

Top 10 Features for Upscale Homes

Special Studies, July 1, 2013

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Economics and Housing Policy

This study reports on the top features for an upscale new home, culled from a long list of items covered in NAHB's recent survey on [What Home Buyers Really Want](#).

Because a home is a complex commodity, with many features that can make it more or less desirable to particular customers, the NAHB survey included a long question that asked recent and prospective buyers to rate a list of many (approximately 120) different features on a consistent scale. The features spanned many aspects of the home, including windows, doors, kitchens, baths, specialty rooms, decorative features, accessibility, energy savings, and type of development in which it's located (see Appendix 1 for complete list). The survey asked buyers to rate each feature on the list as "essential/must have," "desirable," "indifferent," or "do not want."

Basic results were summarized two months ago in the [May Special Study](#). This study reports on a statistical analysis of home features (described in Appendix II) that differentiated the preferences of upscale buyers from others. The analysis identified a group of features that cut across the gamut of kitchen, outdoor, specialty and community amenities and tended to be luxury items—not features strongly demanded by all home buyers, but luxury features usually appropriate in upscale homes, and usually inappropriate at the more affordable end of the price spectrum.

That the features grouped together this way tend to be luxury or upscale items is clear from the nature of the items, as well as the different ratings buyers assign to them depending on the price they pay for their homes. For items at the top of the upscale list, a considerably greater share of buyers expecting to pay at least \$500,000 want the feature, and a considerably greater share of buyers expecting to pay under \$150,000 expressly do not want it.

The top 10 upscale features identified by this method are shown below. Next to each item, a graph shows the share of buyers who both do and do not want the feature at the extremes of the price distribution. Following the precedent of the Late Show with David Letterman, the top 10 list is presented in reverse order:

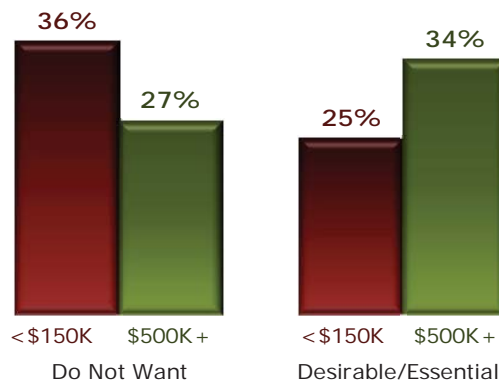
#10. A Game Room

Some homes have a game room intended for specific recreational activities like playing pool or table top games.

Only 27 percent of all buyers in

What Home Buyers Really Want

rated a game room as rated essential or desirable.

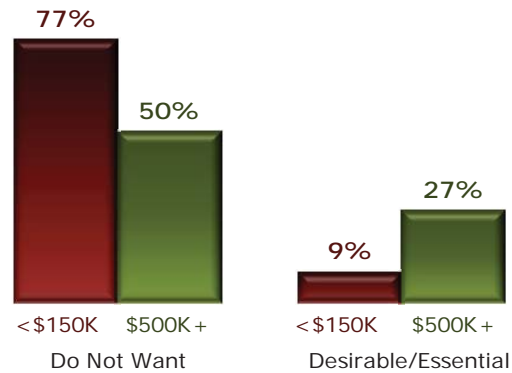


However, the “desirable/essential” share for a number of the specialty rooms in the survey rises with the price of the home, and the game room is one of these. Over one-third of buyers expecting to pay at least \$500,000 who want a game room, compared to 25 percent for buyers expecting to pay under \$150,000. At the other end of the preference scale, 36 percent of buyers expecting to pay under \$150,000 explicitly say they are unlikely to buy a home if it includes a game room, compared to 27 percent of buyers expecting to pay \$500,000 or more.

Although these differences are significant, a game room is only #10 on the list of upscale features. For items higher on the list, the high-price/low-price spreads are greater than 10 percentage points, usually much greater.

