



**Via Verde + Jonathan Rose Companies:
The Intersection of Affordable Housing + Ecological Design**

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Abstract

Via Verde is a mixed-use, mixed-tenure, mixed-income housing development in the South Bronx, New York. Developed by Jonathan Rose Companies and Phipps Houses, Via Verde is an excellent case of affordable housing development that remediates a brownfield and incorporates a number of environmentally conscious and energy efficient features. Furthermore, the project's design reflects a deep conviction that the urban environment benefits from housing development that forges a strong relationship between nature and the spaces in which people live.

Via Verde came about through unusual circumstances. Two competitions and a flurry of support from a number of public and private entities resulted in securing enough financial backing to fund Via Verde's construction. Designed by Dattner and Grimshaw Architects, Via Verde features a number of buildings that range in scale from a twenty-story tower to smaller townhouses. Public spaces and a network of green roofs run throughout the development.

Perhaps the most important factor that allowed Via Verde to come about was Jonathan F.P. Rose. President and founder of Jonathan Rose Companies, Jonathan Rose is a real estate developer and urban planner

committed to practically and profitably stitching together the fabric of communities. In 2014, Jonathan Rose delivered a speech at Harvard's Graduate School of Design in Cambridge, MA entitled "The Entwinement of Housing and Well-Being." Rose's speech discussed the importance of housing affordability on a number of fronts, and introduced a curious concept: cognitive ecology. Cognitive ecology, according to Jonathan Rose, is a "mental landscape of thinking, feeling and relating." Connecting people with nature and providing housing stability through developments like Via Verde are critical steps toward generating a positive cognitive ecology in the lives of urbanites, reducing both physiological and financial stress. Via Verde is the epitome of a housing development that generates positive cognitive ecology for its residents all while remaining environmentally conscious and energy efficient.



Introduction

Via Verde is a mixed-use affordable housing development in the South Bronx, New York. Literally called “The Green Way,” Via Verde stands as a seminal example of affordable housing that forwards innovative design practices that

benefit individuals, communities, and the natural environment. The development incorporates 222 residential units (both owned and rented) and 7,500 square feet of retail space. Via Verde places significant emphasis on green, open space while simultaneously cleaning up a difficult site designated as a brownfield.

Via Verde’s origin stems from a complex set of circumstances. This case study examines the project’s history, investigating the political context and social will that produced such a splendid outcome. The project has won numerous awards from institutions such as the Urban Land Institute (ULI) and the American Institute of Architects (AIA). Via Verde’s success, however, raises important questions regarding replicability.



Background

Phipps Houses and Jonathan Rose Companies

Via Verde was developed as a joint venture between two enterprises: Phipps Houses and Jonathan Rose Companies. Since its inception in 1905, Phipps

Houses has built a solid reputation as the “oldest and largest not-for-profit developer, owner, and manager of affordable housing in New York City” (Phipps Houses). It is committed to matters of remedying poverty and facilitating community development across New York.

Jonathan Rose Companies (JRC) was founded in 1989 and has since completed over \$1.5 billion dollars of work, ranging from housing construction to urban redevelopment. JRC’s mission is to generate “transformative change by creating green urban solutions as replicable models of environmentally, socially and economically responsible plans, communities, buildings and investments... [and] to repair and strengthen the fabric of cities, towns and villages, while preserving the land around them” (Jonathan Rose Companies website).

Jonathan F.P. Rose and Cognitive Ecology

Perhaps the most important figure of Via Verde’s history is Jonathan F.P. Rose. The founder of JRC, Jonathan Rose is a member of the Rose family, one of New York’s oldest real estate legacies. Jonathan Rose studied psychology and philosophy as an undergraduate at Yale, and went on to receive a Masters in Regional Planning from the University of Pennsylvania. Notably, he is trained as an urban and regional planner,

a characteristic that has certainly guided his company’s work. Jonathan Rose is a frequent speaker on matters of housing. On September 29th, 2014, he delivered a speech at Harvard University’s Graduate School of Design entitled “The Entwinement of Housing and Well-Being.” Citing research from fields ranging from sociology to neuroscience, he argued that “empathy and altruism are essential elements of healthy communities.” Further, Mr. Rose introduced the concept of “cognitive ecology.”



