



## CHAPTER 3

*STEPS TO GREEN ALLEY DEVELOPMENT: THE AVALON  
GREEN ALLEY NETWORK DEMONSTRATION PROJECT*

# INTRODUCTION

This chapter provides a case study of the Avalon Green Alley Network Demonstration Project for the purpose of guiding future action and potentially informing other alley revitalization efforts. The Avalon Project is a pilot project in South Los Angeles. In partnership with the City of Los Angeles, The Trust for Public Land is leading this collaborative effort to green a network of alley segments within a residential neighborhood of the area (see Figure 20).

The chapter begins with an overview of the Avalon Project, including its significance, goals and the community context for those goals. Next, the main section of this chapter tells the story of the Avalon Project, breaking down the project into main steps typical of alley revitalization efforts. The authors then describe the South Los Angeles Green Alley Master Plan and potential opportunities for other future green alley efforts.

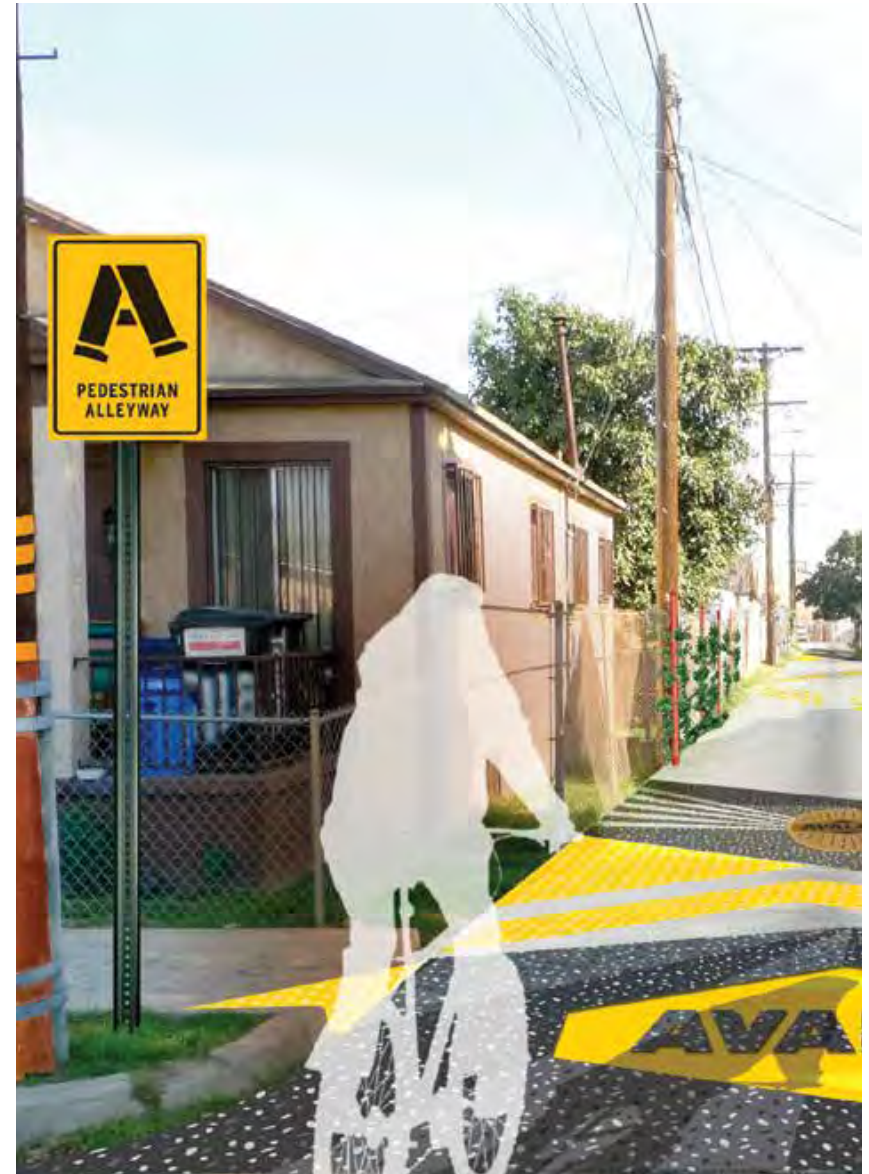


Figure 20: Conceptual rendering of the Avalon Project  
Image Credit: SALT Landscape Architects



## OVERVIEW AND IMPORTANCE

Although other alley projects have been built in Los Angeles, the Avalon Green Alley Network Demonstration Project represents many firsts. It is the first alley revitalization project in the high-density, working-class area of South Los Angeles, the first comprehensive alley retrofit to simultaneously incorporate green elements and vehicles in Los Angeles and the city's first retrofitted green alley network. The Trust for Public Land and other project proponents offer the Avalon project as a replicable model for maximizing the potential for alleys as open space to meet multiple community needs. The Avalon Project also provides lessons about the importance of community participatory design as well as ideas for the innovative re-use of existing infrastructure to meet public health and ecological needs.<sup>95</sup>

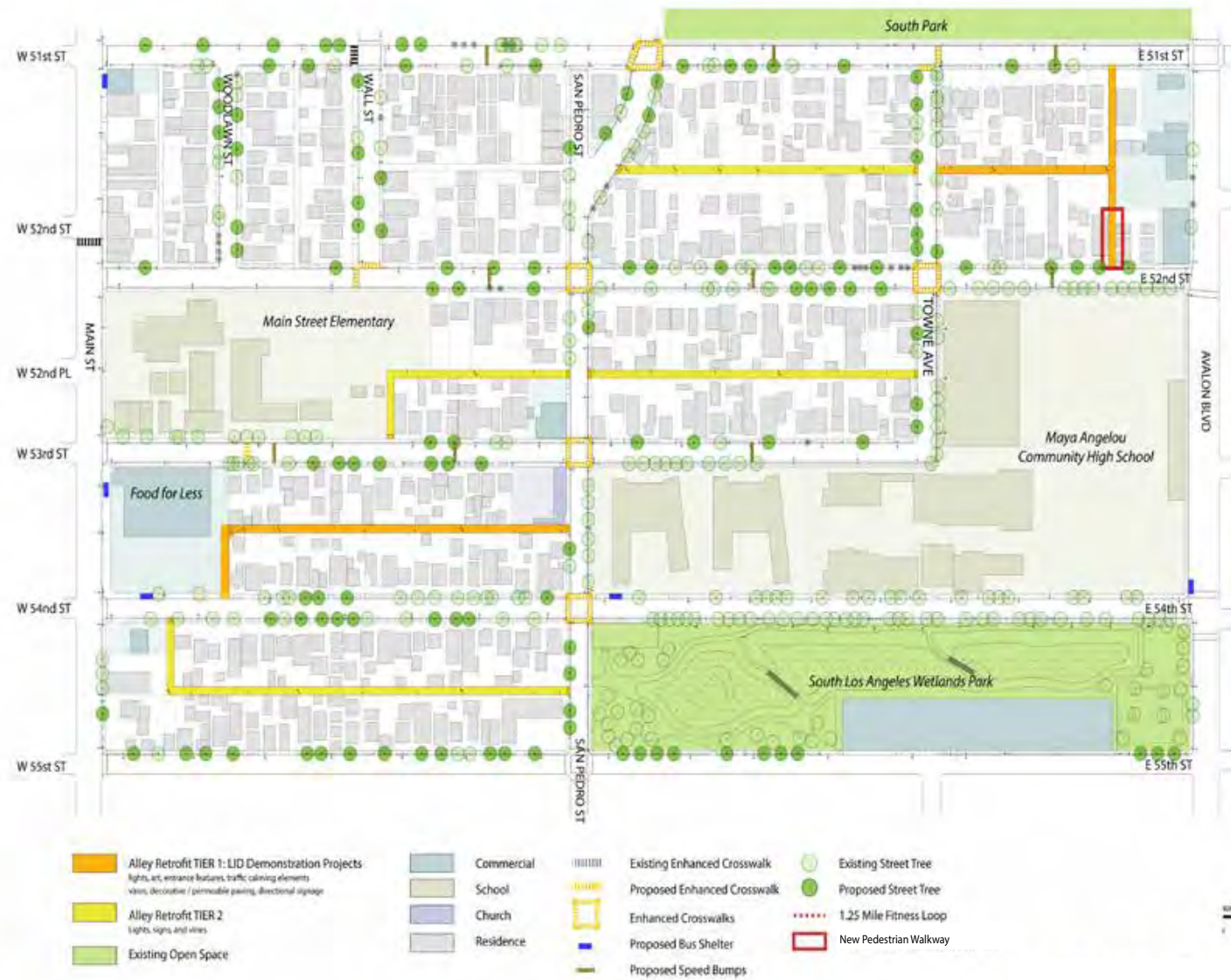
The Avalon Project will transform six alley segments that create a network and a connection between residential homes and community amenities, including the local schools, parks, and local grocery store. The multi-benefit Avalon Green Alley Network spans an approximately 35-acre neighborhood and is comprised of six city blocks and alleyways. Each alley ranges from approximately 1/4 to 1/3 acre, which creates a combined total of 1.8 acres.<sup>96</sup> The project area is bordered by Vernon Avenue to the north, Central Avenue to the east, Slauson Avenue to the south and the Harbor Freeway (110) to the west (see Figure 22). As a demonstration project, two of the six alleys within the network are targeted as full green infrastructure retrofits, totaling 0.61 acres. In addition, the entire network will be planted with nearly 150 street trees.<sup>97</sup>

## STATUS

Many years of organizing, community engagement, planning, and more have gone into the Avalon Green Alley Network Demonstration Project. This work creates an important foundation for the physical construction scheduled for 2015. While many physical improvements are still to come as of the writing of this report, community residents are already actively involved in transforming the selected alleys, such as alley clean ups, as Figure 21 illustrates.