#9. Home in a Golf Course Community

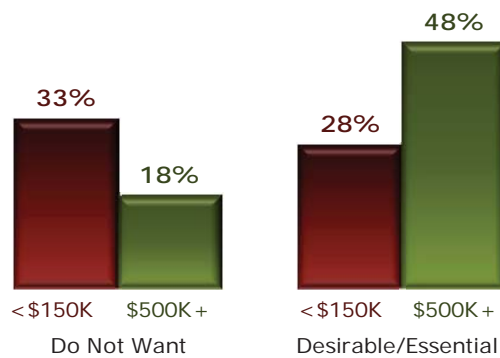
Nearly two-thirds of all buyers say they do not want a home in a golf-course community, making it the second most “unwanted” feature out of the 120 in *What Home Buyers Really Want*. Clearly, there are many successful golf course communities in the U.S., but it is something of a niche market.



It’s also clear that the niche is at the high end of the price spectrum. A sizable 50 percent of home buyers expecting to pay \$500,000-plus who do not want to live on a golf course is fairly high at 50 percent, but the share is 77 percent for buyers of homes priced under \$150,00. A golf course community qualifies as an upscale amenity not because it is always appropriate for the more expensive homes, but because it is seldom appropriate for homes at the more affordable end of the market.

#8. An Exercise Room

Much as some owners will set aside an area of the home for games, some want an area dedicated to exercise—often with a treadmill, weights, or other specific type of equipment. This is



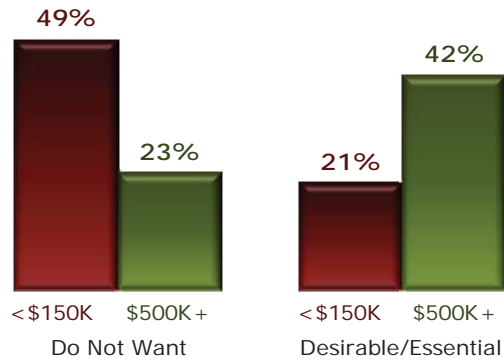
another of the specialty rooms in the “What Home Buyers Really Want” for which consumer preferences change regularly with the price of the home.

At the two extremes, 48 percent of buyers expecting to pay at least \$500,000 want a game room, compared to 28 percent of buyers expecting to pay under \$150,000. And 33 percent of buyers expecting to pay under \$150,000 explicitly say they are unlikely to buy a home if it includes a game room, compared to 18 percent of \$500,000-plus buyers.

#7. A Wet Bar

As the term suggests, a wet bar is a place for mixing and serving beverages that includes a sink. Plumbing and installing plumbing fixtures is a type of job 93

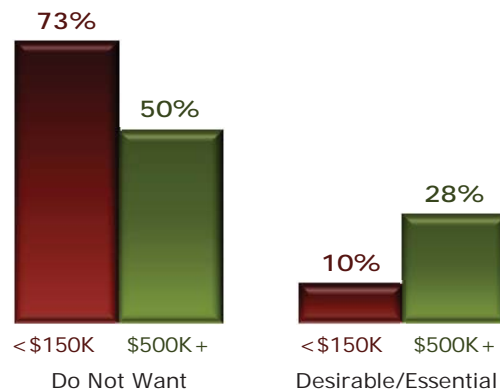
percent of single-family builders always subcontract, according to survey of builders NAHB conducted in July of 2012.



Given the added cost, it's not surprising that this is another upscale item for which demand is concentrated at the high end of the price spectrum. Nearly half of buyers expecting to pay under \$150,000 are unlikely to buy a home if it includes a wet bar, compared to only 21 percent for buyers expecting to pay \$500,000 or more. Forty-two percent of \$500,000-plus buyers do want a wet bar, compared to 28 percent for under-\$150,000 buyers.

#6. An Elevator

Number 9 on the list (a golf course community), was the survey's second most "unwanted" feature overall. Number 6 is the single feature explicitly rejected by home buyers more often than any other—an elevator, something a full 70 percent of all buyers say they do not want.

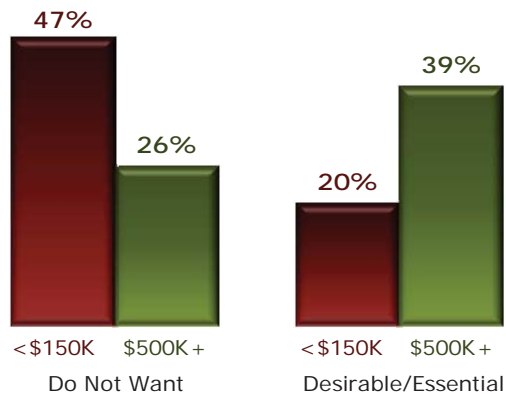


Like a golf course, to the extent that a niche market exists for elevators in single-family homes, it is strongly concentrated at the high end of the market. Only 10 percent of buyers expecting to pay under \$150,000 rate an elevator as at least desirable compared to 28 percent of buyers expecting to pay \$500,000 or more. Even in the \$500,000-plus range, half of buyers are unlikely to buy a home with an elevator, but the share is

over 79 percent for buyers of homes priced under \$150,000. The low desirability may be partly explained by a cost running into five figures, and buy the preference of a majority of buyers for a single-story home.