“Just as the world needs a healthy natural ecology to thrive, it also needs a healthy cognitive ecology, or mental landscape of thinking, feeling and relating. If we are going to ease endemic poverty, we need to recognize that it persists in an invisible, pervasive cognitive ecology of toxic stress that deeply permeates not only families living in low income communities, but also the caregivers who are trying to support them. We should also note that although toxic stress is both concentrated and exacerbated by low socio-economic status, that it is increasing throughout all levels of society. This cognitive ecology is the soil of civilization. The work of community development must include the creation of positive cognitive ecologies so that humans and natural systems will thrive.”

Jonathan F.P. Rose, “The Entwinement of Housing and Well-Being”



Cognitive ecology” is not a topic one typically expects to hear about from a real estate developer. Jonathan Rose’s notion of cognitive ecology reflects a deep concern regarding the ways in which individuals, communities, and the environment relate to one another, and how these

relationships promote or inhibit a sense of well-being, security, and purpose. These are qualitative matters, but Mr. Rose’s conviction is further supported by evidence he cites from recent medical research concerning the impact of stress on physiology, and how these impacts carry over to future generations.



Jonathan Rose’s speech paid great attention to matters of endemic poverty, poverty that proliferates from one generation to the next in a seemingly unbreakable cycle. He argued that individuals living in low-income communities often suffer from “toxic stress” due to tumultuous dwelling situations, inconsistent employment, and (literally) toxic environments, among other factors. In order to address such challenges, Jonathan Rose argues that “building enough safe,

green, walkable, sociable affordable housing is a key first step in the creation of a safe base for families to begin to move forward with their lives. The housing must also be energy efficient, and easily connected to transit if it is going to really help reduce some of the financial stress on working families.” There is a driving belief behind Jonathan Rose’s work that affordable housing is an essential ingredient for generating healthy cognitive ecology. Affordable housing, if done correctly, is inherently ecological.

The importance of nature with respect to human cognition is an essential, underlying principle of Jonathan Rose’s cognitive ecology. His speech at Harvard cites individuals such as Richard Luov and Jim Rouse, who stated that “people are affected by their environment, by space and scale, by color and texture, by nature and beauty, that they can be uplifted, made comfortable, made important” (Jonathan Rose, speech). There is an implied belief in “biophilia,” which Edward Wilson calls the “love of life” and the “instinctive bond between people and other living things” (Wilson, *Biophilia*).

Further defining cognitive ecology, Jonathan Rose writes that it is important to “think at the scale of an ecological niche—I see the cognitive ecology as the shared mindset of that niche. A niche could be a neighborhood, a building, a family, a social network. It has a shared cognitive system from which behaviors arise, just as soil is a shared nutrient system from which plants arise” (Jonathan Rose, interview by author). He compares social systems at multiple scales to interdependent natural systems—the word “shared” is key. The design and programming of Via Verde echo Rose’s convictions, such that it is an affordable housing development aimed at fostering a community centered on natural space.

History of Via Verde

Via Verde came about as the result of a competition. In 2003, the American Institute of Architects (AIA), the City Council of New York, and the City University of New York (CUNY) announced a competition called “New Housing New York” (NHNY). The competition called for submissions of innovative housing design concepts and drew 160 entries. A year later, the New Housing New York Steering Committee commissioned a follow-up competition centered on Via Verde’s future site, a triangular parcel in the Melrose neighborhood of the South Bronx. Called the “Legacy Competition,” the NHNY Steering Committee, composed of architects, urban planners, and developers from numerous public and private entities, expressed the need for ideas that address “issues of affordability, sustainability, transferability and viability.” The New York City Department of Housing Preservation and Development (HPD) offered the site for a nominal fee to the winning team (Bruner Foundation). Later, the competition attracted additional interest from organizations such as the National Endowment for the Arts, Enterprise Community Partners, and Citibank. By 2007, the winning team composed of Phipps Houses, Jonathan Rose Companies, Dattner Architects, and Grimshaw Architects was selected.

The circumstances from which Via Verde came about were unusual. First, there were two competitions involved. The initial competition called for “paper” submissions, which generated enough interest to spark the subsequent competition. Second, the competitions drew attention and support from a plethora of public agencies and private organizations that worked in tandem to facilitate Via Verde’s implementation. In fact, a makeshift Joint Review Committee was formed of members from the Steering Committee in addition to a number of public agencies (including HPD, the New York State Energy Research and Development Authority, and the Department of Buildings) in order to expedite permitting, facilitate land use review, and secure necessary zoning variances. Third, the will of a

visionary developer and urbanist, Jonathan Rose, coupled with the historic reputation and competencies of Phipps Houses provided the necessary expertise and political sway to realize the project. The sociopolitical context from which Via Verde grew suggests that its success is a case of public-private partnership *par excellence*.

