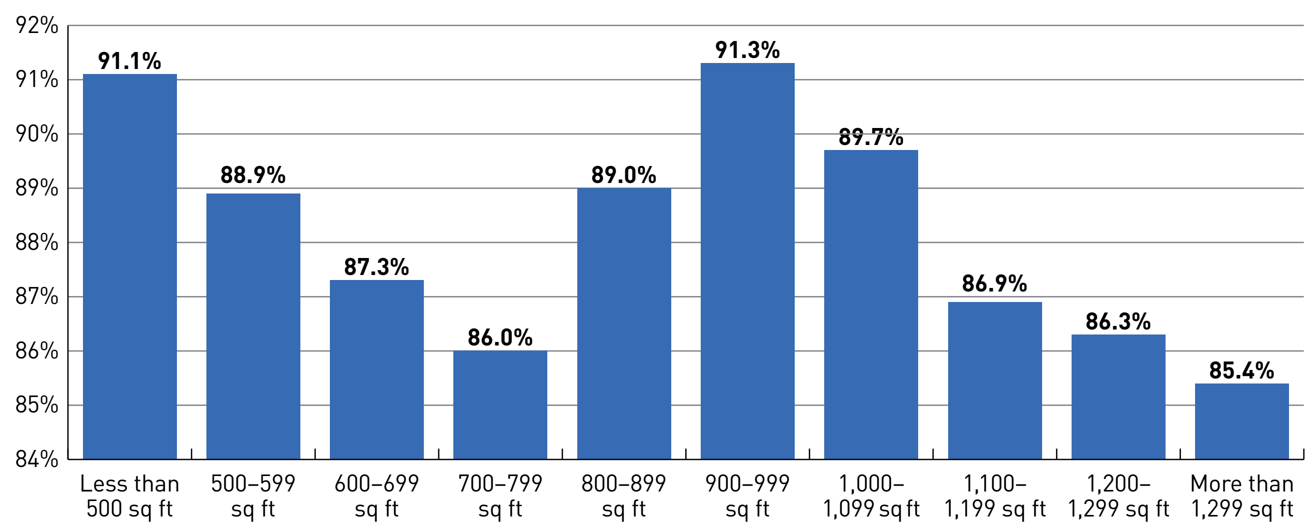


counted for 12.3 percent of this product mix, making the comparatively high occupancy in those units meaningful. However, solid occupancy in units of 900 to 999 square feet and 1,000 to 1,099 square feet likely in part reflected how few of those apartments are offered.

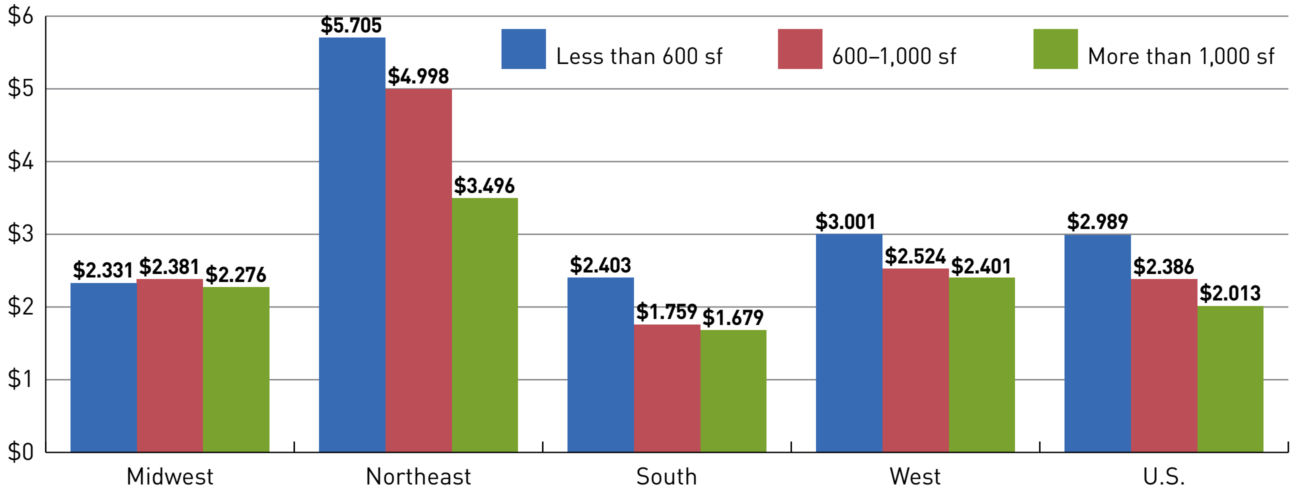
Among 2012–2013 completions that include units less than 500 square feet in size, early 2014 effective rents for new leases averaged $2.989 per square foot in the units meeting the small designation (under 600 square feet). That's a 25 percent premium over the square-foot rates for mid-sized units of 600 to 1,000 square feet and a 48 percent premium over the pricing for large units of more than 1,000 square feet.

Interestingly, the price premium for small units is less pronounced within properties that emphasize this option than is the premium for small units over the total marketplace. That is a logical result because, generally, the greater the inventory of any unit type within a given property, the greater the number of units that have to be leased and, in turn, the less aggressive an operator can be on pricing.

Occupancy by Unit Size for 2012–2013 Properties Including Units Less Than 500 Square Feet, United States



Rent per Square Foot by Unit Size for Properties with Units Less Than 500 Square Feet (2012–2013 Development Cycle), United States



Key Findings

Among the key findings from the historical data are the following:

- In properties built during the 2012–2013 time frame, average unit size (950 square feet) is down nearly 50 square feet from the average recorded in the previous cycle (both early in that cycle and late in the cycle).
- Although a tendency exists toward slight downsizing of units in one-bedroom configuration, the real driving force behind the smaller overall average unit size is a shift in the mix of floor plans offered, with more studio and one-bedroom units and fewer two-bedroom units and apartments with three or more bedrooms. The shift in unit mix corresponds to a greater share of development occurring in urban settings, where household size is smaller.
- A review of historical data reveals that 2012–2013 completions featuring units less than 500 square feet are concentrated in mid-rise or high-rise buildings in urban core settings. Among properties that offer very small units, those specific units tend to be the top-performing floor plans in the individual communities. However, the more small units in the mix at an individual property, the smaller the performance premium is for those units.
- The smallest units offered in the current generation of product tend to achieve the strongest occupancy levels and significant rent (per square foot) premiums over larger floor plans. Small units thus appear underrepresented in the inventory relative to demand potential. However, the total stock of units under 600 square feet that has been introduced is very limited, making up less than 8 percent of the current apartment development cycle's total supply. Very small, or micro, units constitute less than 3 percent of the 2012–2013 deliveries. Given this limited number of units, it is difficult to derive from available data the viability of moving this product type beyond niche status.

In the following section, Kingsley Associates has conducted extensive consumer research that examines and documents consumer sentiment toward micro units.

Consumer Feedback

Kingsley Associates conducted consumer research to explore satisfaction with, and attitudes and preferences toward, micro units. The specific goal of the assessment was twofold: first, to identify potential renters' attitudes and impressions toward small and micro units as well as factors influencing the rental decision; and second, to gauge current micro-unit renters' opinions regarding their living experience and initial leasing decisions.

Participants

Two surveys were administered via e-mail to the two respondent groups of potential and current micro-unit renters.

The first group of respondents was identified as potential renters. They are conventional apartment renters who are not currently living in a micro unit. With the permission of the apartment owner or operator, the residents were sent invitations to participate in the online survey on January 22, 2014, and were able to respond through February 18, 2014. Kingsley Associates distributed surveys to more than 37,000 conventional-unit renters across 180 apartment communities nationally and received 3,407 responses for a response rate of 9 percent.

Potential renter survey participants provided feedback in the following general survey areas:

- Initial micro-unit interest;
- Decision factors;
- Amenities (neighborhood, community, and in unit); and
- Demographics.

For the purposes of gauging potential renter interest in micro units, a simplified unit description was used along with the same image of a micro-unit plan shown in previous images.

> Micro-unit apartments are a new type of residential community designed to provide small but affordable housing in urban areas. These units are typically 20 percent to 30 percent smaller than a conventional studio apartment and feature compact kitchens and bathrooms. Innovative installations such as customizable space partitions and convertible furniture are frequently used to maximize space efficiency.
>
> Living in a micro-unit apartment generally includes having a single-occupancy unit at a lower cost than comparable studio apartments in the same neighborhood. To compensate for the smaller unit size, micro-unit apartments tend to have a stronger emphasis on shared communal areas in lobbies, hallways, and rooftops.

The second group of respondents was micro-unit renters. They are apartment renters currently living in a micro unit. With the apartment owner's or operator's permission, invitations were sent to participate in a separate online survey beginning February 28, 2014, to which they could respond through May 29, 2014. Because micro units are an emerging product type, the accessibility of micro-unit renters for research is limited. Kingsley Associates distributed 422 surveys to micro-unit renters across five different apartment communities identified in partnership with the ULI Multifamily Research Committee. Of these surveys, 110 responses were received for a response rate of 26 percent. Although more micro-unit communities are under construction, these properties were unavailable to survey at the time of publishing.

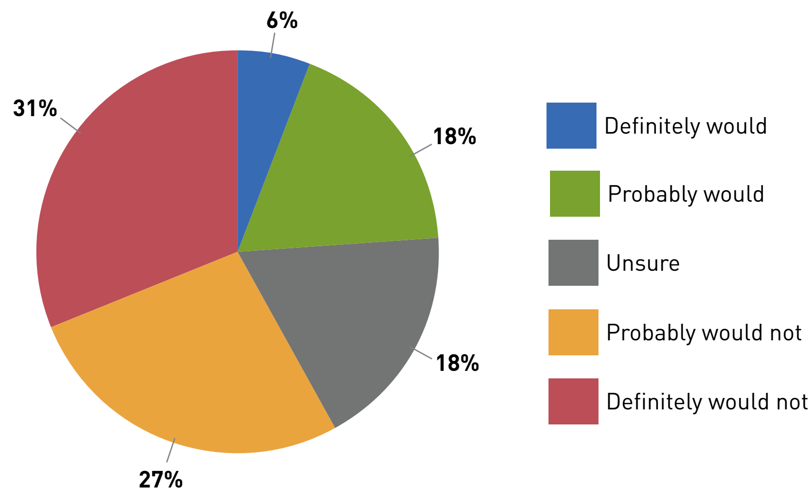
Micro-unit renter respondents answered questions on the following topics:

- Satisfaction with micro-unit living experience;
- Initial leasing decision, including amenities factors;
- Micro-unit lifestyle and use;
- Renewal intentions; and
- Demographics.

Survey Results

The complete findings of both surveys are included in the appendix of this report. The following are highlights of some of the key findings and results from the research. In addition, where appropriate, the findings from micro-unit renter responses are compared to the Kingsley Index^{SM} for contrast to conventional-renter satisfaction levels and opinions. The Kingsley Index is a proprietary real estate tenant and resident opinion database that includes a multifamily index of data from more than 100 companies, including seven of the ten largest apartment managers. (All figures in this section are courtesy of Kingsley Associates.)

Conventional-Renter Interest in Renting a Micro Unit



Potential-Renter Results

Results from the survey of potential micro-unit renters currently living in conventional units revealed that the majority of respondents (58 percent) were probably or definitely not interested in renting micro units, with 18 percent unsure and 24 percent probably or definitely interested. Those uninterested in a micro unit most frequently cited lack of a separate bedroom (75 percent), less storage space (63 percent), and less living or dining space (60 percent) as the reasons for their disinterest. Interestingly, similar questions were asked of current micro-unit renters regarding their initial leasing decision. A majority of the current micro-unit renters (82 percent) were not intentionally looking for a micro unit.

Consumer feedback from best practices research (in the following chapter) confirms survey responses received. When focusing on the potentially interested group, age, income, and living situation emerge as the top indicators of micro-unit interest. For example, 47 percent of respondents who are single, under 34 years of age, living with roommates, and earning less than $40,000 indicated they would consider renting a micro unit, which is twice the rate of interest for the entire conventional-unit respondent pool. (Please see the appendix for a detailed breakdown based on each category.) More generally, the demographic characteristics of the interested potential-resident group show that males are slightly more interested than females (26 percent versus 23 percent), single persons living with roommates (40 percent) are most interested (with singles living alone the next most favorable reading at 27 percent), and those under 25 years of age (34 percent) are the most interested age group.

