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Lloyd Crossing Sustainable Urban Design Plan and Catalyst Project—Portland, Oregon

Mithūn Architects+Designers+Planners and the Portland Development Commission



On January 8, 1973, maverick Oregon Governor Tom McCall famously warned state legislators of the threat posed by those he called the “grasping wastrels of the land.” “Oregon,” he proclaimed, “is an inspiration,” and land was its “most valuable finite natural resource.”¹ Oregonians listened. Today the state is a leader in forward-thinking land-use planning and innovative environmental policy. Portland, the state’s most populous city, has also been touted as the “American headquarters of the ‘New Urbanism,’” the place to live “the green American dream,” and even “the largest European city in America.”²

The Lloyd Crossing Sustainable Design Plan & Catalyst Project, commissioned by the Portland Development Commission, is proof that these are not empty accolades. Produced by Mithūn Architects+Designers+Planners of Seattle and a broad team of affiliated consultants, it seeks to almost triple the developed square footage of a 35-block area of the city, while simultaneously reducing its environmental signature to that of a pristine forest.

This winner of a 2005 EDRA/*Places* Planning Award

contains two equally ambitious components. Its Sustainable Design Plan endeavors to create a framework of implementation strategies, quantifiable measures, and region-wide connections to support the emergence of a central-city district offering the best of both urban living and ecological sensitivity. The associated Catalyst Project attempts to demonstrate that this vision will not only be technically feasible, but also aesthetically desirable and financially profitable.

The Background: Lloyd Crossing

The plan covers a 35-block area within the Lloyd District, located northeast (across the Willamette River) from downtown Portland. While the area is officially part of the “Central City,” many feel it lacks the vibrancy that distinguishes the Rose City’s other famous neighborhoods. Indeed, according to Sloan Schang of the Portland Development Commission (PDC), it can feel more like a “middle-American downtown” than the heart of a lively West Coast metropolis.

Lloyd Crossing Sustainable Urban Design Plan and Catalyst Project—Jury Comments

Brager: This seemed to really have a nice organization of goals, analyses, and performance measures. They went beyond just saying we’re going to do it. You might argue with the methods, but they *bad* methods—it wasn’t just on a philosophical struggle. The way they presented it was also very educational.

It’s a really nice model for others to follow.

Vale: So often we have the buzzwords of sustainability. But this one really says, here is a 35-block urban ecosystem, let’s set some standards for how you can have growth and densification without raising ecological impacts. To actually talk about

reforestation—“a small mixed-conifer forest woven into the urban infrastructure”—as they put it. It’s a lovely concept.

Brager: I think it fit a lot of criteria of what we were looking for in terms of the connection of research to planning, and going from planning back to clear



But the potential is there. The neighborhood covered by the plan contains 2.8 million square feet of developed building space housing a wide variety of uses, including the Rose Garden Arena and the Oregon Convention Center. It has been dubbed “Lloyd Crossing,” because of its designation as a future meeting point of the present light-rail system and a planned new streetcar line.

The Lloyd District Development Strategy—formulated in 2001 for the larger area that includes Lloyd Crossing—had already called for the creation of an active, dense urban neighborhood in the area. Additionally, market studies indicated that over the next 45 years, an additional 8.1 million square feet (70 percent of what present zoning allows) could be absorbed by the district, bringing with it 8,000 potential new residents.

All 35 blocks of Lloyd Crossing lie within an urban renewal area. In 2004, when the PDC drew together a project-specific advisory committee composed of twelve area stakeholders, from property owners to neighborhood advocates, to help guide its redevelopment, sustainability

soon emerged as a central objective. As Schang notes, there is “a lot of movement in the city to push the envelope with sustainability.” Indeed, when the request for proposals for Lloyd Crossing emerged from the advisory committee, it not only expressed a desire to maintain the development potential of the land and create a district with a defined sense of place, but to establish a vision that would both reflect “financial reality” and exceed LEED platinum-level standards.

The winning team assembled by Mithūn shared this bold vision. According to Bert Gregory of Mithūn, when it comes to sustainability, what is most needed today is to “move beyond green buildings... to jump to the next level, to look to neighborhoods as systems,” and to recognize it is possible to create vibrant urban places with extremely low impact on the environment. Of equal importance, though, is that one of the largest property owners in the neighborhood, Ashforth Pacific, also expressed an interest in doing something truly innovative.

