

EMERGENT PUBLIC SPACE

A FRAMEWORK FOR NEW GREEN URBAN COMMONS IN SAN DIEGO



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ABSTRACT

Emergence can be defined as “the movement from low-level rules to higher-level sophistication” (Johnson, 2001). Emergence helps to explain how systems develop and change, and there is a growing body of literature where emergence theory is used to explain urban environments as Complex Adaptive Systems (CAS). A challenge remains, however, to translate our understanding of emergence and CAS into operative guidelines for the design of resilient urban environments.

Several landscape architectural theories including Landscape Urbanism, Ecological Urbanism, and the writing of Rod Barnett have endeavored to reconcile our understanding of CAS with the act of designing urban landscapes. This project builds upon this discourse by applying Barnett’s description of emergence theory to the design of specific landscape phenomena called green urban commons (GUC). These niche landscape phenomena loosen existing institutional structures and allow novel forms of land use to materialize (Radywyl and Biggs 2013). Related to the nascent practice of iterative urbanism, GUCs take various forms and often involve the conversion of underutilized urban land into productive community assets. These landscapes are iterated and changed over time by stakeholders, and temporary land uses often transition to more fixed, institutionalized change.

The goal of this pragmatic research-through-designing project is to encourage the creation of GUCs in San Diego’s Mid-City and Southeastern communities as a means to improve resident quality of life and urban resilience. The explicit application of emergence theory is presented as a way to enhance the landscape quality of GUCs, and a framework is proposed to encourage and expedite the development of new GUCs on city-owned vacant land in San Diego. To assess the scalability of the framework’s prescriptive recommendations, portions of the framework process are applied to three vacant urban lots in the Mid-City/Southeastern San Diego study area. The speculative impacts of these case studies are then discussed in light of Barnett’s criteria for civic landscapes that exhibit emergent characteristics.

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KEY TERMS

<i>Emergence</i>	“...the movement from low-level rules to higher-level sophistication” (Johnson, 2001)
<i>Green Urban Commons (GUC)</i>	“...urban ecosystems of diverse ownership that depend on collective management and organization,” usually by groups of strangers with diverse backgrounds and desires” (Colding and Barthel, 2013)
<i>Iterative Urbanism</i>	A practice concerned with how “the morphologic characteristics of the city help enable it to evolve, incrementally, over time” where “time and evolution” are considered “key to generating fit urban spaces” (Wohl and Wittmeyer, n.d.)
<i>Resilience</i>	“1) the amount of disturbance that a system can absorb while still remaining within the same state or domain of attraction; 2) the degree to which the system is capable of self-organization (versus lack of organization or organization forced by external factors); and 3) the degree to which a system can build and increase its capacity for learning and adaptation” (Cumming, 2011 as cited in Desouza and Flanery, 2013)
<i>Urban Resilience</i>	The ability of an urban system to “absorb, adapt, and respond to changes” (Desouza and Flanery, 2013)
<i>Quality of Life</i>	“An individual’s perception of his/her position in the context of culture and value systems in which they live in and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept incorporating, in a complex way, the person’s physical health, psychological state, level of independence, social relationships, personal beliefs and relationships to salient features of the environment” (WHOQOL Group, 1998)
<i>Complex Adaptive Systems (CAS) Theory</i>	“...an attempt to understand the dynamics of complex systems where the behavior of the system depends upon unpredictable interactions between parts” (Dovey, 2012).
<i>Safe-to-fail</i>	Low-risk changes to the built environment that present an alternative to large scale, high investment change. These projects are often incremental and subject to ongoing evaluation, revision, and adaptation (Lister, 2016; Ahern, 2011)



INTRODUCTION



Figure 1.1: Vacant Lot, Southeast San Diego



Figure 1.2: New Roots Community Garden

Emergence can be defined as “the movement from low-level rules to higher-level sophistication” (Johnson, 2001). Anthills, beehives, bird flocks, and even human social systems can be understood as emergent phenomena; these complex systems seem to materialize out of the apparently chaotic interaction of their simpler parts. Emergence helps to explain how systems develop and change, and there is a growing body of literature where emergence theory is used to explain urban environments as Complex Adaptive Systems (CAS). A challenge remains, however, to translate our understanding of emergence and CAS into operative guidelines for the design of sustainable urban environments.

Several landscape architectural theories including Landscape Urbanism, Ecological Urbanism, and the writing of Rod Barnett have endeavored to reconcile our understanding of CAS with the act of designing urban landscapes. This project builds upon this discourse by applying Barnett’s description of emergence theory to the design of specific landscape phenomena called green urban commons (GUC). The development and use of GUCs already closely align with Barnett’s description of civic landscapes that exhibit emergent characteristics. GUCs are understood as “urban ecosystems of diverse ownership that depend on collective management and organization,” usually by groups of strangers with diverse backgrounds and desires (Colding and Barthel, 2013). Examples include community gardens, urban tree orchards, plazas, and other public spaces such as Times Square. These niche landscape phenomena loosen existing structures and allow novel forms of land use to materialize (Radywyl and Biggs, 2013). Related to the nascent practice of iterative urbanism, GUCs take various forms and often involve the conversion of underutilized urban land into productive community assets. These landscapes are iterated and changed over time by groups of stakeholders, and temporary land uses often transition to more fixed, institutionalized change. As negotiated urban spaces, GUCs are recognized as contributors to both community political capacity and urban resilience (Colding et al., 2013; Colding and Barthel, 2013; Radywl and Biggs, 2013).

The goal of this project is to encourage the creation of GUCs in San Diego’s Mid-City and Southeastern communities as a means to improve resident quality of life and urban resilience. The explicit application of emergence theory is presented as a way to enhance the landscape quality of GUCs, and a framework is proposed to encourage and expedite the development

of new GUCs on city-owned vacant land in San Diego. To assess the scalability of this project's prescriptive recommendations, portions of the Framework process are applied to three vacant urban lots in the Mid-City/Southeastern San Diego study area. These case studies are then discussed in light of Barnett's criteria for civic landscapes that exhibit emergent characteristics.

This chapter contains a brief discussion of project significance and the key theoretical concepts that have guided project research. Theories and precedent-based assertions are discussed to provide a foundation for the researcher's design decisions during action research, Framework development, and site-specific landscape proposals.

Project Significance

The creation of new GUCs on underutilized urban land can benefit communities facing an array of economic, social, and environmental justice challenges. Since volunteer or community-led efforts for GUC creation can be understood as informal and process-oriented, this project proposes a framework for designing and managing these spaces that is flexible and open-ended.

In their article "Rethinking urban transformation: Temporary uses for vacant land," Jeremy Nemeth and Joern Langhorst (2014) present the case for "temporary, incremental, flexible, and experimental responses to urban vacant land," arguing for a "systematic inclusion of temporary uses into existing planning and design instruments to realize the latent potentials of vacant urban lands as an important resource." Such temporary uses often entail the appropriation of vacant land for some new ecological, social, economic, or public space function. A classic example might be the use of vacant land for urban agriculture, though more contemporary interventions have endeavored to develop new parks and public spaces on previously derelict lots (Bishop, 2012; Fernández and Mozas, 2012). Temporary use of vacant urban land is understood as a reflexive, open-ended solution in response to urban systems that are constantly in flux. Several "shrinking cities" in the United States such as Detroit and New Orleans have been the subject of speculative design projects focused on temporary uses for vacant urban lots, though Nemeth and Langhorst present the argument that an economically robust city

such as San Diego could also benefit from an exploration of design possibilities for its publicly-owned vacant land.

Temporary uses for vacant land may also be classed as iterative urbanism projects, where interventions initially considered 'temporary' actually change and inform the future of an urban landscape, neighborhood, or community (Westbury, 2012; Wohl and Wittmeyer, n.d.). Such projects often embody a participatory, 'bottom-up' approach to the design of urban spaces that allow community members and laypeople to take an active role in the design of their urban spaces. These instances of direct engagement in the development of urban landscapes often strengthen communities' political capacity by encouraging residents to claim agency over their physical surroundings and democratically negotiate the trajectory of their built environment.

Despite the fact that vacant land use and iterative urbanism projects are becoming accepted in the mainstream of urban planning, few designers have taken on the challenge of proposing a scalable, emergent framework for GUCs rooted in the principles of CAS. Urban master plans and large public park designs by the studios of George Hargreaves, James Corner, and Michel Desvigne have endeavored toward nonlinear, emergentist designs rooted in CAS theory, though no explicit effort has been made to construe the theoretical underpinnings of these propositions to small-scale community-driven vacant land development (Berrizbeitia, 2007; Czerniak and Hargreaves, 2007; Tiberghien, 2012).

Informed by action research, this project proposes a flexible, process-oriented Framework and pragmatic "kit-of parts" for GUC development, equipping stakeholder groups with design guidelines and organizational strategies that can facilitate the improvement of unsafe, underutilized vacant lands. By providing a low-cost palette of materials and "Spatial Scaffold" to guide physical development, this project lowers barriers to the creation and collective management of new public spaces in some of San Diego's most underserved communities. By revealing the untapped potential of vacant lots, it is hoped that this project will inspire residents in these areas to take an active role in the development of public space in their own neighborhoods.

LANDSCAPE TYPE

In order to comprehend the impact of this project, one must also understand the landscape type being designed. Specifically, the landscapes proposed by the Framework are GUCs on vacant city-owned land that qualify as iterative urbanism projects.

Urban Design

This research project ties into a broader discussion about what constitutes good urban design. Sentiments and theories as to how cities and public spaces should be built have changed throughout history, and an abundance of literature exists on the topic. A cursory summary of the western approach to urban design suggests movement from the organic development patterns of ancient and medieval cities to baroque and Renaissance urban design approaches characterized by axial geometry, symmetry, order, and a direct aesthetic connection to the high classicism of the ancient Greeks. As the scientific, rational approach of the Renaissance and Enlightenment periods led toward modernity and the industrial revolution of the 19th century, cities seethed and grew along with the rise in manufacturing and concentrated centers of work. As an answer to the social ills of industrialization and what he saw as irresponsible, lifeless urban design, Camillo Sitte published *City Planning According to Artistic Principles* in 1889 to expound the importance of aesthetics in the design of cities. Sitte, along with his contemporaries

such as Werner Hengemann, conducted extensive urban precedent research on European spaces such as Piazza Duomo (Figure 1.3) to inform their practice of “civic art,” crafting picturesque places to provide healthy, beautiful living environments for city dwellers (Bohl, 2009). Urban design was translated to an American context by Figures such as John Nolen, who developed comprehensive plans for more than twenty-five cities in the United States (Stephenson, 2014). Nolen’s general plans, such as the one for Venice Florida (Figure 1.4) guided the development of urban form by designing large-scale networks of green open spaces, roads, and civic centers.

The aesthetic emphasis of Hengemann and Sitte contrasts sharply with Nolen’s function-based approach to urban design that gained popularity in post-war 20th century America. Along with dramatic advances in technology and manufacturing, urban form was dictated largely by municipal zoning that eschewed walkable mixed-use communities and instead favored suburban development and automobile infrastructure. The work 1960s and 1970s of Figures such as Jane Jacobs, William Whyte, and Christopher Alexander ushered in critiques of the ‘functional city’ and spurred the new urbanism approach to urban design that advocates for mixed-use, human-scale urban environments.



Figure 1.3: Piazza Duomo, Milan, Italy (Source: Wikimedia Commons)



Figure 1.4: John Nolen plan for Venice, Florida (Source: City of Venice)



Figure 1.5: Efflorescent Ecologies Master Plan, Zhenhai, China (Source: Maya Abdul-Latif)

In our current era characterized by globalization, many contemporary landscape architects and urban design theorists have begun to favor landscape urbanism and ecological urbanism as ways to explain and shape the environment. Landscape urbanism contrasts sharply with the picturesque means of Sitte, Nolen's comprehensive urban planning, and post-war modernism. After Charles Waldheim, Rod Barnett summarizes the components of landscape urbanism as follows:

1. *Basis in postmodern critique of architectural urbanism*
2. *Recognition of the indifference of city development to the stylistic oscillations of architecture*
3. *Landscape as a singular medium in its own right*
4. *Development of landscape architectural practice in the wake of modern urban decay (brownfields and industrial sites)*
5. *The demise of physical design in the discipline of planning*
6. *Integration of infrastructure and public space design*
7. *Assumption of the operational methodologies of field ecology*
8. *Rise of the event/program for public urban terrain (and identification of programmatic indeterminacy)*
9. *Replacement of plan by strategy*
10. *Orchestration of diverse contents and elements*
11. *Introduction of phasing*
12. *Equivalence of urban systems and natural systems*

(Waldheim 2002, 2006a, 2006b, 2007 as cited in Barnett, 2013). Barnett goes on to argue that the latter six characteristics possess a direct connection to emergence, stating “the most obvious place to look for emergence in contemporary public space design is in the design practices and writings of landscape architects who align themselves with landscape urbanism” (Barnett, 2013). Several aspects apply directly to this project and the development of GUCs, such as the “replacement of plan by strategy,” the “indifference of city development to the stylistic oscillations of architecture,” and the “development of landscape architectural practice in the wake of modern urban decay.” The former is particularly applicable, as many GUCs occur within spaces that are otherwise overlooked, derelict, or outside the bounds of institutional oversight.

Vacant Land Use

The very notion of “vacant land” is contentious. While some might see vacant land as blight or hazard, still others might see it as a playground, wildlife habitat, or tabula rasa awaiting commercial development. These perceptions and attitudes toward vacant lots vary between individuals and communities, evolving from the complex interplay of social and economic forces (Foo et al., 2013). Although the presence of some vacant land is understood as the consequence of contemporary urban settlement patterns, vacant parcels in many shrinking cities and low-income communities pose a challenge to urban revitalization and community health (Pearsall and Lucas, 2014). Furthermore, the presence of vacant land and derelict property has been correlated to higher levels of crime, adolescent drug use, increased risk of fire injury, and can be understood as a type of urban “physical disorder” linked to an array of poor health outcomes including cardiovascular disease and mental illness (Garvin et al., 2012).

A growing body of literature suggests that the interim appropriation of vacant land is a means to alleviate the negative outcomes of urban vacancy. The addition of ecological function within vacant lots is cited as a low-cost means to increase urban ecosystem services such as stormwater treatment and wildlife habitat (Burkholder, 2012). Projects on vacant land such as community gardens, although often considered temporary or interim uses, provide communities with nutrition and challenge negative perceptions in areas that have been historically burdened by blight or neglect (Armstrong, 2000; Lawson, 2004; Schmelzkopf, 1995). Furthermore, the addition of new social or ecological function within vacant lots, paired with public access and collective stewardship, has been shown foster “cues to care” within urban communities and improve residents’ perceptions of their neighborhoods (Foo et al., 2013; Nassauer, 1995).

The City of San Diego, California has over 4200 tax lot parcels listed as “Vacant or Undeveloped,” totaling in at over 31.4 square miles. 322 of these vacant lots are City-owned, constituting 7.6% of the total number of lots with a landmass of 467.44 acres (SanGIS, 2016). Beyond a mowing and vegetation management regime on some lots, little is being done to leverage the latent potential of these public properties.

Iterative Urbanism

In an effort to alleviate the negative impact of vacant land, community activists and civic officials across the globe have begun to respond with “tactical urbanism” landscape interventions that quickly, inexpensively improve vacant lots and generate new public space (Bishop and Williams, 2012; Lydon and Garcia, 2015). These projects are often framed as rapid, inexpensive, and scalable responses to deficiencies in the urban built environment (Lydon and Garcia, 2015) and have in some cases been ascribed the more appropriate title of “iterative urbanism” projects (Westbury, 2012). Although tactical or iterative urbanism projects take a myriad of forms, the phenomena often emerges “in response to the inability of urban design and development to deal with social, economic, and ecological crisis” (Tardiveau and Mallo, 2014). In their book *Tactical Urbanism*, Mike Lydon and Anthony Garcia classify three common applications for such interventions: 1) citizen-initiated efforts that bypass formal bureaucracy and allow citizens to assert their “right to the city” by prototyping, protesting, or revealing the unseen potential of marginal urban land; 2) government, developer, or organization-led efforts to “engage the public during planning, delivery, and development processes;” and 3) as an early-stage prototype used by cities or developers prior to long-term investment (2015).

Iterative urbanism projects exist along a temporal land use continuum. In their book *Temporary Urban Spaces*, Florian Haydn and Robert Temel present several definitions key to the language of this project. The authors frame “temporary uses” as those that are planned at their outset to be impermanent. Furthermore, they present the notion of “temporary in the city” as a concept between “provisional” and “ephemeral,” whereby something that is temporary in the city is “short-lived like ephemeral, but unlike the latter it can certainly exist for a longer period than was initially intended... it is possible to extend its life.” Temporary urban landscapes also share “qualities with the provisional, but the temporary also has its own qualities and should not be viewed as merely a substitute for the fully adequate” (2006). Iterative urban design projects, on the other hand, remain cognizant of the fact that interventions that might begin as temporary have the potential to influence more permanent changes to the urban environment.

A classic example of iterative urbanism is the development of the Times Square Pedestrian Plaza in New York City. A prominent international tourist destination, Times Square was characterized by heavy traffic and auto-centric design despite its draw for pedestrian visitors. On what was initially a temporary basis, folding lawn chairs and traffic barrels were used to test the closure of Times Square to auto traffic and designate the space as a pedestrian-only zone (Figure 1.6). The resulting space became so popular that there was sufficient social momentum and political support for more permanent changes to be commissioned. As shown in Figures 1.7 and 1.8, a more formal pedestrian plaza designed by the firm Snøhetta replaced a second temporary iteration of paint, bollards, and moveable furniture. The initial deployment of temporary materials provided a low-risk and low-cost alternative to the more traditional mode of urban development that might have entailed comprehensive master planning and more permanent, ‘fixed’ initial design propositions (Lydon and Garcia, 2015). A more dramatic initial proposal for change might have been a non-starter, whereas the iterative project process and use of temporary materials allowed for the “loosening” of existing structures sufficient for a new form of land use to materialize. Furthermore, the iterative aspect of the Times Square project led to the mobilization of a stakeholder group that oversees the management and development of the space, and the



Fig 1.6: Initial Times Square pedestrian zone (Source: NBC New York)



Fig 1.7: Temporary plaza at Times Square (Source: RSVLTS.com)



Figure 1.8: Formal Pedestrian plaza by Snøhetta (Source: adsttc.com)

plaza has been characterized as an example of a GUC (Radywyl and Biggs, 2013).

Sharon Wohl and Sean Wittmeyer consider iterative urban design as a practice concerned with how “the morphologic characteristics of the city help enable it to evolve, incrementally, over time” where “time and evolution” are considered “key to generating fit urban spaces” (n.d.). Furthermore, Nina-Marie Lister presents the case that “community experiments in design, and growth in rapid prototyping for small-scale projects” present “more agile responses to changing conditions” that constitute “safe-to fail” rather than “fail-safe” solutions to contemporary urban design problems (2016).