Which perceived attributes of a micro unit are most appealing to potential renters? The survey revealed that the primary reasons potential renters would

Micro-Unit over Conventional-Unit Trade-off

I would choose a micro unit over a conventional-size apartment unit in exchange for:

Ranking areas	1st- or 2nd-rank mentions	1st-rank mentions
Lower rent compared with conventional studios	73%	53%
Desired location/neighborhood	44%	23%
Reduced utility costs	35%	7%
Ability to live alone (i.e., without roommates)	28%	12%
Shorter commute to work	19%	8%
Minimal apartment upkeep, cleaning, etc.	10%	3%
Neighbors with a similar lifestyle	8%	3%
More community amenities/shared spaces	7%	2%
Proximity to public transportation	6%	3%

Importance of Amenities in Rental Consideration

Neighborhood amenities	Percent 4s and 5s
Grocery store	88%
Restaurants/bars	68%
Gym	56%
Entertainment	53%
Retail centers	52%
Cafés	49%
Recreation	46%
Public transit	41%

Community amenities	Percent 4s and 5s
Laundry room	83%
Assigned parking	72%
Visitor parking	72%
Fitness center	70%
Roof/outdoor space	62%
Pool	56%
Living room area on each floor	43%
Grill	43%
Business center	30%
Pet services	29%
Central lounge	26%
Bike rack	23%
Cinema room	20%
Communal kitchen	19%
Car rental	14%

Unit amenities	Percent 4s and 5s
Washer and dryer	86%
Built-in closet/drawers	82%
Storage space	81%
Full-size refrigerator	77%
Full-size kitchen sink	75%
Four-burner stove	75%
Dishwasher	71%
Bathtub	61%
Space partitions	53%
High ceilings (9 feet+)	49%
Oversized windows	49%
Flat-screen television	42%
Juliet balcony	41%

Note: Importance ranked on a scale of 1 (least) to 5 (most) important.

choose a micro unit over a conventional-size unit are lower rent (and utility costs), desired location, and ability to live alone.

Regarding cost, respondents largely expect micro-unit rent to be 21 percent to 30 percent lower than for a comparable studio. This is not too far from the 25 percent to 30 percent rent reduction obtained from the best practices effort in the next section, as well as in line with the original micro-unit definition. As to which micro-unit qualities made potential renters most hesitant, the wide majority cited the perceived lack of storage.

With reduced unit space, surrounding amenities are an especially important consideration for potential micro-unit renters. Conventional-unit respondents assessed the importance of various types of amenities (neighborhood, community, and in unit) that would matter most to them if living in a micro unit. Across all the different types of amenities, the following were rated as important by over 80 percent of respondents: proximity to a grocery store, in-unit washer and dryer or community laundry room, and in-unit storage space (such as built-in closets and drawers).

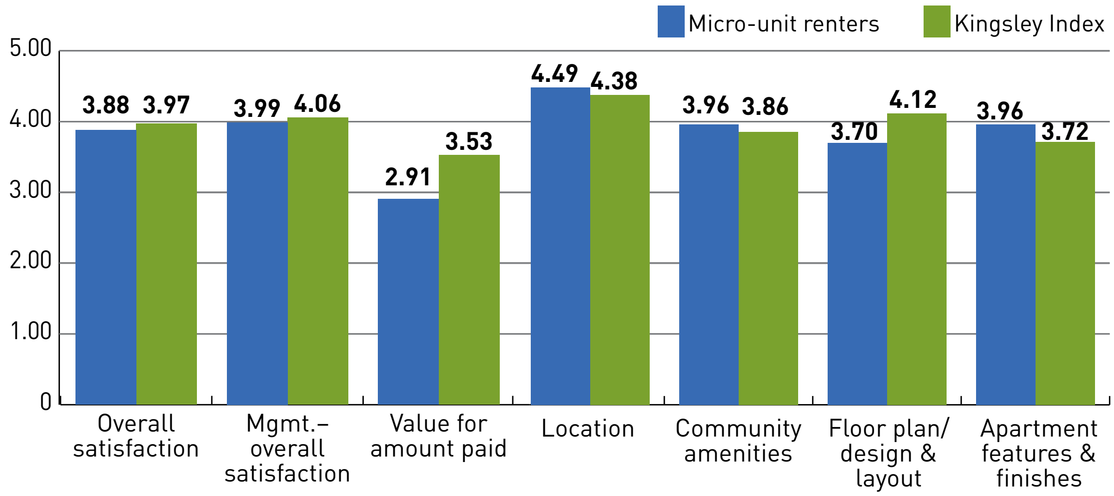
Surprisingly, regarding in-unit furnishings, only 30 percent of respondents reported they would be interested in a fully furnished unit, though 55 percent would be interested in multifunctional furniture (e.g., a bed that converts to a table or a couch that converts to a bed). Perhaps market participants should strike a balance between providing well-designed multifunctional furniture without fully furnishing the unit.

Results for Micro-Unit Renters

As previously mentioned, the micro unit is an emerging product type. The accessibility of micro-unit renters for research was extremely limited. Given the relatively small data set of micro-unit renter responses (110 responses from five communities), these results may not be nationally representative. Nonetheless, the response rate for the micro-unit renters was high compared with that of the conventional-unit renters.

The survey distributed to micro-unit residents aimed to measure satisfaction levels with the current living experience as well as their decision-making process and resident lifestyles. The majority of the micro-unit renters were not specifically looking for micro units in

Micro-Unit-Renter Satisfaction Scores



their search. Once they become micro-unit residents, their overall satisfaction levels are similar to those of conventional renters or trail only slightly. This information was evident when the micro-unit satisfaction results were compared to the Kingsley Index. Dissecting the data further, micro-unit renters are more satisfied than conventional renters with community location, amenities, and unit features and fixtures. However, they rate the perceived value for amount paid and satisfaction with unit floor plan and layout considerably lower than renters of conventional units. This result leaves room for market participants to improve on space layout.

Going back to micro-unit renters' initial leasing decision processes, the survey results suggest location-related factors, including proximity to work and school, neighborhood amenities, and public transportation, are key, as are price and the ability to live alone. All of these responses are not only similar to potential renters' decision processes but are also in concurrence with current developer practice.

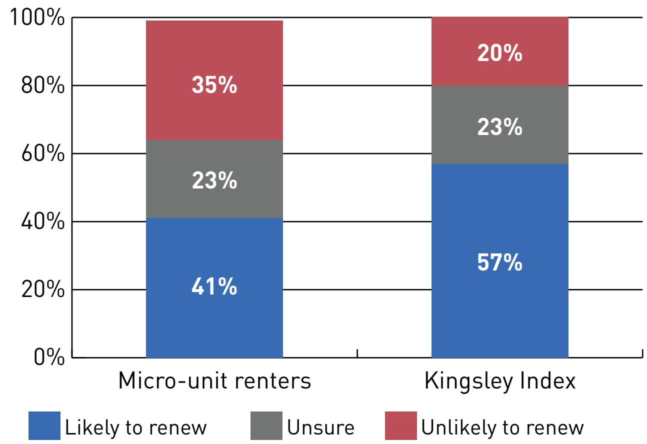
Market participants have indicated that occupants of micro units tend to stay for relatively short periods. This hypothesis was tested by asking micro-unit renters about future renewal intentions as well as purchase interest and likelihood of recommending micro-unit communities. The survey revealed that micro-unit renters generally indicate a lower likelihood of renewal than conventional renters do, with 41 percent of micro-unit respondents indicating likely renewal, compared with 57 percent in the Kingsley Index. The significantly lower renewal rate can potentially translate into higher operating cost, as has been witnessed in historical performance.

To further explore the renewal decision, Kingsley Associates analyzed the decision factors cited by each renewal group: unlikely, unsure, and likely. For micro-unit residents who indicated they were unlikely or unsure of their renewal decision, price was the primary decision factor, followed by space

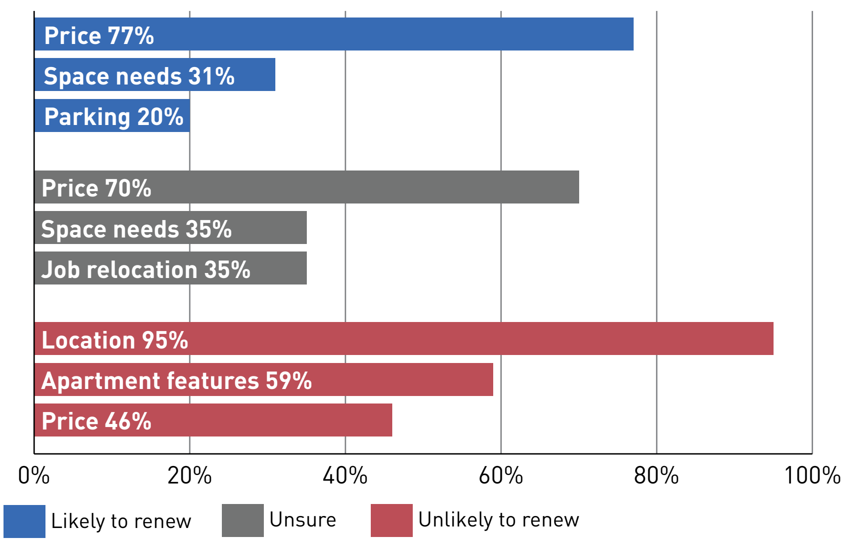
Micro-Unit Renters' Priorities in Initial Lease Decision

Lease decision factors	Percent 4s and 5s
Location	97%
Price	86%
Proximity to work/school	78%
Proximity to neighborhood amenities	73%
Ability to live alone	71%
Proximity to public transportation	62%
Internet/wifi services	54%
Quality of finishes	52%
Floor plan/layout	42%
Assigned parking	32%
Common areas/amenities	32%
Sustainability practices	29%
Sense of community	27%
Pets allowed	26%
In-unit storage	25%
Visitor parking	21%
Neighbors with similar lifestyles	20%

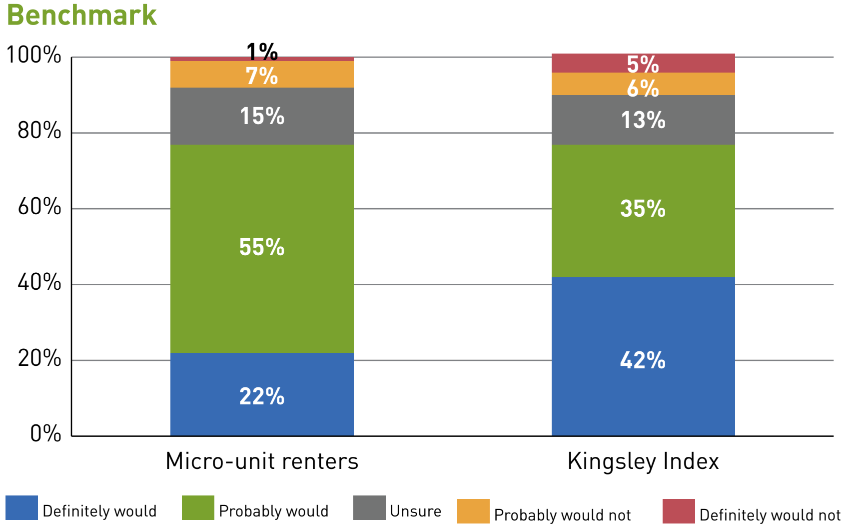
Micro-Unit Renewal Intentions vs. Conventional-Renter Benchmark



Top Renewal Decision Factors by Renewal Intention



Micro-Unit Recommendation vs. Conventional-Renter Benchmark



needs. Underscoring the previously mentioned attractiveness of micro-unit locations, almost all residents likely to renew cited location as a decision factor (95 percent). Micro-unit renters likely to renew are also positively influenced by the apartment features.

While micro-unit respondents' likelihood of renewal fell below the traditional renter average, likely recommendation was comparable, with 77 percent of respondents indicating they would probably or definitely recommend a micro unit to a peer with a similar lifestyle. Whereas 77 percent of conventional renters in the Kingsley Index are also likely to recommend their communities, the proportion that definitely would recommend (42 percent) is notably higher than for micro-unit respondents (22 percent). When asked about the prospect of owning a micro unit, over one-third of micro-unit renters (37 percent) indicated they would consider purchasing their micro unit (or a similar unit), if available for sale.

Key Findings

The following is a summary of key consumer survey findings:

Conventional Renters

- Interest: 24 percent of conventional-unit renters indicated they would be interested or very interested in renting a micro unit.

  —Trade-offs: Respondents interested in renting a micro unit would be most likely to pick a micro unit over a conventional-size unit in exchange for lower rent, desired location, and ability to live alone.

- Rent expectations: A large margin of respondents expect micro-unit rent to be 21 percent to 30 percent less than that of a comparable studio.
- Decision factors:

  —Most appealing: lower rent; and

  —Greatest hesitancy: lack of storage.