The Proposal: Urban/Forest

As a first step, the team attempted to give teeth to the concept of “sustainability.” This was no small feat. By 2000 it seemed that “sustainable” was a required word in virtually all planning documents, and that “sustainable development” was the avowed goal of everyone. Yet, as J.G. Frazier has noted, the concept was so poorly defined as to be largely meaningless. In fact, during the 1990s the editorial staff of *Issues in Science and Technology*, a publication of the National Academy Sciences, had proclaimed the phrase to have “no useful meaning.”³

The Sustainable Design Plan, in contrast, rests on a functional concept of “Pre-development Metrics” developed by the team. These measures embody a theoretical

The towers and parking lots of the Lloyd District, across the Willamette River from Downtown Portland. It is here that the Lloyd Crossing project is planned to take shape.

recommendations. These predevelopment measures define clear metrics to use as a benchmark. They were really looking at different critical dimensions of the project and establishing how they would be met.

Hardy: I was impressed that it is the Portland Development Commission that sponsored the thing.

Their statement—which is very ambitious—I think is true. They say the study is to examine the benefits of an integration of urban design strategies, green infrastructure opportunities (they certainly went into that), shared building systems, innovative financial models (which are often left in the dust), and to serve

as a catalytic sustainable urban design model. And all of that, which is enormously ambitious for a city agency to even think about, was there. Quite extraordinary.

Brager: Exactly. And too often you see these ambitions and you get excited about the project, and you look through it and say, “Well, where is it?” It’s

baseline representing the ecological profile of the site before there was a human presence on it. This framework was then used to create a plan that would be even more ambitious than the “beyond-platinum” goals specified in the RFP. In effect, the remarkable notion at the heart of the plan is that intense urban redevelopment can be used to reverse existing environmental impacts, and return many of the ecological qualities of the site to those of a 54-acre, mature, mixed-conifer forest.

Wildlife habitat, water and usage quality, and energy consumption are three areas where the plan establishes specific performance goals. In terms of habitat, the predevelopment metric was 90 percent tree cover, supporting a diverse range of species. In comparison, the plan attempts to reestablish 25–30 percent tree cover—an “abstraction” of a mixed-conifer forest, involving native “forest patches,” green streets, rooftop gardens, and habitat corridors. Meanwhile, provisions are also proposed for off-site habitat restoration.

In terms of water, the plan estimates the study area receives 64 million gallons of rainwater a year, and it proposes treating much of this runoff on-site. It also proposes reducing potable water consumption by 62 percent, and providing on-site sources for 100 percent of nonpotable water demand through rainwater harvesting and wastewater reuse.

Energy metrics involve a number of concerns. According to the plan, the neighborhood receives 161 million kilowatt hours per year of solar energy. The plan aims to exceed the level of utilization of this energy that would be typical of a mature forest.

Among the plan’s other goals are to reduce on-site carbon dioxide emissions to predevelopment levels and create an overall carbon-neutral strategy. Since the construction industry consumes 40 percent of the global economy’s raw materials, the latter would involve giving preference to materials that employ renewable resources, that are from within 300 to 500 miles of the site, have low embodied energy, and that receive a positive Life Cycle Assessment.

one thing to analyze a building and look at actual performance, rather than have green-washing statements. But to do it at the planning stage is even harder. All too often you have these grandiose statements of intent without any kind of metric to back it up.

Hardy: And the inference was that there are ways to do this, rather than this is what it will be. This, from my

point of view, is the nature of what planning should be.

Harris: In Portland anyone who wants to get reelected has to be in favor of this, and there is likely to be a good amount of political support. But this is also really well suited to where it is in Portland. It’s a huge area—a little bigger than the densest part of the central district. It’s a tough location, but it could be

quite wonderful over time. They even identified some catalytic projects they thought might get it started.

Vale: I was really delighted to see an urban- or district-scale approach to sustainability that had some measurable outcomes. It seems the right kind of multiprong strategy, at the right place, at the right city, at the right time.



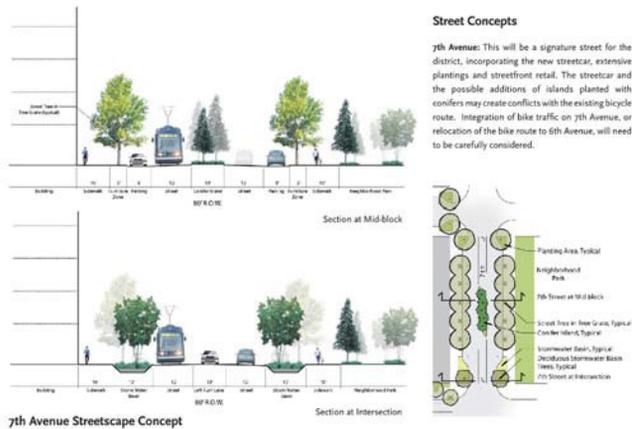
Placemaking

The placemaking strategy of the plan builds on the successful qualities of Portland’s older core neighborhoods.