Risks

Although much can be said in favor of iterative urbanism projects within vacant lots, the activity is not without pitfalls. It should be noted that “pop-up” public space interventions on vacant urban land are often used as catalysts for future construction, thereby increasing the risk of gentrification and the displacement of existing communities (Harris, 2015b). The geographer Ella Harris forewarns that pop-up landscape interventions and iterative urbanisms like it possess a “taciturn ambiguity” that “enables both precarious urban conditions and strategies of gentrification to be subsumed by a label that positions all temporariness as positive.” She also describes pop-up park environments as possessing the spatiotemporal “imaginary” of immersion, described as “the sensation of entering a space that immediately identifies itself as somehow separate from the world” (2015a, Griffiths, 2013). Harris argues that this characteristic of immersion can both help and harm as temporary land use interventions “transform perceptions of the sites they pop up in.” Taking multiple critiques of temporary land use into consideration, she argues that although temporary land use can “transform sites into a space of play for those with high disposable incomes at the expense of alienating or displacing the populations of the areas they occupy,” they can also conversely “add or uncover meanings in ways that are attentive to political and social dimensions of space, bringing the usually hidden layers of the city-as palimpsest into focus,” as well as “enable attentiveness to the particularities of place, foster community, and engage with environmental and political issues” (2013a).

Green Urban Commons (GUC)

GUCs are defined as “urban ecosystems of diverse ownership that depend on collective management and organization, “usually by groups of strangers with diverse backgrounds and desires” (Colding and Barthel, 2013). An additional definition used by Colding et al., describes GUCs as “physical green spaces in urban settings of diverse ownership that depend on collective organization and management and to which individuals and interest groups participating in management hold a rich set of bundles of rights, including the rights to craft their own institutions and to decide whom they want to include in their management schemes” (2013).

Occurring in such diverse settings as “parks, community gardens, building exteriors, vacant lots, and public housing campuses,” GUCs are understood to contribute to “sustainable urban transformation” and help

humankind transition to more resilient cities (Colding et al., 2013; Radywl and Biggs, 2013). An example of GUCs often cited is that of community gardens and urban orchards. In addition to the positive public health outcomes and urban blight alleviation described earlier, these spaces provide a forum for end-users of landscapes to take a more active role in the negotiation of value-based landscape change (Radywyl and Biggs, 2013). This aspect of democratic, collaborative decision-making is a key aspect of many GUCs, and this project seeks to encourage such action as a means toward community empowerment and the strengthening of local political capacity. In this regard, new GUCs created using this project’s Framework stand to make a more significant impact than temporary vacant land activation or “pop-up” urbanism. While principles such as collective management and investment in GUCs have the potential to build political power, the physical development of



Figure 1.9: New Roots Community Garden, San Diego (Source: JMS Reports)

GUCs has also been shown to have a quantitatively positive impact on urban biodiversity and the generation of ecosystem services (Dennis and James, 2016). Furthermore, access to green space and participation in horticultural activities has a positive impact human health and wellbeing (Coutts, 2010, 2011; Hynes and Howe, 2004 as cited in Dennis and James, 2016). Each of these aspects has the potential to contribute to improvements in resident quality of life and urban resilience (in both a political and ecological regard).

User-Generated Urbanism

The term “user-generated urbanism” is closely tied to the notions of GUC, tactical urbanism, and “iterative placemaking,” as it entails the “bottom-up” participation of citizens in the negotiation and development of public spaces (Bela, 2015). Regardless of application, user-driven urbanism projects are often framed as a direct engagement in the politics of urban space as a means toward community empowerment, whereby the “users” have the potential to claim greater agency over the environment in which they live (Andres, 2013; Bela, 2015; Iveson, 2013). This potential for political capacity building is especially pertinent to long-marginalized communities like Mid-City and Southeastern San Diego. In addition to providing physical access to public green space, the process of creating and managing GUCs empowers communities to assert their “right to the city” and participate in the social construction of the urban environment (Bela, 2014; Lefebvre, 1991; Tardiveau and Mallo, 2014). The international phenomena of PARK(ing) day is often held up as an example of city-dwellers’ assertion of their “right to the city” and participation in user-generated urbanism. For one day each year, PARK(ing) day events encourage everyday citizens to construct temporary ‘parks’ within sidewalk-adjacent auto parking spaces. With designs ranging from the placement of turf and a bench upon asphalt to the establishment of temporary reading libraries and ping pong arenas, PARK(ing) day is intended to remind city inhabitants that the streets, although often dominated by automobiles, are part of the realm of publicly-owned space. In the spirit of iterative urbanism, some interventions that began as temporary PARK(ing) day designs have since become formalized as more permanent ‘Parklet’ public spaces that possess many of the characteristics of GUCs.

The emergentist GUC propositions in this project are directly correlated to the notion of user-driven urbanism because of they encourage “assumption of local control over local conditions,” recognizing that “people’s ability to make small changes to their environmental conditions can spiral upwards into dramatic revisions of social relationships” (Barnett, 2013).

Value Negotiation and Political Capacity

Iterative urbanism efforts that are user-driven, such as the GUC proposal of this project, are understood as more resistant to the negative outcomes of development and urban revitalization because participatory development and collaborative management build the political capacity of end-users (Andres, 2013). Direct community action and outcome-based approaches to urban design such as iterative GUC development can guide urban regeneration toward what individual communities desire for their living environments rather than leaving development to the whim of developers or other external forces.

Urban Resilience

As a concept, resilience can be defined as consisting of: “1) the amount of disturbance that a system can absorb while still remaining within the same state or domain of attraction; 2) the degree to which the system is capable of self-organization (versus lack of organization or organization forced by external factors); and 3) the degree to which a system can build and increase its capacity for learning and adaptation” (Cumming, 2011 as cited in Desouza and Flanery, 2013). Strategies for resilient cities include “assume change and uncertainty, nurture conditions for recovery and renewal after disturbance, combine different types of knowledge for learning” and “create opportunities for self-organization” (Wilkinson, 2011 as cited in Desouza and Flanery, 2013). The nascent practice of “safe-to-fail” iterative urbanism projects has been directly correlated to notions of urban resilience (Ahern, 2011; Lister, 2016). By responding to disruptions in the socioeconomic or ecological fabric of the city, iterative urbanism projects such as GUCs often leverage limited resources for public benefit. In addition to providing spatially explicit landscape functions, negotiated spaces like GUC interventions are also recognized as contributors to the resilience of urban systems because they loosen existing institutional

structures and provide opportunities for community empowerment (Radywl and Biggs, 2013).

In addition to being correlated to the large-scale evolution of urban systems, the notion of resilience may also be applied to the scale of an individual landscape site. A shorthand definition of resilient landscapes can be characterized as “those that adapt to volatile conditions while maintaining functional integrity” (Woodward, 2008). In landscape architecture, aesthetics have also been invoked as a means to maintain functional integrity and project longevity (Meyer, 2008). Intentionally designed “cues to care” encourage collective stewardship, while beauty has been compellingly argued as a key aspect of sustainable landscape design (Nassauer, 1999). To this end, aesthetics remain a key design consideration in this project’s proposed efforts to intervene in and sustain GUCs.

Resident Quality of Life

Quality of life is itself a difficult concept to define or quantify, consisting of both objective and subjective measures related to socioeconomics, individual and community well-being, housing satisfaction, livability, and urban living conditions (Mohit, 2013). The concept can be generally defined as “an individual’s perception of his/her position in the context of culture and value systems in which they live in and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept incorporating, in a complex way, the person’s physical health, psychological state, level of independence, social relationships, personal beliefs and relationships to salient features of the environment” (WHOQOL Group, 1998). Many of the positive ecological, public health, and resident perception outcomes related to iterative vacant land interventions can be correlated to an improvement of quality of life in the communities in which they occur.

EMERGENCE THEORY

Built upon discourse related to Landscape Urbanism and the application of CAS theory to landscape architectural practice, Rod Barnett’s interpretation of emergence theory drives the Framework development and design process in this project. In effect, the GUC Framework in this project aspires to encourage patterns of self-

organization in civic spaces that are similar to other Complex Adaptive Systems (CAS).

Conjured as a response to scientific reductionism, “emergence theory attempts to describe how things and the interactive systems that comprise all things can change and develop” (Barnett, 2013). Framed as a response to scientific reductionism, emergence theory does not assume a deductive or linear progression of social or metaphysical phenomena. Instead, the movement from low-level rules to higher-level sophistication is characterized by nonlinearity, dynamism, adaptation, and unintended consequences (Murphy 2007). Furthermore, emergence theory “foregrounds the idea, prevalent in contemporary materialist philosophy, actor-network theory, systems ecology and other disciplines, that everything that exists always *becomes* and never is” (Barnett, 2013).

Nonlinear Urban Development

Urban environments and cities are understood as shifting, complex, self-organizing systems (Spirn, 2012; Mostafavi and Gareth, 2010). A successful framework for GUC interventions must operate within this context of material flows, resource flows, and socioeconomic complexity

Complex Adaptive Systems (CAS)

In tandem with Rod Barnett’s more contemporary writings on emergence, CAS theory has made a significant impact upon contemporary landscape architectural discourse and practice. CAS theory is “an attempt to understand the dynamics of complex systems where the behavior of the system depends upon unpredictable interactions between parts” (Dovey, 2012). The adoption of CAS theory as both an operative and explanatory framework for landscape design has led to revelations about how process-oriented landscape designs might achieve a desirable balance between rigid structure and the self-organization associated with ecological principles of resilience and succession (Stilgenbauer, 2015). Anita Berrizbeitia argues that CAS theory can be used by designers to propose a beneficial level of “undecidability” that allows landscapes to take on an open-ended, process-oriented, and propositional character; conceptualizing landscape designs that are “precisely open rather than vaguely loose” (2001). Her description of CAS theory is essentially “the study

of the abstract organization of phenomena and the interaction of this organization with its environment” (2001). According to a CAS theory interpretation, landscape architectural interventions can be understood as a complex assemblage of interactive parts that have the potential for a myriad of future trajectories. For an illustration of additional connections between CAS and contemporary urban design theories, please see Appendix A.

Assemblage

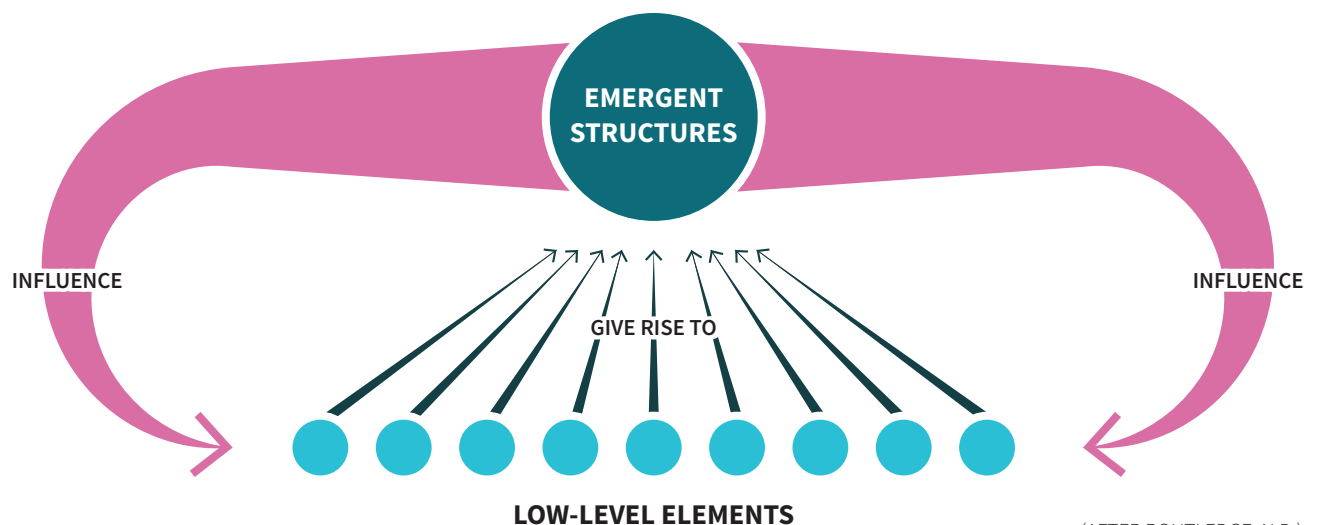
Assemblage can be defined as “objects, bodies, expressions, qualities, and territories that come together for varying periods of time, ideally to create new ways of functioning” (Deleuze and Guattari, 1987). They are wholes “formed from the interconnectivity and flows between constituent parts,” and all landscapes, whether at the scale of a street, city block, or metropolitan area, can be considered as assemblages (Dovey, 2012). The notion of assemblage has been directly related to CAS theory (Dovey, 2012) as well as emergence (Barnett, 2014) and iterative urbanism designs (Wohl and Wittmeyer, n.d.) and is often used to explain the complex and sometimes unpredictable interactions between perception, material, and space. The classification or description of assemblage, however, is particularly problematic because they are “at once material and

representation and [defy] any reduction to essence, to textual analysis or to materiality” (Dovey, 2012).

Kim Dovey (2012) posits, “Assemblage is a useful way of re-thinking theories of ‘place’ in terms of process, identity formation, and becoming.” Similarities can be drawn between the characteristics of assemblage and iterative landscapes because they are heterogeneous, dynamic systems where materials and meaning exist in relation to time and stability (Tardiveau and Mallo, 2014). The notion of assemblage, particularly its relational explanation of landscapes and attachment to the idea that all things are always “becoming,” integrates with aspects of emergence theory. A successful emergentist civic landscape is one that explicitly accommodates the shifting of both physical form and social meaning over time, similar to the ways that an assemblage undergoes constant change (Barnett, 2013).

Emergence and Landscape Architecture

In his book *Emergence in Landscape Architecture*, Rod Barnett has conveyed a conceptual approach that can bridge an emergence theory-based practice of landscape design with the GUC landscape type. He frames emergence theory as a way of explaining landscapes and provides some guidelines for design practice.



(AFTER ROUTLEDGE, N.D.)

Figure 1.10: Emergence Diagram (Source: Routledge)

The Designer's Role

Because emergence theory builds upon CAS theory, the designer must recognize landscape interventions as contingent modifications to the environment that are hitched to, driven by, and existing within a social and environmental context. Rather than promoting fixed, deterministic designs that assume a single trajectory of contextual conditions, Barnett argues for public space designs that embody a self-awareness of change over time and of intimate, dynamic interactions with contextual forces. These open-ended design compositions assume, and spatially account for, the development of alternative futures and narratives that emerge through the interaction of social, ecological, political, and economic systems (Barnett, 2013). Such an approach can assure a project's "survival as a socially-relevant place, its programs in an endless process of self-renewal, as new cultural practices and subjectivities emerge" (Berrizbeitia 2001). In an emergent landscape architectural practice, it is recognized that all things are constantly "becoming" and subject to the continued evolution of both physical and social states. The designer's role, therefore, is to set initial conditions for the ongoing social and physical evolution of a landscape. An initial physical scaffold is proposed and constructed, from which social meaning and material conditions are intentionally left to evolve and emerge.

Civic Design

In *Emergence in Landscape Architecture*, Rod Barnett describes six "hallmarks" of emergent public space design: 1) a "multitude of connections between environmental design and social outcome. ...this connectivity will be such that the emergent social phenomena would have an autonomous existence, and yet depend on the designed structures to enable and support them"; 2) "commitment to strong emergence," or in other words, "higher-level functioning in some way influences lower-level functioning"; 3) "the appearance of novel social properties"; 4) "assumption of local control over local conditions"; 5) "at least three types of simultaneously applicable explanation [(bottom-up, same-level, and top-down)] possible for [the] designed landscape"; and 6) a recognition that "urban landscapes are at once social systems and ecosystems," and "the landscape architect is responsible for a description of that situation" (2013).

These six hallmarks are explicitly applied to the development of the Framework in this document and are summarized as bullet points in Figure 1.13. Appendix B includes additional excerpts from Barnett (2013) detailing what the researcher perceived as design guidelines for each of the hallmarks. By providing a desired set of end conditions in the form of his six hallmarks, Barnett has provided the foundation for a GUC development Framework. The Framework proposed in this document strives to meet Barnett's hallmarks through an outcome-based approach, where specific aspects of the Framework are correlated directly to achieving Barnett's desired emergent landscape criteria.

RESEARCH THROUGH DESIGNING

Emergence theory, combined with an understanding of iterative urbanism, negotiates the designer's role in the creation of temporary GUCs. Action research, the designed Framework, and subsequent site-specific proposals for GUC development in San Diego's Mid-City and Southeastern communities are a context-specific synthesis of these theoretical concepts. A detailed account of this synthesis begins in the next chapter with a description of design context.

Knowledge Claim

This project leverages a "pragmatic research through designing" approach to critically explore the potential of an emergence theory-driven Framework for GUC design (Lenzholzer et al., 2013). Design process allows for a reflexive generation of knowledge because "theoretical understanding emerges as research is underway," where "insight emerges inductively from the design setting... and deductively from the testing and challenging of established concepts" (Deming and Swaffield, 2011). The GUC Framework in this project is devised by synthesizing several design concepts that have hitherto not been explicitly linked, thereby generating new knowledge for the discipline of landscape architecture. Drawings, diagrams, and renderings produced through the synthetic design process are the object of discussion in the research (Seago and Dunne, 1999).

