"Living Smart":
Portland, Oregon's Approach to Infill Housing Development

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Population is a hot topic in the United States today. As of October 16th, 2006, the population of the U.S. reached 300 million people, making it the 3rd most populous country in the world and arguably the largest consumer of natural resources (per capita). More people countrywide undoubtedly means added pressure on urban areas, and as a result, urban sprawl has become a development phenomenon in this country comparable to the plague. Some cities, however, are implementing progressive alternatives to suburban development in the face of increased population pressures, alternatives that are meant to slow the effects of sprawl. Portland, Oregon is one such city. In the content of this paper I intend to examine the Living Smart Program, Portland's approach to infill housing.

Portland has a reputation for its history of "sustainable" urban design. METRO, the city's planning agency, has a well respected track record when it comes to land use planning, transportation planning, and community resource management. The hard work of METRO, combined with a few favorable natural attributes (weather not being one of them), has paid off to make Portland an extremely "liveable" city, and regional population growth reflects this fact. Population growth, however, signals a need for more housing stock. According to Wade Nkrumah of the Oregonian, "…by 2017, Portland will have to add roughly 70,000 housing units to help absorb its share of regional growth." (Nkrumah, Oct. 4th, 2006). While the suburbs surrounding Portland are undoubtedly growing to accommodate most of this need, the city council and the Bureau of Development Services (BDS) have joined with local and international designers to promote the Living Smart Program.

First, some background: according to The Random House Unabridged Dictionary, infill is defined as: "the planned conversion of empty lots, underused or rundown buildings, and other available space in densely built-up urban…areas for use as sites for…housing, frequently as an alternative to overdevelopment of rural areas." The need for infill comes as a direct result of another of Portland's progressive urban planning schemes: The Urban Growth Boundary. The adamant delineation of a regional Urban Growth Boundary undoubtedly "protects outlying open spaces and agricultural lands", yet it also fosters a need for aggressive infill housing development, if for no other reason than to take advantage of the existing, robust transit system and sufficient infrastructure within the city limits. In essence, the call for infill is a result of city regulation prohibiting the expansive sprawl associated with most American metropolises; the city instead is forcing itself to grow up, not out.

An average house site in Portland is generally about 5000 sq. feet, or 50 feet wide by 100 long. Vacant lots, although scarce, do exist, and in 1991 Portland's city council approved zoning changes intended to encourage infill development on said lots. The intentions were good; the results, unfortunately, were less appealing. Throughout the 90's, many developers made handsome profits by subdividing vacant lots into two and building bland, car oriented, and contextually inappropriate tract housing in pockets

throughout the city. As a result, Portland's city council decided to revisit their parameters for infill development.

In 2003, the Living Smart program was launched. Living Smart "arose from growing neighborhood concerns about single-dwelling infill development on 25-foot wide lots" (www.livingsmartpdx.com). The program limited new construction to currently vacant lots and added design requirements in the hopes of promoting more appealing new housing stock. The design requirements became the foundation for an internationally released competition for architectural firms and individuals alike, a competition that required entrants to design houses to fit into one of four categories (see chart below).

PDX 1- 15-foot wide, 25-foot tall house with garage
PDX 2- 15-foot wide, 25-foot tall house without a garage
PDX 3- 15-foot wide, 30-foot tall house with or without a garage
PDX 4- 16 to 19-foot wide, 25-foot tall house with a garage

According to literature on the program, the competition sought to move beyond simple ideas of new housing options, instead creating "a dialogue between designers and builders." The entrants were encouraged to utilize building practices that were not only affordable and contemporary, but sustainable wherever possible. The organizers stressed the contextual aspect of architecture in Portland with the hopes of attracting designs to complement existing neighborhood aesthetics. Past reliance on zoning code requirements to deter the development of unsightly, production style housing was deemed unsuccessful; the architects of Living Smart consciously promoted "creative and varied building design".