- Most important amenities:

  —Grocery store nearby; and

  —Washer and dryer in unit.

Micro-Unit Renters

- Lease decision: Nearly all respondents (97 percent) indicated location was a top priority in choosing a micro unit.
- Renewal decision: Fewer micro-unit renters are likely to renew their lease than conventional-unit renters, 41 percent and 57 percent, respectively.
  - —Top-cited factors for those likely to renew: location and apartment features; and
  - —Top-cited factors for those unlikely to renew: price and space needs.
- Purchase interest: 37 percent of respondents would be interested in purchasing their micro unit or a similar unit if for sale.

In the following section, RCLCO examines best practices and lessons learned from ULI Multifamily Council member participants and other developers, operators, and design professionals that have experience with micro units.

Best Practices and Lessons Learned

To understand who the market audiences are for small units and micro units and how they may differ from residents in conventional units in the market, RCLCO (Robert Charles Lesser & Co.) prepared case studies of selected rental apartment communities that include micro units and conducted a series of interviews with developers, owners, operators, and design professionals regarding their experience with micro units. RCLCO identified 30 existing communities across the country that include micro units as all or part of their unit mix, with a total of nearly 1,700 micro units. In addition, 18 communities as of the writing of this report are either under construction or planned that will add approximately 1,850 new micro units to the inventory.

Relatively few rental apartments are purpose built entirely with very small units. Less than one-half of the existing communities identified previously have 80 percent or more of their mix represented by micro units. However, many of the communities under construction and proposed are mostly if not entirely micro units, illustrating that this is a growing national trend.

Although micro-unit communities are popping up all over the country, they have generated considerable controversy in some markets. For example, in Seattle, SRO and micro-unit rental communities have been introduced into several established neighborhoods with predominantly single-family detached homes. Detractors complain about the strain these communities put on parking in the neighborhood and the density of these types of communities that are, while permissible, often out of character with the existing housing stock. Moreover, they contend that micro-unit communities, particularly those structured with short-term leases, attract an undesirable, transient population. In southern California, a new rental apartment complex, the Eleve, was delivered with units averaging only 425 square feet. The community was met with such public backlash that the city of Glendale soon thereafter raised its minimum residential unit size to 600 square feet to preclude another micro-unit project being built within the city limits.

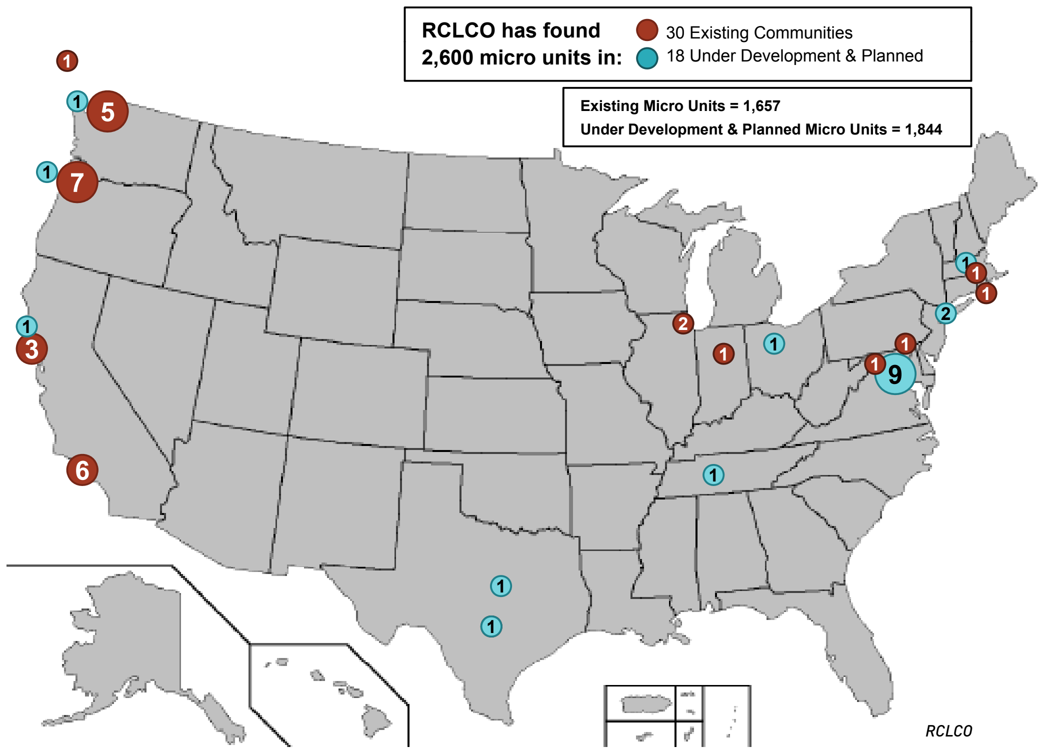
Through case study research and interviews with market participants with experience with micro units, this study has identified the following critical success factors and considerations for anyone contemplating development of or investment in a community with these very small units.

Target Market Audiences

The vast majority of residents who choose micro units are young professional singles. They are typically first-time renters who have not accumulated much "stuff" yet and are, therefore, completely comfortable with limited space. Many consider these units "launch pads" for new careers and lives in a new city or place. Micro-unit occupants are described as social animals, but ones who do not want or need to socialize in their units. Some couples occupy micro units, but singles are the norm. Some older individuals are looking for a part-time residence near family, and some use a micro unit as an in-town pied-à-terre, or crash or party pad, but this is only a small segment.

Market participants indicated that micro-unit occupants trend slightly more male than female, presumably because women are generally more interested in and tolerant of roommates. Micro-unit renters don't tend to remain long in their unit: they stay only one or two years and then graduate to a larger unit. Often the consumer is a parent of children with "delayed-onset-adult syndrome." Micro units seem to appeal to young renters in the tech and new media industries, though this may be a function of the markets in which many of the existing micro-unit communities have been built. This

Location of Micro-Unit Communities



possibility was later confirmed by the consumer feedback survey described in the previous chapter.

Perhaps not coincidentally, the rise in micro units has corresponded with an increase in millennials (or generation Y) entering the workforce and beginning to form households—the vast majority of whom rent in their early 20s. Examining some key gen-Y trends sheds light on why micro units are appealing to this generation. First, generation Y is highly mobile and tends to move frequently to follow opportunities and jobs. Many millennials choose where they want to live first and then look for a job. This generation has demonstrated a renewed interest in urban and urbanizing "authentic" locations—transit-rich locations are a plus, but walkable is a must. The Great Recession has had a disproportionately large impact on millennials, with unemployment among the under-30 set nearly double that of older members of the labor force. Gen-Yers have significantly lower incomes and much higher student loan debt loads, and therefore less disposable income to spend on things like expensive apartments. All of this has contributed to delayed household formation and delayed marriage among members of the millennial generation. Many of these same factors are what make micro units so attractive.

As an example, a community in Chicago converted a hotel into a rental apartment complex and kept a small portion of the mix as essentially hotel rooms in the 300-square-foot range. These units have performed extremely well and have attracted nurses, medical residents, and interns from the nearby Northwestern University medical campus. Nurses and aspiring doctors don't spend much time in their apartments, so micro units are a perfect solution. The developer of this community wishes in retrospect that it had included many more micro units in the mix. Patrick Kennedy of Panoramic, who has conducted research on micro units, has built one small community and currently has a 160-unit all micro-unit community under construction in San Francisco. He describes four key trends that are increasing the appeal of micro units:

- Delayed household formation and/or post-collegiate odyssey;
- An increase in single-person households;
- A decrease in car ownership, particularly among millennials; and
- Younger households with less accumulated stuff and a growing "sharing economy."

Purchase and Rent Motivations

In a separate survey that was conducted of 400 residents regarding purchase motivations, location ranked number one—locations that were walkable, not necessarily transit accessible—but "authentic" neighborhoods were valued most. Most respondents reported a willingness to trade size of unit in exchange for amenities (both community and neighborhood), but only for the locations that met the number-one location criterion. Price was not the primary factor, but cost ranked very high as a purchase motivation. (Figures for this section are courtesy of RCLCO.)

Based on the interviews, three closely interconnected "purchase motivations" have become apparent as driving the interest in micro units. The most important factor seems to be the desire among a growing segment of—particularly young—renters to live in walkable, trendy locations, primarily in the urban core of relatively expensive apartment markets. Next is economics and the willingness of renters to trade off a much smaller unit for less absolute rent in these highly desirable urban locations. Finally, the desire to live alone is the primary motivator that draws residents to the micro-unit concept. The consumer is often a parent who is paying rent for "delayed-adult-onset-syndrome" children. Micro units are competing with the private-bedroom underground market.

Closely related to square footage reduction, the "sweet spot" where potential residents seem to choose micro units over conventional studio and one-bedroom apartments is when micro units are positioned with absolute monthly rents that are approximately 25 percent to 30 percent below rents of conventional units, controlling for other factors (e.g., location, age, unit features), and are in line with or below the cost to share a larger apartment with one or more roommates. This seems to be the point at which a segment of the market is willing to trade off considerably less space for lower rent in a well-located, highly amenitized community. Few apartment residents think in terms of value ratio (cost per square foot per month) but rather think about their monthly rent cost. The hypothetical example in the table illustrates this positioning paradigm.

Unit-Size Comparison and Rent

	Size	Rent
Micro-unit studio	300 sq ft	$1,500
Conventional studio	500 sq ft	$2,000
One bedroom	650 sq ft	$2,400
Two bedroom and roommate	500 sq ft	$1,700

Rent Comparison

	Conventional studio	Micro-unit studio
Size	500 square foot	300 square foot
Sticker price	$2,000	$1,500
Rent per square foot	$4.00	$5.00

Although less powerful than the "lower" monthly rental rate, other important selling propositions for those marketing micro units include very low utility costs compared with conventional apartments—sometimes as low as only $15 per month. Another important message is the ease of moving into a micro-unit apartment, particularly those that come with built-in furniture systems. All a resident needs to move in is a small couch and a suitcase. Flexible lease terms that accompany some micro-unit communities and many SRO developments are also an attractive selling point for footloose millennials.

Selling Proposition

The selling proposition to developers, owners, and operators is all about the economics. Achieving higher density often translates into higher yields. From a construction standpoint, building a micro-unit community costs approximately 5 percent to 10 percent more per square foot because of the relatively fixed cost associated with building a kitchen and a bathroom, which is generally the same for a micro unit as for a conventional apartment. However, the typically 25 percent higher value ratio that can be achieved for these units reportedly more than compensates for the higher construction cost.

Managers of communities with micro units report slightly higher operating expense per square foot, perhaps an additional $5 per square foot higher annually, because a building with a high percentage of very small units tends to generate more trash per square foot than a similar-sized conventional project. Yet again, these same operators report that the higher value ratios more than compensate for the increased operating cost per square foot. Although identifying good case study analogs to test the financial implications of delivering micro units has been a challenge, one developer interviewed for this research estimated that this higher cost and higher revenue dynamic per square foot adds an additional 100 basis points to the going-in yield for a micro-unit development compared to a conventional rental apartment deal.

Ideal Size

In an attempt to understand what constitutes the ideal size for a micro unit, one developer interviewed for this effort revealed that it had conducted some primary consumer research on the subject. The developer created a series of micro-unit mock-ups and had a graduate student live in the units and provide feedback on what worked and what did not. Based on this research, this developer determined that a micro unit with less than 200 square feet was too small, that a unit with 375 square feet was too large, and that something in the 275- to 300-square-foot range was optimal for a "one person plus dog" household. This research also revealed the need to have flexible furniture systems and adequate storage for units this small to be workable.

Some design professionals interviewed for this research effort seriously questioned the ability to produce units compliant with the Fair Housing Amendments Act (FHAA) at under 300 square feet. If a hallway and a bathroom alone account for 150 square feet, then not much room is left for a kitchen, closet, and living room/bedroom. Some skeptical of sub-300-square-foot units believed that 350 square feet is a much more reasonable amount of space to create a truly compliant unit and that something in the 375- to 400-square-foot range would be much more marketable and could be accomplished without the need and expense of built-in furniture systems.

Despite this feedback, this survey found a number of examples of micro units across the country that were smaller than 300 square feet. A preliminary review of selected sub-350-square-foot micro units indicates that they are indeed FHAA compliant.

Micro-Unit Solutions

Most micro units in the sub-300-square-foot range cannot accommodate standard-sized furniture,

The Panoramic, San Francisco, California, uses 3D renderings on the website to provide context of micro-unit function and livability.