Via Verde’s Context

South Bronx History

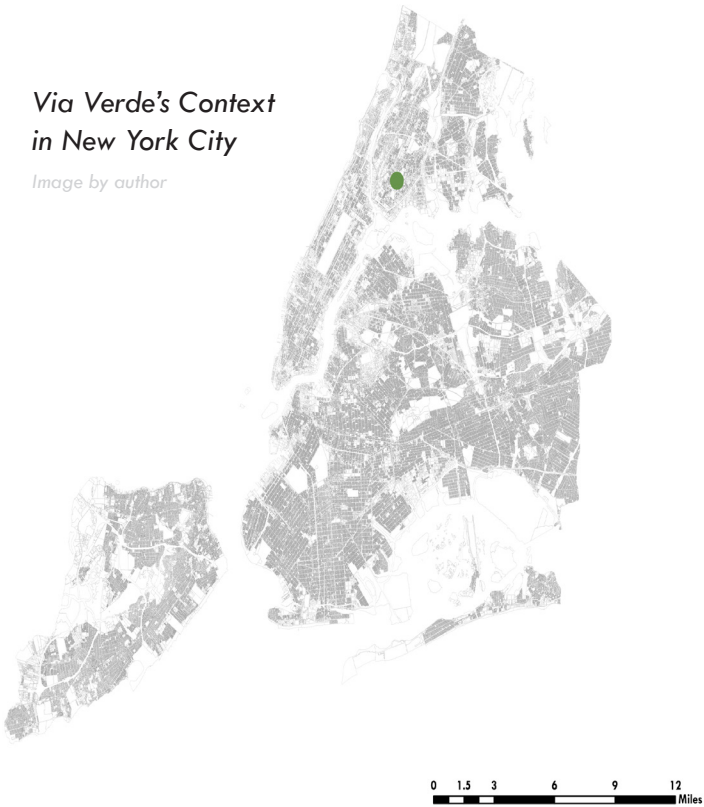
Via Verde is located at the intersection of Brook Avenue and 156th Street in the Bronx. The South Bronx has a tumultuous history. Over the last century, it has experienced dramatic demographic shifts, such that by 1960 two-thirds of its population was African American or Puerto Rican. Minority neighborhoods were “redlined” by banks, and urban redevelopment efforts of the 1970s primarily focused on high-rise public housing development. Highway construction exacerbated the isolation of the South Bronx, such that crime and poverty worsened. In 1977, Howard Cosell famously interrupted his commentary on the World Series at Yankee Stadium to announce that “The Bronx is burning.” Arson was rampant, a means to collect on property insurance in an area otherwise considered lost. To this day the South Bronx is arguably still in a state of disrepair. Via Verde is



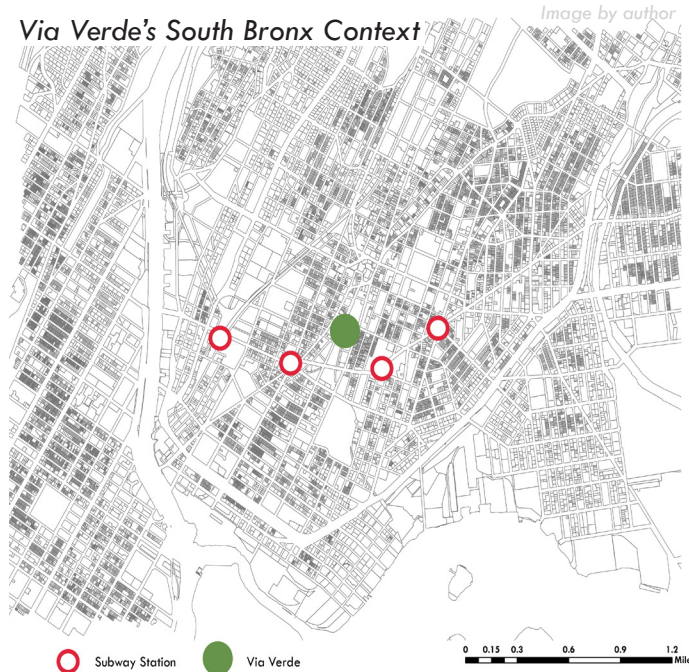
Source: AIA, <http://www.aiany.org/NHNY/>