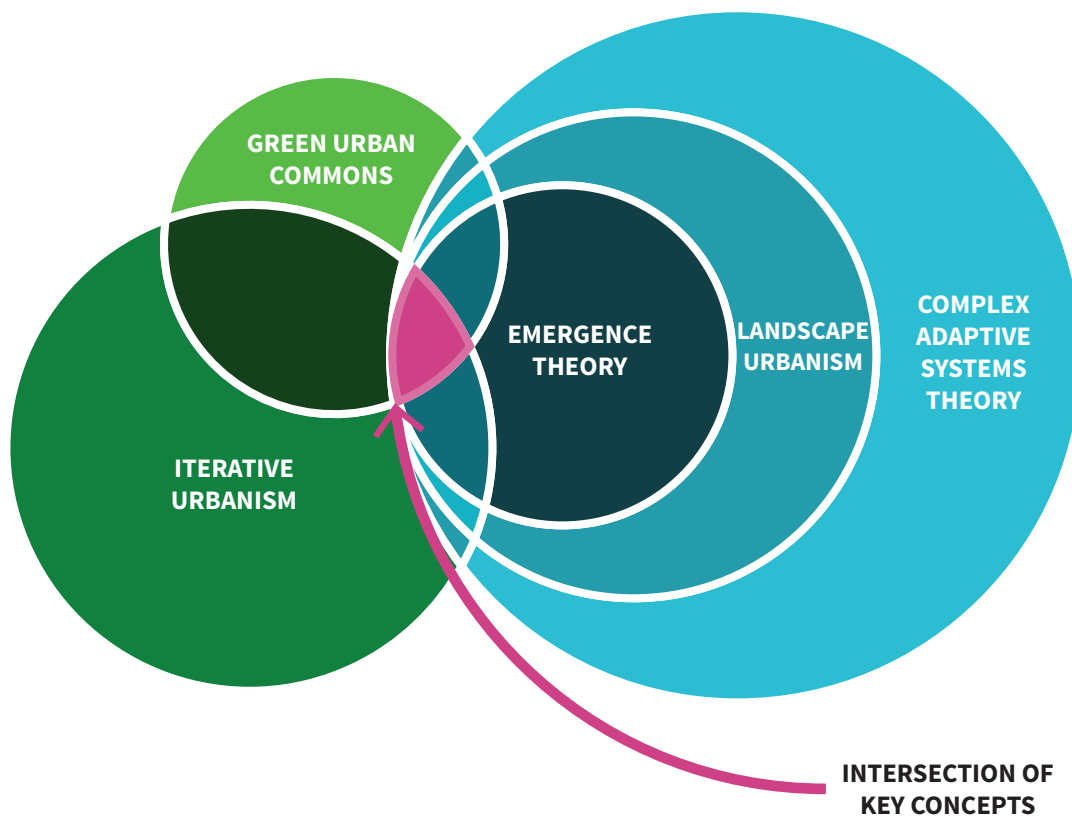


Figure 1.11:
Landscape Type
Diagram

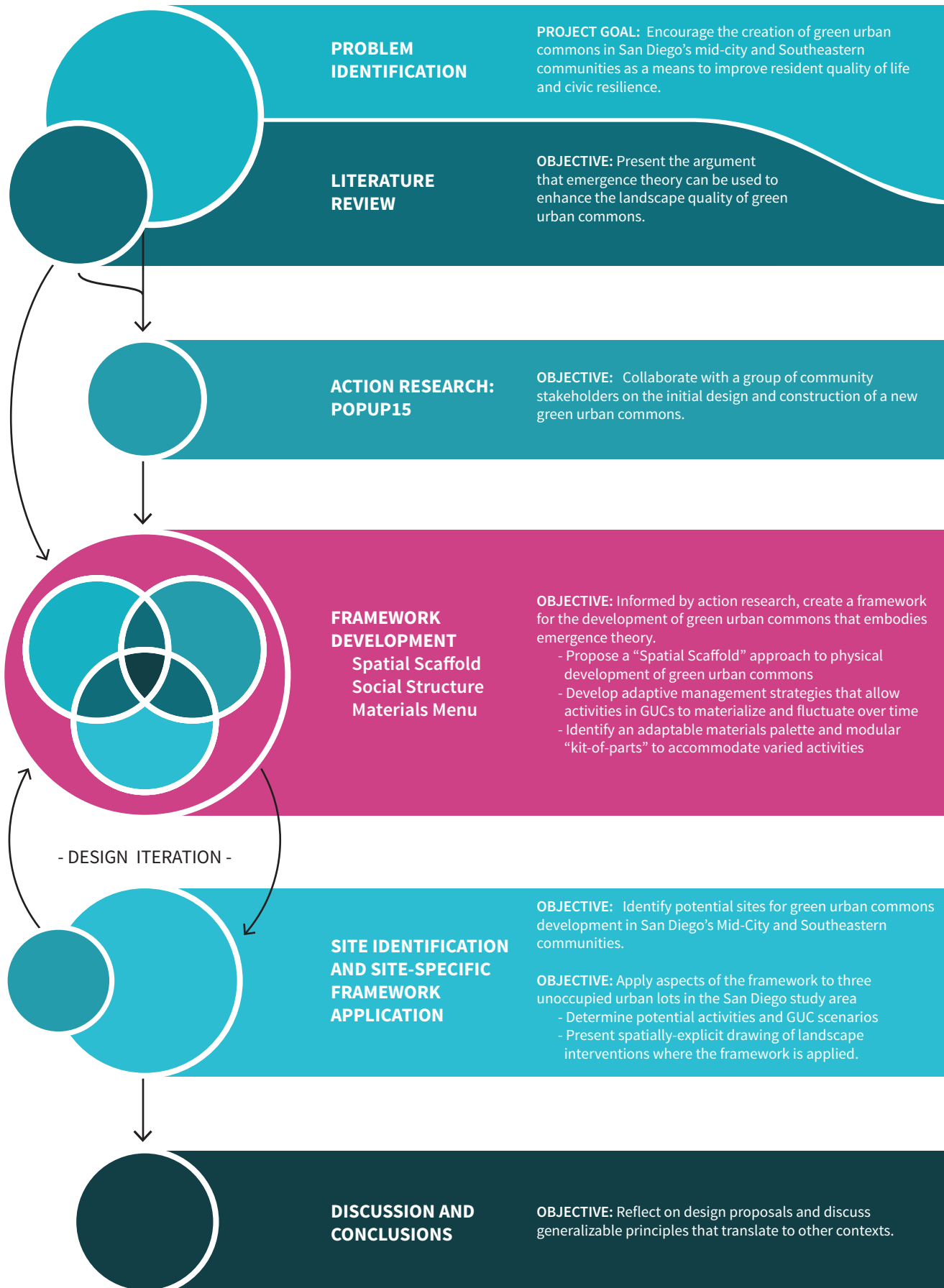


Figure 1.12: Overall Research Project Structure

Similar context-specific research through design involving a physical framework, iteration, and synthetic design propositions are found in Walter Hood's *Blues & Jazz Landscape Improvisations* (1993) and *Urban Diaries* (1997). Furthermore, student and professional design propositions presented in Rod Barnett's *Emergence in Landscape Architecture* explore the application of emergence theory to landscape problems (2013). Although knowledge generated through this research project is context specific, results will help designers in similar circumstances rapidly yet effectively design temporary urban spaces that promote civic participation and urban resilience. The resultant Framework and design propositions provide a base of knowledge that is highly transferable to design professionals and laypeople alike.

Document Structure

Research began with problematizing the presence of vacant land in San Diego through literature review and the researcher's personal knowledge of context. This process is explicated here in this first chapter as well as in the chapter that follows. The Study Area Definition section of the next chapter also contains a summary of the sociopolitical and biophysical contexts of San Diego's Mid-City and Southeastern communities. The next chapter also includes a description of the researcher's endeavor to initiate, design, and implement a GUC project in partnership with a Business Improvement Association and coalition of nonprofit organizations. Knowledge and experience gained during this action research period informed the development of the proposed Framework for New Green Urban Commons. The Framework section is the heart of the document. It contains a description of the proposed Framework for the development of GUCs in San Diego's city-owned vacant lots. Embodying several aspects of emergence theory, the Framework contains three key elements: 1) a "Spatial Scaffold" approach to physical development of GUCs that is minimal, flexible, and open-ended enough to accommodate the unfolding of different uses; 2) "Social Structure" management guidelines to guide project initiation and allow activities within lots to fluctuate, materialize, and disappear over time; and 3) a modular, adaptable materials palette that can help non-professional builders to assemble, adapt, and repurpose physical elements within proposed urban commons. The next sections detail the mapping process used to identify potential sites for GUC development

and describe application of the Framework to three unoccupied urban lots in the Mid-City/Southeastern San Diego study area. Potential activities and urban commons 'scenarios' are determined for each of the three sites, and spatially explicit drawings are shown for each landscape intervention. In the final chapter, Discussion, the limitations and advantages of the proposed Framework are discussed, particularly in regard Framework implementation, the application of emergence theory to GUC design, and the tension of designer involvement in GUC public space projects. The overall research project structure, along with specific project goals and objectives, is detailed further in Figure 1.12.

RESEARCH PLAN

With the goal of encouraging the development of new GUCs in San Diego, this project has two primary aspects: 1) a Framework for creating new GUCs in a specific study area of San Diego, and 2) site-specific design proposals for new GUCs that both embody principles of the Framework and exhibit characteristics of emergent landscape architecture (after Barnett, 2015). The Framework and design proposals methodically transpose concepts of iterative urban design, GUC, and emergence theory to a specific study area context in order to benefit a specific user group. New, contextually specific knowledge is generated through this synthetic research-through-designing method.

Knowledge Claim

This project asserts a 'pragmatic' knowledge claim, as it is concerned primarily with "applications and solutions to problems within a specific context." Interested in discovering 'what works' for public space creation in San Diego, this pragmatic research through design project presents arguments for both the natural (postpositivistic knowledge) and socio-cultural (constructivist and participatory knowledge) implications of emergence theory and GUC (Lenzholzer et al., 2013). These multiple concepts are reconciled and synthesized into a set of contextually specific design proposals, and new knowledge for the discipline of landscape architecture revolves around how this knowledge is integrated into specific landscape propositions.

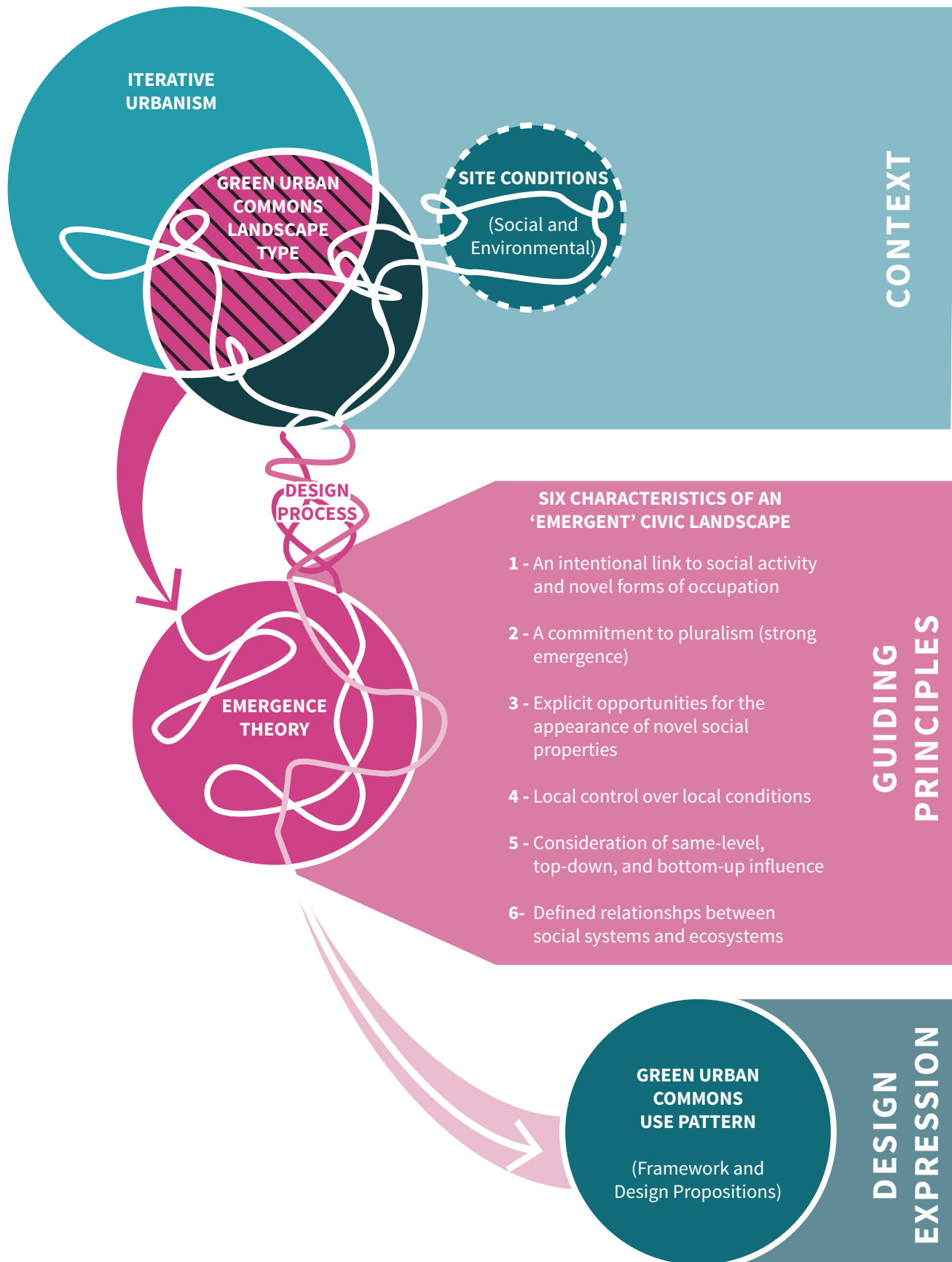


Figure 1.13: Experimental Design Process Diagram

Experimental Design

In *Composing Landscapes*, Clemens Steenbergen classifies research through design projects into two types: “design experiments” and “experimental designs” (2008). This project can be considered an experimental design as it involves both a variable object (design expression) and variable context (Deming and Swaffield, 2011). Experimental designs involve “making an integral spatial proposal,” and can be understood as “a form of heuristic research, geared to exploring a possible or predictable future and the methodical discovery of the right composition.” Steenbergen compares the cycle of research by design (“problem – analysis – generation of schematic compositional models – experimental design”) to the cycle of traditional empirical research (“defining the problem – analysis – generation of possible verifiable answers – hypothesis”) (2008). In this project, the experimental design process of problem identification, analysis, and schematic design is guided by two touchstone concepts: the GUC landscape type (after Colding and Barthel, 2013) and emergence theory as applied to landscape architectural practice (after Barnett, 2013).

DESIGN PROCESS

The theoretical concept of emergence was used to develop the Framework and site-specific design proposals in this project. Given this understanding, operative criteria for emergence theory were adapted from Rod Barnett’s *Emergence in Landscape Architecture* to guide the development of a framework for GUC creation and, in turn, spatially explicit landscape recommendations. The six “hallmarks” of an emergent civic space design were used by the researcher as a set of high-level organizing instructions to inform Framework structure and design scenario expressions for each sample site. This process is detailed in Figure 1.13 whereby emergent civic design criteria are depicted as the touchstone principles for design expression.

Role of the Researcher/Designer

The proposed Framework and design propositions account for grassroots management and iterative development of GUCs. Design process and methods used in this project and proposed by the Framework intentionally emulate the way that a professional landscape architect might approach the pro-bono

design of a GUC when working with a stakeholder group. The reason behind this is that grassroots, community-led efforts to develop vacant city-owned land will likely have very little funding, and whatever few resources are available will need to be used both judiciously and efficiently. Project budgets for new GUCs are more likely to rely on volunteer labor, focusing on the procurement of materials for site improvements rather than professional design or surveying services. To this end the researcher used simple, accessible tools such as LIDAR-derived topographic data and Google Earth to develop schematic designs for the new GUCs. Furthermore, the site inventory and documentation process for each of the sites occurred during brief windows of time similar to what a professional landscape architect might be able to accomplish on an afternoon or weekend visit to a pre-identified site. Photographs using a smartphone, baseline measurements recorded in the field, as well as brief, infrequent visits to the site for observation outside of regular business hours provide a contextual basis for spatial design recommendations.

In addition to these pragmatic considerations for user-led GUC design, Barnett shares some guidelines regarding the role of a landscape architect who is designing a civic space that takes seriously the fundamental propositions of emergence. In short, the designer is responsible for describing the desired relationship between social systems and ecosystems within the design context. This entails a thorough understanding of “the situation” surrounding the site, whereby the site and stakeholders inform what potential activities and programmatic elements are most desired within the space. That said, Barnett specifies that the designer is not entirely responsible for mandating an enduring or fixed design program. On the contrary, the designer is “not a purveyor of top-down solutions but a discoverer of emergent processes,” and they are instead responsible for establishing “an initial set of conditions...that generates a process of realization” (2013). Furthermore, given the understanding that individual stakeholders should have maximum control over the ongoing evolution of the space, the designer’s role becomes one characterized by definition, contextualization, and facilitation.

Due to the desired emergence characteristics (see Figure 1.13) and the likely brevity of the a landscape architect’s involvement on this project type, end-users of GUCs are

understood as the agents responsible for the progressive iteration of use patterns, site element arrangement, and activities within individual GUCs. This project proposes that an emergentist landscape architect's role in GUC design be restrained to that of a 'guide by the side' rather than a 'sage on the stage.' Each aspect of the Framework considers the fact that stakeholders need to ensure ongoing urban commons management as social capital materializes and dissipates.

Action Research

The researcher's role in the conceptual design and construction of PopUp15 was a formative aspect of this project. Limited funding was available to develop the initial "Spatial Scaffold" build-out of the site, and a community-based bicycle workshop organization currently operates out of one of the storage containers. Additional partners, including a youth arts organization, a church, and a community advocacy organization have all expressed interest in using parts of the site for both temporary and ephemeral activities. In addition to interviewing project partners to discuss build-out options, the researcher conducted two outreach events at movie screenings that were held outdoors at the PopUp15 site. Although the Boulevard BIA is ultimately responsible for the space and is the leaseholder with the city, the collective management strategies put forward by the BIA trend toward a GUC management pattern. Action research for PopUp15 was integral to the development of the Framework for new GUCs described later in this document. Design propositions that follow in the Assemblage Design Scenario section detail varied site configurations to accommodate the progression of uses on the lot over time.

Drawing & Making

Barnett recommends, "an emergentist landscape architect will combine techniques of reconnaissance and imaginative forensics" through "expressive drawing, writing, and photography that are adequate to the multiplicities that comprise the field in which he or she is immersed" (2013). Furthermore, drawing, drafting, and physical modeling are recognized as methods for creating and refining form in pragmatic/constructivist research through design method (Lenzholzer et al., 2013). These actions were used to iterate the overall project Framework and express potential schemes for each site. Individual schematic drawings and model compositions

were evaluated according to their adherence to the emergence criteria listed in Figure 1.13. The use of physical models with modular parts was particularly helpful in design process, as the pieces could be disassembled and reconfigured into various potential user-determined site compositions. Photographs of these site models are shown in Figures 1.14-1.17.

The next two chapters detail the culmination of the design process as guided by project context and emergence theory. A three-part Framework for the development of GUCs throughout the study area is described along with potential design scenario expressions for each of the three sample sites. A discussion chapter follows this where the relevance, transferability, and success of the Framework is discussed.