Figure 21: Community residents cleaning an alley in the Avalon Project site  
Image Credit: The Trust for Public Land



### Avalon Green Alley Network Demonstration Project

Figure 22: The Avalon Project site  
Image Credit: The Trust for Public Land and SALT Landscape Architects

THE TRUST for PUBLIC LAND  
CONSERVING LAND FOR PEOPLE



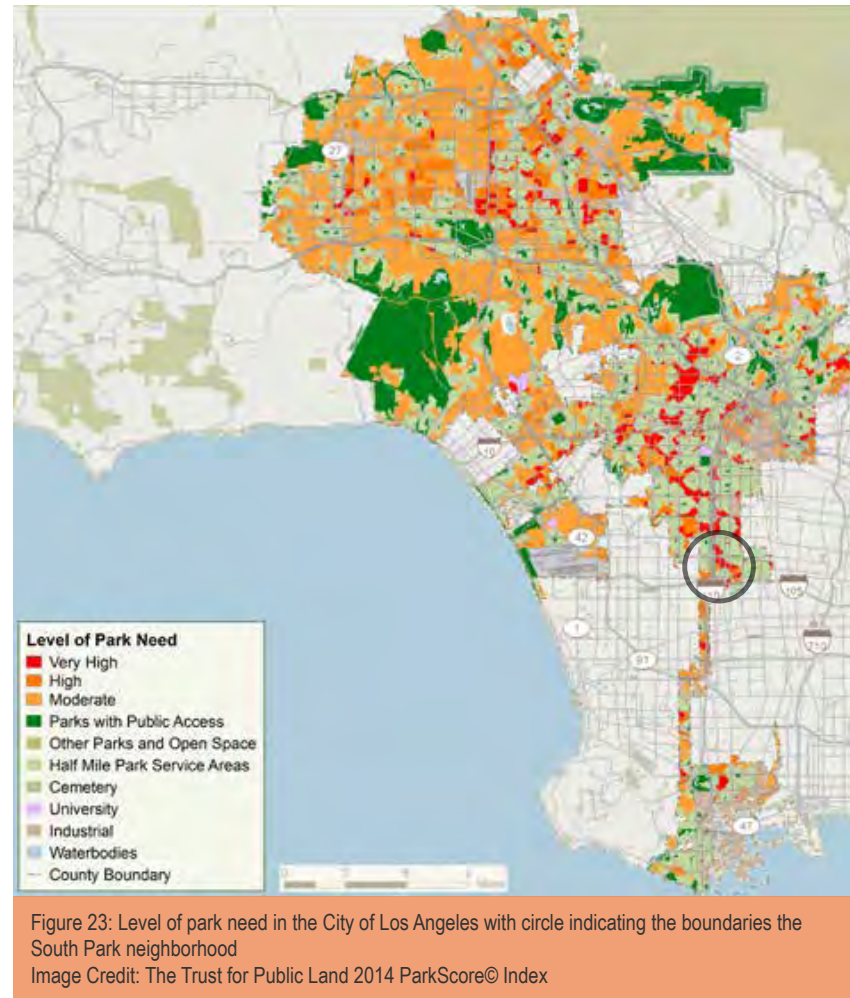
## RATIONALE

South Los Angeles has the highest concentration of alleys in the city.<sup>98</sup> Inventory studies of these alleys have shown that a majority are unsafe, unused, and refuse-filled environments.<sup>99</sup> The Avalon Green Alley Network Demonstration Project is demonstrating that while transforming these alleys will take considerable effort, the alleys could represent a significant opportunity for much needed public open space.

Los Angeles ranks last among major cities in per capita open space; the area of South Los Angeles and the South Park neighborhood are disproportionately affected.<sup>100</sup> The National Recreation and Parks Association recommends 10 acres of park space per 1,000 residents, but Los Angeles has 1.107 acres and South Los Angeles has a mere 0.42 acres of park space per 1,000 residents.<sup>101</sup> These statistics define South Los Angeles as “park poor.” (See Figure 23)

With a lack of open space and recreation opportunities, perhaps not surprisingly, residents of South Los Angeles suffer from the highest rates of obesity, diabetes, and heart disease in Los Angeles County.<sup>102</sup> Furthermore, resources to deal with these health issues are limited in South Los Angeles. South Los Angeles is identified as a “Severely Disadvantaged Community” in terms of income. The median household income (MHI) is \$31,256 (53 percent of the statewide MHI).<sup>103</sup>

There are also environmental challenges in the area, including polluted runoff and stormwater management. The Los Angeles River traverses through South Los Angeles, carrying polluted runoff and stormwater from city streets to the ocean. Green infrastructure improvements can help the local area and the City of Los Angeles comply with water quality standards. Water quality compliance related to the Clean Water Act can be an impetus for implementing multi-benefit green alleys.



In sum, green alleys in South Los Angeles could address a range of community challenges by facilitating physical activity, active transportation, watershed health among other benefits.<sup>104</sup>

## GOALS

The Trust for Public Land has the following project goals for the Avalon Green Alley Network Demonstration Project:<sup>105</sup>

- **Improve community health and fitness.** The South Park neighborhood in South Los Angeles is a dense residential, park-poor community. Alleys are an important land resource in this area that can be transformed into user-friendly green spaces that promote physical activity. The network of alleys can function as a fitness path to encourage walking, cycling, recreation and exercise. The green alley network could help to serve a need not otherwise met by existing parks; alleys can provide residents and their children with an outdoor area to enjoy directly adjacent to their homes and schools.
- **Increase safety.** Safety concerns are one of the top priorities of alleys within this South Los Angeles community. Through renovating and greening the alleys, The Trust for Public Land seeks to increase residential usage and stewardship, which could promote reductions in crime, illegal dumping, and pollution. Improvements will extend to the surrounding street network in the form of added streetlights, crosswalk striping and signage to encourage pedestrian use, safe passage and walkability.
- **Provide neighborhood connections.** The Avalon Project intends to provide connections between homes and the local grocery store, parks and school sites. Signs, lighting and pavement markings will be implemented to encourage residents to use the alleys as green pedestrian pathways throughout the neighborhood.<sup>106</sup> The green alleys are designed to adaptively re-use existing infrastructure in order to integrate a green network of corridors into the fabric of the neighborhood.
- **Improve water quality and supply.** Infrastructural improvements, such as permeable pavers and bioswales, are planned for the Avalon Project, with the objective to decrease urban run-off, recharge groundwater and help improve water quality in the Los Angeles River Watershed

and coastal waters. For example, permeable pavers will be installed to help prevent standing water, as seen in Figure 24, and direct rainfall not otherwise captured by fruit tree and vine pocket planters along the alleys. This design allows water to percolate through porous pavement to the ground soil, providing natural drainage, and then filter under the permeable surface layer to recharge the ground water table.

- **Green and cool the urban matrix.** The Avalon Project features green infrastructure improvements including light colored pavement to reduce the urban heat island effect as well as drought tolerant plantings to create shade and help green and beautify the neighborhood. The addition of approximately 150 street trees is intended to further these cooling efforts and help increase canopy coverage.



Figure 24: Existing conditions of an alley in the South Park neighborhood with standing water  
Image Credit: The Trust for Public Land

