



## Developing a Community of Opportunity: Sendero Verde

### An Interview with Jonathan F.P. Rose, President, and Sabrina Barker, Senior Development Manager, at Jonathan Rose Companies

By Mary-Michael Robertson

*Sendero Verde, a joint venture between Jonathan Rose Companies, L+M Development Partners, and Acacia Network (Architect: Handel Architects; Landscape Architect: AECOM), is currently under construction in New York City's East Harlem and will be a block of mixed-use development prioritizing biophilic design and affordable housing, scheduled for completion in 2021. With the central tenet of creating a "Community of Opportunity," it will be the largest fully affordable*

*Passive House development in the U.S. and will consist of 709 mixed-income residential units, 4,000 square feet of retail, 90,000 square feet of community facility space, and a 20,000-square foot central publicly accessible courtyard with 3 community gardens.*

**Biophilic Cities (BC):** We'd love to hear more about the origins and planning process of Sendero Verde.

**Jonathan Rose and Sabrina Barker (JR + SB):** This site was in an area in which New York City's Housing Preservation and Development (HPD) and New York's Department of City Planning were already going through ULURP to rezone East Harlem for higher density along the major avenues. Sendero Verde was used as a model of the best of what could come from the larger rezoning. Since the project began as a response to

HPD's SustainNYC RFP, our basis of design started with its ambitious climate and energy efficiency goals. Included in the SustainNYC RFP were reports and workshops done by Community Board 11 and the GreenThumb gardens that occupied the site. The East Harlem Neighborhood Plan, which was a year-long effort by the community to gather neighborhood priorities and desires, was another source of inspiration. We aimed to meet as many of the goals laid out in these various plans as possible. Unfortunately, since this was a competitive RFP that was responded to by a variety of teams, the City process did not allow us to reach out to the community during the initial design and RFP phase. However, Jonathan Rose Companies, and our RFP teammate, L+M Development Partners, had both worked in East Harlem and had a good sense of the community's needs.

The project was deeply informed by Jonathan Rose Companies' interest in developing Communities of Opportunity, as a way to create pathways to wellbeing and out of poverty. Our goal was to create the best model of a newly constructed community of opportunity that we could. Both the City and the community responded positively to the idea in the RFP review process.

Once we won the RFP in February 2017 and started presenting the project at various community board meetings, we were able to hear directly from the community. From this, we increased the amount of permanent affordability we offered and lowered the highest AMI tiers as much as

possible while still making the project financially feasible.

**BC:** Can you tell us a bit about Sendero Verde's design?

Open space was incredibly important to us as well as the community, and the massing of the project and the meandering path reflects that goal. In 2016, the site was occupied by multiple GreenThumb community gardens that were required to be included in the overall plan of the new development. There was also a baseball field that was used by a local Little League team, so this block had a history of being an accessible open space within East Harlem.

The development of the courtyard grew out of our desire to preserve as much open space as possible. The program that we came up with during the RFP included a school, which needed a gymnasium. Given that it is very expensive to build a double height and column-free gymnasium below a residential tower, we decided to sink the gymnasium under a raised courtyard to reduce the cost of the clear-span space. Raising the courtyard also meant we could get a little more sunlight into the courtyard, but we needed to create a design that would draw pedestrians up from the street into the courtyard. This was done with the idea of the winding path from Madison Avenue and a grand staircase from Park Avenue. Early in our site investigations, we had discovered a map of an old Lenape Indian trail, and tried as best we could to duplicate its pathway through the site.

The massing of the buildings, including the shorter building to the South and the 34-story tower on the Northwest corner, was designed to provide the greatest amount of sunlight to the courtyard. We located the GreenThumb gardens on the southeast and southwest corners of the site, ensuring that they get as much sunlight as possible and will be accessible to the street.

Perhaps the biggest change to the project post-RFP was with the courtyard design. After winning the RFP, the Rose/L+M team was asked to bring a local community group into our partnership, and we added the Acacia Network to the team. One of the first things they asked us was to re-design the courtyard to reflect their understanding of community need. The courtyard is immeasurably better due to their input.