PATRICK KENNEDY, PANORAMIC INTERESTS

Patrick Kennedy in a micro unit. The image illustrates the flat-screen TV mounted on a tilting arm, which greatly enhanced the functionality of the unit and served to teach residents how to live in their units and how to set up the furniture layout.

PATRICK KENNEDY, PANORAMIC INTERESTS

appliances, or cabinets, and developers have turned to manufacturers that have more typically provided furniture for smaller living spaces in trailers, boats, and mobile homes. One of the key impediments to making micro units smaller and more efficient is that all major U.S. suppliers make systems and appliances that are too big, including heating, ventilation, and air-conditioning systems, kitchen appliances, and cabinets. Many offer good-quality smaller products overseas, but these are not typically available in the United States, and often these appliances do not carry the important Underwriters Laboratory certification or are designed for 240-volt and not U.S. 120-volt electrical capacity. Many U.S. consumers are turned off by European and Asian brand appliances that are sufficiently compact but lack acceptable performance standards (e.g., all-in-one washer-dryers). One developer interviewed for this report wanted to provide smaller kitchen appliances but had to go commercial, and the cost of this option made no sense. This research has certainly surfaced the need to urge U.S. manufacturers to make smaller appliances, cabinets, and furniture that can be used in micro units.

Updated versions of the vintage Murphy-bed system are added amenities to the functional living-space of a micro unit.
RESOURCE FURNITURE

Some developers and design professionals cited built-in furniture systems as essential in promoting the livability of micro units. These include modern versions of the old Murphy-bed system, typically with a queen-sized bed that easily converts to dining or desk area; bench seating in window nooks; and, in one case, a flat-screen TV mounted on an articulating arm. Convertible, built-in furniture promotes livability and versatility, and it helps show residents how to live in these small spaces.

Furniture systems come with high cost (anywhere from $4,000 to $12,000) but can be amortized and embedded in the unit rent at a reasonable price (say an extra $40 to $200 per month).

In addition to furniture and storage solutions, creative design ideas are being used in an attempt to reduce unit size while at the same time making them FHAA compliant. One such solution is the use of a wall-hung vanity with no cabinet below in a bathroom, which allows the space allocated to a bathroom to be reduced yet keeps it accessible. Or, as one developer has illustrated (see image top right, page 27), including a "gadget" wall instead of a closet eliminates the need to clear 24 feet of a drywall closet at the entrance of the unit, again allowing the unit width to be reduced.

Amenity and Gathering-Space Trends

Rental apartment communities with micro units are enticing prospective residents to accept much smaller apartment footprints by offering an extensive array of amenities. What happens outside the walls of one's apartment is just as important, if not more so, than what goes on inside. Therefore, in addition to the usual lineup of fitness amenities, pool, cyber café, and so on, large landscaped outdoor space is key. A number of micro-unit communities have extensive rooftop amenities that include fitness centers with fabulous views, fire pits, gas grills, catering kitchens, pools with private cabanas, and evening movies projected on large screens or walls.

AVA Somerville, in Somerville, Massachusetts, features unique amenities like customizable closets and retractable walls in select floor plans.
AVALON COMMUNITIES

The Harper on 14th Street, N.W., in Washington, D.C., includes a "movable" kitchen island. Because the island is not technically fixed in place, it did not count against FHAA clear passageway requirements, and the width of the unit could be reduced accordingly.
KEENER MANAGEMENT

Bigger is not necessarily better, and many communities are moving toward a wider variety of smaller amenity spaces that are laced throughout the building. The intent is to create a series of multiple smaller amenity or gathering spaces that enable residents to socialize, work, and gather outside their individual units. Most have some type of a clubroom or cyber café, but it is no longer the focus of the amenity space. The traditional business center is disappearing in favor of "benching"—large communal tables with Wi-Fi like those found these days at Starbucks. Here, young millennials can "gather alone" and text.

Bikes are increasingly replacing cars in micro-unit communities as many more millennials are either "car-lite" or carless. Communities are going beyond just being pet-friendly; they are becoming pet-centric, with grooming stations; pet walk and park

LINK Apartments, Seattle, Washington.
HARBOR PROPERTIES

Ace Hotel, New York, New York.
DOUGLAS LYLE THOMPSON

Under-couch storage.
ERIC ROTH, PURE HOME

areas; pet sitting, pet walking, and pet play-date services. This survey learned of one community that is combining the pet and sharing economies and taking pet-centric to the next level by offering a community dog that can be borrowed for a short time!

For many of the communities that are situated in highly desirable, walkable mixed-use environments, developers are able to scale down their amenity offerings to some degree because the neighborhood itself is the primary attraction. For example, lobbies in some locations are going the way of boutique hotels and are getting smaller. However, in pioneering locations or in underserved retail markets, developers are finding they have to overcompensate for the lack of neighborhood amenities and are including an extensive array of features, sometimes even a convenience or mini-mart retail component just for residents.

In some larger micro-unit communities, developers are adding gathering spaces on individual floors to provide residents with a "living room" outside their units.

All amenities should be verified against consumer expectations in a given market.

General Design Considerations

Storage is critical to making micro units livable. It is definitely one of the top criteria for considering a micro unit. Short of providing fully furnished units, look for opportunities to provide built-in seating with storage below. Use the plenum above the bathroom for additional storage, and don't hesitate to go vertical with shelving. Providing a built-in armoire removes the need for residents to bring large furniture storage solutions with them.

Interviews with developers and design professionals revealed other innovative ideas that were tried to make micro units successful but turned out to be unsuccessful. One such "don't" was experimenting with a bathroom and shower combination, similar to what one might find on a boat or an RV. This saved a considerable amount of space but was overwhelmingly rejected by focus group participants.

Soundproofing in a community with micro units is critical—even more so given the higher density than in a conventional apartment.

Light, air, and volume can compensate for smaller size of micro units. Volume creates the illusion of additional space, so building with ceiling heights of nine feet or more is essential. In addition, the use of oversized (six to eight feet high) operable windows is critical to bring light and air into the units. Balconies are too expensive to build, but Juliet balconies work just fine and they allow residents to open their units to the outdoors. Bay windows also provide more light to the unit and can be an extra seating area.

Kitchen Design

The design and configuration of kitchens in micro units have received a lot of attention. Developers and design professionals have wrestled and experimented with what is essential, what is nice to have but not necessary, and what to avoid. Some of the feedback from developer interviews has shed light on the dos and don'ts of kitchen design in micro units.

The consumer survey indicates that it is true that occupants of micro units do not cook often, but experiments with reduced-size appliances, smaller sinks, and space-saving washer-dryer appliances from European and Asian manufacturers have not tested well with American audiences. Micro units need to supply smaller, but still full-size appliances (i.e., a full-height 24-inch refrigerator) because

The Harriet, San Francisco, California (left), and the Wharf, Washington, D.C. (below), each illustrate the importance of natural lighting to amplify the space.

PATRICK KENNEDY, PANORAMIC INTERESTS (LEFT); PN HOFFMAN (BELOW)

residents do not like small, under-countertop refrigerator units like those found in hotel suites. A micro unit has to have a full-size 30-inch sink; attempts to use smaller fixtures did not appeal to renters and can create potential conflicts with accessibility requirements. Having a small cooktop is important, but including an oven is not necessary as long as the kitchen has a combination convection and microwave oven. But don't put the microwave under the countertop, because this did not test well. Many communities that have micro units and smaller studio units include an 18-inch dishwasher and a small stacked washer-dryer, but this amenity varies by market, and dishwashers and in-unit laundry appliances may be possible to eliminate in some instances. Although no magic formula exists, most respondents indicated that a linear kitchen ranging between five and eight feet in length is ideal.

Some developers are experimenting with prefabricated and modular kitchens and baths that are trucked onto the construction site and "plugged in" to the units. However, the jury is still out on this technique, as there is a lack of consensus among developers on whether or not these units save time and money.

What's Next—Micro Suites?

The next evolution of the micro-unit concept is currently under construction in San Francisco. Panoramic is building a 160-unit community in the SoMa district that will offer a mix of micro-unit studios and three-bedroom, two-bath "micro suites" that are approximately 700 square feet in size. That is 233 square feet per occupant—assuming only one person per bedroom—with five people that is 140 square feet per person. Cozy. These units will have no formal dining or living room but will have a kitchen. The unique selling proposition of the micro suite

Modular kitchens are useful to the consumer, but developers are on the fence about the marginal impact to the bottom line.
RESOURCE FURNITURE

over a micro unit is that the tenants enjoy the same benefits of lower absolute rent, and the developer is able to leverage the fixed cost of a kitchen and bathrooms over more bedrooms compared with a studio. As in a professional dorm, the developer plans to offer a roommate matching service, housekeeping will be embedded in the rent, and the developer will maintain rent protection insurance, which provides roommates with a two-month "abandonment grace period" for $20 per month.

According to the developer, one of the advantages of the micro suites is that these units are a good solution for corners of buildings that are typically difficult to access with micro units alone.

Some developers who are concerned that the trend toward tiny units may be just a fad are mitigating this risk by designing units, bearing walls, and utilities and systems so that micro units sitting side-by-side can easily be combined at a later date into conventional one-bedroom and two-bedroom units.

Location, Location, Location

Some of those interviewed for this effort hypothesize that the "affordable" price positioning advantage afforded by micro units would be a compelling proposition anywhere. If one could offer smaller units at a 25 percent to 30 percent discount relative to the existing inventory of conventional units, the concept would be equally as viable in suburban and lower-density locations as it would be in expensive urban locations. However, one operator active in southern California found that it had to temper expectations regarding how small it could make units because it was competing in submarkets that generally had older, much larger, and yet still relatively affordable units. Most of the respondents were convinced that micro units were most likely to succeed in high-density, expensive urban and urbanizing coastal markets.

Side-by-side units.
RCLCO

The Panoramic, San Francisco, California, offers a mixture of units and "suites" that can be converted later into conventional units.

PATRICK KENNEDY, PANORAMIC INTERESTS

Marketing and Branding

The term *micro unit* has a negative connotation in the marketplace among some consumers, communities, and jurisdictions. A number of developers and operators are attempting to rebrand micro units with more progressive labels. Suggested rebranding ideas include the following:

- Innovation units;
- Nano unit;
- Launch pad;
- Urban flats; and
- Fun unit.

Developer and operator Keener Squire in Washington, D.C., recently completed the Harper rental apartment community with 144 units, including small studios and junior one-bedroom units with as few as 350 square feet. Keener Squire is currently building another micro-unit community, the Drake, with 218 units that will average 419 square feet. The company makes no mention of micro units in any of its presentations or marketing material—they are just apartments in a great location.

This community is also trying to simplify the leasing process and differentiate itself from other new communities in the marketplace by including all utilities in the monthly rent.

Cautious Capital

Most institutional capital does not have experience with micro-unit developments and has generally shied away from taking the risk or required a much higher return to compensate for the perceived

At the Harper, you will find no mention of unit size on the website, and you will be hard pressed to get the leasing staff to offer information on how big (or small) the units are.
KEENER MANAGEMENT

The Harper Savings Features

- Security deposit—none
- Amenity fee—none
- All electric—included in rent
- Trash removal—included in rent
- Water and sewer—included in rent
- Hot water—included in rent
- Personal storage space—included in rent

increased risk profile associated with these types of developments. The Panoramic micro-unit/suite development in San Francisco previously mentioned was able to secure a $50 million construction loan in 2013. However, one-half the units in this development had been preleased to the California College of the Arts, and it is unknown whether funds would have been forthcoming had this development truly been a 100 percent "spec" market-rate rental. However, this caution may be fading as the market gains more experience with micro-unit developments. Reportedly, Hoffman-Madison recently secured financing from a Canadian pension fund manager for a large mixed-use residential and commercial project in Washington, D.C., the Wharf, which will include 330 rental units in the first phase, approximately 170 of which will be micro-unit studios ranging in size from 330 to 360 square feet.

Case Study Projects

These are a few of the case study communities that contributed to the best practices and lessons learned.

Factory 63, Boston, Massachusetts

Located in Boston's newly minted "Innovation District," this community includes 38 units in a converted shoe factory, 23 of which are dubbed "innovation" micro-studio units. The units range in size from 368 to 504 square feet and have lease rates ranging between $1,699 and $2,450 per month, which translates into value ratios of $4.62 to $4.86 per

Factory 63, Boston, Massachusetts.
GERDING EDLEN

Flats Chicago, Chicago, Illinois.
FLATS CHICAGO

square foot per month. Each resident gets a nine-square-foot storage cube in the basement included in the rent. This community reportedly leased up in two weeks and now regularly sports a waiting list sign-up sheet on its web portal.