*Figure 1.14:
Researcher
workspace with
drawings, models,
and creative
collage*

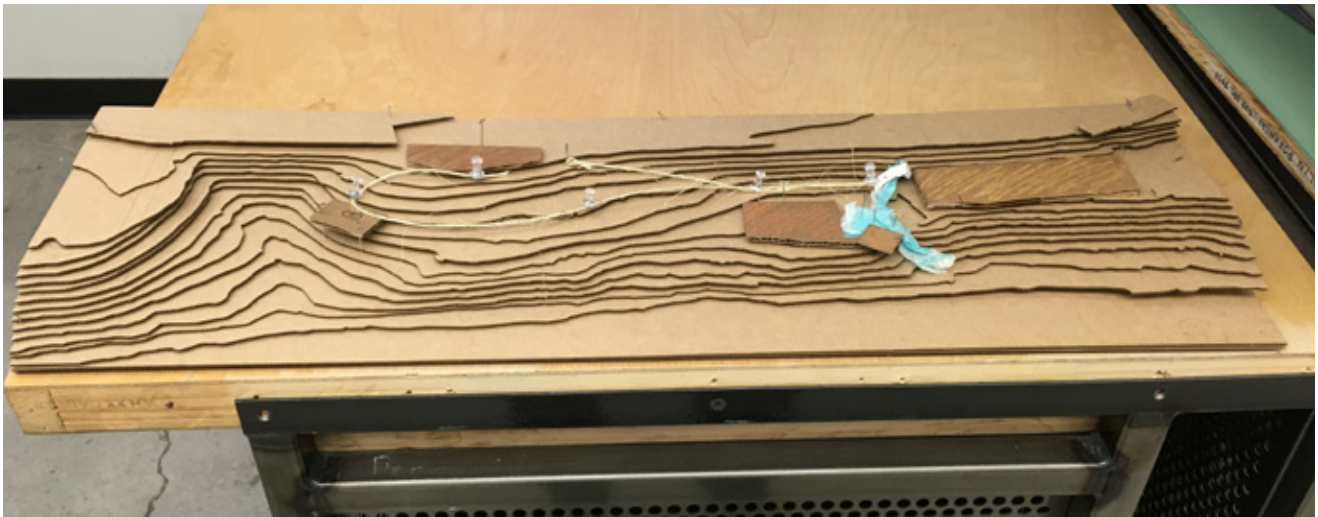


Figure 1.15: Market Street Hillside Study Model



Figure 1.16: Martin Ave Study Models

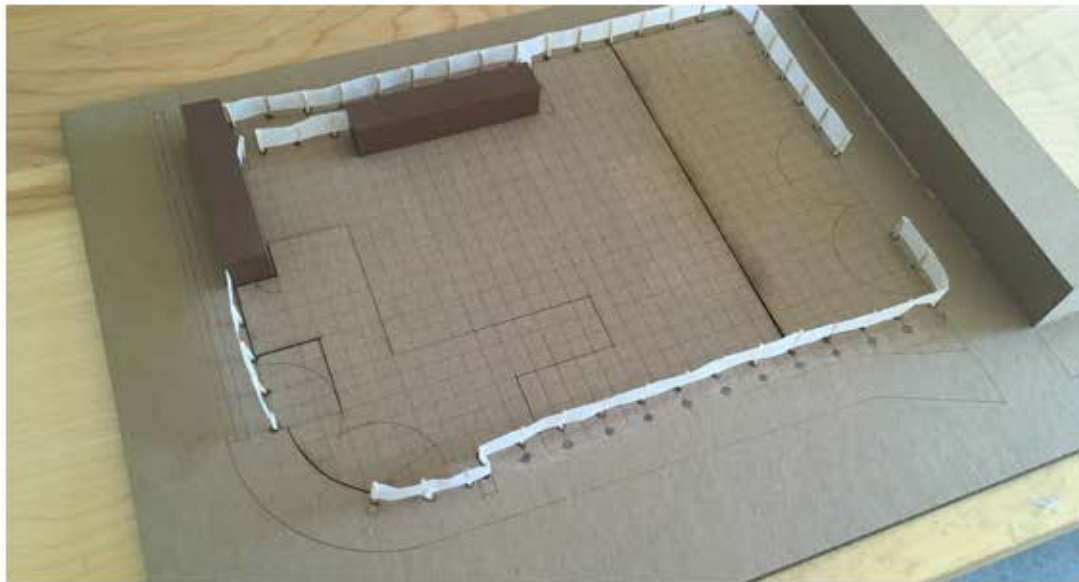
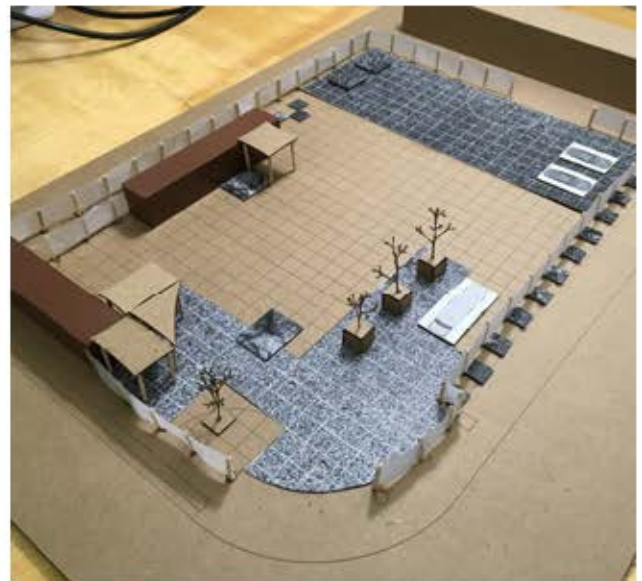
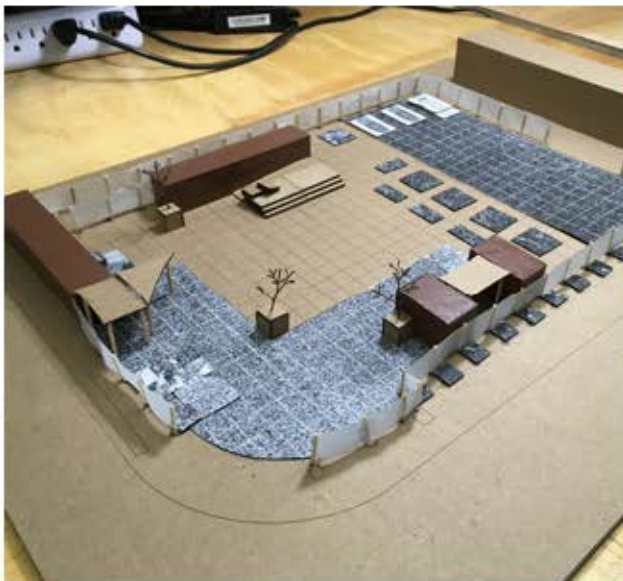


Figure 1.17:
PopUp15 Study
Model with
modular grid
configurations





THE WORK:

Study Area Definition
Action Research: PopUp15
Framework for New Green Urban Commons
Green Urban Commons Project Process
Site Selection and Existing Conditions
Assemblage Design Scenarios

In the preceding chapter, the assertion was made that the creation of green urban commons (GUC's) in underserved communities can enhance urban resilience and resident quality of life. This research project also argues that the application of emergence theory to the creation of iterative GUC's can enhance landscape function and lower barriers to creating these "safe to fail" public space projects. Given this understanding, the question remains: just where, and by what means might landscape architects engage in the creation of GUC's?

This chapter describes the definition of a study area spanning several of San Diego's Mid-City and Southeastern communities. Following a description of study area context, details of an action research project for a new GUC, PopUp15, are discussed. Discoveries made during the the PopUp15 project informed the basis of a Framework for GUC development that embodies the principles of emergence theory. Following a description of the Framework for New GUCs, site-specific Assemblage Design Scenarios are presented as case study applications. In addition to the PopUp15 site, two additional GUCs were identified within the study area using specific site identification criteria. The three sites are detailed and site-specific GUC design propositions are depicted for each. The PopUp15 site is revisited for further design in order to envision possible landscape scenarios as the project evolves into the future.

STUDY AREA DEFINITION

In this project, publicly owned vacant urban tax lot parcels are used as a forum to test and evaluate the application of emergent landscape architectural practice to GUC design. The site selection process is based upon a body of literature that suggests the transformation of vacant urban land to GUC's will increase urban resilience and enhance resident quality of life in underserved communities (Burkholder, 2012; Colding and Barthel, 2013; Colding et al., 2013; Radywyl and Biggs, 2013; Dennis and James, 2016). San Diego was selected as the urban setting for this project because of the researcher's existing contextual knowledge, availability of GIS data, physical convenience for conducting site visits during the summer and winter of 2016, as well as an opportunity to collaboratively design a pop-up park with a team of nonprofits headed by the El Cajon Boulevard Business Improvement Association (Boulevard BIA). A contiguous study area within San Diego consisting of the city's most low-income and disadvantaged communities was defined in order to increase the potential social impact of this project and identify opportunities for case study GUC designs.

This research project has two operative definitions for what constitutes a vacant lot. The first is a parcel with the assigned description "Vacant & Undeveloped" on the 2016 SanGIS Land Use map. The second definition of a vacant lot is a parcel listed as an "active" San Diego city park that currently has no physical improvements to accommodate visitor use or access. This second vacant land classification was determined for four sites within the study area by a ground-truth visual assessment. At a glance, the municipality of San Diego has over 31.4 square miles (20,096 acres) of public and privately owned land listed as "Vacant & Undeveloped" across 4,204 individual parcels. The City of San Diego owns 467.44 acres of this land across 322 parcels (SanGIS, 2016).

Study Area Definition

The definition of the 23 square mile study area (Figure 2.1.1) and citywide identification of vacant land began with the procurement of spatial data from San Diego Geographic Information Source (SanGIS). These GIS files included: current and historic land use (in 4-6 year increments back to 1986), parcels (including ownership data), city parks, stormwater infrastructure, stream locations, and sensitive water quality areas. Information from SanGIS also included overlay maps of the city's Renewal Communities, Community Plan areas, Business improvement Districts (BID's), and a Federal Promise Zone overlay.



Figure 2.1.1: San Diego Context Map

The study area boundary was drawn using the boundaries of community plan areas that intersected the Federal Promise Zone, Redevelopment District, and Boulevard BIA (Figure 2.2). The idea behind the boundary was twofold. The first reason was to determine, by criteria found during literature review, the area in San Diego that would provide opportunities for maximum positive potential impact of new GUC's. In their article *Rethinking urban transformation: Temporary uses for vacant land*, Nemeth and Langhorst (2013) provide a list of conditions appropriate for temporary land use interventions. These criteria includes "areas seeking redevelopment, attraction of new residents and businesses" and "active community/ residents/ non-profits/ small investors". The Renewal Communities and Federal Promise Zone SanGIS maps define areas that intentionally cultivate private and public sector redevelopment efforts through a suite of permissive policies and tax incentives. Furthermore, these areas benefit from specialized social programs and public aid that could potentially support the development of citizen-led GUC projects. BID's and other community organizations like the Jacobs Center for Neighborhood Innovation in the Encanto community fall within Nemeth and Langhorst's (2013) criteria for active nonprofit organizations that may support temporary land use efforts. To this end, the mid-city communities at the north end of the study area were included because they intersect the Boulevard BIA, a place-based organization

that has been consistently active in temporary land use projects. The second key consideration when drawing the study area boundary was to ensure a large enough area to encompass a diverse array of vacant lots, yet not one so large that the researcher would find it impossible to conduct a sufficient number of site visits to the included communities over a two-week period between December 2016 and January 2017.

Community plan areas were chosen as the primary grain of boundary determination, as planning decisions about development, transportation, parks, and public space are often made according to these political units. In addition, drawing the study boundary lines along community plan areas provided a more focused look at population demographics. A detailed comparison of these communities (except for the East Village neighborhood of downtown, which falls within the Centre City community plan) is shown in Figure 2.1.4.

Study Area Context

To better understand the potential for GUC development in San Diego, one must first grasp the essence of the city's biophysical and social context. The city, renowned for its world-class beaches and mild weather, can be understood as a postindustrial urban center. With no large-scale landscape-based industrial enterprise to drive development, the city grew slowly from Spanish



Figure 2.1.2: Mural in Southeastern San Diego

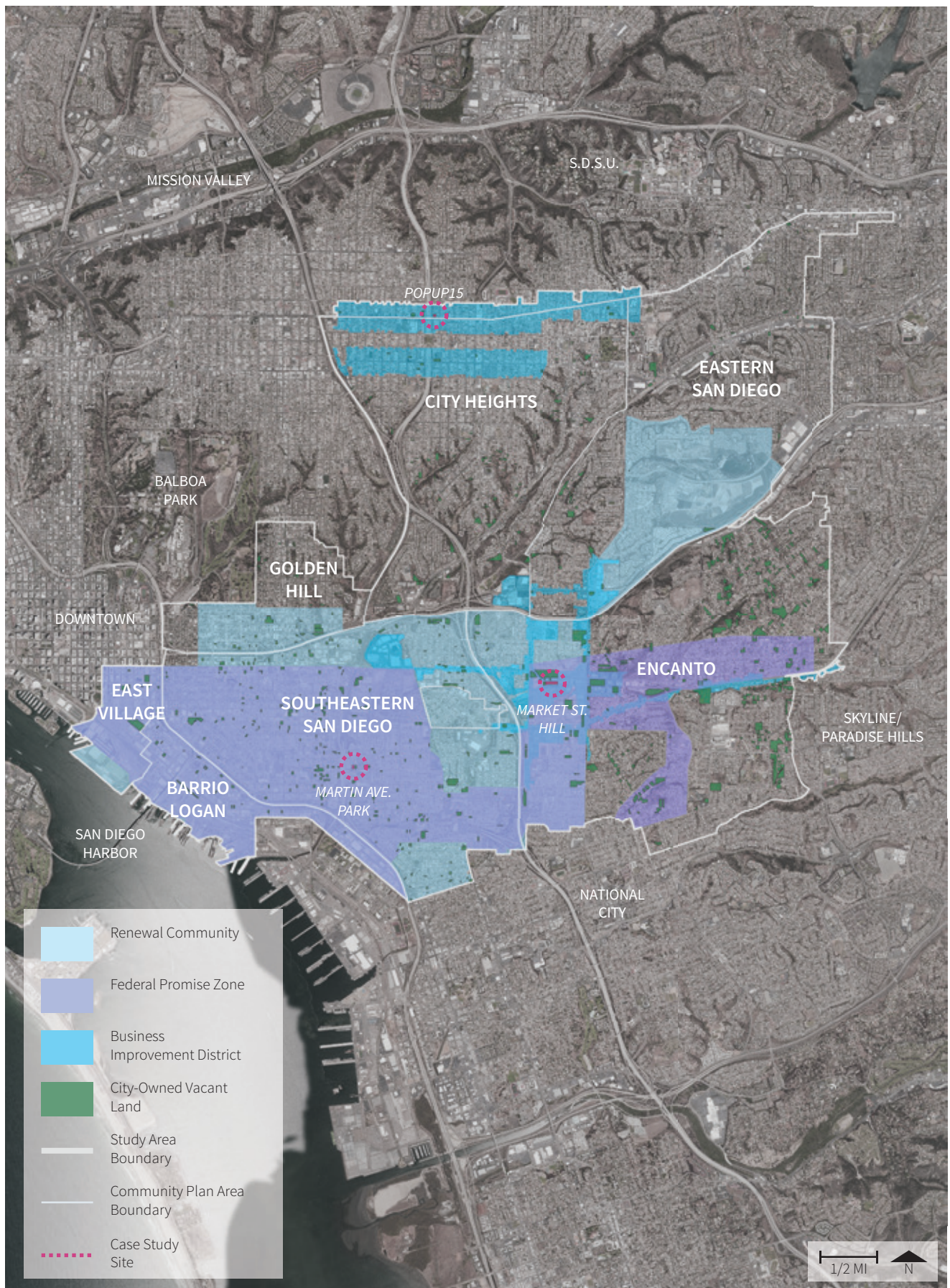


Figure 2.1.3: Study Area Map

colonization in 1769 up to the mid-20th century. San Diego began to flourish as a modern urban center during and after World War II as the large infrastructure projects of the Metropolitan Water District of Los Angeles began to deliver a consistent supply of fresh water to Southern California (Reisner, 1986). A consequence of WWII and the city's large harbor, the Marine Corps and Navy has a strong presence in the city. The federal government continues to serve as the region's largest employer, followed by the healthcare industry.

Climate & Ecology

San Diego has a mild, Mediterranean climate with hot, dry summers and cool, wet winters (SDSU, 2015). The average annual high temperature is 69.9 degrees (F), with an average annual low temperature of 56.5 (WRCC, 2016). Annual rainfall averages around 10 inches, 85% of which occurs November through March (NOAA, 2016). Water scarcity is a primary landscape design consideration, followed closely by stormwater management during the region's infrequent rain events. San Diego is the most biologically rich county in the nation, with "approximately 200 [rare or endangered] plants and animals—more than in any other county in the nation" (Nature Conservancy, 2017). Considerable conservation efforts have been made throughout the county, and San Diego has a diverse range of an environmental organizations working within city limits to protect wildlife habitat, increase ecosystem services, and alleviate negative urban environmental impacts.

Topography & Hydrology

From the time the indigenous Kumeyaay people inhabited the area through Spanish colonization, Mexican independence, and annexation by the United States, the region's topographical features have largely dictated human settlement patterns. While Old Town San Diego was sited near the San Diego River, the current downtown core sits at the base of a series of mesas and adjacent to a large harbor lined with military installations and industry. Housing development from the early 20th century through the postwar era was concentrated on the mesas north of downtown, leaving a network of canyons that drain water either north toward the San Diego river and Mission Valley, or south toward the harbor through the Pueblo watershed. The majority of the project study area falls within the Pueblo watershed, whose waterways

remain channelized, choked with invasive plants, or burdened by stormwater runoff.

Promise Zone

In addition to falling within the approximate bounds of the Pueblo Watershed, the study area includes an Obama-era federal Promise Zone. Identified by the U.S. Department of Housing and Urban Development (HUD), the San Diego Promise Zone includes three of the city's most economically challenged neighborhoods. The Promise Zone is characterized by "high unemployment, low educational attainment, insufficient access to healthy foods, concentrated poverty, rising crime, and the least affordable housing in the nation." The area has a population of 77,241, a poverty rate of 39.06%, and an unemployment rate of 15.61%. Youth unemployment is also a pressing concern, as 40.1% of young people in the area aged 16-24 are unemployed compared to 20.5% in other parts of the city.

A group of partners led by the City of San Diego and Jacobs Center for Neighborhood Innovation have identified six goals to "improve the quality of life and accelerate revitalization" in the Promise Zone: 1) create jobs, 2) improve economic activity; 3) reduce violent crime, 4) expand educational opportunities, 5) access top-quality affordable housing, and 6) promote health and access to healthcare (HUD, 2016). A positive impact can be made toward achieving several of these goals, as GUC's on vacant land stand to improve individual health outcomes reduce crime (Garvin et al., 2012; Pearsall and Lucas, 2014). Furthermore, HUD cites rezoning, vacant land along high traffic corridors, and public transit as key assets within the Promise Zone that can be built upon to "bring economic vitality to these underserved communities" (2016). The Promise Zone designation is particularly relevant because two of the sample design sites fall within its boundaries.