To activate the courtyard and to ensure year-round activity, the community facilities and the residential buildings all have direct access to the courtyard. Union Settlement, which is a youth and senior center, has a cafeteria that opens directly onto the courtyard. The school also has an entrance from their second floor and adjacent to their interior grand staircase to ensure connectivity to the outside. The pods of the courtyard were designed to appeal to a wide variety of age groups and community users. They were also carefully calibrated to respond to the interior uses. There is a stage and gardening pod adjacent to the school for outdoor learning and performances,

and adult exercise equipment located near the entrance to Union Settlement. We also have a couple more meditative pods for quiet conversation or contemplation, as well as pods for young children to play.

Early on, we had named the project Sendero Verde, or Green Path, in part a reference to previous projects of ours, Via Verde and Paseo Verde. The landscape architect came up with the idea of having a green ribbon of edging material line the project's pathway, from Park Avenue to Madison. This ended up informing our project logo. We required all of the landscape materials in the project to be "Manahatta" plants -- those that were indigenous to the region prior to 1491, and the project was designed to meet Fibonacci proportions. Both of these, indigenous plant materials and Fibonacci proportions, are elements of all Jonathan Rose Company designs.

Biophilic design carries throughout the entire design in subtle ways. In the community spaces, we've chosen wall coverings that evoke nature and are meant to create a sense of calm. The patterns, textures, and palettes of the interior spaces reflect natural tones and materials as much as possible. Wayfinding wallpaper and accent colors at the residential elevator lobbies and at the terminus of corridors pair with the ideas of biophilic design and carry throughout the project.

Amongst the requirements for this site, the RFP required that

the resulting project be built to Passive House Standards. The RFP gave HPD and the City the ability to test out the effectiveness of Passive House Standards on a project that they have some control over because it includes so much public financing. As part of the award process, we were required to share lessons learned with the New York State Energy Research & Development Authority (NYSERDA) and are implementing a building monitoring system to collect data on the various building systems so we can share the data with NYSERDA and HPD.

**BC:** How does research into the mental and physical benefits of access to green space and nature factor into this project?

**JR + SB:** All Jonathan Rose Companies projects take into account the mental and physical benefits of green space, healthy materials, proper acoustics, and energy efficiency.

At Sendero, providing direct access to the courtyard from every residential tower became a very important design requirement, even though it was relatively difficult to accomplish because it meant losing floor area from community facility tenants. Despite this economic pressure, we have maintained direct elevator access to the courtyard from all three residential buildings because we believe that being able to access great public open space is important for residents' health and wellness. The program of the courtyard is meant to appeal to a wide variety of age groups and

activity levels, ensuring a place for everyone to enjoy.

We also created open space on the roof of each residential building for more private outdoor activities. Each residential building has a rooftop community room that opens out onto a south-facing terrace. The terraces include solar trellises that offer some shade and places to relax, as well as outdoor planting beds for resident gardening.

**BC:** This project is innovative in a number of ways, including the fact that it will be the "largest fully affordable passive house building in the world when completed." Please explain a bit more about what "fully affordable" means in the development world and in the East Harlem neighborhood in particular?

**JR + SB:** The Federal definition of "affordable" historically has referred to households that make 60% or below of area median income (AMI), although that recently has been raised to 80% as long as the average is below 60%. Because the cost of living is so much higher in NYC, HPD defines affordable housing as any regulated housing at 165% of AMI or below. This housing is financed using financing term sheets from HPD/HDC and includes a regulatory agreement that stipulates affordability for a period of time. To assist in the financing of these units, HPD will give per-unit subsidy on units up to 130% of AMI (the amount of money per unit varies depending on the AMI level). The units from 130%-165% do not receive subsidy from HPD, but they do fall under HPD rental

regulations, and the renters need to be income qualified before they can move in.

At Sendero, we started the project by proposing units from 30% to 130% of AMI. Over time, we have adjusted those AMI levels to take into account new subsidy term sheets from HPD, as well as neighborhood concerns over gentrification. Since the original RFP award, HPD now requires any project receiving subsidy from the City to have a percentage of the building set aside for formerly homeless families. On Phase 1 of Sendero, that percentage was 10%. On Phase 2 we expect the percentage to be 15%. Another change since the RFP is the reduction in the 130% AMI units. As the term sheets have shifted over the last 4 years, the per unit subsidy on those units has dropped. We have also found that in a neighborhood like East Harlem, where a 130% affordable unit is similarly priced to a market rate unit, tenants don't want to go through the painful income verification process with HPD. As such, our current pro forma shows units from formerly homeless to 100% AMI.