The Flats, Chicago, Illinois

This community by Cedar Street Development is a converted hotel located immediately adjacent to Northwestern University's medical campus near Navy Pier just north of the Loop. The community includes 350 units, of which approximately 15 percent are micro units—essentially the existing hotel rooms converted to apartments. These micro studios range in size from 275 to 350 square feet and start at $900-plus per month. According to the owner/operator, micro units have been very successful by appealing to medical residents, nurses, and university hospital staff, and the developer wishes it had had the guts to convert more of the hotel rooms into micro suites. According to the website, the Flats offers high-quality, amenity-rich, authentic environments at approachable rents, always.

Lofts at 7, San Francisco, California

This community by the Dolmen Property Group is a converted local television broadcasting facility with 88 micro units that range in size from 275 to 530 square feet and include a mix of studios and loft-style units. Rents range between $1,550 and $2,350 per month, which translates into a value ratio range of between $4.43 and $5.64 per square foot per month.

Despite its relatively small unit count, this community has an extensive 6,500-square-foot landscaped roof deck with an outdoor cinema, an open-air sundeck with grills and a fire pit, and a fitness center with city views.

The Lofts at 7, San Francisco, California.
DOLMEN PROPERTY GROUP

Micro Lofts at the Arcade Providence, Providence, Rhode Island

The community is another adaptive use—of one of the nation's oldest indoor shopping malls. Developed by Evan Granoff and designed by Northeast Collaborative Architects, this complex features retail tenants on the lower floor and 48 micro units on two upper floors. Micro-unit junior one-bedrooms range in size from 225 to 450 square feet and feature full bathrooms, built-in beds, seating, and storage, as well as kitchens equipped with refrigerators, sinks, dishwashers, and microwave ovens. When residents need more space than their individual units offer, they can take advantage of a game room, a TV room, and porches. Other common amenities including on-site laundry facilities, bike storage, locked basement storage units, and a parking garage across the street.

Micro Lofts at the Arcade Providence, Providence, Rhode Island

BEN JACOBSEN/COURTESY NORTHEAST COLLABORATIVE ARCHITECTS

ekoHAUS Freedom Center, Portland, Oregon.

WDC PROPERTIES

ekoHAUS Freedom Center, Portland, Oregon

This community by WDC is one of the few new-construction, purpose-built micro-unit communities. The development consists of 150 micro units in a mid-rise building. Units range in size from 267- to 385-square-foot studios and rent for $895 to $1,550 per month, or $3.35 to $4.03 per square foot per month. Key marketing messages for this community include the following:

- "Live urban in Portland";
- "Low-impact floor plans"; and
- "Eco-friendly living."

My Micro NY, New York, New York.
LEDAEAN.COM

My Micro NY, Kips Bay, New York

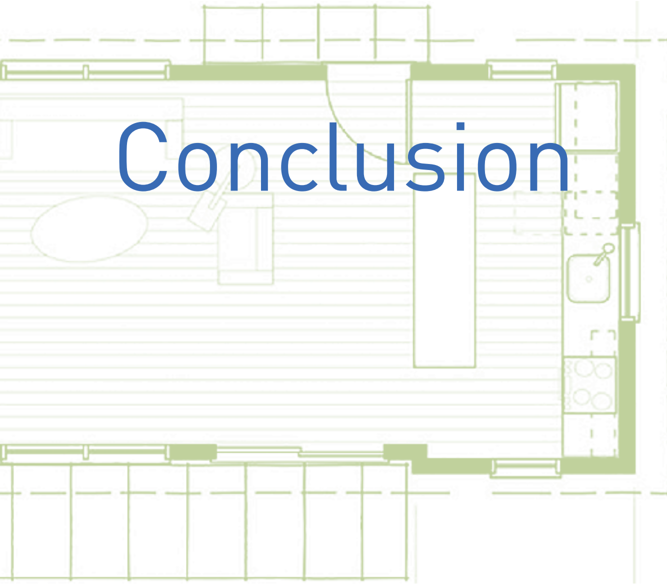
The community is the result of a design competition in New York City for which Mayor Bloomberg waived the city's minimum unit size requirement for a demonstration project to help promote the development of affordable housing within the city. This community will include 55 micro-unit studios that range in size from 250 to 370 square feet. Approximately 40 percent of the units will be below-market affordable housing with rents targeting household earnings at 80 percent of area median income. The remaining 60 percent of the units will be market rate with rents starting at $1,900 per month, which compares with rents at conventional studios in the $2,500 to $2,700 per month range. These units will be entirely modular and will be constructed off site in a factory setting and assembled on site.

Key Findings

Approximately 30 rental apartment communities with nearly 1,700 micro units were identified as part of this research effort. In addition, 18 communities under construction or planned and proposed will include approximately 1,800 micro units.

- The target market audience for micro units is predominantly young professional singles. Secondary segments include younger couples, older move-down singles, and some pied-à-terre users. Micro-unit dwellers trend slightly more male.
- The most important, and interrelated, factors driving the interest in micro units include the following:
  - —The desire of younger residents to live in walkable, hip locations, primarily in the urban core of relatively expensive apartment markets;
  - —The willingness to trade off a much smaller unit for a lower absolute monthly rental payment in these highly desirable locations; and
  - —The desire to live alone.
- The "sweet spot" where renters seem to choose micro units over conventional studios, one-bedroom apartments, or roommates is when micro-unit rents are positioned approximately 25 percent to 30 percent below conventional units.
- Developers and operators acknowledge that both building and operating rental apartment communities with a high percentage of micro units are more expensive, but the increased rent per square foot more than compensates for this added cost.
- Some interviewed for this research expressed doubts that it is possible to produce sub-300-square-foot micro units that are accessible; however, a cursory review of selected micro-unit floor plans in that category indicates that this is, indeed, possible.

- It may be necessary to include built-in and/or flexible furniture systems and storage to make sub-300-square-foot micro units functional.
- Design dos and don'ts include the following:
  - —Smaller, but still full-sized kitchen fixtures and appliances are more acceptable to renters than some of the compact or dual-function European or Asian versions (e.g., include a 30-inch sink, 24-inch full-height refrigerator, small stacked washer-dryer).
  - —Some question exists whether it is necessary to include a dishwasher or a washer-dryer appliance; this may vary by market.
  - —A linear kitchen ranging between five and eight feet in length is ideal.
  - —Storage is critical to making micro units livable, including built-in seating with storage below, storage above a bathroom plenum, built-in armoire furniture, vertical shelving, and so on.
  - —Tall ceiling heights of more than nine feet create a sense of volume and can counteract the small square footage of micro units.
  - —Light and air are critical to making micro units feel bigger than they are. Use six- to eight-foot tall windows. Bay windows also provide light and extra seating in a micro unit.
  - —Build in flexibility to convert side-by-side micro units into conventional one-bedroom and two-bedroom units in the event the trend reverses.
  - —Provide extensive amenity space in the community to compensate for the lack of space in the units. Typical community amenities include the normal lineup of fitness, pool, and cyber café, but also incorporate extensive roof-top amenities, fire pits, catering kitchens, and the like.
  - —Provide additional "living room" spaces on each floor to serve as a gathering and entertaining space for residents outside their units.
- Taking the micro-unit concept to the next level, a developer in San Francisco is building a new community with a combination of micro-unit studios and two-bedroom micro suites that are approximately 700 square feet, or 233 square feet per occupant.



Conclusion

Micro units have generated considerable interest and some controversy in the real estate community in the past several years. This research illustrates that the migration toward smaller average unit size, based on a shift in mix to studio and one-bedroom units, and the number of rental apartment communities offering micro units are a growing trend. Whether this turns out to be a lasting phenomenon or a passing fad, micro units have renewed the focus on efficient layouts and innovative design solutions. Many of these smaller units are designed and configured to feel larger to potential renters than older conventional units by virtue of higher ceiling heights, larger windows, built-in storage, and in some cases, flexible furniture systems. The evidence from the market indicates that smaller units tend to outperform conventional units; they tend to have higher occupancy and achieve significant rent premiums. Still unclear is whether this performance is driven by the relatively limited supply of these smaller units on the market, or whether a sizable, and perhaps untapped, segment of renters is willing to make the tradeoff and pay considerably more per square foot rent in exchange for highly desirable locations, better community amenities, the ability to forgo a roommate—or perhaps some combination of these factors. The consumer research indicates that, from the renter's perspective, the micro-unit strategy that offers a lower monthly rent "sticker price" compared with conventional units is a compelling proposition. But it is also clear from the research that micro units are not for everyone and that micro units may not be the solution for every location.

The goal of this effort has not been to find conclusive answers to these questions, but rather to shed light on the key issues, challenges, and some of the solutions that market participants have experienced and experimented with to date in dealing with micro units. The real estate industry needs to investigate this issue further and continue to monitor the successes and challenges that this unique rental apartment product presents, including the risk/reward profile and long-term market viability of micro units. We thank those who have participated in this study, and we hope this report provides an objective background for future micro-unit developments as those of us in the industry collectively and individually seek solutions that best suit the markets we serve.

Research Committee Members

Bill Whitlow

Committee Chair
Terra Search Partners
San Francisco, California

Bill Whitlow's 25-year tenure in the real estate industry provides the team with deep insights and industry and functional context across a broad spectrum of areas, including finance and capital markets, investment strategy, asset and property management, development, and leasing. During his career, Whitlow has held senior positions at firms such as Venture Corporation, Studley, Arthur Andersen, PricewaterhouseCoopers, and Aetna Realty Investors, where he has executed more than $3 billion in debt and equity transactions and has provided capital markets, strategic management consulting to clients on projects and portfolios valued in excess of $6 billion. Whitlow's experience includes the leadership of three property management companies. He also has deep expertise in capital raising, strategic and operational advice, and client relations.

Whitlow is an active supporter of Project Open Hand, AIDS Foundation, Sacred Heart Schools, Urban Land Institute, and other charitable organizations. He is a past board member of the San Francisco Bay Area YMCA, the San Jose chapter of the American Red Cross, and the Silicon Valley Roundtable Executive Board of the University of Illinois Foundation.

He holds a master's of management from the J.L. Kellogg Graduate School of Management and a master's of architecture from the University of Illinois.

Charles Hewlett

RCLCO
Bethesda, Maryland

Charles Hewlett has more than 25 years of experience in real estate and has consulted on a broad spectrum of commercial and residential properties in most major metropolitan regions in the country. Before joining RCLCO, he was president of Lofty Builders Inc., a real estate service company concentrating in renovation, rehabilitation, and management of investment real estate properties in the Boston metropolitan area.

A graduate of Brown University in Providence, Rhode Island, Hewlett has conducted training seminars on the methodology for metropolitan-development trend analysis for regional branch offices of major national commercial developers. He is also a frequent speaker and ULI panelist, including the redevelopment of the Southeast Federal Center in Washington, D.C., and Atlantic City in Norfolk, Virginia. Hewlett has written articles published in the *Corridor Business Journal*, *Urban Land Digest*, and publications of the National Multi Housing Council.

Teresa Ruiz

SB Architects
San Francisco, California

Teresa Ruiz joined SB Architects with over 15 years of architectural experience and a focus on multifamily and residential projects. At SB Architects, she is responsible for advancing the firm's multifamily practice in the Bay Area, nationally, and internationally. In her prior role at BAR Architects, Ruiz was responsible for multifamily and mixed-use projects totaling over 3 million square feet and built work with construction costs totaling more than $300 million. Her past projects have received numerous national awards including the ULI Jack Kemp Workforce Housing Award. Teresa was recognized in 2012 as a winner of ENR California's Top 20 under 40.

Ruiz is a hands-on architect whose interests and areas of responsibility go far beyond that of the typical architect. She is immersed in evaluating best practices as they relate to the design efficiency, performance, scheduling, and optimization of the design team and of her projects. She works closely with the development team to ensure that goals are aligned and that development objectives are met or exceeded.

Ruiz's interest in home design led her to volunteering for Habitat for Humanity, both in hands-on construction work and in providing design services. Throughout the past two decades, she also volunteered for Christmas in April, now known as Rebuilding Together. She is fluent in English, Chinese, and Spanish—something that came in handy during her volunteering as an architect-in-residence/ instructor with Leap . . . Imagination in Learning in the San Francisco Public School District in 1998. Ruiz received her undergraduate degree in Architecture from the University of California, Berkeley, and master of architecture from the University of Oregon.

Ron Witten

Witten Advisors
Dallas, Texas

Beginning at MPF Research in 1973, Ron Witten has spent a career studying and understanding the economic, demographic, and housing market forces shaping apartment market performance. President from 1978 through 2000, Witten led MPF as the firm became a national leader in apartment market data and market analysis for the nation's leading apartment companies. In July 1999, MPF became a wholly owned subsidiary of RealPage Inc., the leading provider of property management software to the apartment industry. He continued as president of MPF before forming Witten Advisors in January 2001.