Once all the building designs were received, they were judged in two phases by a panel of experts and displayed for public comment as well. Comments and critiques were evaluated equally. In the first phase, awards were given for Design Excellence and Merit. The 50 winners of the Design Excellence award then had their submissions published in a full color monograph that was distributed throughout North America. The second phase, more locally oriented, took 20 designs from the Design Excellence category and re-produced them in The Portland Catalogue of House Designs for Narrow Lots. The winning designs of this category, according to the literature, "can be constructed affordably for the entry-level, first time buyer and can be endorsed by designers, builders, and neighborhood interests". The catalogue was made public through the BDS offices in downtown Portland and has been well received since its publication in December of 2004.

The benefits of the Living Smart competition didn't end there, however. The Bureau of Development Services and Commissioner Leonard went one step further, selecting the two most popular winning entries and making their plans "permit ready" and available to the public. By streamlining the process within the city bureaucracy, these plans were essentially pre-approved for use by developers, builders, and individuals alike. Infill housing designed and approved by experts was not only encouraged, therefore, it was made simple to the point of being a likely default for those folks considering the option in the first place. As of October 2006, construction has begun on 5 separate lots within the city limits using the designs submitted by two winning entrants.

Winning design #1 is referred to as the Higgins Plan, as it was submitted by Bryan Higgins, a local architect and LEED AP from Portland proper. It falls into the category of PDX 3. Mr. Higgins designed (and actually built) the house for himself and his family in a densely populated neighborhood of SW Portland. It is small, only 1400 sq. feet, and fits nicely into the well established aesthetic of the neighborhood around it. As Mr. Higgins describes, the front façade addresses the "pedestrian scale of the street" by using a pop-out bay window to add interest and avoid the endemic boxy appearance of some traditional new architecture. The sloped roof is very much in harmony with the houses nearby. Elements of sustainability that are incorporated into the design include "natural ventilation for cooling, a radiant infloor heating system, lasting enduring materials", not to mention proximity to many existing transportation options. It should be noted, as well, that the house does not have a garage, a concept that encourages sustainability at multiple levels. (To view the house plan, follow the link: http://www.livingsmartpdx.com/home/higgins.asp)

Winning design #2 is known as the Vargas-Greenan house, and falls into the category of PDX 1. Unlike the Higgins design, the Vargas-Greenan house has a garage to anchor its frontal appearance. That distinction aside, it also does an admirable job of blending many existing Portland styles into one, fitting multiple potential neighborhoods, and not calling much attention to its new construction status. The most notable aspects of this design are its integrated use of wooden trellises around the building's perimeter. These serve not only as sun shades during warmer times of year but also seek to soften the tall/thin nature of the structure's exterior. The house almost seems to grow out toward the street, not just up towards the sky. It measures a total of 1532 sq. feet and has renewable, forest certified materials incorporated into its specifications for sustainability. (To view the house plan, follow the link: http://www.livingsmartpdx.com/home/vargas.asp)

For people who consider themselves architectural enthusiasts, all of the submissions offer something to be appreciated. But the merits of the competition obviously extend beyond the benefits for us design snobs. The plans are made available to the public, being attached to the bill for a building permit, and end up costing about 50% of what an individual could expect to pay for architectural drawings alone (not including permits). This is a savings that cannot be understated. By classifying the plans as permit ready, the city has achieved its multi-faceted goal of encouraging sustainable development.

Infill is good for cities. Cities like Portland, cities with comprehensive, integrated transit systems, walkable and pedestrian oriented dense residential neighborhoods, could potentially suffer from infill with good intentions but bad design. The people at BDS, in conjunction with Commissioner Leonard, are effectively serving the public good by decreasing the possibility of inappropriate infill development. Developers wary of dealing with the challenges to infill, including community opposition and costly permitting regulations, will be likely to take the easier, Living Smart option. It is truly a win-win situation. I don't believe every entry in the competition deserves to be built. Many of the designs wouldn't fit contextually into the neighborhoods I know and love, neighborhoods with historic significance and architectural integrity from times past. However, I believe the Living Smart competition is one of the more progressive,

sustainable ideas to come out of the Portland planning department, and should serve as a sustainable model to other cities both nationally and worldwide.

Sources:

Nkrumah, Wade. "Skinny House Designs Put To Test", The Oregonian, Oct. 4th, 2006

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