#5. Two-story Entry Foyer

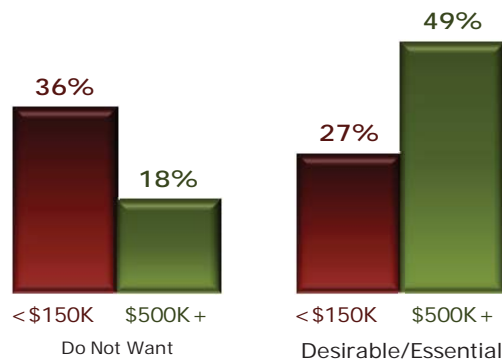
The top half of the list starts with a feature that is also linked to the underlying preference for a home taller than a single story—a two-story entry foyer.



A two-story foyer creates a visually impressive entrance at the cost of space that needs to be conditioned or could be dedicated to a more utilitarian function. (From the builder's perspective, it also introduces some complications in framing, covering and insulating the walls). This may help explain why 47 percent of buyers expecting to pay under \$150,000 explicitly reject a two-story foyer when asked, compared to 26 percent of buyers expecting to pay \$500,000 or more.

#4. An Outdoor Kitchen

Although an outdoor kitchen may be a relatively simple expanded grilling area, it may also be a more elaborate affair with many of the amenities found in an indoor kitchen, including a sink, refrigerator, lighting, cabinetry, and



natural stone countertops. Variants of these products are sometimes designed specifically for use outdoors—by waterproofing them, for example.

It's probably not surprising that what often amounts to a second complete kitchen constructed outdoors qualifies as a luxury item that seems primarily appropriate in upscale homes. Nearly half of buyers expecting to pay at least \$500,000 rate an outdoor kitchen as at least desirable, compared to a little over a

quarter of buyers expecting to pay under \$150,000. And 36 percent of buyers expecting to pay under \$150,000 are unlikely to buy a home if it comes with an outdoor kitchen, compared to only 18 percent of \$500,000-plus buyers.

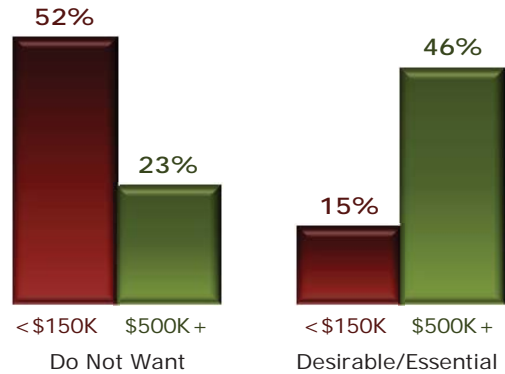
#3. Kitchen With a Wine Cooler

Following the outdoor kitchen, #3 on the list of upscale features is an amenity sometimes included in indoor kitchens—a wine cooler.

A wine cooler can be of almost any size, but when evaluating a cooler as an integral

feature that would be included in the price

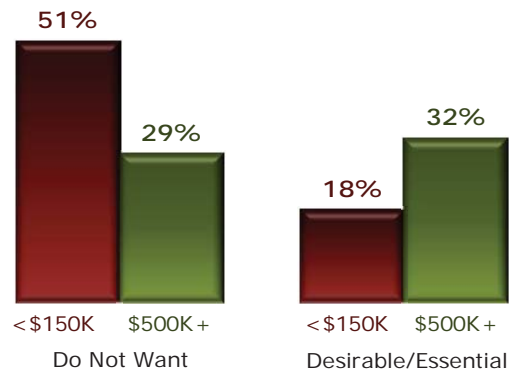
of a home, most consumers probably envision something large enough to crowd out another appliance or essential general storage space in a smaller kitchen.