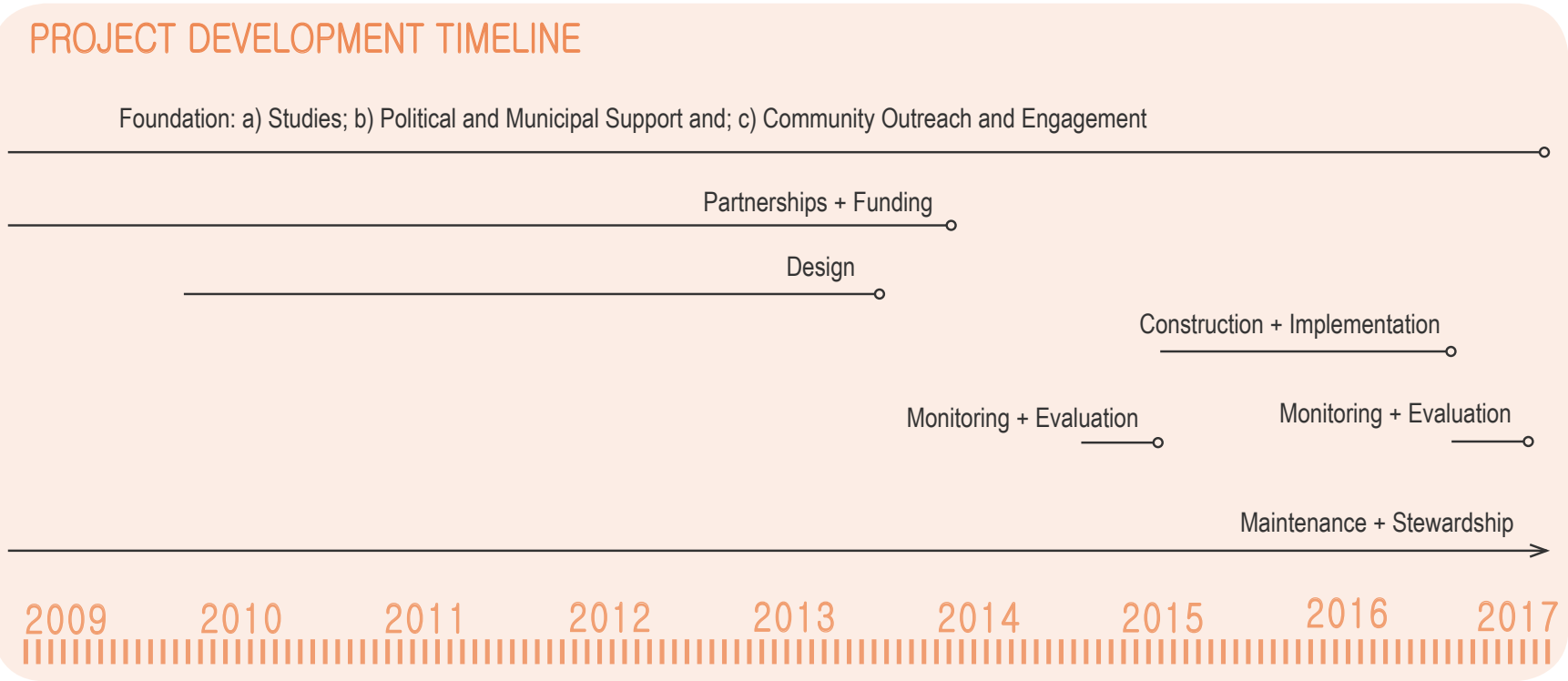
# STEPS TO ALLEY TRANSFORMATION

The Avalon Green Alley Network Demonstration Project has involved a multi-step development process. This section describes that process, with details that could be useful for readers thinking about how to approach future alley greening efforts, especially medium and large scale projects. (Small scale efforts may not involve such comprehensive steps). The main steps include:

- 1) Laying the Foundation with:
  - a) Research and Pre-Design Studies;
  - b) Political and Municipal Support and;
  - c) Ongoing and Integrated Community Outreach and Engagement;
- 2) Partnerships and Funding;

- 3) Design and Permitting;
- 4) Construction and Implementation;
- 5) Maintenance and Stewardship and;
- 6) Monitoring and Evaluation

The below development timeline visualizes these steps and their duration:



## 1. Laying the Foundation

Conducting research, building political and municipal support, and focusing on community outreach and engagement were key first steps to development of the Avalon Green Alley Network Demonstration Project.

### Research and Pre-Design Studies

Research and data helped spur general interest in alleys in Los Angeles and laid the foundation for efforts on the Avalon Project. These research efforts included:

- The University of Southern California's Center for Sustainable Cities (CSC) published "Transforming Alleys into Green Infrastructure in Los Angeles (2008)," which sparked the idea of alleys as usable space and locations for green infrastructure. This report included physical inventories of alleys in Los Angeles, which identified the benefits of green alleys and made several policy recommendations. One main policy recommendation was to develop a Green Alleys Program and Subcommittee within the City's Green Streets Committee to facilitate green alley implementation.<sup>107</sup>
- The Cal Poly Pomona Landscape Architecture graduate student studio and the Los Angeles Community Redevelopment Agency (CRA/LA) collaborated to produce a Vision Plan for South Los Angeles in 2008, which included alley improvements. Out of this process, the CRA/LA identified the South Park neighborhood as one of the priority locations for improvements. The CRA/LA referred to the Avalon Project at this time as the "Eco-Alley Walk" in South Los Angeles.
- The Trust for Public Land and the CRA/LA conducted studies to assess what was possible for alleys in South Los Angeles. This included looking at how other cities developed green alleys. In addition, The Trust for Public Land and the CRA/LA conducted feasibility studies to better understand existing conditions in the South Park neighborhood of South Los Angeles, as seen in Figure 29. This involved studying pedestrian and vehicle circulation, examining adjacent intersections and determining potential alley segments for closures



Figure 25: Existing conditions of an alley in the South Park neighborhood with illegal dumping  
Image Credit: The Trust for Public Land

to vehicles. One study found that the project site had a significant lack of street trees, faded crosswalks, an absence of Americans with Disabilities Act (ADA)<sup>108</sup> accessible sidewalk ramps and inconsistent lighting in the alleys, among others. Research also identified three segments for closure, based on surveying residents' comfort levels and projecting the impact that alley closure would have on residents' use of the alleys for parking and accessing their properties and garages.

Overall the findings helped determine that an alley network project was possible due to the proximity of the alley segments and nearby amenities. As a result, the scope of the project widened to include an alley network that could increase connectivity within the area and function as alternative pedestrian passageways.



### Initial Municipal Support and Coordination

The City of Los Angeles responded to the aforementioned research by beginning to coordinate efforts within City departments and other stakeholders outside of the municipal government. This initial City organizing around greening alleys was also fueled by growing concerns of stormwater runoff pollution.<sup>109</sup> In response, the City of Los Angeles formed the Green Alleys Subcommittee of the City's Green Streets Committee in 2008. Jennifer Wolch of USC's Center for Sustainable Cities helped lead the efforts with city staff.

The Green Alleys Subcommittee was comprised of a group of individuals representing the City of Los Angeles' Department of Public Works, Department of Planning Urban Design Studio, the Los Angeles Community Redevelopment Agency (CRA/LA), The Trust for Public Land and USC's Center for Sustainable Cities. Using Chicago's Green Alley Program as a source of inspiration, the purpose of the Subcommittee was to develop, design and determine successful implementation strategies for a green alley program at the citywide scale.<sup>110</sup> Examples of the Subcommittee's tasks included investigating funding opportunities, developing green alley selection criteria, and creating a tiered and prioritized list of pilot projects.<sup>111</sup>

The result of this process was the development of a menu of six green alley design schemes that can be used as a guide for engineering and design. All of the schemes include Best Management Practices (BMPs) for managing stormwater, such as permeable pavers, bioswales, and other integrated stormwater management features along with their associated estimated costs per square foot. These green alley scenarios were incorporated into the "Rainwater Harvesting Program: Green Street & Green Alleys Design Guidelines," in 2009 as a tool to guide the city in the creation of projects with stormwater management components.

Once the green alley design principles and pilot projects were established and in progress, the Subcommittee's responsibilities merged with the City's Green Streets Committee. Presently, any projects with planned or potential green infrastructure elements are to refer to the "Green Street & Green Alleys Design Guidelines" for BMPs, costs, necessary permits and implementation

### LA Nuisance Alley Conversion Program: An Early Solution

While current efforts to improve alley conditions focus on increasing public access, early efforts by the City of Los Angeles focused on closing alleys for strict private use. The LA Nuisance Alley Conversion Program was established in the mid-90s as a solution to mitigate illegal dumping and crime. Under the program, the City installed 8-foot high wrought-iron gates and gave the keys to residents, who were responsible for maintaining the enclosed property.<sup>1</sup> In the program's peak, the City had sealed off approximately 430 alleys citywide.<sup>2</sup> However, a superior court ruling in 2004 deemed the program illegal and halted further gating because they violated the public's access to a city's public right-of-way.<sup>3</sup> The LA Nuisance Alley Conversion Program provides important historical context to alley efforts in Los Angeles; the discontinuance of the program marks a notable shift in the city's perspective on alleys, which helped pave the way for green alley development.



Figure 26: Gated alley in the city of Los Angeles  
Image credit: theeastsiderla.com

<sup>1</sup> Martin, Hugo. "Iron Gates Taking Bite Out of Back-Alley Crime." Los Angeles Times 19 Oct. 1998. Web. 15 Dec. 2014. <<http://articles.latimes.com/1998/oct/19/local/me-34082&gt;>.

<sup>2</sup> Ibid.

<sup>3</sup> Cassidy, Arly, Josh Newell, and Jennifer Wolch. Transforming Alleys into Green Infrastructure for Los Angeles. Rep. Los Angeles: Center for Sustainable Cities, U of Southern California, 2008. Print. (p.2)

guidance. The Bureau of Sanitation, Watershed Protection Division continues to coordinate and promote alley conversion and other green infrastructure projects across the city of Los Angeles.

The initial municipal support and coordination gained through the development of the City's Green Alleys Subcommittee created a supportive environment to

further realize green alley revitalization in South Los Angeles. In 2008, shared interests in South Los Angeles alleys led The Trust for Public Land and the CRA/LA to begin developing what was referred to at the time as the Eco-Alley walk project in the Avalon neighborhood of South Los Angeles. The result was a formalized partnership in 2009 between The Trust for Public Land and CRA/LA. To jumpstart the process, CRA/LA provided funding for outreach, design

## STREET TREES



There is a significant lack of street trees throughout the project area. Most roadways have a small scattering of trees that provide little shade. Two street segments, 54th Street between San Pedro Street and Avalon Boulevard and 52nd between Towne Avenue, do not have any trees at all.