	Community Plan Areas						Study Area Totals	San Diego Jurisdiction
	Barrio Logan	Southeastern	Greater Golden Hill	Encanto	City Heights (Mid-City)	Eastern (Mid-City)		
Area (Square Mi)	0.862	4.577	1.165	5.954	4.587	4.867	22 (+1 Outside C.P. Areas)	372.1
Population	4,865	56,757	15,848	47,361	74,062	37,431	236,324	1,301,617
Population Density (People/Sq.Mi.)	5,643.9	12,400.5	13,603.4	7,954.5	16,146.1	7,690.8	10,573.2	3,498
Race (US Census Categories)								
Hispanic	72%	83%	44%	50%	58%	33%	58%	29%
White	16%	4%	45%	7%	11%	30%	14%	45%
Black	7%	9%	5%	24%	12%	16%	14%	6%
Asian	2%	2%	3%	15%	16%	16%	12%	16%
Other	2%	2%	4%	4%	3%	4%	3%	4%
Population Under Age 18	28%	34%	18%	30%	32%	25%	30%	21%
Population Age 65 and Older	7%	6%	6%	10%	6%	10%	7%	11%
Individuals Over Age 25 with Less than High School Education	40%	52%	19%	33%	39%	20%	36%	14%
Individuals Over Age 5 Speaking a Non-English Language at Home	62%	78%	43%	57%	73%	42%	64%	39%
Individuals Below Poverty Level	41%	34%	17%	22%	29%	17%	26%	14%
Median Household Income	\$26,761	\$31,414	\$46,476	\$43,668	\$33,549	\$48,155	-	\$63,198
Median Housing Value	\$428,906	\$351,456	\$509,879	\$337,864	\$351,347	\$368,778	-	\$506,107
Median Age	30.8	27	33.1	31.1	28.4	31.8	-	33.8
Unemployment Rate	22.00%	14.20%	5.90%	11.30%	11.20%	10.80%	-	8.40%

Data Source: SANDAG Regional Data Warehouse, constructed from U.S. Census Bureaus American Community Survey 2010 (extracted on: 5/18/2017)

Figure 2.1.4: Study Area Socioeconomic Information

PILOT PROJECT: POPUP15

Between May and December of 2016, the researcher engaged with the El Cajon Boulevard Business Improvement Association (Boulevard BIA) and other City Heights community organizations to develop a new GUC on the PopUp15 site described in the Methods chapter. Although the Framework detailed in this document had not yet been fully named and developed, nearly each aspect of the Spatial Scaffold, Materials Menu, and Social Structure components were integral to project execution. In turn, action research on the PopUp15 project informed and helped to refine the building blocks of the framework. Despite the fact that the project was not explicitly called a GUC, the oversight and management of the space is similar enough to ascribe the title and draw parallels to the Framework.

Phase 1: Project Start-Up (February – July 2016)

Site ID & Selection

The PopUp15 site is located within the district of the El Cajon Boulevard Business Improvement Association (Boulevard BIA) at the intersection of El Cajon Boulevard and Central Avenue in the City Heights Community of San Diego. Between 2015 and 2016, the Boulevard BIA partnered with a local chapter of the Urban Land Institute (ULI) on a study that included identification of transit-oriented mixed-use development opportunities in City Heights. The PopUp15 lot, owned by the City of San Diego and vacant for over 26 years, was identified by ULI as a site that could potentially host a new mixed-use development to compliment the nearby public transit platform on the Interstate 15 overpass. The study began a conversation about the future of the PopUp15 site, and the BIA chose to develop it as a temporary pop-up park to integrate with its ‘placemaking’ efforts. From the beginning, the Boulevard BIA’s interest has been to activate the site with programming and catalyze discussion about the future of the space, allowing the temporary site intervention to influence more permanent change.

Stakeholder Mobilization

The Boulevard BIA was intentional about stakeholder outreach. A ‘placemaking’ college student intern with the BIA contacted potential stakeholders, announcing the opportunity to access the lot and inviting other groups to participate in GUC oversight. Groups that were contacted included: teachers at two local High Schools, a community development corporation, a sustainable transportation organization, a public health coalition, an urban agriculture organization, a community advocacy network, and a refugee resettlement organization. Several contacts from these groups expressed interest in accessing the PopUp15 space at some future date, and a select few were in a position to offer tangible resources or time toward initial landscape development.

A kickoff event at the PopUp15 site was held in late May 2016 to coincide with a report of the ULI study and invite potential stakeholders to the site. Following preliminary discussions, a community-based bicycle advocacy organization, Bikes del Pueblo, submitted a formal proposal to the BIA to use a portion of the lot to host a drop-in bicycle repair workshop. In exchange, Bikes del Pueblo

offered to staff a monthly “bicycle valet” for cyclists interested in using the adjacent rapid transit bus for their commute. In addition to the bicycle workshop, the BIA collaborated with the Media Arts Center of San Diego to host a 3-week outdoor film series on the PopUp15 site during July 2016 as part of its project start-up. Each of these events and arrangements led to collaborative decision-making about resource sharing, mutual benefit, and site improvements. To use Framework terms, members of the Boulevard BIA and Bikes del Pueblo became the de-facto Stewardship Team of the PopUp15 GUC, though neither was specifically called such during the course of action research.

Designer Engagement

Designer engagement began with a series of phone conversations between the researcher and Boulevard BIA staff between February and June of 2016. The researcher, assuming the role of design consultant for the PopUp15 project, began by submitting a proposal for volunteer involvement and a detailed 12-week work plan spanning mid-June through early September of 2016. Deliverables outlined in the proposal and agreed upon by the BIA were:

- Programmatic ideas for the lot generated during interviews with the BIA, area residents, and potential project partners
- Design drawings for the lot including a site plan and conceptual sketches (i.e. a site survey, Spatial Scaffold design, and build-out scenario projection to be used for fundraising)
- Coordination of one (minimum) community event centered on physical site improvements that could include construction of Spatial Scaffold elements or site amenities (ex. benches, planters, stage, furniture, etc.), dependent upon funding
- Assistance developing guidelines and strategies for project maintenance over the three-year project lifespan

These deliverables correlate loosely to several of the ten “Outcomes” described in the Project Process diagrams (Figures 3.4.2 - 3.2.4). Although some responsibilities were expanded outside of this initial list of deliverables, it was beneficial to begin the pro-bono designer-stakeholder relationship with a detailed timeline and clearly articulated list of outcomes. The list and timeline helped

both parties maintain clear and realistic expectations during the course of their working relationship, and it ensured that the landscape was set upon a trajectory toward emergent characteristics.

Out of initial discussions with the Stewardship Team, it also became clear to the researcher that a concise set of project goals would help to determine collective values and objectives (Framework Outcome 1), guide project development, and attract additional stakeholders. Collaborative discussions with the BIA led to the formation of the following three goals for the PopUp15 project:

- Serve as a flexible and adaptable outdoor space for community events
- Provide green open space for the City Heights community
- Engage City Heights residents in the physical construction of site elements

The establishment of value-based goals helps to ensure the development of landscape objectives that fulfill additional desired outcomes (listed in Figures 3.4.2 - 3.2.4). For example, engaging City Heights residents in physical construction means that elements should be able to be built by non-experts (tied to Outcomes 6 and 7). Stipulating that the open space be “green” led to the construction of planter boxes and a discussion about pollinator-friendly plants, helping to formalize relationships between social systems and ecosystems (Outcome 2). Declaring that the space should serve as a flexible and adaptable outdoor space for community events was intentionally meant to attract a diverse range of additional stakeholders and project participants (tied to Outcomes 4, 9, and 10).

Following the establishment of a work plan, deliverables, and project goals, the researcher contacted potential project partners and other stakeholders that had been previously identified by the Boulevard BIA. In-person or phone interviews were conducted so that the researcher could gain a better sense of the interests and physical requirements of each group. Interviews began with a review the PopUp15 project goals established by the Stewardship Team. The line of questioning included:

- What activities would your organization be interested in hosting on the PopUp15 site?

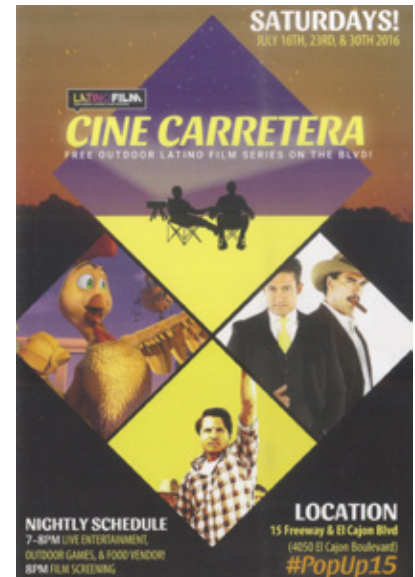


Figure 2.2.1: Images from the Cine Carretera event

- What physical elements or infrastructure would need to be provided to successfully host your event(s)?
- How many event attendees do you anticipate?
- What is your future vision for the vacant lot?
- What do you envision as some of the key opportunities and constraints to the success of the PopUp15 project?
- Are there any potential uses for the site that have not been identified by the BIA?

The researcher conducted interviews with Bikes del Pueblo, the Media Arts Center, the Rock Church located across the street, and a local refugee youth arts organization called the Aja Project. Levels of involvement varied from complete organizational relocation and investment in the site (Bikes del Pueblo), to temporary event-based involvement (Media Arts Center), to aspirational involvement if funding were to materialize (Aja project). The Media Arts Center, for example, expressed interest in hosting their initial Cine Carretera film series as well as future outdoor movie screenings if it were able to secure appropriate resources and funding. The Aja Project, interested in a more permanent venue to host its student art exhibits, expressed interest in converting a shipping container on the site into a gallery. It did not, however, have any immediate funds to contribute toward that effort.

In addition to stakeholder interviews, the researcher visited two of San Diego's established pop-up parks, Silo at Maker's Quarter and the Quartyard, for analogous inspiration and precedent research. The researcher also spent time visiting library archives, studying aerial images, mapping, sketching, walking the site, and taking photos to gain a better understanding of the lot. Visits were intentionally made during a range of hours to gain a sense of the site at different times of day. A coarse site survey was also conducted, and a set of measured drawings was produced.

The researcher also set up a booth during Media Art Center's Cine Carretera Movie screenings during July 2016. At the time of the film screenings, all that existed on the site was a 40' shipping container used by the BIA for storage. The remainder of the site was largely unimproved. Representatives from the Media Arts Center, BIA, and the researcher set up tables, chairs, and a portable film projector for each screening (Figure 2.2.1).

At two separate film events in the series, the researcher set up a "vision board" featuring a photographic collage of potential activities and amenities for the PopUp15 site, including some items that had been mentioned by the stakeholders (Figure 2.2.1). Participants were then invited to select their two favorite and one least-favorite images from the board using colored dot stickers. Visitors to the booth were also encouraged to leave a post-it note detailing what they would like to see occur in the lot, though this activity was less popular than the photo vote. It became clear that attendees were interested in:

- Children's play equipment
- Green planting areas and vegetation
- Food trucks and vendors
- A swap meet or open-air market

In addition to the outreach booth activities, it was also valuable for the researcher to observe event attendees' use of the unimproved vacant lot site. Children were attracted to the northwest corner of the lot, and attendees did not tend to linger near the alleyway. People seemed generally comfortable with the arrangement of chairs, screen, and stage placement. The preliminary, pre-construction events also attracted several neighbors and allowed them to exchange contact information with the Stewardship Team.

Spatial Scaffold Design

Prior to creating the Spatial Scaffold presentation drawing meant to secure approval from the City's Development Services department, the researcher generated a site plan for stakeholder fundraising and grant writing efforts (Figure 2.2.5). Although the BIA and Bikes del Pueblo had a small budgets allocated for the project, they had to continue seeking additional funding in order to carry out their vision for the space and construct site elements. These fundraising drawings were a synthesis of stakeholder interviews Stewardship Team aspirations for the space. The result was a similar type of GUC scenario projection as those detailed in the Assemblage chapter, and this initial drawing iteration helped to inform initial Spatial Scaffold design.

A key organizing element of the initial Spatial Scaffold was the placement of shipping containers, as they would be difficult to relocate or move during later spatial iterations. One 40' container running east to west along the northern edge of the site was already placed and in use by the BIA, though Bikes del Pueblo was prepared to

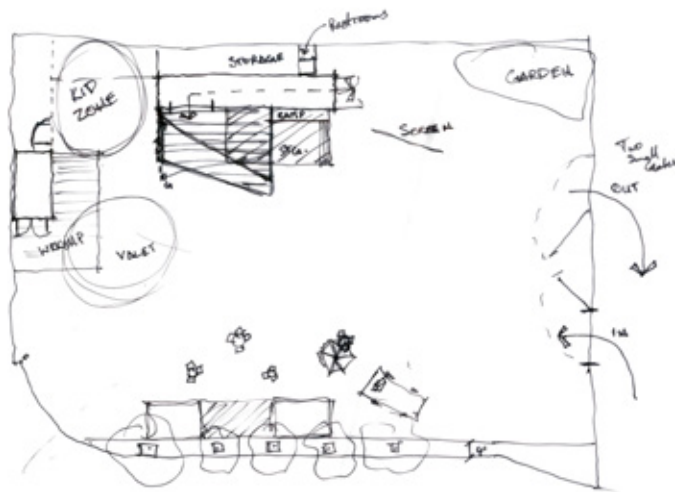


Figure 2.2.2: Scheme A - Concept Diagram for PopUp15

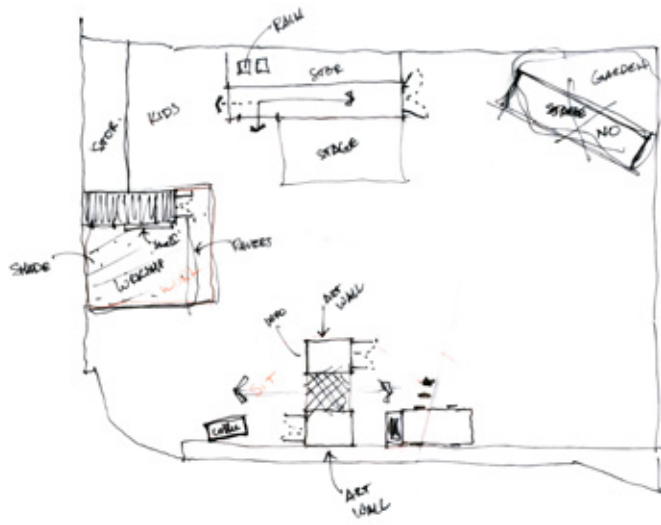


Figure 2.2.3: Scheme B - Concept Diagram for PopUp15

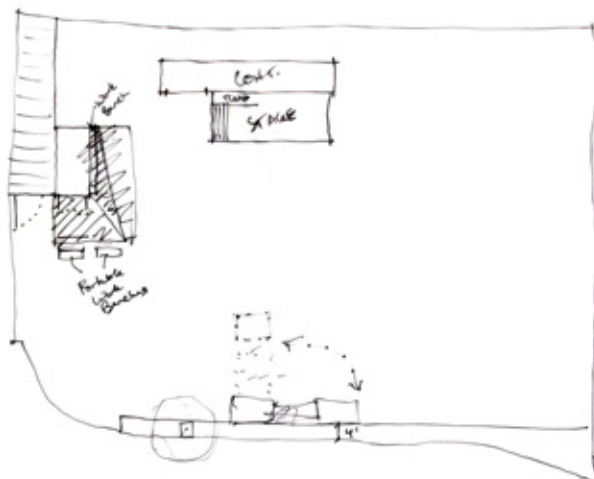


Figure 2.2.4: Scheme C - Concept Diagram for PopUp15

secure an additional container to serve as their workshop and supply storage space. Several configurations were drawn and evaluated (Figures 2.2.2 - 2.2.4), and the researcher settled upon two schemes worthy of presentation to the Stewardship Team (Figures 2.2.6 and 2.2.7). The Stewardship Team and researcher decided it best to place a second 40' container along the western property line. This way, the container could double as a mural wall and perimeter wall, enclosing the Bikes del Pueblo workshop area while permitting views into the lot from the street.

Another key organizing element of the initial Spatial Scaffold design was a paved entry plaza for both ADA access to the site and the Bikes del Pueblo workshop space (preliminary sketch shown in Figure 2.2.9). The edges of the paved area were articulated to accommodate small 10' containers along the southern property line in the future. The additional containers could serve a wide range of potential functions and would not be as obtrusive as another full-length unit. Prior to additional 10' container purchase, the articulated edge could also accommodate a food truck or entry booth.

Another immediate priority for Spatial Scaffold design was treatment of the ground plane on the entire site. Even small gusts of wind through the lot would blow up noticeable amounts of dust, and there was a tremendous

amount of broken glass, rubble, and trash spread throughout the property. The initial Spatial Scaffold design called for removing the top layer of material and replacing it with stabilized decomposed granite.

Institutional Support

Following initial site identification, the Boulevard BIA approached the City of San Diego's development services department about use of the space for placemaking efforts. The city and BIA negotiated a one-year lease agreement signed into effect on May 2, 2016. The lease included the following key stipulations:

- The property may be used as a "public gathering place"
- Allowed uses are "outdoor community activities and events" with written consent needed in the event of other desired uses
- Proper event permits must be secured if necessary
- There are to be "no permanent infrastructure or improvements" on the site
- Lessee may utilize temporary landscaping in pots/containers, temporary removable seating, portable shading, and temporary removable performance area
- Lessee (BIA) holds "Commercial General Liability" insurance and places a \$1000 security deposit down with the city. The BIA was