Witten has been a frequent speaker on market conditions as well as emerging demographic forces shaping apartment markets, addressing meetings sponsored by organizations including the National Multi Housing Council (NMHC), the Urban Land Institute, the National Association of Home Builders' Multifamily Leadership Board, the National Apartment Association, and NAREIT. He routinely lectures on real estate markets at Southern Methodist University.

Witten wrote the chapter on market analysis in ULI's *Multifamily Housing Development Handbook* and cowrote ULI's *Real Estate Market Analysis* text as well as books on real estate markets and investment strategies. He currently serves as a director of Behringer Harvard REIT I Inc. as well as Apartment Life, a nonprofit that helps build a sense of community in apartment properties to reduce turnover and enhance resident satisfaction.

He has been active in the Urban Land Institute where he is past chair of both the silver and gold flights of the Multi-Family Council. He now serves as a member of the NMHC's Research Roundtable, and he wrote NMHC's quarterly *Market Trends* newsletter in its initial years of publication.

Witten received a BBA in marketing from Texas Tech University and has completed graduate classes in statistics and economics at Southern Methodist University.

Appendix

Micro-Unit Interest and Trade-offs Unless otherwise stated, percentage of responses ranked among top three trade-offs	Micro-Unit Interest: Micro-unit interest (% interested/ very interested)	"Rent expectation vs. studio (30% or greater discount)	Rank of Trade-offs to Conventional Apartment: Ability to live alone (without roommates)	Desired location/ neighborhood	Lower rent compared with conventional studios	Minimal apartment upkeep, cleaning, etc.	More community amenities/ shared spaces	Neighbors with similar lifestyles	Proximity to public transportation	Reduced utilities cost	Shorter commute to work
Conventional renters	24%	34%	40%	65%	84%	22%	15%	15%	12%	57%	33%
Age Range											
Under 25	34%	31%	49%	56%	84%	21%	12%	13%	12%	58%	31%
25–34	25%	31%	42%	65%	87%	20%	15%	11%	11%	59%	38%
35–44	20%	33%	35%	71%	80%	23%	17%	19%	11%	50%	39%
45–54	26%	37%	36%	66%	82%	18%	12%	18%	11%	60%	30%
55–64	25%	44%	31%	62%	86%	30%	16%	16%	16%	58%	24%
65+	19%	37%	48%	69%	82%	37%	18%	24%	20%	49%	14%
Apartment Floor Plan											
Studio/efficiency	44%	32%	53%	63%	85%	24%	16%	6%	22%	54%	29%
1 bedroom	26%	33%	35%	66%	84%	22%	13%	15%	13%	58%	35%
2 bedroom	21%	34%	42%	63%	85%	20%	16%	18%	10%	56%	35%
3 bedroom	23%	41%	49%	67%	81%	27%	23%	15%	10%	58%	22%
Other	15%	54%	45%	69%	92%	27%	9%	10%	30%	55%	20%
Living Arrangement											
Single living alone	27%	34%	41%	67%	84%	22%	13%	14%	10%	56%	32%
Single with children	20%	35%	27%	62%	89%	27%	11%	11%	14%	64%	33%
Spouse/partner	18%	32%	25%	66%	81%	27%	19%	16%	17%	54%	45%
Spouse/partner with children	17%	33%	36%	74%	78%	19%	22%	24%	10%	66%	35%
Living with roommate	40%	39%	59%	57%	87%	16%	14%	14%	14%	54%	26%
Gender											
Male	26%	34%	39%	65%	83%	27%	15%	16%	11%	57%	36%
Female	23%	34%	41%	65%	85%	18%	15%	14%	13%	57%	32%
Annual Household Income											
Less than $25,000	34%	42%	53%	41%	89%	27%	6%	11%	10%	66%	32%
$26,000–$40,000	29%	38%	45%	65%	86%	14%	14%	15%	8%	65%	30%
$41,000–$50,000	27%	29%	34%	66%	86%	21%	19%	14%	7%	64%	31%
$51,000–$74,000	25%	31%	44%	63%	84%	21%	15%	17%	11%	57%	31%
$75,000–$100,000	24%	36%	38%	70%	83%	22%	18%	9%	13%	54%	34%
$101,000–$150,000	21%	30%	33%	68%	76%	20%	15%	21%	22%	45%	44%
More than $150,000	14%	33%	25%	76%	79%	37%	18%	11%	17%	33%	47%
Primary Method of Transportation											
Bicycle	24%	35%	40%	66%	84%	23%	14%	16%	7%	59%	33%
Car	26%	33%	40%	61%	82%	12%	18%	11%	42%	40%	36%
Other	43%	43%	50%	43%	71%	33%	8%	8%	29%	46%	29%
Public transit	22%	29%	33%	71%	89%	24%	18%	9%	23%	38%	41%
Walking	13%	43%	50%	50%	100%	17%	0%	50%	25%	80%	0%
Car Ownership											
No	24%	35%	39%	66%	84%	23%	15%	16%	9%	58%	34%
Use a shared-car service	27%	25%	45%	70%	79%	22%	11%	7%	30%	32%	24%
Yes	31%	33%	48%	55%	86%	17%	15%	11%	33%	54%	33%
Pet Ownership											
No pets	26%	35%	41%	66%	83%	22%	15%	16%	13%	57%	33%
Dog(s)	23%	33%	39%	65%	85%	23%	14%	13%	11%	58%	35%
Cat(s)	19%	34%	38%	61%	84%	24%	12%	10%	13%	52%	31%
Other	32%	40%	38%	43%	97%	18%	8%	12%	8%	53%	34%
Primary Occupation											
Accounting	22%	19%	35%	58%	89%	5%	14%	20%	15%	54%	48%
Banking/finance	29%	36%	50%	61%	78%	21%	20%	20%	16%	59%	39%
Construction/engineering/architecture	26%	30%	46%	71%	85%	19%	13%	13%	7%	55%	47%
Consulting	18%	42%	50%	86%	73%	13%	27%	20%	17%	48%	17%
Defense	37%	37%	38%	63%	63%	53%	0%	40%	33%	56%	55%
Education/training	25%	35%	39%	62%	87%	24%	10%	20%	9%	58%	25%
Energy	24%	45%	20%	67%	60%	33%	17%	33%	29%	78%	29%
Entertainment/media	26%	30%	37%	69%	95%	16%	21%	14%	22%	44%	29%
Food/beverage/hospitality	28%	35%	44%	66%	84%	20%	21%	13%	8%	65%	23%
Government	26%	35%	37%	67%	83%	13%	13%	15%	14%	58%	39%
Insurance	27%	24%	38%	65%	84%	20%	25%	27%	0%	61%	56%
Legal	13%	35%	30%	80%	83%	21%	4%	9%	9%	48%	28%
Medical/biotech	21%	35%	43%	65%	90%	17%	8%	12%	6%	57%	32%
Nonprofit or religious	24%	38%	38%	83%	77%	17%	14%	5%	21%	54%	24%
Real estate	21%	15%	26%	77%	76%	25%	33%	17%	6%	58%	42%
Retail	26%	37%	44%	52%	88%	23%	13%	13%	18%	67%	27%
Student	33%	31%	65%	60%	72%	30%	20%	11%	13%	46%	36%
Technology	22%	30%	33%	61%	84%	27%	14%	11%	16%	56%	44%
Telecommunications	23%	36%	29%	47%	95%	35%	31%	0%	15%	68%	43%
Transportation	33%	39%	39%	54%	87%	33%	33%	21%	6%	55%	5%
Other	25%	38%	36%	63%	84%	23%	9%	15%	13%	59%	30%

Reasons Not Interested in Micro Unit Percentage of responses	Reasons Not Interested in Micro Unit						
	Compact bathroom	Compact kitchen	Expecting need for more space	Lack of separate bedroom	Less living/dining space	Less space to host guests	Less storage space
Conventional renters	37%	43%	19%	75%	60%	56%	63%
Age Range							
Under 25	31%	41%	14%	76%	53%	60%	57%
25–34	39%	44%	20%	76%	63%	53%	63%
35–44	35%	38%	16%	74%	57%	50%	59%
45–54	37%	44%	22%	73%	62%	60%	62%
55–64	39%	41%	14%	81%	61%	55%	71%
65+	42%	45%	16%	79%	60%	45%	65%
Apartment Floor Plan							
Studio/efficiency	30%	32%	18%	51%	61%	54%	56%
1 bedroom	37%	42%	16%	77%	58%	55%	63%
2 bedroom	37%	43%	20%	75%	62%	56%	62%
3 bedroom	44%	45%	22%	76%	65%	63%	62%
Other	38%	46%	33%	75%	50%	46%	58%
Living Arrangement							
Single living alone	38%	41%	13%	76%	60%	56%	64%
Single with children	38%	43%	26%	77%	61%	49%	52%
Spouse/partner	39%	49%	22%	74%	60%	57%	66%
Spouse/partner with children	33%	38%	26%	74%	64%	55%	57%
Living with roommate	32%	35%	19%	74%	55%	57%	68%
Gender							
Male	37%	42%	18%	75%	63%	58%	60%
Female	37%	43%	19%	76%	58%	54%	64%
Annual Household Income							
Less than $25,000	39%	40%	20%	80%	55%	51%	58%
$26,000–$40,000	36%	40%	22%	73%	60%	50%	58%
$41,000–$50,000	32%	40%	20%	77%	60%	54%	59%
$51,000–$74,000	39%	46%	18%	75%	61%	54%	60%
$75,000–$100,000	34%	41%	20%	71%	59%	57%	63%
$101,000–$150,000	41%	43%	19%	78%	63%	64%	70%
More than $150,000	39%	43%	19%	74%	59%	54%	62%
Primary Method of Transportation							
Bicycle	38%	43%	19%	76%	62%	56%	63%
Car	37%	38%	15%	69%	53%	53%	61%
Other	22%	22%	22%	67%	22%	78%	56%
Public transit	34%	39%	15%	73%	56%	48%	63%
Walking	50%	50%	19%	63%	50%	50%	50%
Car Ownership							
No	38%	43%	19%	76%	61%	56%	62%
Use a shared-car service	34%	44%	20%	73%	56%	59%	63%
Yes	37%	35%	17%	72%	58%	54%	61%
Pet Ownership							
No pets	37%	42%	19%	74%	62%	56%	61%
Dog(s)	39%	44%	21%	76%	58%	57%	63%
Cat(s)	36%	45%	18%	80%	59%	51%	70%
Other	43%	51%	29%	86%	57%	71%	74%
Primary Occupation							
Accounting	35%	41%	17%	83%	65%	61%	61%
Banking/finance	40%	46%	21%	73%	62%	57%	61%
Construction/engineering/architecture	38%	43%	15%	73%	59%	58%	65%
Consulting	37%	42%	16%	75%	66%	63%	60%
Defense	52%	52%	17%	83%	74%	70%	52%
Education/training	36%	39%	9%	78%	56%	46%	65%
Energy	43%	48%	14%	76%	67%	62%	57%
Entertainment/media	41%	40%	19%	70%	57%	54%	63%
Food/beverage/hospitality	32%	41%	17%	68%	68%	59%	67%
Government	37%	44%	24%	72%	63%	61%	66%
Insurance	40%	40%	19%	83%	60%	52%	60%
Legal	42%	48%	16%	75%	65%	53%	59%
Medical/biotech	33%	41%	19%	74%	57%	51%	61%
Nonprofit or religious	29%	35%	32%	71%	47%	50%	44%
Real estate	31%	35%	19%	67%	54%	48%	54%
Retail	45%	49%	18%	75%	72%	55%	65%
Student	48%	49%	22%	86%	60%	65%	75%
Technology	31%	38%	16%	76%	58%	59%	63%
Telecommunications	34%	38%	16%	81%	56%	44%	34%
Transportation	40%	47%	30%	87%	63%	60%	63%
Other	40%	45%	23%	76%	58%	54%	67%