Figure 27: Early analysis of the Avalon Project site area showing a lack of street trees  
Image Credit: The Trust for Public Land and SALT Landscape Architects

and construction documents for two alleys near the Avalon Eco-Alley Walk. Figure 27 shows an early analysis of the Avalon Project site area, revealing a significant lack of street trees. Through this partnership process, The Trust for Public Land began their work with the Avalon Project.

### **Ongoing and Integrated Community Outreach and Engagement**

While main construction for the Avalon Project is due to break ground in early 2015, community members have been engaged with the project since 2009. In many ways, the foundation for the Avalon Project is built upon community outreach, engagement and empowerment. For The Trust for Public Land, community outreach was not a box to check on a to-do list but rather an integral component to the entire project; ongoing and integrated community outreach is seen as the process of building community around the Avalon Project.<sup>112</sup>

Yet, integrating outreach into every project development step was not without initial challenges. The first initial challenge was eliciting consistent participation from residents otherwise disengaged from municipal decision-making processes. The second challenge came from the degraded state of the alleys in the Avalon Project site and the negative perception of alleys as unpleasant places for trash. For many residents, the concept of transforming alleys into desirable public places with sustainable co-benefits was a new concept.

The solutions to these initial challenges involved ongoing and integrated engagement strategies. First, to solve the issue of inconsistent participation, The Trust for Public Land actively engaged with a range of community members, including residents, local schools, and community-based groups which led to the formation of the Avalon Green Alley Green Team. The Avalon Green Alley Team's efforts have included alley cleanups, tree planting, community art projects such as murals, and the formation of a neighborhood watch in coordination with the local police division.<sup>113</sup> Additionally, instead of time-intensive community design charrettes, community members were given the opportunity to provide design input many times over the development process during events and activities.

Coupling events and activities with gaining community input has also helped to solve the second issue of the overall negative perception of the alleys. Visually learn about green alley options and weighing in on the types of green alley elements they wanted to see in their neighborhood, as seen in Figure 28 and 29, has helped community members to become mutual authors of the project. Other formats have included presenting options of green alley elements through conducting surveys, tabling, door-to-door engagement and interactive flip books. The result of this engagement has been community input on mural designs, planting types and green alley features. This flexible and adaptive strategy has allowed The Trust for Public Land to receive input about the community's immediate concerns related to alley safety and cleanliness while gathering feedback on green alley improvement possibilities. The Trust for Public Land hopes that this ongoing community engagement process promotes long-term stewardship and placemaking in the alleys.<sup>114</sup>



Figure 28: The Trust for Public Land presenting images of options for the Avalon Project to gain feedback  
Image Credit: The Trust for Public Land



In order to expand upon ongoing and integrated community outreach and engagement, each project step within this chapter is accompanied by a sidebar of *Integrated Community Outreach Examples*. The purpose of each sidebar is to highlight outreach methods used during each stage of the project that could be relevant to future efforts. These examples are not an exhaustive list of outreach and engagement strategies, but rather noteworthy examples that can aid in green alley development.



Figure 29: Interactive flip books presenting green alley options to residents  
Image Credit: The Trust for Public Land

### Examples of Integrated Community Outreach in the Beginning of the Avalon Project

Community groups, residents and other stakeholders were heavily involved in initial outreach activities to build excitement about green alleys and discuss possibilities for green local alleys. Initial outreach activities included:

- Door-to-door flyering, tabling, and living room meetings around: What is a green alley?
- Presenting at schools, community centers, parent meetings and neighborhood council meetings.
- Posting “No Dumping” signs and partner-led alley cleanups.
- Tree-care training and workshops in collaboration with TreePeople to support the planted 150 street trees.

## 2. Partnerships and Funding Steps

A myriad of partnerships has set the foundation for the Avalon Green Alley Network Demonstration Project to accomplish the diverse range of goals and features.

### Funding and Municipal Partnerships

Early in the development of the Avalon Green Alley Network Demonstration Project, The Trust for Public Land established partnerships with multiple City agencies to align the project with Citywide green infrastructure development and to create strong inter-agency collaboration. As previously mentioned, CRA/LA was The Trust for Public Land's main City agency partner, until the 2012 dissolution of community redevelopment agencies in California, including the CRA/LA. This partnership was key in jumpstarting the Avalon Project in terms of providing seed money and coordinating the project with other Citywide policy and planning efforts.<sup>115</sup> After the dissolution of the CRA/LA, the Bureau of Sanitation, Watershed Protection Division (BOS WPD) became The Trust for Public Land's primary City partner. BOS WPD's main objective is water quality, therefore, BOS WPD's ownership of the Avalon Project centers on the stormwater management components. Other municipal partnerships included:

- City of Los Angeles Department of Planning
- City of Los Angeles Department of Transportation
- City of Los Angeles Department of Public Works - Bureaus of Engineering and Street Services
- The inter-agency City of Los Angeles Green Streets Committee<sup>116</sup> and Green Alley Subcommittee<sup>117</sup>
- Los Angeles Fire and the Los Angeles Police Department, including the Newton Division (see Figure 30).
- The Los Angeles Mayor's Office of Community Beautification (supplied materials for alley cleanups with the community as well as permission to reprint the city's 'No Dumping' sign in English and Spanish, as seen in Figure 31).



Figure 30: The Los Angeles Police Department, Community-Policy Advisory Board, Newton Division participating in community event in an alley in the Avalon Project site area  
Image Credit: The Trust for Public Land



Figure 31: 'No Dumping' Spanish sign posted in alleys in the Avalon Project site area  
Image Credit: The Trust for Public Land

While some of the listed municipal partnerships were initially challenging to foster, all of the aforementioned partners engaged in early-stage concept and planning meetings to identify the Avalon Project as a potential model effort.<sup>123</sup> As a non-profit organization approaching the City about an unprecedented green alley network, The Trust for Public Land had to develop, navigate and demonstrate the authorization process, which took multiple coordination meetings, time and patience. This experience is further clarified in the *Partnerships and Funding* section in on pages 70 and 71.

Political and municipal support has been a critical component of the Avalon Project. Council member Price's entrance into office in July 2013 and his associated focus on alleys in District 9 significantly nurtured the project. This partnership, along with other significant partners, can be seen in Figure 32. Furthermore, the partnership with BOS WPD enabled robust stormwater management elements with the alleys due to their support, expertise and access to funding. This specific partnership has helped The Trust for Public Land to apply and secure grants related to stormwater management (See the *Partial List of Funding Sources* on page 51 for these and other funding sources).



Figure 32: U.S. Representative Lucille Roybal-Allard and Los Angeles City Councilman Curren Price, whose respective districts encompass the Avalon Project site, with students and faculty of Maya Angelou Community High School, the Avalon Green Alley Green Team and The Trust for Public Land staff  
Image Credit: The Trust for Public Land



## Other Partnerships and Funding<sup>118</sup>

The following additional partners collaborated with The Trust for Public Land on various outreach, advocacy and design elements of the Avalon Project:

- Los Angeles Conservation Corps (LACC): The LACC Clean and Green Division helped The Trust for Public Land to organize alley cleanups (See Figure 36). They are the primary partners for street tree planting and near-term watering.
- The Coalition for Responsible Community Development (CRCD): The CRCD is a nonprofit community development organization in South Los Angeles who has worked with The Trust for Public Land on alley cleanups, including graffiti abatement. They are part of a long-term maintenance strategy for aspects of the green alleys.
- Community Health Council (CHC)/ Coalition for an Active South Los Angeles (CASLA): The CASLA, a branch of CHC, advocated for the Avalon Project by highlighting it as a priority project for community health and promoting the project to South Los Angeles residents and partner organizations.
- TreePeople: This environmental nonprofit connects Los Angeles residents to the environment through tree plantings and tree-care activities. TreePeople partnered with The Trust for Public Land to form the Avalon Green Alley Green Team, training residents to care for and plant trees and co-hosting several tree care and planting days in the neighborhood.
- Maya Angelou Community High School and Main Street Elementary School: Located within the Avalon Project and part of the participatory design process, school students participate in cleanups. The Trust for Public Land intends to collaborate with the schools and facilitate the integration of the Avalon Project features into their core curriculum.



Figure 33: Student cleaning up an alley in an Avalon Project alley site  
Image Credit: The Trust for Public Land

- Jefferson High School: This adjacent high school formally hosted a Green Design Academy and also has a green alley project. Jefferson High School partnered with The Trust for Public Land on outreach activities (see Figure 33).
- California State Polytechnic University, Pomona, College of Environmental Design, 606 Design Studio: The design studio, held in 2009, assisted The Trust for Public Land in the early conceptual design of the Avalon Project.
- Council for Watershed Health: Monitoring and evaluation of water quality, both before and after project implementation.
- Consultants and vendors: SALT Landscape Architects, Breen Engineering civil engineers and Byer Geotechnical are Los Angeles-based consulting firms that developed preliminary and final designs for the project. (A private company will also be hired for the construction phase).

## A Partial List of Funding Sources<sup>119</sup>

Creating a prioritization strategy for improvements was important to establishing a fundable construction budget. This funding strategy has led to a plan that does not apply the full range of greening and design elements to every alley in the network; instead, the system allows The Trust for Public Land to apply design features to select alley segments that fulfill certain funding qualifications and thereby meet overall programmatic objectives. Funding the select alley segments of the Avalon Project through grants, as seen below, has led to a phased construction. This is in part due to the fact that grant funding was not achievable for all phases simultaneously. Therefore, the project's implementation is broken down into three phases for construction.