Via Verde’s Context
in New York City

Image by author

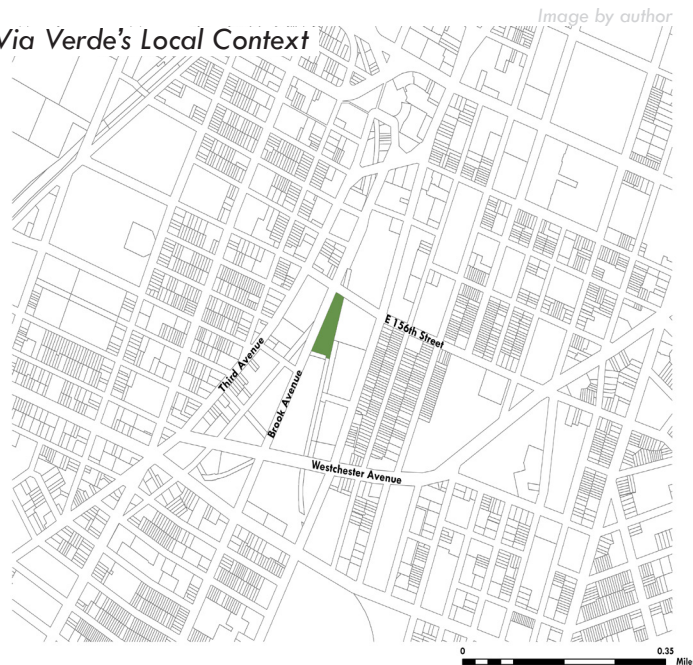


Via Verde's South Bronx Context



located in census tract 71. According to the 2012 American Community Survey, 39.1% of people here live below the federal poverty line, and the per capita, annual income is \$13,312 (American Community Survey, 2012). This area was and still is in desperate need of high-quality, affordable housing.

Via Verde's Local Context



A Bit About the Built Environment of Melrose

The Melrose neighborhood of the South Bronx is an interesting place. The area's retail ranges from local mom-and-pop shops to larger corporate presences. Third Avenue ("The Hub") is a bustling retail corridor upon which the neighborhood depends. Highway systems and elevated train tracks accent the neighborhood, typical examples of functionalist "blight." The housing stock is varied. Lower-density row houses and other small buildings coexist with a number of high-rise public housing developments. The 2 and 5 trains reach Melrose, linking the neighborhood to Manhattan and Brooklyn via subway. The area's green spaces are scarce and in need of stewardship.

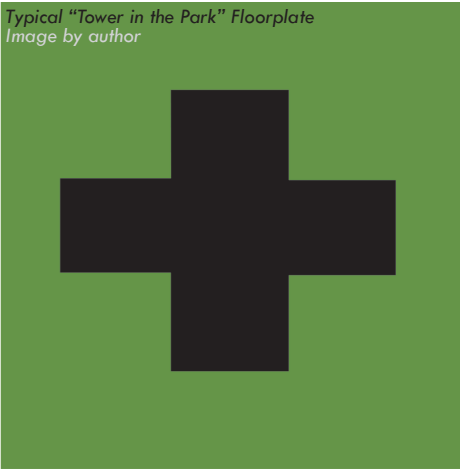
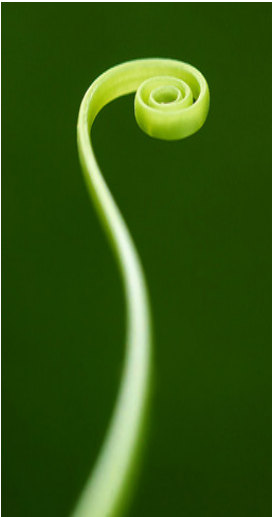


Via Verde's Design

Via Verde's design is radically innovative and impressive in the realm of affordable housing. Dattner and Grimshaw Architects partnered with Lee Weintraub Landscape Architecture to design the project. Reportedly, the guiding inspiration for the development was the idea of a coiled plant tendril growing toward the sun. Via Verde does indeed “wrap” itself around its triangular site. Viewed in plan, Via Verde could not be more different than the typical “tower in the park” model of public housing that is so common in New York. The “tower in the park” model is typically composed of a rectilinear, Corbusian tower surrounded by greenery. Via Verde's numerous buildings are centered on an open green space accessible to residents. Evidently Jonathan Rose's mission to connect people with nature is a key tenet of the project's design.