Hesitancy Regarding Micro Unit	Hesitancy Regarding Micro Unit					
Percentage hesitant/very hesitant	Compact bathroom	Compact kitchen	Lack of separate bedroom	Less living/dining space	Less space to host guests	Less storage space
Conventional renters	20%	25%	44%	20%	30%	50%
Age Range						
Under 25	21%	33%	45%	18%	36%	47%
25–34	21%	29%	47%	22%	33%	49%
35–44	20%	21%	44%	20%	26%	53%
45–54	15%	17%	41%	15%	22%	48%
55–64	16%	18%	39%	24%	27%	48%
65+	21%	23%	41%	25%	37%	66%
Apartment Floor Plan						
Studio/efficiency	17%	27%	23%	17%	25%	46%
1 bedroom	19%	26%	46%	21%	30%	52%
2 bedroom	21%	24%	45%	20%	33%	49%
3 bedroom	18%	22%	51%	19%	19%	42%
Other	15%	0%	43%	8%	23%	62%
Living Arrangement						
Single living alone	19%	25%	47%	22%	30%	53%
Single with children	21%	17%	46%	21%	31%	46%
Spouse/partner	21%	29%	37%	17%	29%	51%
Spouse/partner with children	20%	24%	45%	22%	22%	39%
Living with roommate	18%	24%	41%	17%	33%	48%
Gender						
Male	14%	19%	42%	18%	29%	43%
Female	24%	29%	45%	22%	31%	55%
Annual Household Income						
Less than $25,000	19%	23%	40%	23%	27%	44%
$26,000–$40,000	22%	26%	48%	20%	33%	48%
$41,000–$50,000	22%	25%	49%	24%	33%	60%
$51,000–$74,000	20%	29%	45%	18%	31%	48%
$75,000–$100,000	13%	23%	41%	18%	30%	51%
$101,000–$150,000	18%	23%	36%	20%	28%	53%
More than $150,000	21%	18%	42%	21%	26%	42%
Primary Method of Transportation						
Bicycle	20%	24%	44%	20%	29%	50%
Car	18%	29%	41%	23%	38%	51%
Other	7%	36%	36%	8%	36%	29%
Public transit	20%	22%	42%	22%	25%	49%
Walking	29%	33%	43%	50%	33%	86%
Car Ownership						
No	20%	25%	44%	20%	30%	51%
Use a shared-car service	14%	20%	37%	29%	31%	57%
Yes	20%	23%	43%	20%	31%	42%
Pet Ownership						
No pets	20%	25%	42%	20%	30%	48%
Dog(s)	18%	24%	44%	18%	30%	52%
Cat(s)	19%	25%	48%	22%	31%	59%
Other	10%	27%	40%	13%	23%	53%
Primary Occupation						
Accounting	14%	24%	37%	17%	27%	45%
Banking/finance	24%	20%	37%	24%	25%	46%
Construction/engineering/architecture	17%	20%	53%	19%	33%	54%
Consulting	26%	31%	38%	21%	31%	44%
Defense	6%	18%	47%	6%	24%	44%
Education/training	23%	36%	41%	26%	43%	58%
Energy	8%	42%	50%	17%	50%	42%
Entertainment/media	13%	30%	33%	22%	36%	59%
Food/beverage/hospitality	23%	26%	49%	21%	27%	49%
Government	12%	23%	45%	24%	27%	49%
Insurance	29%	24%	38%	15%	29%	60%
Legal	15%	22%	48%	26%	33%	48%
Medical/biotech	25%	28%	54%	24%	30%	54%
Nonprofit or religious	23%	19%	44%	13%	58%	58%
Real estate	15%	25%	38%	10%	22%	44%
Retail	20%	21%	32%	15%	23%	41%
Student	25%	21%	42%	16%	39%	48%
Technology	18%	29%	41%	19%	27%	45%
Telecommunications	15%	21%	57%	19%	19%	57%
Transportation	12%	20%	54%	24%	28%	44%
Other	19%	18%	41%	19%	21%	49%

Importance of Factors in Micro-Unit Rental Decision	Neighborhood Amenities							
Percentage important/very important	Cafés	Entertainment	Grocery store	Gym	Public transit	Recreation	Restaurant/bars	Retail centers
Conventional renters	49%	53%	88%	56%	41%	46%	68%	52%
Age Range								
Under 25	46%	57%	92%	70%	40%	38%	73%	44%
25–34	52%	60%	88%	64%	42%	49%	72%	49%
35–44	49%	56%	88%	53%	42%	51%	69%	58%
45–54	45%	45%	88%	53%	37%	46%	61%	52%
55–64	49%	35%	85%	41%	38%	38%	61%	52%
65+	53%	42%	84%	29%	46%	40%	61%	71%
Apartment Floor Plan								
Studio/efficiency	65%	52%	90%	64%	66%	48%	73%	40%
1 bedroom	49%	54%	87%	55%	38%	44%	69%	53%
2 bedroom	46%	49%	87%	55%	38%	46%	65%	52%
3 bedroom	45%	60%	95%	60%	42%	46%	69%	58%
Other	58%	75%	67%	58%	25%	67%	75%	82%
Living Arrangement								
Single living alone	51%	52%	87%	55%	36%	44%	67%	54%
Single with children	37%	39%	86%	46%	39%	42%	55%	53%
Spouse/partner	57%	57%	90%	57%	49%	47%	74%	54%
Spouse/partner with children	33%	52%	85%	55%	42%	56%	58%	54%
Living with roommate	48%	58%	92%	66%	46%	47%	75%	46%
Gender								
Male	48%	54%	85%	56%	38%	47%	68%	47%
Female	49%	51%	90%	56%	42%	45%	67%	56%
Annual Household Income								
Less than $25,000	39%	52%	88%	54%	39%	40%	59%	41%
$26,000–$40,000	39%	50%	87%	47%	38%	39%	62%	48%
$41,000–$50,000	48%	50%	87%	53%	32%	45%	66%	54%
$51,000–$74,000	48%	50%	89%	60%	35%	44%	67%	55%
$75,000–$100,000	58%	64%	90%	65%	46%	53%	76%	60%
$101,000–$150,000	60%	56%	87%	55%	50%	52%	76%	52%
More than $150,000	67%	52%	83%	70%	54%	54%	77%	45%
Primary Method of Transportation								
Bicycle	48%	54%	87%	56%	33%	47%	67%	53%
Car	60%	53%	96%	68%	99%	44%	73%	45%
Other	43%	36%	100%	43%	64%	50%	79%	36%
Public transit	64%	42%	88%	57%	75%	39%	68%	41%
Walking	29%	29%	71%	14%	43%	29%	43%	71%
Car Ownership								
No	49%	53%	88%	56%	34%	46%	68%	52%
Use a shared-car service	72%	53%	97%	63%	94%	48%	84%	50%
Yes	49%	48%	88%	60%	74%	41%	67%	52%
Pet Ownership								
No pets	47%	52%	87%	59%	41%	45%	67%	51%
Dog(s)	51%	55%	90%	51%	38%	50%	69%	51%
Cat(s)	59%	59%	96%	49%	41%	42%	72%	63%
Other	37%	43%	80%	55%	47%	59%	70%	53%
Primary Occupation								
Accounting	44%	50%	82%	41%	36%	39%	75%	44%
Banking/finance	49%	52%	91%	61%	52%	49%	76%	52%
Construction/engineering/architecture	43%	51%	84%	55%	34%	50%	70%	45%
Consulting	63%	51%	88%	77%	65%	65%	71%	34%
Defense	56%	56%	69%	41%	41%	29%	78%	61%
Education/training	45%	47%	87%	55%	35%	47%	58%	53%
Energy	55%	55%	91%	64%	45%	82%	73%	27%
Entertainment/media	55%	67%	91%	63%	52%	58%	79%	61%
Food/beverage/hospitality	41%	49%	89%	50%	27%	35%	61%	49%
Government	48%	53%	92%	61%	47%	46%	70%	56%
Insurance	42%	53%	84%	53%	16%	53%	84%	58%
Legal	65%	50%	87%	48%	39%	48%	82%	52%
Medical/biotech	52%	56%	87%	61%	40%	47%	65%	61%
Nonprofit or religious	59%	55%	86%	43%	52%	48%	79%	59%
Real estate	72%	71%	97%	69%	41%	63%	84%	78%
Retail	46%	49%	79%	45%	46%	33%	60%	51%
Student	45%	49%	85%	67%	48%	42%	65%	39%
Technology	55%	52%	90%	59%	42%	42%	65%	42%
Telecommunications	45%	40%	90%	45%	45%	47%	60%	55%
Transportation	25%	48%	92%	50%	25%	40%	67%	54%
Other	48%	54%	89%	52%	35%	44%	65%	55%

Importance of Factors in Micro-Unit Rental Decision Percentage important/very important	On-site Amenities														
	Assigned parking	Visitor parking	Bike rack	Business center	Car rental	Central lounge	Cinema room	Communal kitchen	Fitness center	Grill	Laundry room	Living room area on each floor	Pet services	Pool	Roof/ outdoor space
Conventional renters	72%	72%	23%	30%	14%	26%	20%	19%	70%	43%	83%	43%	29%	56%	62%
Age Range															
Under 25	55%	69%	17%	27%	10%	19%	20%	14%	74%	33%	85%	35%	28%	55%	64%
25–34	67%	72%	26%	28%	13%	29%	23%	22%	81%	50%	83%	44%	31%	57%	68%
35–44	75%	70%	23%	33%	18%	26%	19%	19%	68%	44%	80%	42%	28%	56%	63%
45–54	77%	73%	29%	27%	11%	22%	15%	13%	63%	39%	83%	43%	24%	59%	55%
55–64	85%	76%	19%	42%	18%	26%	24%	19%	57%	42%	88%	47%	31%	50%	56%
65+	83%	72%	11%	28%	9%	34%	21%	30%	33%	28%	81%	46%	25%	47%	59%
Apartment Floor Plan															
Studio/efficiency	56%	53%	31%	25%	19%	33%	17%	16%	82%	45%	91%	33%	29%	49%	68%
1 bedroom	73%	73%	22%	28%	13%	25%	18%	17%	69%	40%	83%	41%	28%	53%	62%
2 bedroom	71%	74%	23%	32%	13%	26%	22%	21%	67%	45%	81%	45%	27%	59%	61%
3 bedroom	82%	79%	22%	34%	12%	25%	31%	22%	67%	48%	85%	52%	42%	68%	65%
Other	92%	92%	17%	55%	25%	58%	58%	33%	91%	58%	91%	64%	50%	75%	67%
Living Arrangement															
Single living alone	72%	73%	21%	28%	13%	24%	18%	18%	69%	38%	82%	40%	25%	51%	61%
Single with children	82%	82%	20%	35%	12%	24%	19%	21%	57%	40%	80%	53%	24%	66%	57%
Spouse/partner	71%	66%	29%	33%	16%	28%	20%	21%	73%	48%	87%	47%	38%	55%	67%
Spouse/partner with children	72%	68%	29%	38%	21%	29%	28%	25%	73%	56%	81%	54%	29%	65%	52%
Living with roommate	63%	73%	24%	30%	13%	30%	24%	17%	74%	47%	86%	38%	33%	62%	68%
Gender															
Male	71%	69%	25%	27%	14%	23%	19%	19%	70%	43%	81%	39%	21%	53%	60%
Female	72%	74%	22%	33%	13%	28%	22%	20%	69%	43%	84%	45%	34%	58%	63%
Annual Household Income															
Less than $25,000	66%	72%	19%	30%	11%	18%	18%	12%	67%	32%	83%	39%	34%	60%	62%
$26,000–$40,000	70%	76%	17%	35%	12%	23%	22%	17%	61%	39%	78%	42%	28%	58%	58%
$41,000–$50,000	68%	77%	22%	29%	11%	24%	23%	18%	72%	46%	80%	49%	34%	62%	62%
$51,000–$74,000	75%	74%	21%	27%	14%	25%	20%	21%	70%	41%	83%	42%	26%	54%	58%
$75,000–$100,000	76%	73%	22%	32%	12%	29%	19%	20%	74%	47%	88%	45%	25%	56%	62%
$101,000–$150,000	68%	67%	31%	24%	21%	31%	18%	26%	72%	51%	89%	36%	32%	49%	70%
More than $150,000	70%	54%	38%	34%	18%	37%	26%	20%	78%	50%	88%	43%	23%	49%	70%
Primary Method of Transportation															
Bicycle	77%	76%	21%	30%	11%	23%	20%	19%	69%	43%	82%	44%	29%	58%	60%
Car	30%	39%	34%	32%	31%	47%	24%	26%	80%	41%	93%	40%	27%	39%	72%
Other	31%	64%	86%	29%	43%	14%	7%	21%	71%	50%	71%	23%	43%	54%	86%
Public transit	36%	45%	27%	41%	32%	39%	18%	12%	70%	33%	86%	33%	23%	47%	74%
Walking	71%	83%	14%	0%	14%	14%	14%	14%	17%	29%	67%	33%	14%	14%	29%
Car Ownership															
No	77%	77%	22%	29%	10%	24%	20%	19%	70%	44%	83%	43%	30%	58%	62%
Use a shared-car service	15%	30%	59%	50%	81%	58%	19%	29%	88%	59%	94%	42%	28%	55%	79%
Yes	39%	41%	30%	37%	22%	35%	24%	19%	67%	37%	83%	40%	25%	42%	66%
Pet Ownership															
No pets	70%	71%	24%	32%	15%	28%	20%	19%	70%	41%	82%	41%	14%	53%	58%
Dog(s)	77%	76%	23%	26%	10%	22%	24%	17%	71%	49%	86%	47%	72%	67%	72%
Cat(s)	72%	72%	27%	29%	12%	23%	23%	23%	64%	47%	87%	49%	38%	58%	69%
Other	61%	62%	24%	18%	7%	21%	24%	32%	57%	38%	79%	48%	57%	54%	55%
Primary Occupation															
Accounting	82%	81%	18%	37%	4%	18%	4%	11%	68%	36%	79%	43%	18%	74%	61%
Banking/finance	65%	60%	21%	32%	9%	30%	27%	18%	62%	45%	87%	39%	24%	61%	64%
Construction/engineering/architecture	72%	71%	19%	24%	7%	15%	19%	20%	73%	43%	84%	40%	26%	51%	64%
Consulting	71%	67%	30%	35%	15%	50%	21%	29%	91%	50%	94%	56%	32%	64%	68%
Defense	94%	89%	25%	24%	18%	17%	22%	24%	53%	39%	76%	31%	41%	44%	47%
Education/training	65%	78%	19%	31%	11%	25%	11%	11%	73%	42%	81%	41%	28%	47%	62%
Energy	64%	55%	55%	45%	36%	40%	27%	30%	64%	45%	73%	45%	18%	64%	91%
Entertainment/media	70%	73%	12%	31%	9%	19%	27%	18%	76%	40%	94%	45%	18%	64%	82%
Food/beverage/hospitality	72%	78%	17%	24%	13%	20%	16%	13%	65%	42%	81%	42%	26%	65%	58%
Government	72%	76%	21%	33%	15%	31%	26%	26%	69%	37%	85%	52%	28%	49%	62%
Insurance	84%	74%	33%	21%	16%	26%	0%	16%	79%	53%	79%	47%	26%	72%	61%
Legal	65%	74%	17%	4%	9%	26%	13%	22%	68%	50%	78%	24%	35%	48%	61%
Medical/biotech	75%	73%	27%	34%	15%	28%	22%	18%	69%	50%	80%	43%	31%	64%	67%
Nonprofit or religious	57%	72%	31%	32%	20%	34%	21%	25%	62%	43%	93%	48%	38%	72%	69%
Real estate	74%	71%	29%	58%	16%	45%	26%	42%	90%	65%	90%	52%	26%	65%	77%
Retail	59%	66%	13%	22%	17%	17%	21%	12%	71%	29%	89%	40%	35%	49%	55%
Student	61%	64%	28%	37%	17%	28%	28%	19%	79%	38%	76%	37%	29%	51%	62%
Technology	77%	72%	25%	22%	15%	24%	16%	20%	73%	39%	82%	41%	26%	48%	53%
Telecommunications	90%	75%	35%	30%	15%	25%	25%	25%	85%	58%	90%	50%	25%	63%	70%
Transportation	76%	68%	18%	24%	12%	28%	13%	8%	58%	42%	76%	36%	22%	58%	62%
Other	75%	73%	25%	35%	14%	24%	27%	21%	59%	44%	82%	43%	33%	53%	56%