As a general rule, relatively few home buyers demand a wine cooler in their kitchens. In the survey overall, it was one of only three kitchen features rated desirable or essential by fewer than 30 percent of the respondents. However, 46 percent of buyers expecting to pay at least \$500,000 rate a wine cooler that favorably, compared to only 15 percent of buyers expecting to pay under \$150,000.

#2. Two-story Family Room

Like a two-story entry foyer, a two-story family room consumes space that needs to be heated or could be used for some other purpose. The space consumed is generally greater for a two-story family room, because there is more floor space in the typical family room than the typical entry foyer.

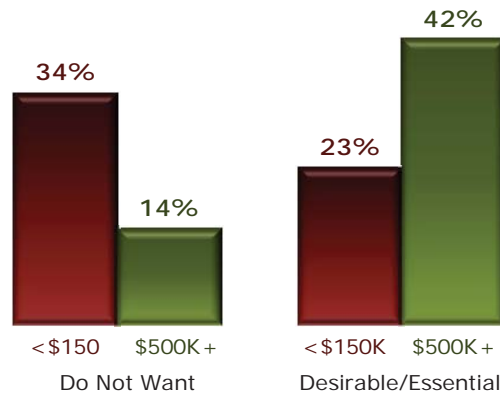


Over half of buyers expecting to pay under \$150,000 say they are unlikely to buy a home with a two-story family room, compared to 29 percent of buyers expecting to pay at least \$500,000. And 32 percent of the

\$500,000-plus buyers rate a two-story family room as at least desirable, compared to only 18 percent of buyers expecting to pay under \$150,000.

#1. Kitchen With a Warming Drawer

Like a wine cooler, a warming drawer is a specialty item that takes up space which would be allocated to more general purposes in a small kitchen. Also like a wine cooler, it is one of the few kitchen features rated essential or desirable by fewer than 30 percent of home buyers overall.



However, a significantly larger share (42 percent) of buyers expecting to pay at least \$500,000 want a warming drawer, compared to only 15 percent of buyers expecting to pay under \$150,000. Only 14 percent of the \$500,000-plus buyers say they are unlikely to buy a home with a warming drawer—the smallest “do not want” percentage for any item discussed above, which helps explain why a warming drawer in the kitchen ranks as the #1 feature most appropriate in upscale homes.

Honorable Mention and Other Caveats

It is purely a matter of convenience to truncate the list of upscale amenities at ten. Five other features missed the top-10 list by a very slim margin and deserve honorable mention: His & Her baths, a laundry chute, an outdoor fireplace, sensor-operated faucets, and a media room.

Another caveat is that the statistical analysis could only be applied to features that home buyers rated on the same scale. Features like swimming pools and equestrian facilities were covered in a separate, differently-formatted question on community amenities and couldn't be included in this particular analysis. (An analysis of this question, showing that swimming pools often influence buyers to choose a community while equestrian facilities do not and many other related results, appears in Chapter 11 of [What Home Buyers Really Want.](#))

A final caveat concerns the nature of a study that focuses on upscale amenities. It can be interesting and useful to analyze the high end of the price scale, but the lower end is extremely important and shouldn't be ignored. The base of the U.S. housing market is supported by a large number of households with relatively

modest incomes who can only afford homes at relatively modest prices. Over a broad range of house prices, the further down you go, the more potential buyers you reach. NAHB provides an online [Housing Affordability Pyramid](#) specifically to illustrate this point.

Appendix I

What Home Buyers Really Want – Survey Questionnaire (excerpt)

31. How would the following various designs and features influence your purchase decision?
Please rate each design or feature as follows:

1.Do not want - not likely to buy a home with this design or feature.

2.Indifferent - wouldn't influence decision.

3.Desirable - would be seriously influenced to purchase a home because this design or feature was included.

4.Essential/Must have - unlikely to purchase a home without this design or feature.