Site Plan by Dattner Architects + Grimshaw Architects
<http://www.archdaily.com/>

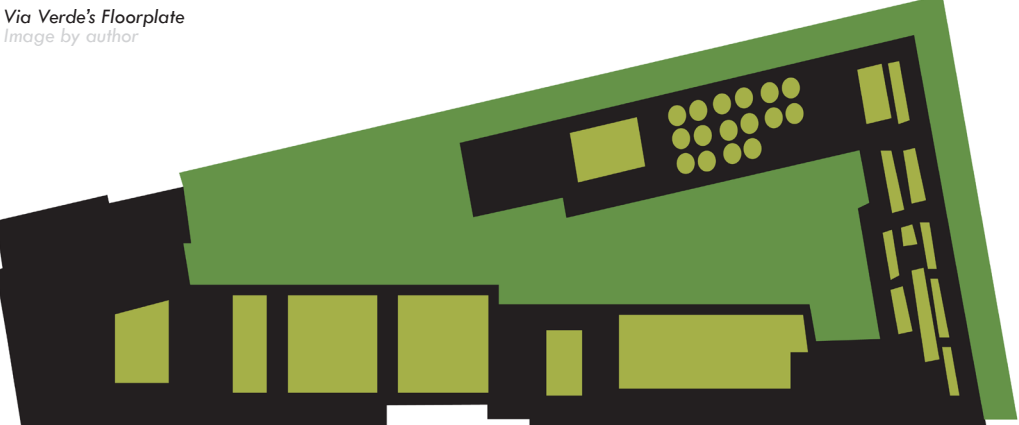


Typical "Tower in the Park" Floorplate
Image by author

Building Footprint Open Space

Facade

Via Verde's façade treatment is eye-catching. Typical public housing developments primarily use concrete and brick. Via Verde's façade features brick, metal, wood, and glass. The overall composition is articulated and dynamic due to the varied material use and color palette.



Via Verde's Floorplate
Image by author

Building Footprint Open Space Green Roof Feature

Threshold

Via Verde's main entrance faces Brook Avenue. All residents may enter through the same entry portal, and there are additional residential and commercial entrances. After entering, you find yourself within an open courtyard. Dotted with rocks, benches, trees, and plantings, the space invites all manner of activity. A key feature is the amphitheater steps that lead upward to a multitude of green roofs.





Tree Typologies

Every roof surface of Via Verde functions as a green roof, and most are accessible. After ascending the amphitheater steps, you enter a grove of evergreen trees, complete with seating. An orchard of apple and pear trees follows the evergreens. Yellow and red wooden panels cleverly conceal mechanical equipment.



Roof Garden

One of Via Verde's most enticing components is its roof garden. Operated by the development's residents in partnership with GrowNYC, a non-profit dedicated to urban agriculture, the roof garden reportedly grew 1,000 pounds of produce in its first season. The food is distributed to residents, a nearby school, and a food pantry in Brownsville, as examples.



Terrace + Solar Panels

Further ascending Via Verde's spiral, one finds herself situated in a landscaped terrace of trees and natural plantings. Cascading solar panels are oriented to the building's southern axis.



Diversity of Scale

Via Verde's composition is marked by a diversity of scale, as its 20-story tower stands alongside its smaller townhouses. The spaces within the development vary in scale as well, comprised of "quiet contemplative spaces, places such as the gardens and orchard to connect with nature, a place for exercise, and lots of spaces for social interaction" (Jonathan Rose, interview by author).



Sustainability

Via Verde’s aesthetic success is made even more commendable given its commitment to sustainability. The project received LEED Gold certification. Considerations factored into this certification include brownfield remediation, green roofs, solar panels, indoor air quality assurance, rainwater recapture, and temperature/motion sensors. Further, the development followed New York’s “Active Living by Design” guidelines, which promote features such as daylighting in staircases to encourage use. In fact, daylighting and active staircase use were measures that secured LEED’s “Design for Health” Innovation Credit.