### Public Funding:

- City of Los Angeles Community Redevelopment Agency
- State of California Urban Greening Grant Program
- State of California Water Resources Control Board – Stormwater Grant Program, Rounds One and Two
- State of California Coastal Conservancy
- City of Los Angeles Proposition O
- LA County Proposition A

### Private Funding:

- The JIB Fund Community Building Initiative
- LA2050, an initiative of the Goldhirsh Foundation
- The National Fish and Wildlife Foundation
- Wells Fargo
- The Trust for Public Land

## Examples of Integrated Community Outreach During the Partnerships and Funding Phase

Developing multiple partnerships at varying levels with the South Los Angeles area and the broader city was crucial to advancing the Avalon Project. Diverse project elements has attracted a myriad of support from many types of stakeholders to:

- Organize and facilitate monthly *pláticas*, informal talks and lectures, through partnerships with the Maya Angelou High School and TreePeople, a Los Angeles-based environmental non-profit. TreePeople provided structure, content and expertise around tree planting and The Trust for Public Land provided information and education around how residents can green their alleys. The resulting *pláticas* curriculum included a monthly meeting centered on tree planting and green alleys.
- Develop the Avalon Green Alley Green Team to lead green alleys Days of Service for alley clean-ups. Members earn a Green Team T-shirt, as seen in Figure 48 on page 71, after attending five events or *pláticas*, which helps to create cohesion and excitement around the Avalon Project.
- Facilitate graffiti abatement in partnership with CRCD and the Los Angeles Conservation Corps.

### 3. Design and Permitting Steps

The various design schematics for the Avalon Green Alley Network Demonstration Project, and ultimately the versions that will be implemented, are products of a participatory and collaborative design process and regulatory considerations.

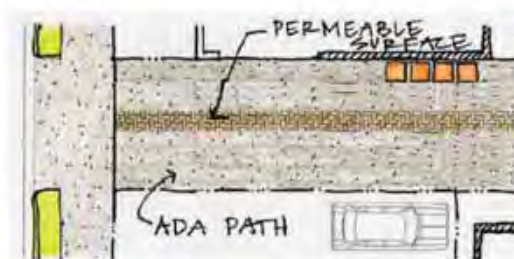
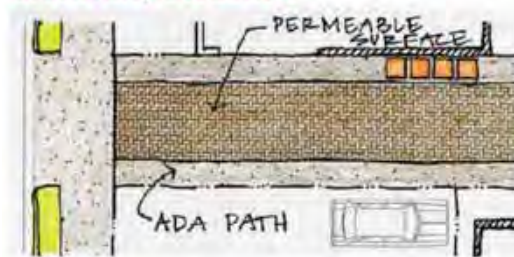
#### City Regulations

Before elaborating on the design elements, it is important to acknowledge the role that City regulations played in the final design schematics. Specific interactions with City agencies altered elements, materials and design schematics of the Avalon Project while others facilitated the development process. Meetings with City departments regarding design schematics resulted in a refined palette of suitable materials; the City's advice centered on utilizing standard materials and avoiding the use of textures and colors out of the context of road and pedestrian safety. Through the use of the non-standard techniques and materials featured in the "Rainwater Harvesting Program: Green Street & Green Alleys Design Guidelines (2009)," The Trust for Public Land was able to navigate the City's compliance related to green infrastructure, including permeable paving, dry wells and other green infrastructure elements suitable in the public right-of-way (see Figure 34).

The Avalon Project complies with permit requirements within the public right-of-way. Ultimately, however, BOS WPD decided that no permits were necessary because of the Avalon Project's status as a pilot project.<sup>120</sup> Instead, a Memorandum of Agreement with The Trust for Public Land states that BOS WPD is responsible for correct design features, liability, and complete maintenance of the stormwater BMP elements.<sup>121</sup>

In order to achieve the alley closure in what is referred to as the North Alley segment within the T-shaped alley, The Trust for Public Land employed the precedent set by the East Cahuenga Alley Revitalization Project (EaCa Alley) to designate the alley segment as a pedestrian mall. As previously mentioned

#### Green Alley Scenario 3



#### Green Alley Scenario 5

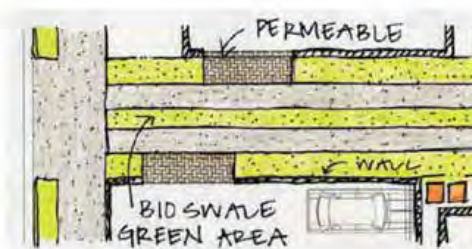
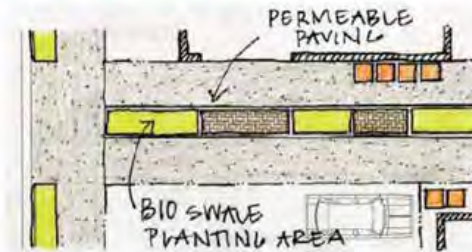


Figure 34: Two examples of green alley scenarios developed by the City of Los Angeles' Green Alley Subcommittee  
Image Credit: The City of Los Angeles



in the EaCa Alley case study on pages 24 and 25, the Pedestrian Mall Law of 1960 within the California Constitution can be applied to alley conversions into pedestrian-only spaces in California, which was the case in EaCa Alley. A pedestrian mall designation restricts vehicle access in a public street, which includes an alley, and enables exclusive or primary pedestrian travel.<sup>121</sup>

### **A Green Alley Network and System for Prioritizing Improvements**

As previously mentioned, one defining decision made early in the design process was the broadened scope of the Avalon Project to a green alley network. This decision also broadened the improvement possibilities and enabled the idea that the network of improved alleys could function as alternative pedestrian passageways throughout the area. As a result, the Avalon Project proposes design amenities that are traditionally used in street re-design or improvement projects, such as signage, art and street trees. Additional public right-of-way and sidewalk improvements, such as bus shelters, crosswalks, new curb and gutters, striping and traffic calming street features, were inventoried during this process in order to lay the groundwork for potential future municipal implementation.

In order to control costs, The Trust for Public Land developed a system for prioritizing improvements: the Alley Retrofit TIER 1 and TIER 2 alley improvement structure. This system allows identified alleys to receive one of two treatments. Alley Retrofit TIER 1 involves low-impact development projects in which alleys will have asphalt pavement replaced with permeable materials to reduce stormwater runoff as well as planted vegetation and espaliered fruit trees accented with public art. The remaining Alley Retrofit TIER 2 alleys will be cleaned up and beautified with vines and artwork but will not involve stormwater management elements.

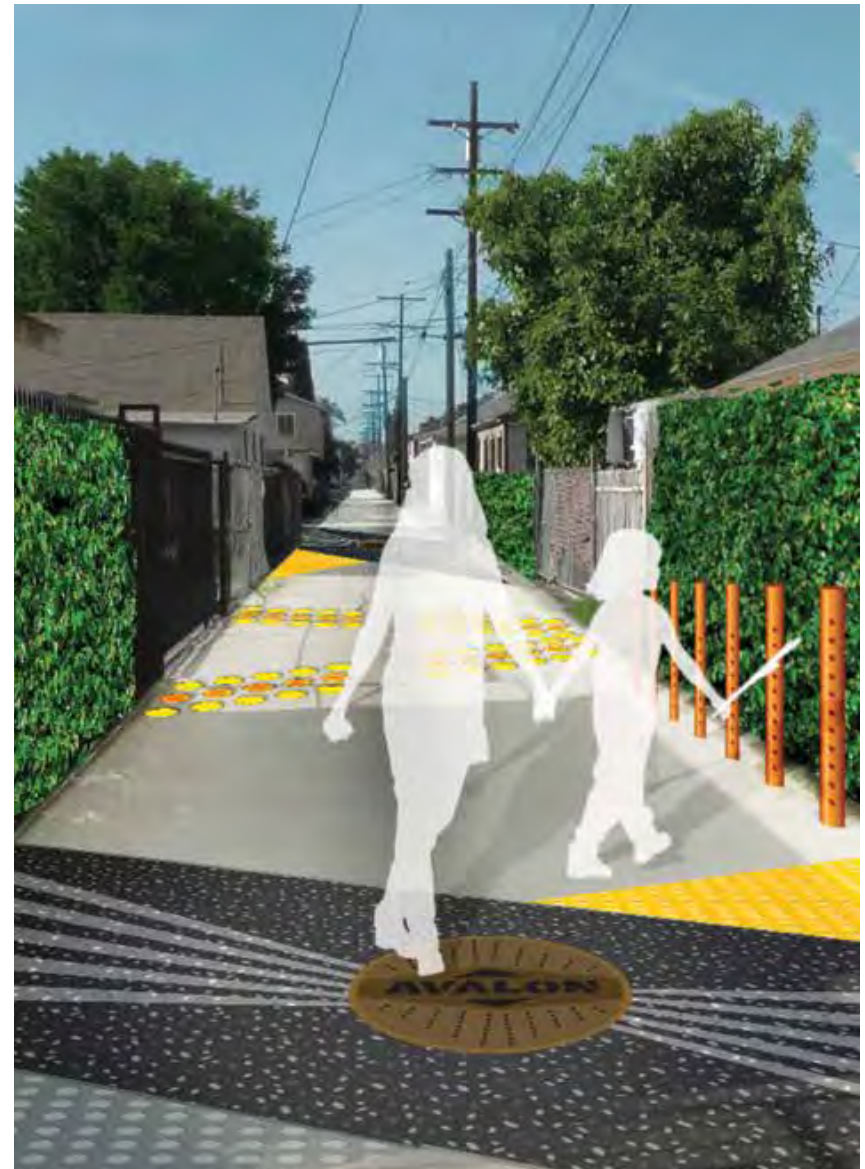


Figure 35: Conceptual rendering of the Avalon Project  
Image Credit: SALT Landscape Architects