	Do not Want	Indifferent	Desirable	Essential/ Must have
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Windows

Low-e insulating glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gas filled (Argon or Krypton) insulating glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Triple-pane insulating glass				
Clad wood or wood windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aluminum windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vinyl windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy-Star rated windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bay or bow windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greenhouse windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skylights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Doors

Interior Doors				
Flat surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paneled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pocket door (slide into wall)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior Entry Doors				
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patio Doors				
Sliding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hinged or French doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Decorative and Other Features

Ceiling crown molding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chair rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Built-in shelving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Built-in kitchen seating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Window seats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposed beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood burning fireplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gas Fireplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceiling fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Kitchen Features

	Do not Want	Indifferent	Desirable	Essential/ Must have
Traditional styled cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contemporary styled cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass front cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central island	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central island with range	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk-in pantry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butler's pantry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double sink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recessed lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instant hot water dispenser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drinking water filtration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trash compactor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Table space for eating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Breakfast bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warming drawer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pull-out drawers/shelves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wine cooler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special use storage (wine rack, spice drawer, pots & pans cabinet etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recycling center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sensor-operated faucets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Desk/Computer area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solid surface countertop (Corian etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramic tile countertop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Granite/Natural stone countertop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laminate countertop				
Engineered stone (Zodiaq, Silestone etc.) countertop				

Bath Features

Both shower stall & tub in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whirlpool tub in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Only a shower stall in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private toilet compartment in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple shower heads in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skylight in master bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Linen closet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double vanity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Granite vanity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultured marble vanity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Bath Features - continued	Do not Want	Indifferent	Desirable	Essential/ Must have
Dressing/make-up area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
His & Her baths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toilet, tub, & sink - white	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toilet, tub, & sink - color	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramic tile walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specialty Rooms or Features

Great room (Kitchen/Family room/Living room combined)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laundry room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dining room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Living room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sun room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Media room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exercise room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Game room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mudroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Den/library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two master bedroom suites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two story entry foyer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two story family room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wet bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recessed lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic air cleaner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laundry chute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Garage storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elevator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Outdoor Features

Front porch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rear porch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor fireplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor grill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor kitchen (cooking, refrigeration, & sink)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lot with trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lawn sprinklers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gated community (monthly fee of \$100-\$200)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home in golf course community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Accessibility Features

	Do not Want	Indifferent	Desirable	Essential/ Must have
A full bath on the main level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doorways at least 3 ft. wide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hallways at least 4 ft. wide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathroom aids, such as grab bars or seating in shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lower kitchen cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-slip floor surfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An entrance without steps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Energy Saving Features

	Do not Want	Indifferent	Desirable	Essential/ Must have
Insulation higher than required by code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy-Star rating for whole home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy-Star rated appliances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tankless water heater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solar water heating/electric system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water efficient features (dual flush toilets or low-flow faucets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Development Features

	Do not Want	Indifferent	Desirable	Essential/ Must have
High density (community with smaller lots and attached or multifamily buildings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infill (in the center of an older, established neighborhood)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mixed use (homes near office, retail or other commercial buildings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU

Top 10 Features for Upscale Homes

Appendix II: Description and Output of the Statistical Model

The upscale features reported in this study were identified by 1) using exploratory factor analysis to extract common unobserved factors from the home buyer preference data, and 2) interpreting the factor that explains the greatest amount of variability in the data as a luxury or upscale factor. The top upscale features are then the ones with the highest loadings (correlation between variable and factor) on this factor.

Computationally, factor analysis is similar to extracting principal components from the data, but factor analysis is derived incorporates additional assumptions—in particular, that a small number of latent or unobserved factors can explain much of the variation in the underlying data. When factor analysis is applied, a lot of emphasis is usually placed on interpreting the estimated factors. Over the years, a more or less standard set of embellishments have been developed (such as methods for rotating the factors to facilitate their interpretation), and these are now included in most of the statistical software packages that perform factor analysis.

The analysis of home buyer preferences began by applying the basic factor analysis program available in the SAS STAT package to all of the data from question 31 in from *What Home Buyers Really Want* (Appendix 1), using the default assumptions provided in the package. The initial procedure extracted 19 common factors, only first three of which explained much more than 1 percent of the variation in the underlying data. In addition, very few variables loaded heavily on any factor after the first three.

Even with 19 factors, the preliminary model explained less than 50 percent of the variation in many of the variables. For the next step, these variables were removed from the analysis unless they had a loading of .5 or greater on at least one factor. The result was a reduced list of 76 home features. Factor analysis was then applied to these 76 variables, with a criterion for identifying common factors that was twice as stringent as the default (a minimum eigenvalue criterion of 2.0 instead of 1.0).