In terms of district character, the plan not only recognizes that developing intensely near existing infrastructure will “reduce the pressure on development in other outlying areas,” but it argues that many of the environmentally friendly architectural and planning features it encourages will create a unique identity for the district. Residential units would be mixed with business uses; a hierarchy of green streets would be established; towers would be set back to allow adequate sun at street level; pedestrian and bicycle access would be encouraged; and new open spaces would be created.

The Catalyst

To provide a real-world structure for these bold environmental goals, the plan proposes hard numbers for financing planned changes to the urban fabric. Specifically, the Catalyst Project seeks to demonstrate financial feasibility by outlining two alternate building scenarios. One involves a midrise, mixed-use project containing 150 new residential units; the other is a highrise project containing



between 240 and 300 residential units.

Based on a public/private partnership, these model projects are estimated to provide a potential developer return of 16 to 21 percent, while exceeding LEED platinum-level standards. They would also allow the construction of a new one-acre public park, green infrastructure, and buildings demonstrating the latest in sustainable technology.

A Model

The jury was broadly impressed with many aspects of this ambitious proposal. But, most importantly, they noted that its clear metrics gave substance to the usual buzzwords of sustainability. Because of this, they praised the PDC and Mithūn for creating something that could move the entire urban planning field forward—not just in Portland, but around the nation and the world.

With luck, some form of a catalyst project may be built in a few years. But, until then, Schang says, “We’ve gotten a lot of people talking.” In addition to winning a 2005 EDRA/Places award, the work has been lauded in a recent issue of *Planning*, and it has won an American Society of Landscape Architects Honor Award and an American Institute of Architects Top Ten award.⁴

This year marks the thirtieth anniversary of the publication of Ernest Callenbach’s *Ecotopia*, a work of fiction that both provided a vision of ecological possibility and

Opposite: The plan analyzes issues related to habitat, water, energy, and place-making. It aims to encourage urban growth that will result in drastically reduced ecological impacts for the area by the year 2050.

Left: Street sections detail specific ways to integrate new patterns of site ecology with existing and planned new circulation patterns.

Right: The Catalyst Project presents highrise and midrise alternatives for the design of actual new buildings and open spaces.

portrayed the region from San Francisco to Seattle as the preeminent bastion for such views in the U.S.⁵ Yet while San Francisco may be home to innumerable environmental organizations, and while Seattle may be a self-described “Pugetopia,” it is Portland that has so far come closest to turning fiction into fact by realizing an ideal of environmental urbanity.⁶ It is providing the kind of inspiration that would make Tom McCall proud.

— Jason Alexander Hayter

Notes

1. From the McCall Gallery at the 1000 Friends of Oregon website: www.friends.org/resources/mccall.html. Also see Brent Walth, *Fire at Eden's Gate: Tom McCall & The Oregon Story* (Portland: Oregon Historical Society Press, 1994).
2. William Dietrich, “A Tale of Three Cities: Portland and Vancouver Get Going While Seattle Stalls,” *The Seattle Times, Pacific Northwest Magazine*, February 2, 2003, taken from <http://seattletimes.nwsource.com/pacificnw/thebigsqueeze/theseries.html>; Elizabeth Armstrong Moore, “In Portland, Living the Green American dream,” *The Christian Science Monitor*, April 26, 2005, taken from <http://www.csmonitor.com/2005/0426/p03s01-ussc.html>; and Matthew Preusch, “A City Proud of Its Underbelly Slims Down and Tones Up,” *The New York Times*, December 1, 2003, p. A14.
3. J.G. Frazier, “Sustainable Development: Modern Elixir or Sack Dress?” *Environmental Conservation*, Vol. 24, No. 2 (1997), p. 190.
4. Clair Enlow, “Portland Neighborhood Proposes New Shade of Green,” *Planning*, August/September 2005, p. 47. Also see the website of Mithūn Architects+Designers+Planners: www.mithun.com.
5. Ernest Callenbach, *Ecotopia* (Toronto: Bantam, 1975).
6. William Dietrich, “Saving the Green: Containing Our Sprawl with Big Ideas and Small Steps,” *The Seattle Times, Pacific Northwest Magazine*, June 22, 2003, taken from <http://seattletimes.nwsource.com/pacificnw/thebigsqueeze/theseries.html>.

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