## A Summary of Design Features

A key intention for the design of the Avalon Project is a replicable model that demonstrates a comprehensive approach to green alleys that can be implemented throughout Los Angeles. With this in mind, it was imperative to design transferable features that comply with City regulations and permitting. The Trust for Public Land retained the refined material palette developed in accordance with suggestions from multiple City agencies in order to create a replicable project for the City of Los Angeles. While not all city agencies approved the non-standard materials, willingness within the BOS WPD to try new materials and promote pilot green infrastructure projects ultimately created a window of opportunity for developing the project.<sup>122</sup>

The overall design concept for the Avalon Project began as the re-appropriation of an auto-oriented alley into a pedestrian environment. However, City standards required initial design elements be scaled back, such as the use of tactile pavement as decorative features and a limited color palette to differentiate alley markings from standard markings in the public right-of-way. To avoid cost and time delay, hardscape materials were selected from those that met with the City's previously tested standards and the color palette was limited to the standard colors used for public right-of-way spaces.

Despite some design restrictions, many creative elements will be used in varying degrees throughout the network. These elements include permeable paving, colored concrete, sandblasting, solar powered lights and recreational elements, such as fruit tree planters and boulders for seating, along with interpretive signage and design-based information inlaid into the paving. The Trust for Public Land hopes that the combination of these design elements will help to create a sense of place within the Los Angeles River Watershed, and educate residents about pollution prevention and green infrastructure benefits.<sup>123</sup> Future steps will potentially include a fitness and walking loop and additional artwork.

Pedestrians will share the green alleys network with vehicles, except for one segment of a T-shaped alley in the northeastern corner of the network, which is a pedestrian-only zone that will be closed to traffic. This 1,700-square-foot

public right-of-way will have specialized elements to help create a green space and a nexus for outdoor gathering, positive community interaction, and recreation (See Figure 36).<sup>124</sup> While the parking feasibility study conducted in the *Research and Pre-Design Studies* step identified that three alley segments could be closed to vehicle traffic, further research prioritized one segment for transformation into a pedestrian mall with prohibited vehicular access.

Design improvements of the Avalon Project will extend to the surrounding street network by way of extensive street tree planting. To amplify surrounding improvements, The Trust for Public Land's vision of the Avalon Project includes traffic calming and pedestrian-friendly improvements to surrounding streets, such as speed bumps, bus shelters, enhanced crosswalks, advanced crossing or "sharks teeth" and flashing warning pedestrian crossing signage at strategic locations within the network.<sup>125</sup>

It is important to note that streetscape improvements are outside of The Trust for Public Land and BOS WPD's current scope, therefore their implementation depends on how the Los Angeles Department of Transportation (LADOT) and the Metropolitan Transportation Agency (MTA) decide to prioritize investments.<sup>126</sup> The Trust for Public Land hopes that these elements will help connect and create safe crossings among the alley segments as well as improve the pedestrian experience. The pedestrian enhancements may be implemented through a prioritization system that allows The Trust for Public Land to assign levels of priority to intersections and high pedestrian traffic areas based on pedestrian usage, existing safety features, proximity to schools and traffic speeds (see Figure 37).





Figure 36: Conceptual rendering of the T-shaped alley, pedestrian-only zone located in the northeastern corner of the network  
Image Credit: SALT Landscape Architects



**NETWORK: PROPOSED PRIORITY PROJECTS**

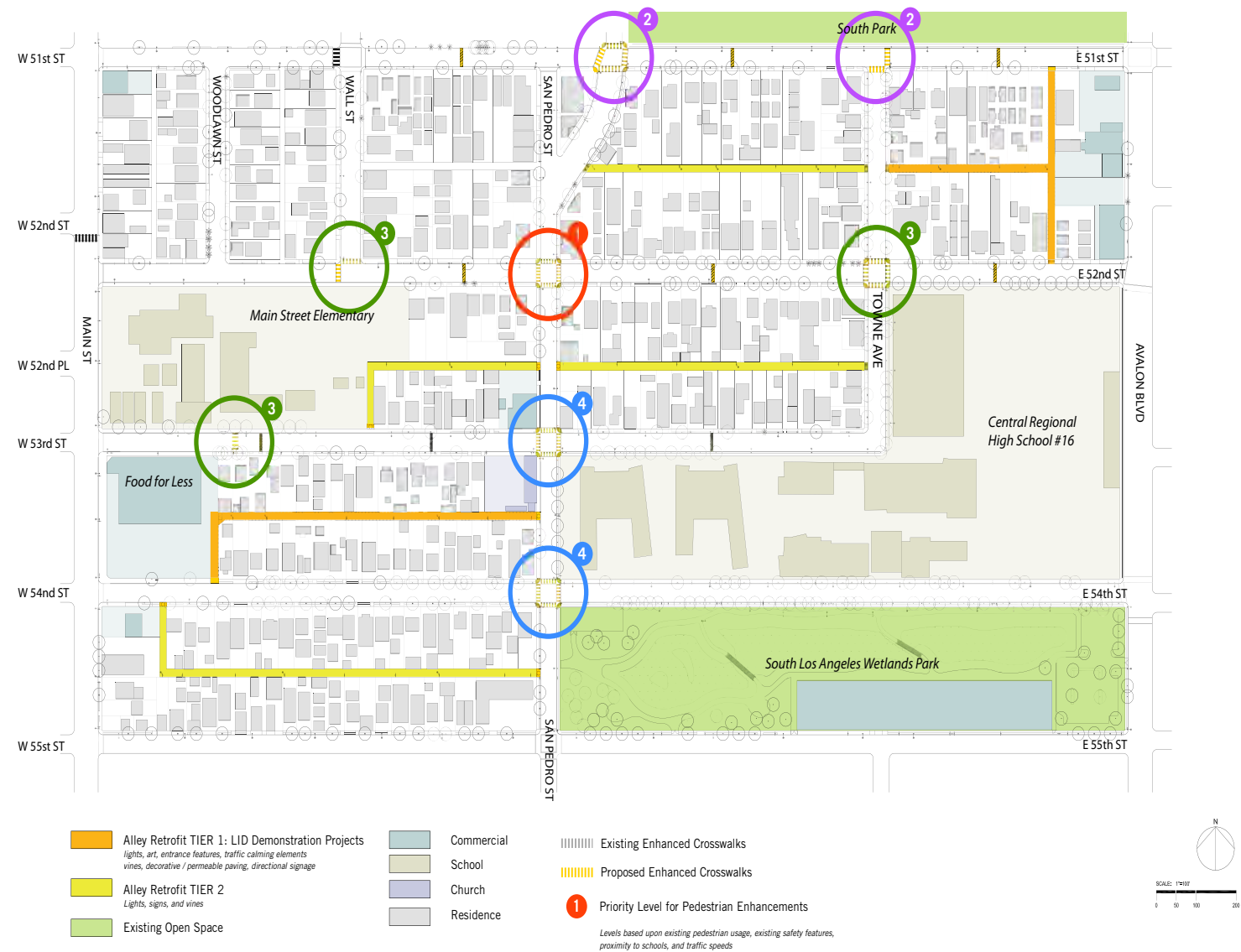


Figure 37: Prioritization of streetscape improvements  
Image Credit: The Trust for Public Land and SALT Landscape Architects

## A Summary of Stormwater BMPs

The inclusion of robust stormwater BMPs in the Avalon Project design is in part due to the City of Los Angeles' expanded interest in stormwater management over the lifetime of the project.<sup>127</sup> This interest further increased after a Supreme Court ruling on Los Angeles' stormwater pollution and new regional projections for climate change and reduced California water supply.<sup>128</sup>

The most visible stormwater BMP to be implemented consists of the removal and replacement of impervious asphalt with light-colored, high albedo permeable pavers and concrete (see Figure 38). The permeable interlocking pavement system will collect stormwater runoff via a four-foot-deep, subsurface infiltration trench, providing temporary storage prior to infiltration into the soil below. Any stormwater draining from the block not otherwise captured in the permeable paving, as well as water captured through catch basins connecting to intersecting streets, will guide flows to dry wells. Dry

wells consist of subsurface chambers to capture, provide inline filtration and infiltrate runoff from accumulated stormwater. They are a cost-effective strategy to provide maximum capture and storage volume in a limited space.<sup>129</sup> By the time the Avalon Green Alley Network Project is built out, the retrofitted green alleys will minimally capture and infiltrate over 76,000 gallons of stormwater each time it rains, which represents the first flush (first 3/4-inches) or most polluted runoff for each rain event. Roughly speaking, up to two million gallons of stormwater could be captured and infiltrated each year, based on an average annual rainfall of 12 inches for the Los Angeles area.