Importance of Factors in Micro-Unit Rental Decision Percentage important/very important	Unit Features												
	Bathtub	Built-in closet/drawers	Dishwasher	Flat-screen TV	Four-burner stove	Full-size kitchen sink	Full-size refrigerator	High ceilings (nine feet+)	Juliet balcony	Oversized windows	Space partitions	Storage space	Washer and dryer
Conventional renters	61%	82%	71%	42%	75%	75%	77%	49%	41%	49%	53%	81%	86%
Age Range													
Under 25	56%	80%	65%	32%	73%	75%	81%	42%	25%	45%	47%	77%	82%
25–34	58%	83%	75%	38%	79%	76%	76%	51%	41%	48%	55%	76%	84%
35–44	63%	83%	71%	42%	78%	77%	81%	51%	41%	51%	51%	82%	87%
45–54	63%	83%	63%	44%	65%	67%	72%	47%	48%	45%	54%	83%	88%
55–64	61%	82%	74%	56%	69%	82%	82%	48%	46%	55%	53%	87%	92%
65+	73%	80%	67%	50%	83%	76%	74%	47%	47%	52%	49%	95%	86%
Apartment Floor Plan													
Studio/efficiency	52%	89%	72%	39%	74%	73%	68%	59%	43%	62%	52%	80%	76%
1 bedroom	60%	84%	70%	42%	75%	75%	78%	47%	40%	46%	51%	81%	87%
2 bedroom	62%	79%	69%	41%	73%	74%	78%	49%	41%	49%	54%	80%	87%
3 bedroom	64%	82%	79%	38%	82%	78%	81%	53%	41%	50%	56%	84%	85%
Other	67%	92%	80%	67%	83%	75%	75%	33%	50%	42%	58%	83%	82%
Living Arrangement													
Single living alone	60%	83%	70%	43%	73%	75%	77%	49%	42%	48%	52%	80%	88%
Single with children	72%	78%	74%	39%	76%	76%	83%	45%	44%	43%	56%	79%	87%
Spouse/partner	62%	85%	72%	40%	76%	79%	79%	50%	42%	53%	58%	86%	85%
Spouse/partner with children	66%	80%	70%	55%	78%	73%	79%	49%	36%	47%	47%	73%	85%
Living with roommate	56%	79%	68%	35%	76%	73%	75%	50%	38%	49%	51%	80%	82%
Gender													
Male	55%	80%	68%	44%	70%	71%	75%	50%	38%	45%	46%	75%	81%
Female	64%	84%	71%	39%	78%	78%	79%	48%	44%	51%	58%	84%	89%
Annual Household Income													
Less than $25,000	74%	80%	67%	38%	74%	80%	81%	46%	39%	40%	46%	76%	86%
$26,000–$40,000	73%	81%	67%	39%	80%	79%	83%	49%	42%	47%	52%	82%	87%
$41,000–$50,000	62%	81%	70%	41%	80%	78%	77%	48%	39%	49%	54%	85%	90%
$51,000–$74,000	57%	82%	71%	41%	71%	69%	75%	46%	39%	44%	49%	77%	84%
$75,000–$100,000	65%	84%	70%	44%	80%	77%	80%	50%	49%	52%	59%	86%	86%
$101,000–$150,000	51%	84%	74%	44%	72%	73%	70%	49%	34%	52%	57%	76%	82%
More than $150,000	35%	87%	78%	51%	54%	75%	72%	61%	38%	63%	48%	77%	87%
Primary Method of Transportation													
Bicycle	62%	82%	70%	42%	74%	75%	78%	48%	41%	47%	53%	81%	87%
Car	48%	88%	78%	41%	80%	75%	79%	50%	35%	59%	57%	82%	83%
Other	46%	71%	57%	50%	86%	86%	71%	36%	50%	57%	21%	57%	64%
Public transit	48%	73%	59%	27%	58%	66%	59%	55%	34%	48%	52%	75%	82%
Walking	71%	71%	43%	29%	100%	71%	86%	57%	71%	57%	43%	86%	86%
Car Ownership													
No	62%	82%	70%	42%	75%	76%	78%	49%	41%	48%	53%	81%	87%
Use a shared-car service	39%	94%	70%	25%	81%	82%	67%	58%	45%	81%	67%	91%	79%
Yes	55%	82%	72%	45%	71%	71%	78%	47%	35%	44%	49%	74%	82%
Pet Ownership													
No pets	62%	82%	70%	43%	76%	77%	79%	51%	41%	47%	52%	80%	85%
Dog(s)	58%	83%	74%	42%	72%	72%	75%	48%	42%	52%	52%	80%	89%
Cat(s)	54%	83%	71%	37%	77%	75%	76%	42%	41%	55%	58%	88%	87%
Other	63%	76%	70%	33%	57%	60%	63%	37%	34%	30%	37%	87%	90%
Primary Occupation													
Accounting	70%	82%	71%	43%	71%	71%	81%	52%	39%	43%	39%	82%	86%
Banking/finance	48%	80%	71%	47%	73%	65%	65%	45%	30%	44%	47%	74%	75%
Construction/engineering/architecture	52%	75%	65%	39%	68%	74%	75%	49%	40%	56%	51%	75%	82%
Consulting	62%	86%	80%	46%	88%	83%	86%	57%	49%	55%	53%	69%	83%
Defense	61%	72%	72%	50%	56%	50%	83%	33%	41%	47%	56%	83%	83%
Education/training	60%	80%	64%	34%	81%	76%	80%	45%	39%	44%	55%	80%	86%
Energy	55%	82%	82%	64%	82%	82%	82%	45%	55%	55%	82%	82%	90%
Entertainment/media	64%	91%	82%	42%	88%	79%	76%	50%	47%	67%	61%	94%	97%
Food/beverage/hospitality	73%	83%	73%	45%	83%	80%	86%	46%	40%	45%	54%	79%	90%
Government	62%	86%	74%	43%	72%	72%	76%	52%	49%	49%	62%	86%	86%
Insurance	37%	84%	53%	32%	63%	63%	78%	58%	37%	42%	37%	74%	89%
Legal	65%	83%	74%	35%	81%	78%	78%	52%	45%	50%	61%	96%	91%
Medical/biotech	59%	83%	77%	38%	76%	79%	81%	49%	39%	47%	47%	80%	91%
Nonprofit or religious	62%	97%	73%	55%	66%	70%	60%	41%	41%	57%	50%	90%	93%
Real estate	62%	90%	77%	45%	81%	68%	73%	71%	45%	61%	55%	84%	87%
Retail	75%	88%	60%	30%	77%	80%	79%	56%	35%	32%	54%	80%	81%
Student	67%	81%	65%	44%	72%	74%	78%	43%	38%	50%	46%	69%	85%
Technology	49%	81%	73%	35%	69%	75%	74%	50%	43%	54%	51%	76%	83%
Telecommunications	70%	85%	65%	55%	85%	95%	90%	60%	50%	45%	60%	80%	95%
Transportation	61%	79%	58%	52%	75%	67%	71%	42%	29%	48%	46%	75%	75%
Other	66%	80%	68%	47%	74%	78%	79%	46%	45%	48%	56%	87%	86%

Satisfaction with Micro Unit Mean score	Micro-unit renters	Kingsley Index
Overall satisfaction	3.88	3.97
Renewal intentions	3.05	3.53
Community recommendation	3.90	4.04
Value for amount paid	2.91	3.53
Community management	3.99	4.06
Community amenities	3.96	3.86
Floor plan/design and layout	3.70	4.12
Apartment features and finishes	3.96	3.72
Location	4.49	4.38
Sense of community	3.06	3.80

Renewal Intentions Distribution of responses	Micro-unit renters	Kingsley Index
Definitely would not	13%	9%
Probably would not	22%	11%
Unsure	23%	23%
Probably would	29%	33%
Definitely would	12%	24%

Renewal Decision Factors Percentage responded	Micro-Unit Renters		
	Unlikely to renew	Unsure	Likely to renew
Access to transportation	3%	4%	41%
Apartment features/finishes	20%	17%	59%
Brand reputation	3%	0%	10%
Building upkeep	14%	0%	32%
Community appearance	0%	0%	34%
Community features	6%	9%	37%
Community management	20%	4%	29%
Community's green practices	6%	0%	10%
Home purchase	3%	9%	2%
Length of lease	11%	13%	15%
Location	17%	13%	95%
Overall sense of community	9%	4%	17%
Parking	20%	13%	22%
Pet policy	9%	4%	10%
Quality of community	17%	9%	37%
Relocation/transfer	11%	35%	7%
Rental rate	77%	70%	46%
Security	6%	0%	41%
Space requirements	31%	35%	5%

Importance in Initial Lease Decision Percentage high priority/very high priority	Micro-unit renters
Ability to live alone	71%
Assigned parking	32%
Common areas/amenities	32%
Floor plan/layout	42%
Internet/wi-fi services	54%
In-unit storage	25%
Location	97%
Neighbors with similar lifestyles	20%
Pets allowed	26%
Price	86%
Proximity to neighborhood amenities	73%
Proximity to public transit	62%
Proximity to work/school	78%
Quality of finishes	52%
Sense of community	27%
Sustainability practices	29%
Visitor parking	21%