The result was a model with 3 factors. After using an orthogonal Crawford-Ferguson algorithm to rotate the factors to a final solution, the factors explained roughly 16, 7 and 3 percent of the variation in the variables, respectively. Much of the variation in preferences is thus still explained by the error term (the unique character of individual home features) rather than by a small number of underlying common tendencies, as the factor model assumes. Nevertheless,

the factors were relatively easy to interpret and interesting enough to report, particularly the first factor.

This is a fairly standard approach to developing a common factor model, but ultimately the details made little difference. Simply extracting the first three principal components from the initial data set would have produced very similar results.

A possible criticism of the analysis is that the four possible responses to each item in question 31 (“essential/must have,” “desirable,” “indifferent,” and “do not want”) are coded 1, 2, 3, 4, which is then treated as a cardinal scale when correlations across respondents are calculated. Techniques like polychoric correlation have been developed to deal with this, but the such computationally intensive techniques were considered unnecessary in a simple exercise that seeks only to organize and describe the data.

For an exercise like this to be useful, the resulting factors need to have reasonable and interesting interpretations. In this case, the three factors have the fairly obvious, reasonable interpretations of 1) upscale (appealing primarily to buyers of more expensive homes), 2) general desirability (appealing broadly to most buyers irrespective of their characteristics), and accessibility (appealing primarily to buyers concerned with being able to access all parts of the home with ease and little threat of accidents).

The loadings of house features on each of these factors are shown on the next page. Loadings are included in a table if they have an absolute value of at least .4. There are conflicting rules of thumb and opinions on how big a factor loading needs to be to make it worth reporting, but a threshold lower than .4 is seldom recommended.

Factor 1 is interesting because it brings together diverse features in a non-obvious way not discussed in the original report on *What Home Buyers Really Want*. Factor 1 is also interesting because the upscale interpretation can be supported with supplemental information on how respondents rate a feature based on the price they expect to pay for a home. Factor 2, on the other hand, provides little additional insight, as the features generally wanted by home buyers were discussed in Chapter 3 of the original report, and the accessibility features identified by Factor 3 were discussed as a group in Chapter 7.

Factor 1: Upscale	Loading
Warming drawer	.679
Two story family room	.671
Wine cooler	.663
Outdoor kitchen	.654
Two story entry foyer	.648
Elevator	.642
Wet bar	.641
Exercise room	.625
Home in a golf course community	.623
Game room	.622
His & Her baths	.612
Laundry chute	.605
Outdoor fireplace	.603
Sensor-operated faucets	.603
Media room	.602
Built-in kitchen seating	.573
Trash compactor	.555
Dressing/make-up area	.551
Greenhouse windows	.549
Gated community	.548
Two master bedroom suites	.547
Skylight in master bath	.544
Cultured marble vanity	.536
Central island with range	.516
Skylights	.512
Window seats	.512
Recycling center	.510
Electronic air cleaner	.506
Instant hot water dispenser	.502
Exposed beams	.502
Clad wood or wood windows	.490
Aluminum windows	.483
Ceramic tile countertop	.480
Den/library	.478
Toilet, tub, & sink - color	.475
High density community	.475
Outdoor grill	.475
Special use storage	.473
Granite vanity	.467
Laminate countertop	.467
Fiberglass windows	.460
Whirlpool tub in master bath	.460
Mixed use development	.458
Chair rails	.454
Wood burning fireplace	.436
Solar water heating/electric	.429
Fiberglass doors	.423
Lawn sprinklers	.416
Recessed lighting (throughout home)	.410

Factor 2: General Desirability	Loading
Energy-Star rating: whole home	.630
Energy-Star rated appliances	.626
Linen closet	.593
Energy-Star rated windows	.572
Laundry room	.567
Exhaust fan	.563
Exterior lighting	.531
Walk-in pantry	.528
Double sink	.504
Double vanity	.501
Insulation higher than code	.498
Recessed lighting (in the kitchen)	.491
Garage storage	.488
Hallways at least 4 ft. wide	.450
Doorways at least 3 ft. wide	.447
Central island	.432
Patio	.424
Ceiling crown molding	.412
Recessed lighting (throughout home)	.412
Low-e insulating glass	.405

Factor 3: Accessibility	Loading
Bathroom aids	.547
An entrance without steps	.516
Non-slip floor surfaces	.483
Lower kitchen cabinets	.442