We will follow the lottery process that is defined by HPD. All future residents will apply through the HPD Housing Connect website. We have seen projects get upwards of 100,000 applications. They will be placed into a lottery system and our marketing agent will run through that list to income verify each application, do credit checks, etc. It is an incredibly complicated process, but it ensures fairness.

**BC:** How does building a

passive house project impact affordability for the developer and end-user?

**JR + SB:** We have determined that doing Passive House added about 6-8% to the hard costs of Sendero Verde over typical affordable construction. The additional hard costs generally come from a more advanced mechanical system and the large Energy Recovery Ventilators (ERVs) on the roof that circulate fresh air throughout the building, additional insulation, rigorous air sealing, and triple-glazed windows. Since there aren't many certified passive house components in the United States, there are a limited number of manufacturers

from which we can purchase equipment. We believe that, as this standard becomes more universal, those costs will decrease.

We expect to see significant heating and cooling savings, but those have to be balanced against some increased operating and maintenance costs. There will be more filter changes to ensure that all of our mechanical, electrical, and plumbing (MEP) equipment is working correctly, and our staff will need to be able to make adjustments to various settings to ensure that the Passive House system is working correctly. We also plan to have a robust tenant information campaign



so that our building residents understand how to get the most out of the energy efficiency measures of the building. Our tenants should benefit from reduced air conditioning bills in the summer, as well as better thermal comfort during all seasons, better air quality, and quieter interior spaces.

One more benefit is passive resilience. If the power goes out, we believe that our apartments will be warmer in the winter and cooler in the summer than non-passive buildings.

Because the passive house design significantly reduces energy usage, the project's rooftop solar system is projected to provide 20% of the building's core and shell needs.

**BC:** To what extent does the concept of environmental justice inform your work and this project in particular?

**JR + SB:** Jonathan Rose Companies was founded to be a mission-focused company, with a focus on environmental and social justice. We first explored

indoor air quality for our 1996 project, Benedict Commons, in Aspen, and then Maitri Issan House, housing for formerly homeless people with HIV/AIDS in Yonkers, NY. Healthy indoor air quality has long been a focus of the Enterprise Green Community Guidelines, a program that we follow for every one of our projects.

All of our projects use environmentally friendly materials, including low-VOC paints and glues, renewable materials, recycled woods and products, and environmentally friendly

cleaning products. Passive House construction takes what we already do one step further, by providing fresh and filtered air directly to the units and ducted exhaust from the kitchen, bathrooms, service areas, and electric stoves, reducing the risk of carbon monoxide build-up when cooking.

We receive many reports from parents that once they move into our communities, their child's asthma goes away or is significantly reduced. This can improve school attendance and

performance.

Providing safe, healthy and affordable housing is the foundation of our Community of Opportunity framework. When we provide homes that promote health and wellness, we foster an environment that improves our residents' quality of sleep, their ability to focus and study at home, their rates of asthma and sickness, as well as their overall sense of peace and well-being. When paired with access to other tenets of our Community of Opportunity framework, such

as access to public transportation, jobs, open space, and schools, we believe that these can help break the cycle of poverty.

*Read more about Sendero Verde:*  
<http://www.rosecompanies.com/projects/sendero-verde>.

### Paseo Verde (Completed 2013)

With the goal of creating a healthy living environment for low and moderate income families, this mixed-use rental housing project, developed in partnership with Asociación Puertorriqueños en Marcha (APM), provides access to both green space, in the form of landscaped terraces and green roofs, and to community services that include a primary care facility, pharmacy, and supportive services provided by APM. Winner of a dozen planning and design awards, the project is the first LEED for Neighborhood Development project in the country to achieve a Platinum rating.



### Via Verde (Completed 2012)

Creating a new approach to green and healthy urban living in the South Bronx, the project provides affordable rental apartment and co-op housing. Its stepped form is inspired by the integration of nature and city. Connected green rooftops harvest rainwater, grow fruits and vegetables, and provide open space for residents. Other amenities that contribute to healthy living include open air courtyards, a health education and wellness center, health oriented retail space, a fitness center, and bicycle storage.