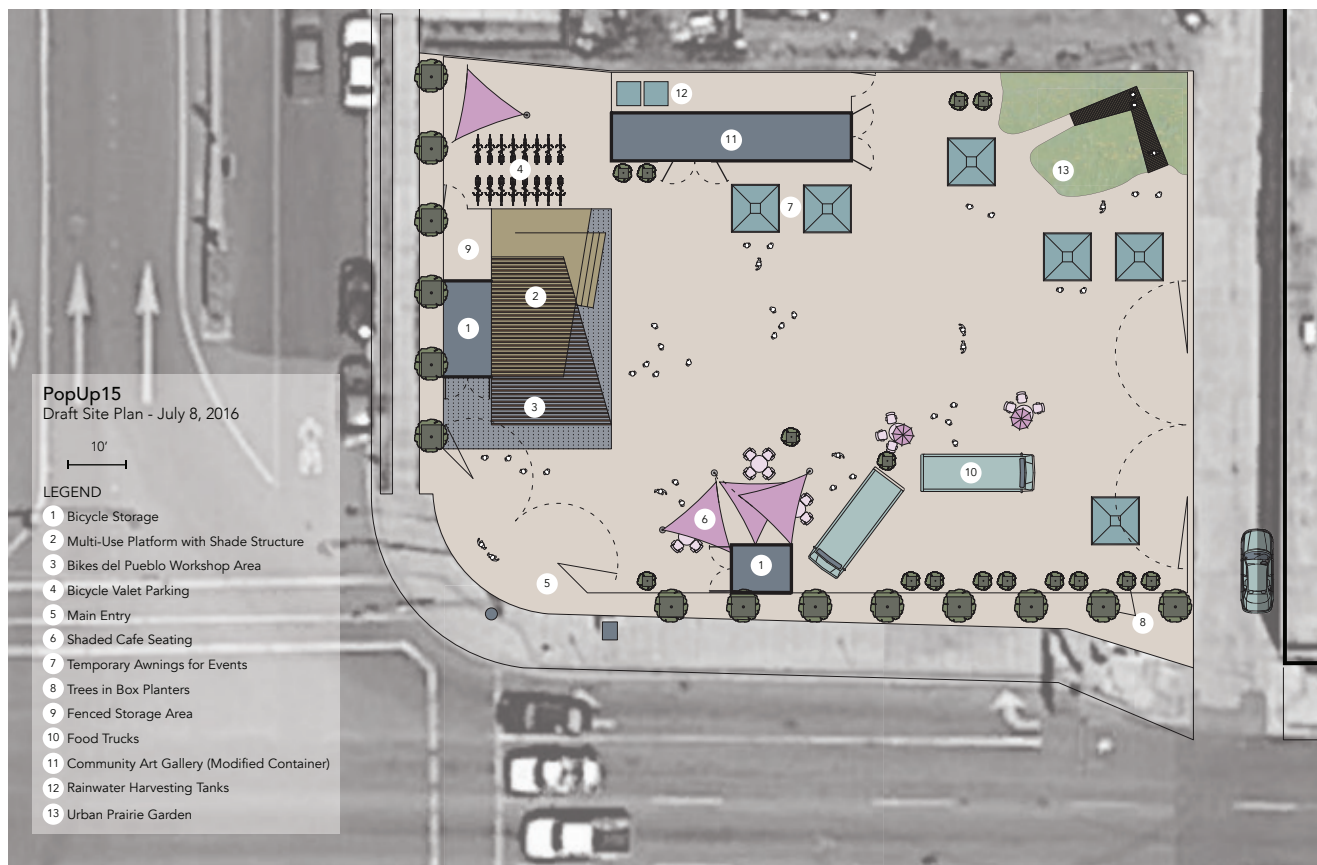
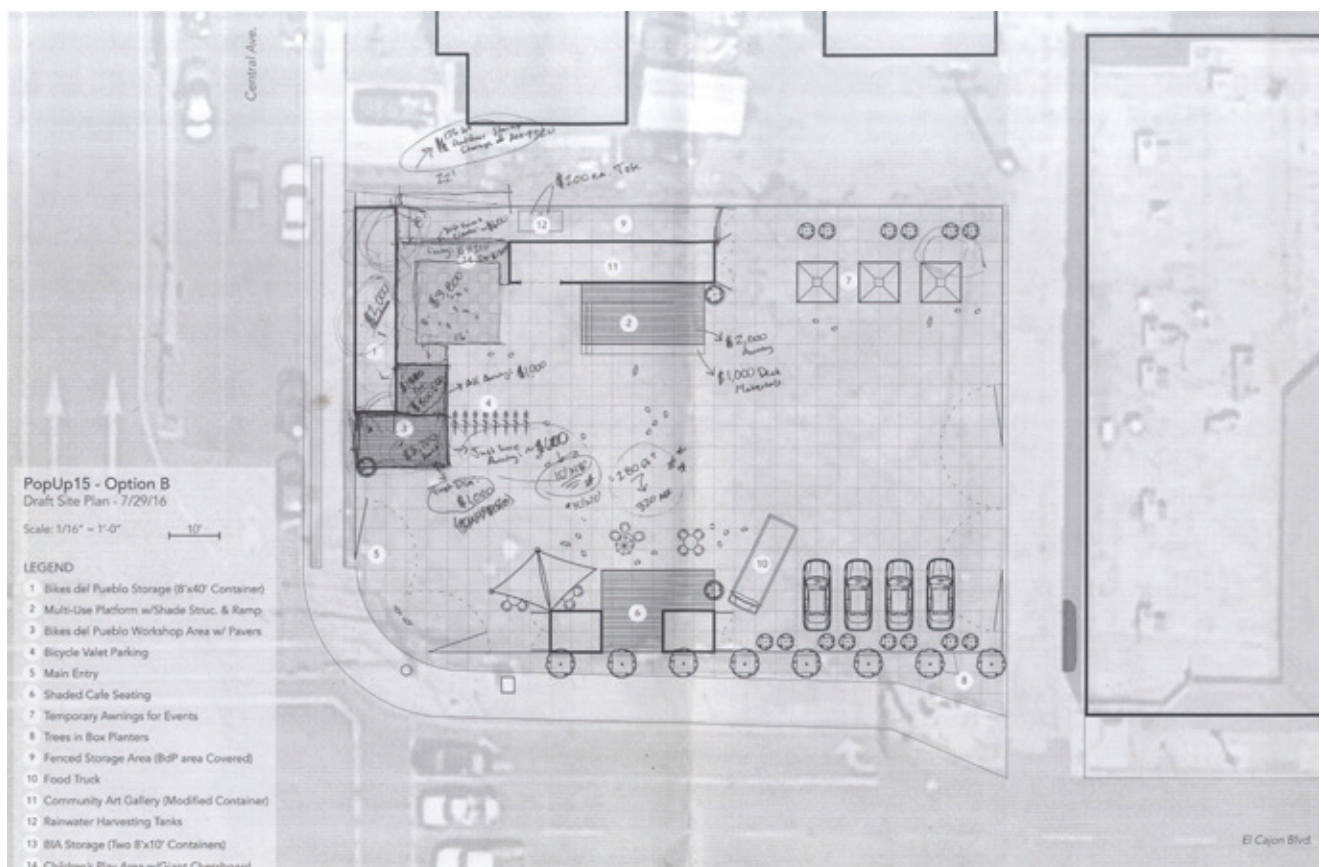
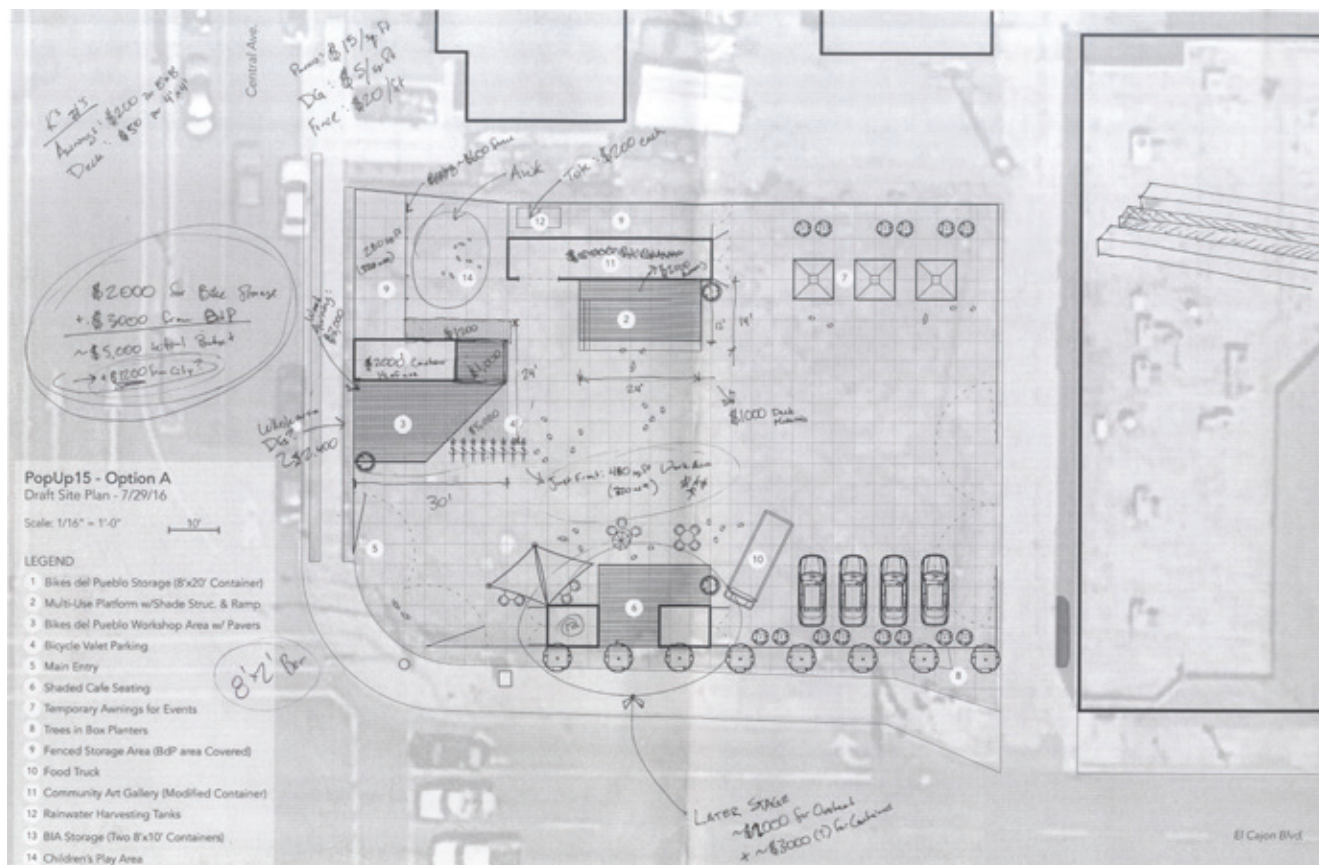


Figure 2.2.5: Drawing used for fundraising efforts



also responsible for paying a one-time lease execution fee of \$980.

- Rent is waived provided lessee holds a minimum of four community events annually (one per quarter).
- The lease may be renewed annually

The Spatial Scaffold design was drawn and negotiated in accordance with the initial lease terms, as the Stewardship Team did not want to undergo a permitting process for site developments. Upon reviewing preliminary design drawings, Development Services provided the following additional recommendations:

- Do not dig beyond 4'
- Vehicle access and egress from the lot to the alleyway must adhere to guidelines similar to those of a construction site by using a compacted gravel driveway,

- Ensure ADA access from the southwest street corner using concrete pavers.
- No wooden stages or other structures may be constructed without a permit
- Overhead structures other than shade sails would be permitted without further review

Each of these points was reconciled, and a more finalized Spatial Scaffold drawing (one that more closely adhered to development code and the specific requirements of the BIA's lease agreement) was cleared for construction by Development Services (Figure 2.2.10).

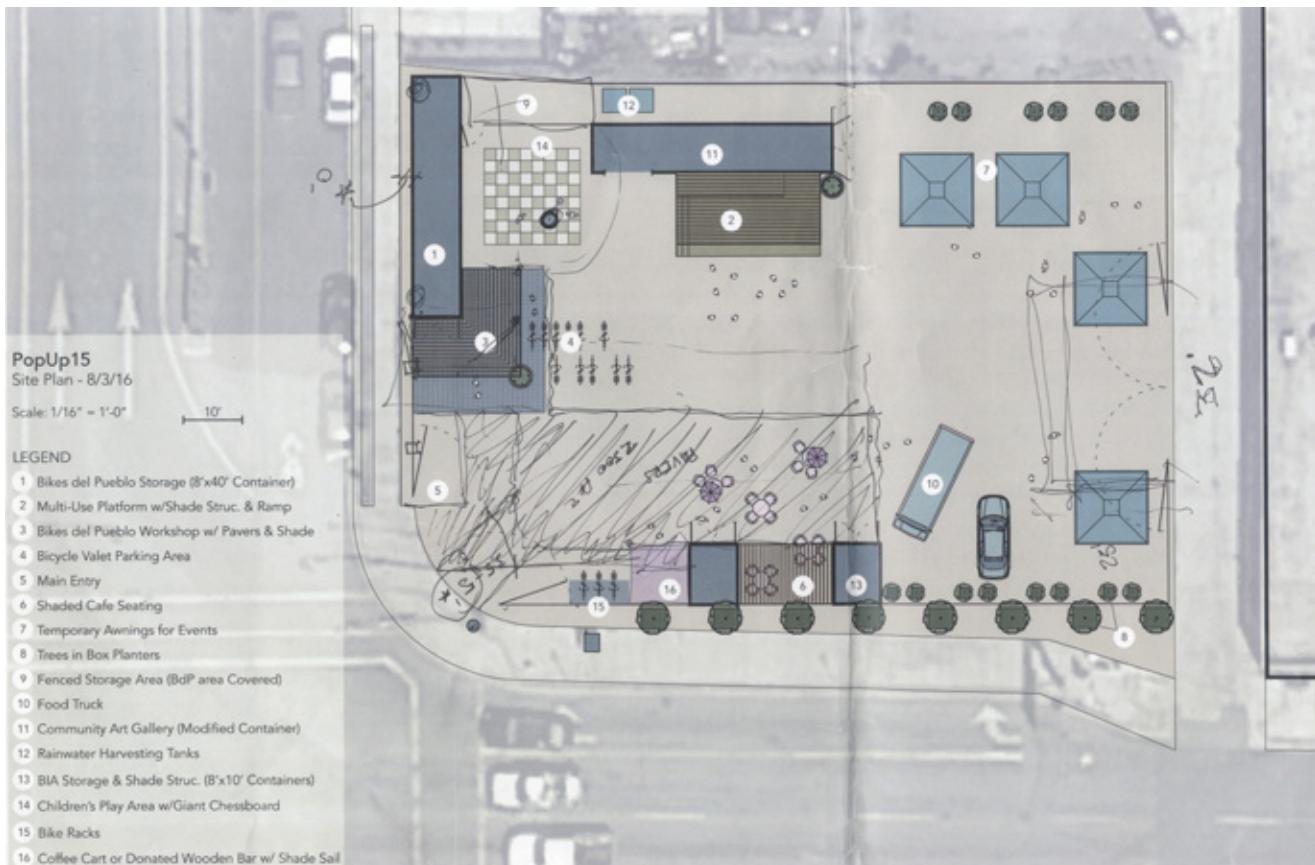


Figure 2.2.8: Plan submitted to City for review with revision notes

Figure 2.2.9: Site plan revision notes from Development Services

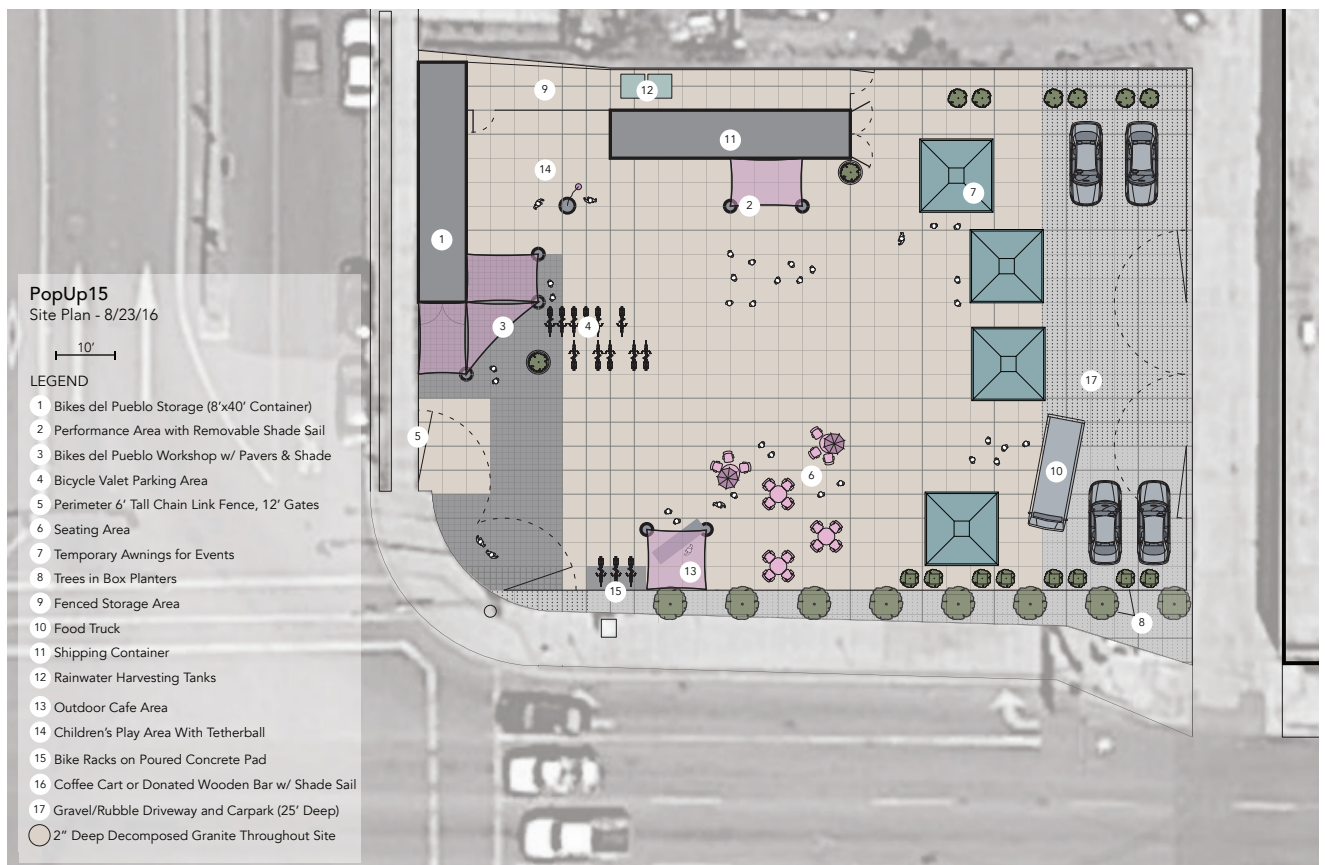
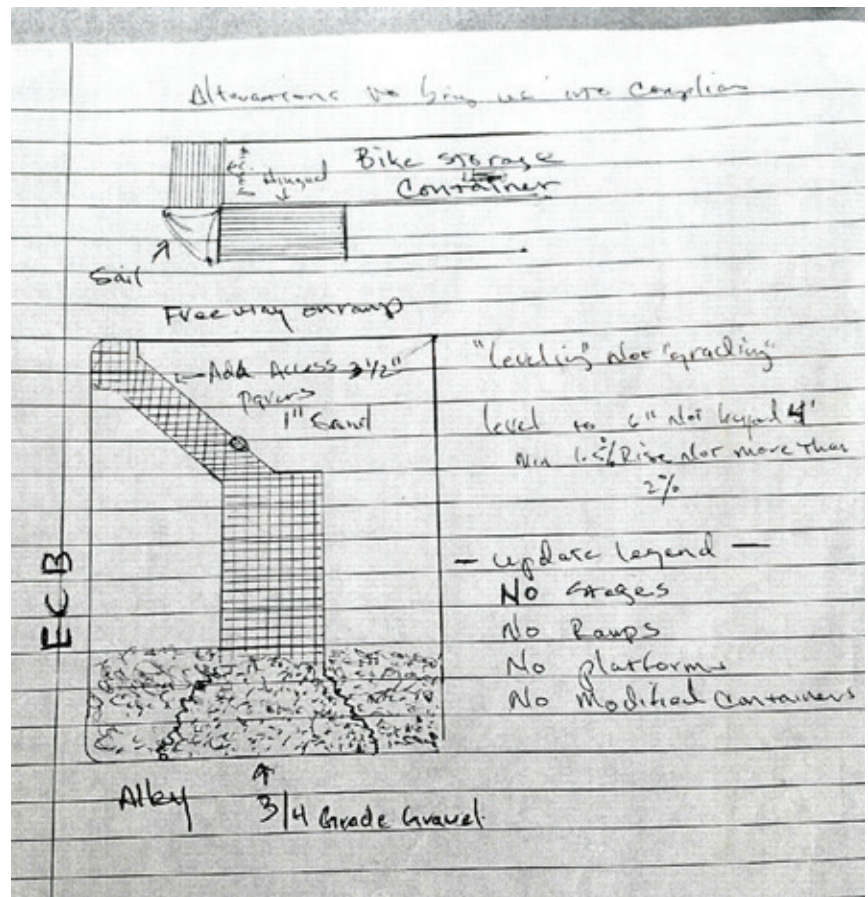


Figure 2.2.10: PopUp15 plan approved by the City's Development Services department

Phase 2: Initial Development (August – December 2016)

Collaborative Design

After gaining approval for site improvements, negotiations continued between the Stewardship Team members about budget and construction priorities. The researcher conferred with the Stewardship Team about budget and construction priorities in an informal fashion, and rough cost estimates were documented on Figures 2.2.6 and 2.2.7 during conversation with the group. These conversations were especially important regarding the treatment of the ground plane, as many options were too expensive for the existing BIA budget. Initiating public access to the site, obtaining a second shipping container, and a flat, paved space for the Bikes del Pueblo workshop emerged as the most important priorities.