According to the Association for Energy Affordability, “Via Verde is remarkably energy efficient. The building is designed to be 27% more efficient than the ASHRAE 90.1-2004 baseline standard in terms of cost savings. The energy efficiency features are estimated to save 441,866 kWh per year and 43,610 therms per year when compared with an identical building constructed with conventional systems. Estimated cost savings are \$154,601 per year” (Association for Energy Affordability, 2014).

Via Verde’s sustainability measures have had the impact of changing standards for future construction in New York. The New York City Department of Housing Preservation and Development “sees [Via Verde’s] sustainable features as a success and now requires all new construction to meet Enterprise Green Community standards, and demonstrate at least a 15% improvement in energy efficiency over a base case (ASHRAE 2007 standard) building, half of what Via Verde achieved” (Bruner Foundation, 2014).

Via Verde by the Numbers

Via Verde contains 222 residential units (151 rental, 71 co-op) and 7,500 square feet of ground floor retail space. Construction began in 2010 and its doors opened in 2012. The buildings are 100% occupied. The retail space is leased to the Montefiore Medical Group, which operates a clinic and accompanying pharmacy.

Affordable Rental Units		
Number of Units*	Income Restrictions	Income (Family of Four)
17	<30% AMI	\$23,040
13	<40% AMI	\$30,720
120	<60% AMI	\$46,080
Cooperative Ownership Units		
# of Units	Income Restrictions	Income (Family of Four)
5	<80% AMI	\$61,450
39	<150% AMI	\$115,200
26	<175% AMI	\$134,400
* 1 unit is reserved for building superintendent		

Source: HUD

The total development cost of Via Verde is just under \$100 million. About two-thirds of the funding was devoted to the rental units, and the remainder to the owned co-ops. The rents and sale prices of Via Verde’s apartments were derived using area median income (AMI) percentile groups, such that the project is affordable, mixed-income, and mixed-tenure.



Like most affordable housing, Via Verde's financial structure is complex. Sources of funds range from low-income housing tax credits, to taxable bonds, to public subsidies, to developer equity, among others.. The project's incorporation of both for-sale and rental units is uncommon, which certainly added to the complexity of its underwriting (different kinds of subsidies are available for for-sale and rental housing).

\$32 million dollars worth of tax credits went toward permanent financing for the rental units, a sizable sum. Tax credits are allocated by public agencies such as the Department of Housing Preservation and Development (HPD). They may either be utilized by a developer to lower her tax bill, or sold to a bank as a means to raise capital (in this case, Chase Bank purchased the tax credits). HPD typically "allocates \$10-\$12 million in credits per year to 40 or more projects with a total of 1,200 low income units" (HPD website). Though Via Verde's tax credit financing came from more than one source, the fact that it required roughly 3 times HPD's annual allowance of tax credits for all of New York City is significant. Given the economic climate at the time, securing financing was surely a challenge. Furthermore, tax-free bonds financed over half of the project.

The financial structure of Via Verde calls its replicability into question. For example, the Department of Housing Preservation and Development (HPD) originally offered subsidy options between \$50,000 and \$70,000 per unit—the actual figure was closer to \$100,000 per unit. An easy criticism of the project is its focus on quality as opposed to quantity. One could argue that development funds could have been dedicated to providing additional units in exchange for lower design quality. The City of New York has called for submissions to develop two parcels adjacent to Via Verde. The resultant projects will perhaps indicate whether or not Via Verde's design, and financial structure, can be replicated.

Conclusion

Via Verde, "The Green Way," stands as an important case study of affordable housing. To say the least, the project accomplishes so many goals. Via Verde's design demonstrates how high-density housing development can work in tandem with natural space. Living up to its name, Via Verde places green space at the forefront of housing design, all while remaining affordable. Through cleaning up a brownfield site and brining nature into the lives of its residents, Via Verde does much to reduce both financial and psychological stress for those who live there. Though one may question the project's financial replicability, its design principles are surely transferable to future projects. Furthermore, Via Verde's complex financial structure worked through the cooperation of numerous public and private entities. It makes a strong case for the importance of public-private partnership.

Jonathan Rose's mission of imbuing communities with healthy cognitive ecology is admirable, a vital model for architects, urban planners, real estate developers and many others to follow. Via Verde is still young, but Jonathan Rose writes that "what will last is the quality of life of the people who live there, and the social networks that unfold. The building is the hardware, but it is the software of its cognitive ecology that makes it live" (Jonathan Rose, interview by author). Only time will tell.



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