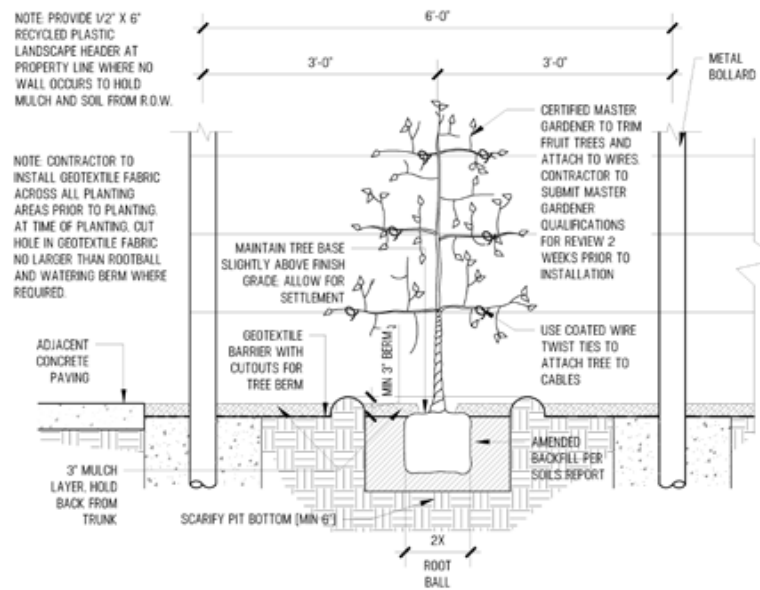
Combined with the planting areas, these BMPs can help reduce pressure on the existing storm drain system, clear alleys of stagnant wet spots and foul odors, replenishing groundwater stores through infiltration, thus improving water quality to downstream receiving waters such as the Los Angeles River and coastal areas.<sup>130</sup> Water not captured in permeable paving or infiltrated in dry wells will help water trees and vines planted along the side of alleys (see Figures 39 and 40).



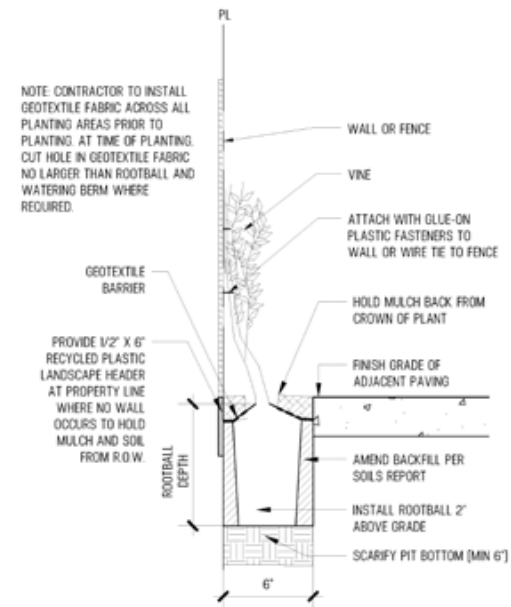
Figure 38: Conceptual rendering of the Avalon Project's permeable paving and catch basins  
Image Credit: SALT Landscape Architects



Figure 39: Conceptual rendering of vine plantings  
Image Credit: SALT Landscape Architects



ESPALIER TREE DETAIL 6  
1" = 1'-0"



VINE PLANTING DETAIL 3  
NTS

Figure 40: Construction details of the vine plantings  
Image Credit: SALT Landscape Architects



### Examples of Integrated Community Outreach during the Design and Permitting Phase

The community was very involved in project design. Through offering suitable choices that were driven by permitting considerations, The Trust for Public Land was able to receive community design input. Residents informed the process by responding to different images of green alleys and deciding if they liked certain elements through:

- Participatory design feedback in a 10-minute interview format.
- Attending free neighborhood-wide events held by The Trust for Public Land and partners that included Christmas *posadas* (potlucks), end-of-school BBQs and Earth Day Tree-Planting, and potentially becoming interested and invested in the project.
- Joining the Avalon Green Team (which expanded at this time from seven to 20 members).

### Next Steps

The following planned steps are not yet implemented and thus the details could be subject to change. Nevertheless, these steps are included in this report because they are integral to creating an impactful and comprehensive green alley project.

### 4. Construction and Implementation Steps

Construction for the Avalon Project begins in early 2015 and will be implemented in three phases due to the nature of funding through multiple grant sources.

As the City's lead partner, The Trust for Public Land hired several private sub-contractors for the project's design, construction and engineering. A general contractor will complete the construction under private contract. While the Avalon Project has three construction phases, it is important to note that other green alley project or program's construction phase can be implemented in a single phase. The following elaborates on the elements included in each construction phase:

**Phase 1: Avalon Green Alley South.**<sup>131</sup> Phase 1 includes construction of the TIER 1 L-shaped alley in the southwestern corner of the network, located between W 53rd street and W 54th street and Main Street and San Pedro Street. Phase 1 involves the construction of three BMPs to capture and infiltrate runoff from the surrounding block and intersecting streets via catch basin intercepts; a drywell system; over 2,200 SF of interlocking permeable pavers overlying an infiltration trench and; vines and fruit trees in planters.

- Avalon South's Total Stormwater Volume Managed (per 0.75" rainfall) = 47,771 gallons (or 6,386 cubic feet)
- Drainage Area = 4.44 acres

**Phase 2 and 3: Avalon Green Alley North.**<sup>132</sup> Phase 2 includes construction of the pedestrian-only segment of the TIER 1 T-shaped alley in the northeastern corner of the network, located between E 51st street and E 52nd street and Avalon Blvd and Towne Avenue, and directly adjacent to the

Maya Angelou Community High School. Phase 3 involves the construction of three BMPs to capture and infiltrate runoff from the surrounding block and intersecting streets via a catch basin intercepts; a drywell system; over 800 SF of interlocking permeable pavers overlying an infiltration trench and; vines and fruit trees in planters.

- Avalon North Total Stormwater Volume Managed (per 0.75" rainfall) = 29,002 gallons (or 3,877 cubic feet)
- Drainage Area = 2.89 acres

**During Phases 1 and 2:** the Avalon Green Alley Green Team and the Los Angeles Conservation Corps will participate in community planting days to plant nearly 150 street trees throughout the green alley network (See Figure 44).



Figure 41: Community residents participating in a tree care workshop  
Image Credit: The Trust for Public Land

### Examples of Integrated Community Outreach during the Construction and Implementation Phase

Community members will continue to be involved in the construction and implementation phase including, for example creating poetry that will be included in the alleys. The Avalon Green Team will be part of tree planting and clean up events that will be held throughout the different construction phases. Additional outreach efforts that The Trust for Public Land plans include:

- Holding community information meetings during construction.
- Facilitating the participatory process for poetry that will be added in the alleys.
- Organizing the alley grand-opening event.

## 5. Maintenance and Stewardship Steps

The maintenance plan involves stewardship by the various agency stakeholders and perhaps most importantly, community stakeholders.

The overall, long-term care of the green alleys is anticipated to be a combined city and community-led endeavor. In order to facilitate and promote this hybrid stewardship and maintenance regime, community outreach is tightly coordinated with maintenance requirements. Ultimately, The Trust for



Figure 42: Community residents and project partners removing trash from South Park neighborhood's alleys  
Image Credit: The Trust for Public Land

Public Land seeks to join neighborhood safety, greening and events with maintenance. Regular use of the alleys by residents during the day and night can promote their integration into daily life activities, as well as help deter vandalism and reduce illegal activity.

Multi-agency collaboration and community support will help to maintain the improvements over time. Accordingly, the Memorandum of Understanding with BOS WPD places the bureau as responsible for the stormwater BMPs and green infrastructure maintenance (grant funding obligates the City for 20 years minimum).<sup>133</sup> Additionally, adjacent local schools have informally agreed to support the project with maintenance through the schools' service-learning and community service activities.<sup>134</sup> As an example, the partnership with the neighboring school, Maya Angelou High School, has led to a multi-year plan and a letter of understanding of their commitment to engage students and provide spaces for various community meetings. The objective is to work with the school with adjacent schoolteachers to integrate green alley maintenance and stewardship into the students' curriculum, daily schedules and school events over time.

Maintenance will also involve Los Angeles Conservation Corps and the non-profit organization Coalition for Responsible Community Development (CRCD), which often helps the Bureau of Sanitation and other city agencies in graffiti and trash removal, as well as mitigating deterioration by the request of residents (see Figure 41). Vegetation maintenance is planned to be the responsibility of volunteer gardening organizations, yet identified, who will mentor and assist the Avalon Green Alley Green Team in pruning, watering and care of the fruit trees and drought-tolerant plants (see Figure 42). In most circumstances, the Bureau of Sanitation and Street Services maintain alleys in the City of Los Angeles and beyond. However, the Avalon Project is unique in that only the maintenance and operations of the project's stormwater components will be provided by the Bureau of Sanitation. The BOS WPD will provide long-term maintenance and operations of the stormwater BMPs as part of their regular wastewater conveyance and sanitation oversight.<sup>135</sup>





Figure 43: Members of the Avalon Green Alley Team maintaining alleys in the Avalon Project's site area  
Image Credit: The Trust for Public Land

### Examples of Integrated Community Outreach: Maintenance and Stewardship

Through sharing the multi-benefits of green alleys and facilitating active community participation throughout the development steps, The Trust for Public Land has created a framework to guide the community with long-term stewardship of the green alleys. With community members already engaged, maintenance and stewardship are planned to coincide to support and care for the green alleys. Examples of community outreach at this step are:

- Maintenance provided by Maya Angelou High School through the integration of standards-based content about green alleys into their curriculum.
- Provision of training to the Avalon Green Alley Green Team, a group that meets monthly in support of the project, to prepare them as green alley stewards: tree planting and tree maintenance, community education on bulky item pickup, event organizing (see Figure 43).
- Facilitating an increase in participation and stewardship through Avalon Green Alley Days of Service and other events approximately two to three times per year in the alleys.