Material Selection

The Materials Menu did not exist by name during PopUp15 action research, though the researcher employed the same guiding notions to select materials. The researcher and Stewardship Team decided that the materials used on site should be inexpensive and possess modular, adaptive, or multi-functional qualities.

The site's full exposure to the sun made construction of shade an imperative, so shade sails were used in combination with anchor poles sunk into concrete-filled tires. The entryway plaza was built with sand-set 1'x1' pavers that could be reset and relocated. Basket planters made of hardware cloth and repurposed palettes were constructed to hold soil and low-water plants. Material donations were sought out including tires, pallets, gravel, and shelves for the bicycle workshop. It was decided that the BIA would cover the cost of decomposed granite for the site, and large pieces of donated construction rubble were used at the driveway area adjacent to the alleyway.

Initial Landscape Construction

Four construction kick-off work parties were held over the course of four weekends spanning August and September of 2017. Volunteers from the Stewardship Team and other community members helped to clear the site, level the pad for the second storage container, and construct both planter beds and shade sail posts. Between September and December 2016, the containers



Figure 2.2.11: Bikes del Pueblo Volunteers constructing posts for shade sails



Figure 2.2.12: PopUp15 during site leveling and initial construction



Figure 2.2.13: Bikes del Pueblo workshop space after initial construction

were professionally painted, the interior of the second container was outfitted as the Bikes del Pueblo workshop, and the entry patio area was constructed. In late December 2016, the paver patio was constructed and local contractor was hired to level the site and spread layers of decomposed granite. The site has since assumed its intended functions as a bicycle workshop, community event venue, and green open space.



Figure 2.2.14: Bikes del Pueblo banners advertising services at PopUp15

Phase 3: Ongoing Management (January 2017 – Present)

Although the Boulevard BIA is ultimately responsible for the space and is the leaseholder with the city, the collective management strategies put forward by the BIA trend toward a GUC management pattern. Administrative management, budgeting, and decision-making for the project became integrated within the existing nonprofit structure. Weekly PopUp15 committee meetings held were held during the course of the researcher's involvement, and these meetings continue to be held on a regular basis. Fortunately, the BIA had dedicated staff time to help facilitate oversight of the GUC. The group has hitherto been open and transparent about its budget and project oversight, and there remains an open call for community members to use the PopUp15 site as a venue for events and activities.

As of January 2017 the future of the PopUp15 site is yet to be determined, though the BIA asserted at the beginning of the project that its role would re-evaluated on an annual basis, with a project duration totaling 3 to 5 years. The underlying values and project goals that guide the PopUp15 intervention indicate that the space will continue to evolve and iterate over this period. Several possible futures for the space are presented later in the Assemblage Design Scenario section of this document, revealing how the space might evolve dependent upon social capital and resources.



Figure 2.2.15: PopUp15 in January 2017 following initial construction





Figure 2.6.16: PopUp15 in May 2017 (Source: Steve Aldana)



Figure 2.6.17: PopUp15 in May 2017 (Source: Steve Aldana)

FRAMEWORK FOR NEW GREEN URBAN COMMONS

The Framework proposal that follows is intended to organize and facilitate the creation of new green urban commons (GUC's) in San Diego's Mid-City and Southeastern communities. As stated in the Introduction and Methods chapters, the Framework itself is a product of the synthesis of emergence theory with a distinct landscape type (iterative GUC's) within the specific context of San Diego (reference Figure 1.13 for clarification). Because a primary research objective was to create a Framework for the development of GUC's that embodies emergence theory, every effort has been made to correlate Framework components and outcomes to Barnett's emergent civic landscape criteria (see Figure 2.3.2). Information and experiences from PopUp15 action research helped to develop and hone certain aspects of the Framework and GUC Project Process detailed in the next section.

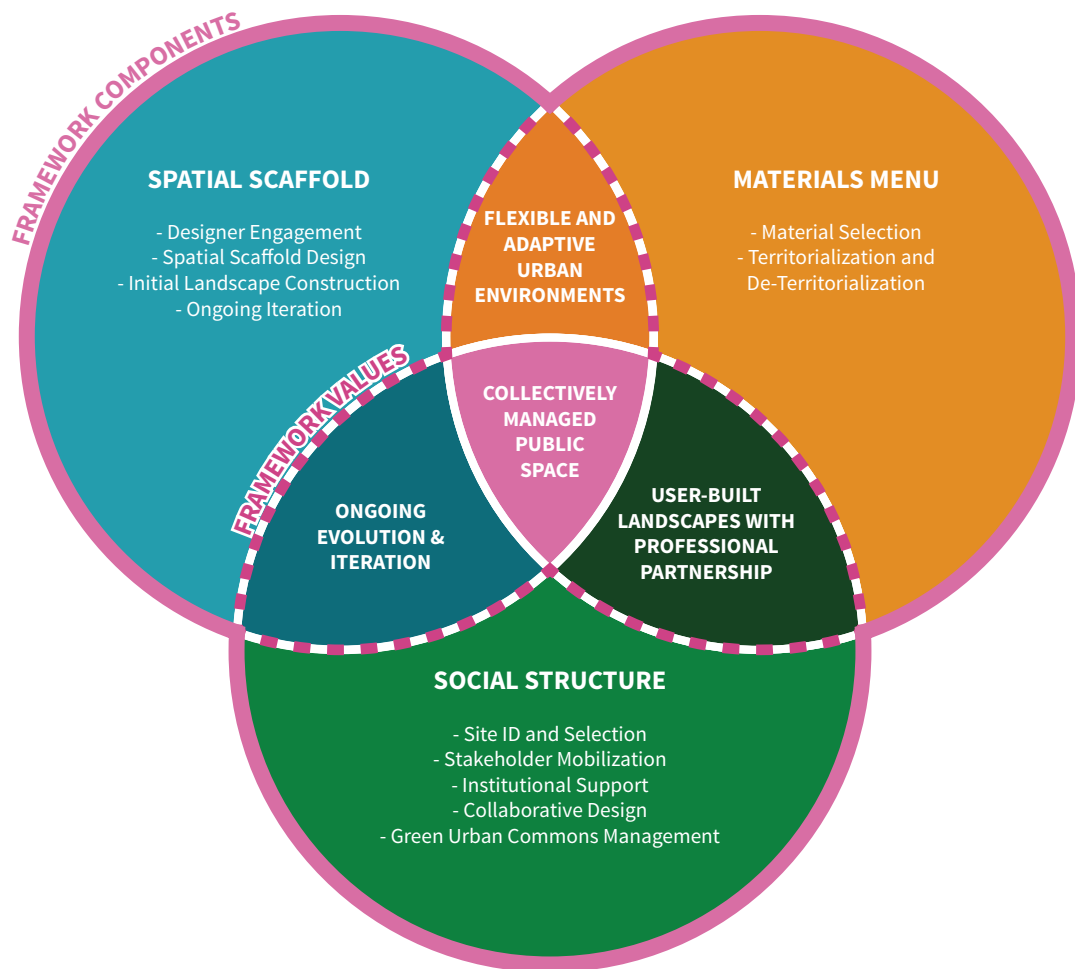


Figure 2.3.1: Framework Components and Values

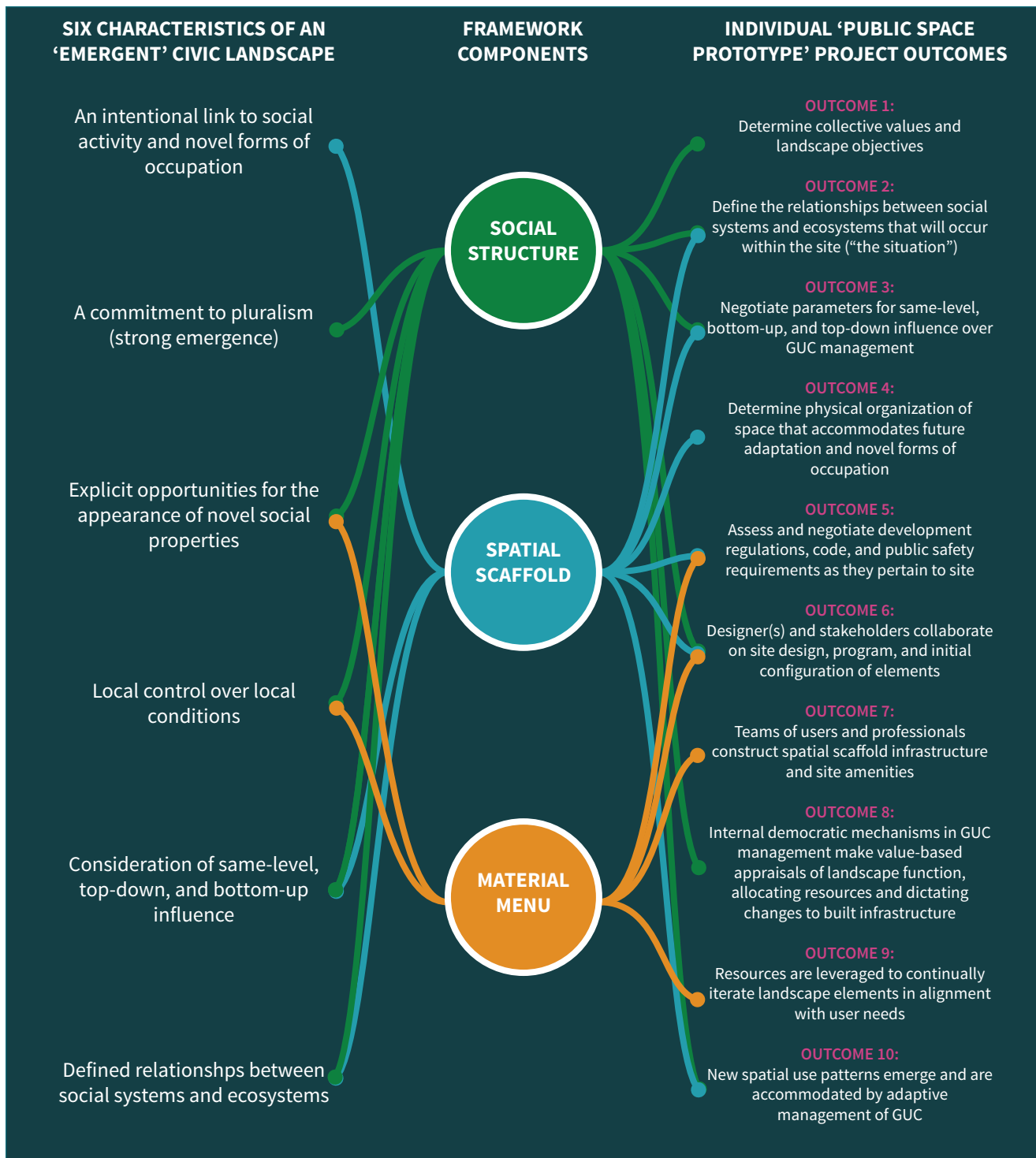


Figure 2.3.2: Connections between emergence theory and proposed framework (After Barnett 2013)

Components

The Framework has three key components: “Social Structure” adaptive management strategies to encourage democratic management of space, a “Spatial Scaffold” to guide the physical development of new GUC’s, and an adaptable and modular “Materials Menu” to accommodate various user-driven needs and activities (Figure 2.3.1). Combined together, the Social Structure, Materials Menu, and Spatial Scaffold components of the Framework allow use patterns, activities, and physical configurations within appropriated vacant lots to fluctuate over time. In addition, each component of the Framework has an intentional link to one or more of Barnett’s six criteria for an emergent civic landscape (Figure 2.3.2).

Embedded Framework Values

The Framework has four key values that should be communicated to stakeholders, city officials, and all others who may be interested in developing GUC’s on city-owned vacant land in San Diego. These are meant to legibly convey to stakeholders the landscape values that can guide the development of new GUC’s that exhibit emergent characteristics, without necessarily naming or explaining the specific nuances of either. The values are:

- Urban environments should be flexible and adaptive
- Landscapes undergo constant evolution and iteration
- Civic landscapes should be built by end-users with professional partnership
- Public space should be collectively managed as a common-pool resource

SOCIAL STRUCTURE

The foremost component of the Framework is social management strategies to foster the initial development and ongoing maintenance of GUC’s. Although what follows is by no means an exhaustive inventory of social and political strategies necessary for GUC start-up and maintenance, the building blocks described are meant to inculcate stakeholders with tools to navigate the development of new landscapes on publicly owned land.

Site Identification and Selection

The development of a new GUC is most likely to begin with the identification of a vacant or underutilized lot by a community member, nonprofit organization, or activist designer. Currently in San Diego, the determination of land ownership, lot size, zoning, land use status, and other site characteristics require specialized knowledge or the use of GIS software. It is recommended that an online interface be created to expedite the identification city-owned vacant lots and facilitate communication between community members and potential stakeholders. Open source software called “Living Lots” exists for this exact purpose, having been made available through the nonprofit organization 596 Acres out of New York City. SanGIS shapefile data and metrics used by this project for case study site selection can be seamlessly integrated into such an online interface. An interactive online mapping tool could help community members and stakeholders not only identify physical spaces for GUC creation using the GIS data generated for this project, but it could also provide a web-based forum for community members to communicate with one another, share resources, and mobilize efforts around specific lot opportunities.

Stakeholder Mobilization

Once a lot is identified, the next step is for stakeholders to find one another, organize, define collective values and objectives, and share resources. For purposes of the grassroots-led GUC efforts described by this Framework, a stakeholder can be defined as “anyone who is potentially affected by local, regional and global social issues whose needs could be addressed in the project, particularly marginalized groups” (Brown and Jennings, 2003). A foremost concern for nascent stakeholder groups is to determine collective values and landscape objectives. This process of stakeholder-driven (rather than designer or government-driven) value negotiation regarding land use is an ongoing process in any GUC undertaking (Radywyl and Biggs, 2013).

Stakeholder groups may choose a number of methods to organize and share resources, though Asset-Based Community Development (ABCD) strategies can serve as an appropriate model. ABCD promotes a ‘glass half-full’ approach to community development, focusing on the sharing and enhancement of assets rather than focusing on deficits. In addition to pooling resources, a

stakeholder group may also want to consider marketing and outreach tactics to build momentum around the project and connect with other interested parties. During the initial start-up phase of project development, any designers involved with the project will want to meet with these stakeholders to inform their decisions about Spatial Scaffold design and future landscape possibilities.

Stewardship Team

To maintain project oversight and continuity, it is recommended that a Stewardship Team be formed to lead project development and negotiate with both institutional and design partners. This team may consist of local residents, business owners, representatives from nonprofit organizations, faith groups, or other institutions that have some stake in the success of a particular GUC project. Transparency in decision-making and democratic negotiation of land use should remain

paramount concerns. It is likely that this Stakeholder Team will be responsible for securing land use and construction approval from the city, delegating resources, and coordinating the purchase of materials. Mechanisms for decision-making and conflict resolution should be decided upon early in the project timeline.

Institutional Support

After initial mobilization and the definition of landscape objectives and collective values, a stakeholder group will want to initiate communication with the San Diego City agency or department responsible for overseeing the lot in question. Stakeholders will want to inquire about several things from their institutional contacts, including information about: formal approval for site access, physical development restrictions, construction permitting, as well as any liability issues or insurance requirements. At this point, the designer will also



*Figure 2.3.3:
Construction
during PopUP15
Action Research*

collaborate with the stakeholders and city agency to assess and negotiate development regulations, code, and public safety requirements as they pertain to the site in order to inform the Spatial Scaffold design. Following the development of a Spatial Scaffold design by a landscape architect or other professional, the Stewardship Team should remain in contact with their city agency about any major changes they intend to make to the GUC's built infrastructure. Ostensibly, the city agency will have already recognized the fact that the physical landscape of the GUC is intended to shift and change over time. It would be best to clarify and negotiate early in the process the types of physical changes beyond initial Spatial Scaffold construction that do and do not necessitate further institutional approval.

If the San Diego City Park and Recreation department or another agency responsible for public space oversight owns the identified GUC lot, the Stewardship Team may want to inquire about resource sharing and the iterative, collaborative development of a new public park. In this case, the city may be amenable to sharing financial, material, or maintenance resources. This type of collaborative development may be especially desirable for the city to test different public space prototype designs on city parks properties that present particularly problematic circumstances, such as the Martin Ave. Park site (discussed further in Assemblage Design Scenario section) with its dramatically sloped topography and single family detached homes on either side. Such collaborative projects present opportunities for the Parks Department to create “safe to fail” public space projects at a lower cost and lower risk than more permanent, traditional park development.

In the case of a GUC on city parks-owned property, the Stewardship Team and involved designers will want to refer to guidelines found within the San Diego Parks and Recreation document Consultant's Guide to Park Design and Development. Deviations from the parameters in this guide may be appropriate but would need to be negotiated with the city on a case-by-case basis. Another useful starting point for most groups embarking upon the development of a GUC, regardless of location, might be the San Diego Parks and Recreation guidelines and formal approval process for community garden development. The researcher recommends that the city create a similarly formalized “Placemaking” or

“Green Urban Commons” approval process aligned with this Framework in order to lower barriers to new GUC creation.

Collaborative Design

After the determination of an initial Spatial Scaffold and institutional approval, the Stakeholder Team will want to continue negotiating the program and activities set to occur within the landscape. This process began prior to the development of the Spatial Scaffold during stakeholder mobilization, though it is probable that the stakeholder group will want to gain insight from a designer prior to passing judgment on initial land use patterns and the physical configuration of elements. During this stage of the project, the designer(s) may work with stakeholders to develop a more detailed plan for allocation of space within the Spatial Scaffold. The overarching 4' grid geometry stipulated in the Spatial Scaffold design guidelines will help stakeholders during this process of physical allocation. The designer should emphasize the adaptability of the Scaffold to stakeholders, showing different ways that the space can evolve from the same starting point. The results of this negotiation process may take the form of something similar to the Assemblage Design Scenarios shown later in this document.

The collaborative design process is likely to include continued negotiations about resource distribution and land use. For example, a particular stakeholder group may be interested in the development of skateboarding rails and ramps on a site. If no funds exist for the purchase of these materials, the Stewardship Team may stipulate that the area designated for the future skate park accommodate an interim programmatic element that is less expensive yet requires similar infrastructure (such as an asphalt basketball court).