## 6. Monitoring and Evaluation Steps

Monitoring and evaluation is crucial for quantifying the effects of the improvements of the Avalon Project and determining its overall success. Data gained from these steps can help to promote further green alley development.

The Trust for Public Land and the Council for Watershed Health (CWH) will conduct pre- and post- implementation evaluation and monitoring for the purposes of quantifying green alley benefits. These steps are expected to help provide measurable outcomes and replicable solutions for the implementation of stormwater infiltration in other densely developed neighborhoods across Los Angeles. The CWH will provide an analysis based on monitoring the stormwater infiltration components and collecting water samples. The CWH will also analyze the effects of the proposed BMPs on water quality and water supply as well as document the operations and maintenance needs of the BMPs.<sup>136</sup> Monitoring and Evaluation is planned for six months prior to construction and 12 months after construction completion.

Monitoring and evaluation plans also include measuring social and educational impacts, public health improvements, greenhouse gas reduction, and increased biological diversity through the implementation of monitoring equipment, neighborhood surveys and interviews with residents and students.<sup>137</sup> The Trust for Public Land plans to survey the community during these evaluation periods to ask questions, like those seen in the sidebar, that help to quantify the changes created by the implementation of the project.

### Integrated Community Outreach: Monitoring and Evaluation

The community outreach during the Monitoring and Evaluation steps will revolve around interviewing residents through pre- and post-implementation evaluation. One of the planned methods of collecting information from residents includes surveys to present questions in an attempt to measure the social, educational, economic, public health and environmental improvements. Examples of planned survey questions about alley use and quality include the following:<sup>138</sup>

#### **Generally, how often do you use the alleys in your neighborhood? (Check one)**

- ☐ Daily
- ☐ A few times per week
- ☐ Once per week/a few times per month
- ☐ Monthly
- ☐ A few times per year
- ☐ Never

#### **Are there specific concerns you have about the alleys in your neighborhood or reasons you do not use them? (Check all that apply)**

- ☐ Desired features are not available
- ☐ Safety concerns
- ☐ Maintenance issues
- ☐ Traffic (driving cars or parking)
- ☐ Other:

## **Thinking Big: Going Beyond the Avalon Green Alley Network Demonstration Project**

There is a growing recognition that green alley projects and programs can have multi-benefits in cities. Alleys in Los Angeles are extensive and ripe for investment (see Figure 44). The South Los Angeles Green Alley Master Plan has the potential to scale up the Avalon Project to other parts of South Los Angeles. The plan focuses on a 17 square mile study area in South Los Angeles, which is framed by the 10 freeway to the north, Florence Avenue to the south, Alameda Street to the east and Western Avenue to the west, is one of the most underserved and economically challenged areas of the city. The plan has the following goals:<sup>139</sup>

- 1) Extend the Avalon Green Alley Network Demonstration Project;
- 2) Promote infill development;
- 3) Improve community walkability (thereby reducing Vehicle Miles Traveled);
- 4) Develop new attractive spaces for outdoor exercise and;
- 5) Promote multi-benefit infrastructure improvements with a focus on stormwater capture and infiltration

The main intention of the South Los Angeles Green Alley Master Plan is to formalize the green alley process and create a resource to guide the City in future green infrastructure projects. Through the partnership between The Trust for Public Land and the CRA/LA, along with other City agencies and local schools, a “Sustainable Communities Planning and Incentives Grant” was awarded to CRA/LA to create the Plan. With funds awarded from the grant in 2010, The Trust for Public Land and the CRA/LA conducted precedent studies and identified which alley segments had the greatest potential to fulfill the Plan’s diverse goals. Currently, the Trust for Public Land is responsible for project management and administration as well as overseeing outreach and completing initial design concepts for new networks.<sup>140</sup> Throughout 2014, The Trust for Public Land gathered community input through approximately 1,000 surveys collected from residents in South Los Angeles related to the alleys. The completed plan will provide a clear vision with detailed implementation steps for phasing and funding alley networks in the study area. With the re-



Figure 44: Existing conditions of alleys in South Los Angeles  
Image Credit: The Trust for Public Land

establishment of the Bureau of Sanitation WPD as the lead City agency since the CRA/LA’s dissolution in 2012, the Master Plan is slated to be completed by June 2015.

As many other cities and stakeholders continue to develop green alley projects and programs, it is important to reflect upon successful and noteworthy strategies for their implementation. Chapter 4 is designed to relay unique strategies and resources for green alley development from the Avalon Green Alley Network Demonstration Project and the various project and program examples featured in this report.



## ENDNOTES

<sup>95</sup> “State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011

<sup>96</sup> “Green Infrastructure for the Avalon Green Alley Demonstration Project.” The Trust for Public Land. 2014.

<sup>97</sup> Ibid

<sup>98</sup> “State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011

<sup>99</sup> Combined Report for CF 05-0752 Alternative Street Surfacing Materials; Green Streets; CF 08-0102 Green Alleys. October 15, 2008

<sup>100</sup> Chau, Haan-Fawn. Green Infrastructure for Los Angeles: Addressing Urban Runoff and Water Supply Through Low Impact Development. Rep. N.p.: n.p., 2009. California Water Board. Web. 6 Aug. 2014.

<sup>101</sup> Ibid; South Los Angeles Green Alleys Master Plan Grant Application. August, 2010

<sup>102</sup> Los Angeles County Public Health, August 2006 and 2006

<sup>103</sup> Ibid.

<sup>104</sup> Combined Report for CF 05-0752 Alternative Street Surfacing Materials; Green Streets; CF 08-0102 Green Alleys. October 15, 2008

<sup>105</sup> State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011.

<sup>106</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>107</sup> Rainwater Harvesting Program: Green Street & Green Alleys Design Guidelines.” 1st edition. City of Los Angeles in partnership with Sanitation Department of Public Works and Watershed Protection Division. September 4, 2009.

<sup>108</sup> Title II of the ADA requires state and local governments to make pedestrian crossings accessible to people with disabilities by providing curb ramps that meet specific standards for width, slope, cross slope, placement, and other features (<http://www.ada.gov/pcatoolkit/chap6toolkit.htm>)

<sup>109</sup> “Rainwater Harvesting Program: Green Street & Green Alleys Design Guidelines.” 1st edition. City of Los Angeles in partnership with Sanitation Department of Public Works and Watershed Protection Division. September 4, 2009.

<sup>110</sup> Combined Report for CF 05-0752 Alternative Street Surfacing Materials; Green Streets; CF 08-0102 Green Alleys. October 15, 2008

<sup>111</sup> Ibid.

<sup>112</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>113</sup> Ibid.

<sup>114</sup> State of California Water Resources Control Board Grant Program Proposal.” The Trust for Public Land. 2013.

<sup>115</sup> State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011

<sup>116</sup> A team of experts from the city of Los Angeles’ Departments of Planning and Public Works

<sup>117</sup> Comprised of members from the Board of Public Works; Bureau of Sanitation; CRA/LA; Department of Planning; and USC Center Sustainability

<sup>118</sup> “State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011

<sup>119</sup> “Funding Sources for the Avalon Green Alley Demonstration Project.” The Trust for Public Land. 2014.

<sup>120</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>121</sup> Ibid.; California Codes (shc:11000-11011).” CA Codes (shc:11000-11011). N.p., n.d. Web. 21 Jan. 2015.

<sup>122</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>123</sup> State of California Urban Greening Grant Program Proposal.” The Trust for Public Land. 2011

<sup>124</sup> Ibid.

<sup>125</sup> “Avalon Green Alley Network Pedestrian Improvements Report.” The Trust for Public Land. 2014

<sup>126</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>127</sup> Ibid.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid.

<sup>130</sup> State of California Urban Greening Grant Program Proposal.” The Trust for

Public Land. 2011

<sup>131</sup> “Green Infrastructure for the Avalon Green Alley Demonstration Project.”

The Trust for Public Land. 2014.

<sup>132</sup> Ibid.

<sup>133</sup> Ibid.

<sup>134</sup> Ballock, Laura. Project Manager for the *Parks for People* program for The Trust for Public Land. In-person interview. 4 Sept. 2014.

<sup>135</sup> “State of California Water Resources Control Board Grant Program Proposal.” The Trust for Public Land. 2013.

<sup>136</sup> Ibid.

<sup>137</sup> Ibid.

<sup>138</sup> “Draft Survey Questions for the Avalon Green Alley Network Demonstration Project.” The Trust for Public Land. 2014

<sup>139</sup> South Los Angeles Green Alleys Master Plan Grant Application. August, 2010

<sup>140</sup> “State of California Water Resources Control Board Grant Program Proposal.” The Trust for Public Land. 2013.

*Chapter page image credit:* The Trust for Public Land