Green Urban Commons Management

The Stewardship Team should continue to hold regular, open meetings and invite additional community membership as it continues to oversee and democratically negotiate the use of space. The management structure should emphasize equitable access, equitable use, sustainable management of the space as a common pool resource, as well as equitable and transparent sharing of resources. Ongoing user-driven iteration of the physical environment will either reinforce or revise the physical



Figure 2.3.4: Canyon-Adjacent Lot in Encanto

territory defined by initial construction. To continue the skate park/basketball illustration from the section above: when the skateboarding stakeholder group is able to garner funds for materials and construction, the territory designated for basketball would be renegotiated and the GUC would begin a new spatial iteration. If basketball were a particularly popular activity and paved asphalt space in the GUC were limited, the Stewardship Team or other management group might equitably negotiate and designate specific hours for basketball and skateboarding activities to alternate within the same space. These temporal guidelines could be communicated in creative ways such as decorative signage or artful timetable murals, and the physical fluctuation of space could be accommodated through innovative material use such as wheeled, moveable skate ramps. It is understood that each of these GUC management decisions would be made on a case-by-case basis yet strive to adhere to the overarching Framework Values (ref. Figure 3.2).

SPATIAL SCAFFOLD

The purpose of the Spatial Scaffold is to guide the physical development of a new or established GUC. Aligned with the emergentist notion that all landscape situations are in a continual process of “becoming,” the Spatial Scaffold sets the initial conditions for a

landscape that can continue to be flexible, adaptive, and accommodate future iteration.

Designer Engagement

A landscape architect or other design professional should become involved in a GUC project as soon as possible. Designer engagement in a user-driven GUC is likely to be on a voluntary, pro-bono basis, though certain project scales may necessitate some form of compensation and assumption of liability. The role of the designer is to explore the open systems that exert influence over a particular site and purposefully re-define (or reinforce) the relationships between social systems and ecosystems. It is understood, however, that a primary result of their involvement in the project will be a Spatial Scaffold plan to help the stakeholder group secure approval from the city agencies responsible for overseeing the property in question. It is also understood that the four Framework values illustrated in Figure 2.2 will guide the designer’s decision-making toward a landscape design that embodies emergent characteristics.

In order to understand the connections and nuance of the systems exerting influence on a potential GUC site, designers will want to engage in “expressive drawing, writing, and photography” as well as site reconnaissance, site forensics, and a detailed site survey (Barnett, 2013). Site reconnaissance can be defined as exploration

of a territory in order to gain information, whereas site forensics refer to the use of deductive scientific thought to build evidence in support of an argument or understanding of reality. A site survey is recognized as the two-dimensional definition and communication of a physical territory as well as the “determination of cultural details above, on, or beneath the surface of the earth” (Barnett, 2013). It is recommended that the designer, in light of both the Framework values and those established by the GUC stakeholder group, document what they perceive to be the key opportunities and constraints for a particular site’s development. In addition to documenting the sociocultural and biophysical factors at play on a potential GUC site, the designer will also want to conduct soil toxicity tests and any other documentation required to ensure public safety.

It is unlikely that a grassroots-led GUC project will have funds to hire a professional survey team or other similar consultation services. As a result, the designer is likely to use several rudimentary tools in order to establish the site survey, and guide site reconnaissance and forensics: Google Earth imagery, LIDAR topographic information, SanGIS data, and on-site measurements. The designer should also undertake, on their own volition, whatever exploratory means they deem appropriate in order to understand the forces at play on the site.

Another important aspect of designer engagement with a GUC project is their role in initial stakeholder mobilization. It is likely that the designer will want to reach out to individuals, nonprofits, or community groups that have either directly expressed interest in participating, or are likely to participate in GUC construction and use. The designer should ask questions regarding the activities that stakeholders would like to conduct within the space, as well as the physical requirements for the activities. Although it is important that the designer interview potential and active stakeholders regarding specific GUC use, either Stewardship Team or other leadership should be the ones leading outreach efforts. It is important to keep in mind that the designer’s involvement in the project is temporary or intermittent at best, and that it will be the responsibility of GUC leadership to identify and follow up with parties for outreach.

Spatial Scaffold Design

In partnership with a landscape architect working on a pro-bono basis, stakeholder groups should develop a schematic physical plan to gain city approval and guide both initial construction and ongoing evolution of the GUC. Following their initial site reconnaissance and creative forensics process, designers should use physical elements selected from the Materials Menu (presented later in this chapter) to propose:

- Basic access and egress to the site
- Internal circulation pathways between landscape spaces, preferably at or under 5%
- Defined green spaces that have either distinct or flexible uses
- Flexible, programmable social spaces that are leveled at or under a 2% cross slope. These spaces should be designed and drawn with a 4’ grid.
- Infrastructural spaces (ex. restrooms and trash receptacles)
- Integral systems such as electrical and irrigation

The spatial scaffold design should be communicated to stakeholders and institutional contacts with a scaled plan drawing that includes the basic delineation of green space areas, programmable social spaces, key spot elevations, modified contours, and existing vegetation to retain. The overarching 4’ grid geometry for flat-graded programmable landscape spaces is helpful because it is both an acceptable minimum pathway dimension as well as the unit by which many landscape elements in the Materials Menu can be permuted (pallets, shipping containers, planter beds, scaffolding, etc.). With a clear 4’ grid, stakeholders can use the designer’s initial spatial scaffold drawings at a later date to quickly calculate square foot areas and negotiate use of space.

Landscape designers should remain mindful of the four Framework values while designing, acknowledging the fact that although they are responsible for defining certain relationships between physical spaces, end-users of the space are the ones responsible for use patterns, program, and the way the landscape is occupied. An additional consideration during spatial scaffold design is adherence to ADA and public safety codes in order to ensure equitable access. Although certain materials may be called out, the designer may choose to be non-specific

about initial material selection. Although materials may vary, the construction of designed Spatial Scaffold elements should allow for the space to assume minimal function and permit full public access to the new GUC.

Initial Landscape Construction

Following spatial scaffold design and institutional approval, initial construction of the GUC may begin. Although non-experts can assemble most elements in the Materials Menu, stakeholders may need to collaborate with professional consultants when constructing Spatial Scaffold components and other infrastructure mandated through the city approval and permitting process. This may include electrical work, grading, construction of overhead structures, and other specialized tasks. Despite the likely need for some professional assistance, GUC stakeholder groups should strive to construct as many of the planned site amenities and Spatial Scaffold components as possible. Volunteer work parties or regular volunteer construction hours will save on labor costs as well as encourage community investment in the space. Stakeholder groups may want to host kick-off events to build interest in the project and garner additional volunteers. Furthermore, stakeholders may be able to secure pro-bono volunteer support from construction companies, faith groups, and San Diego high school students required to complete community service hours for graduation. Outreach to these and similar groups is encouraged.

Ongoing Iteration

The Spatial Scaffold design is meant to guide the physical evolution of a GUC space as social capital and activities fluctuate over time. Stakeholders should continue to transparently manage the GUC as a common pool community resource, allowing parties interested in using the space to become more or less involved in the project. In addition to flexibility in leadership and stakeholder involvement, oversight and GUC management should allow new programmatic uses and spatial configurations to emerge. As user participation changes over time, the territory defined by initial construction will either be reinforced or revised as emergent use patterns and stakeholder desires exert influence on the GUC's physical landscape trajectory. If, for example, a group of community gardeners loses interest or momentum, the space and vegetable beds may be appropriated as a planting area for orchard trees. Conversely, a temporary

stage made of scaffolding within a plaza may become a more permanent wooden fixture with an overhead lattice, or an aluminum access ramp may be loaned to another GUC it is replaced by a concrete walkway. Most important to the success of the GUC is the ongoing value-based negotiation among stakeholders about space use and landscape change. So long as the “bones” of the Spatial Scaffold are upheld, basic public access and safety standards will be maintained within the GUC as the space undergoes continued iteration.

MATERIALS MENU

The purpose of the Materials Menu is to support the initial construction of Spatial Scaffold elements as well as the ongoing iteration of a GUC. As various user desires and landscape activities are negotiated, the suite of elements described in this section can be used to translate stakeholder ideas into basic public space prototypes. As time progresses and space is negotiated, these initial prototypes become more or less definite through an ongoing process of territorialization and deterritorialization.

Material Selection

The following information sheets provide a kit-of-parts of temporary landscape elements that can be deployed to fulfill desired functions. Materials have been selected primarily because they are both inexpensive and possess modular, adaptive, or multi-functional qualities. This list is not meant to be exhaustive, but rather to reveal a range of landscape possibilities using a restrained palette of temporary landscape elements that can be used in the initial territorialization of a GUC landscape assemblage.

Territorialization and Deterritorialization

For purposes of the Framework and materials palette, territorialization and deterritorialization provide a strong operative metaphor for envisioning how a physical GUC space might change, develop, and evolve into the future. The terms “territorialization” and “deterritorialization” refer to spatial and temporal aspects of the assemblage concept. As the various content (bodies and actions) and expression (signs, symbols, and “incorporeal transformations attributed to bodies”) of an assemblage interact, physical elements and objects in the landscape become more or less definite (Deleuze and Guattari 1987). A dammed reservoir, for example, is an example of an

assemblage with a territory that is physically reinforced by cultural desire. The reservoir has clear causal relationships with its immediate surroundings and the lands downstream that are either irrigated or protected from flood (other territories and assemblages in which the reservoir plays a role). The reservoir assemblage may be subject to forms of disturbance such as erosion or an earthquake that would cause its dam to fail. In the event of such a failure, one could call the disturbance one of the “cutting edges” of deterritorialization. Deterritorialization of the reservoir would occur as its physical boundaries and characteristics are drastically revised, and destructive floodwaters would just as dramatically alter (deterritorialize) the downstream territories. Whole patterns of use and functioning surrounding the drained reservoir would change, and new functions would materialize around the reservoir and in the territories below.

Disturbance and reinforcement along the territorialization—deterritorialization axis often occurs at a much less dramatic scale than that of a catastrophic dam failure. In fact, Deleuze and Guattari would posit that the mechanisms of territorialization and deterritorialization are embedded and continuous in any situation—at the microscopic level as well as at the macroscopic (1987). Landscapes and other situations can be described as always *becoming* and never static or twice the same. Over time, users of new GUCs will begin to replace temporary landscape elements with more fixed materials. Extraneous landscape elements can be reassembled and reconfigured to meet relevant new desires, and resources can be leveraged by the GUC Stewardship Team to continually iterate landscape elements in alignment with user needs.



Figure 2.3.5: Vacant Lot near Euclid Ave. and Market Street

Wooden Pallet

Adaptive Qualities	Modular Size, can be found for free, lifted and moved easily. Fits within 4'x4' spatial scaffold grid
Cost	Free (Used) - \$20-\$25 (New)
Dimensions	Standard North American GMA Pallet: 48" Stringers, 40" Deckboards
Uses	Base for site furnishings and planters
Details	Pallets may be pried apart and used for raw building material, though the inexpensive timber often splinters and splits easily.
Life Cycle	2-3 Years contingent upon weather and moisture



Figure 2.3.5: À nous le parking (Source: Collectif-Etc)



Figure 2.3.6: Bodø Harbour Square Installation (Source: Svein Erik Toien)



Figure 2.3.7: Repurposed Pallets (Source: Makers Quarter San Diego)



Figure 2.3.8: Pallet Basket Planters

Repurposed Concrete

Adaptive Qualities

This readily available material may be diverted from the urban wastestream. Heavy pieces can be used in place of large stones to serve a variety of functions

Cost

Free + Delivery

Dimensions

Varied, though consideration should be given to whether pieces will be hand-lifted (12"x18"x4" recommended max) or moved with equipment

Uses

Decorative paving, stacked walls, fill for gabions

Details

Use caution when using broken concrete reinforced with welded wire. Be judicious with shape selection. Plaza areas using repurposed concrete may have difficulty complying with ADA

Life Cycle

> 5 Years

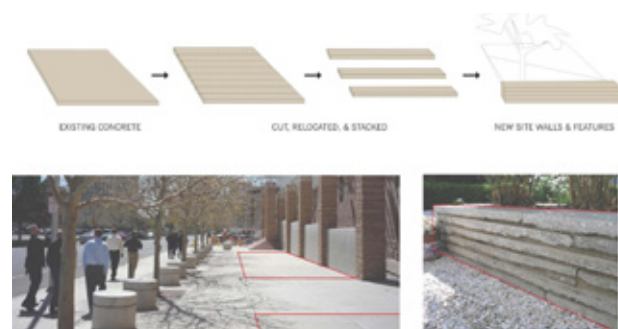


Figure 2.3.11: Saw-Cut Sidewalk Reuse (Source: Rios Clementi Hale)



Figure 2.3.9: Concrete Pavers at Urban Outfitters HQ



Figure 2.3.10: Recycled Concrete Wall (Source: gardendrum.com)



Figure 2.3.12: Concrete Pavers at Urban Outfitters HQ

Dimensional Lumber & Plywood

<i>Adaptive Qualities</i>	Easily obtained, inexpensive material suitable for initial furnishing prototypes. Modular furnishing units can stand alone or be used in innumerable configurations
<i>Cost</i>	Varied
<i>Dimensions</i>	Dimensional Lumber: 4x4, 2x4, 2x2 (Nominal) @ 6'-12' Lengths; Plywood: 4'x8' sheets at 3/4" thick
<i>Uses</i>	Site furnishings such as benches, tables, chairs, caps for gabion seat walls, decks and stages
<i>Details</i>	Stakeholder-constructed furnishings may reflect the character of a landscape or community. Plywood may be doubled-up or joined for strength. Sun and water will speed deterioration of unfinished wood
<i>Life Cycle</i>	1-5 Years depending upon material finish, construction, and moisture exposure



Figure 2.3.16: Stage & Seating, Le Brasero (Source: BruitduFrigo.com)



Figure 2.3.14: Plywood Seating, Lentspace (Source: Interboro Partners)



Figure 2.3.15: Planters and Seating at Lentspace (Interboro Partners)



Figure 2.3.17: Teatro del Mare Seating (Source: ConstructLab/exyzt)

Cinder Block

<i>Adaptive Qualities</i>	Modular size, can be configured and interlocked in various positions. Diverse range of applications.
<i>Cost</i>	\$1.50/ea
<i>Dimensions</i>	8x8x16 Nominal (7 5/8"x7 5/8"x15 5/8" Actual)
<i>Uses</i>	May be dry-stacked for low retaining walls or used as steps. May be up-ended and used with lumber to form a crude bench
<i>Details</i>	Weak without concrete filling and rebar reinforcement
<i>Life Cycle</i>	> 5 Years

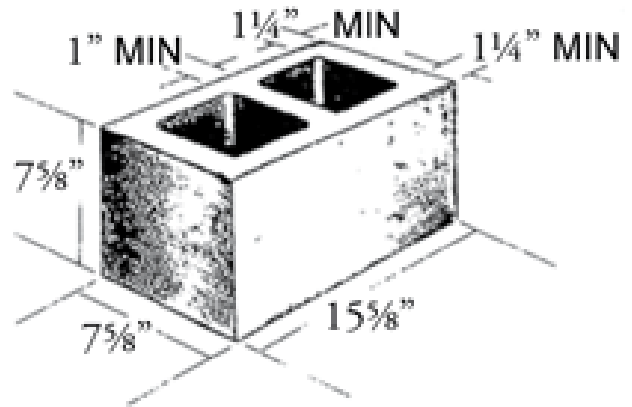


Figure 2.3.18: 8x8x16 CMU Block (Source: RCP Block and Brick)



Fig. 2.3.19: Dry-Stacked CMU Wall (Source: ultimate-handyman.com)



Figure 2.3.20: Creative CMU Planter Wall (Source: Zack Benson)



Figure 2.3.21: CMU Steps (Source: theFigure5.wordpress.com)

Gabion Basket

<i>Adaptive Qualities</i>	Can be assembled on-site and filled with found/repurposed materials. More adaptable and temporary than concrete or CMU retaining walls. Wide enough to serve as seat walls
<i>Cost</i>	Approx \$35/ea
<i>Dimensions</i>	3'x3'x3'
<i>Uses</i>	May be used as retaining wall structures and seat walls
<i>Details</i>	Do not use round cobbles in gabions. Use rough interlocking stones or concrete rubble.
<i>Life Cycle</i>	> 5 Years with proper maintenance



Figure 2.3.23: Bench cap on gabion seat wall



Figure 2.3.22: Gabion retaining wall



Figure 2.3.24: Decorative gabion wall

Chain Link Fencing

<i>Adaptive Qualities</i>	Easily obtained, modular materials than can be easily disassembled and repurposed.
<i>Cost</i>	\$6 - \$10 per linear foot
<i>Dimensions</i>	6' - 8' High, 8' span between posts
<i>Uses</i>	May be used as overhead shade structure, or trellis as well as for fencing
<i>Details</i>	Temporary fencing may be used initially, replaced in a later iteration with concrete-embedded fenceposts
<i>Life Cycle</i>	> 5 Years with proper maintenance



Figure 2.3.25: Temporary chain link fence



Figure 2.3.26: Chain Link Fence Materials (Source: Mutual Industries)



Figure 2.3.27: Chain link trellis and partition (Src: Interboro Partners)

Decomposed Granite

<i>Adaptive Qualities</i>	Can be less expensive than asphalt and paving alternatives. Semi-permeable. Can be stockpiled and used to level out uneven surfaces
<i>Cost</i>	\$30 - \$35 per cubic yard
<i>Uses</i>	Ground plane for sloped walkways and flat-graded programmable areas. Can be made ADA Accessible
<i>Details</i>	Use stabilized mix and install in lifts. Compact and wet lifts during installation. Install extra thickness for vehicle areas, and use compacted gravel subgrade.
<i>Life Cycle</i>	Replenish and compact every 3-4 years



Figure 2.3.28: Decomposed Granite (Source: Soils Plus)



Figure 2.3.29: DG at SILO Maker's Quarter, San Diego



Figure 2.3.30: Decomposed Granite Ramp

Concrete Pavers

<i>Adaptive Qualities</i>	Uniform size, inexpensive and easy to replace during prototype iterations
<i>Cost</i>	\$1/ea
<i>Dimensions</i>	12"x12"x1.5"
<i>Uses</i>	Used as ground plane for flat-graded programmable areas
<i>Details</i>	May be painted or stenciled with a decorative pattern by volunteers. Be sure to use edge restraint system and sweep sand joints
<i>Life Cycle</i>	4-5 years before re-set or replacement/repair



Figure 2.3.31: Modular pavers at PopUp15



Figure 2.3.32: Modular concrete paver (Source: Home Depot)



Figure 2.3.33: Modular concrete paver (Source: Home Depot)

Wood Mulch

Adaptive Qualities Biodegradable and easily removed. Can be secured from local tree trimmers on a free/donation basis.

Cost Free - \$12 per cubic yard

Uses Used as mulch or for pathways/trails through green space and planting areas

Details Various grades exist. Pine wood chips are best, eucalyptus is appropriate for paths, no-cost Miramar landfill compost can be used to enrich soil in planting areas

Life Cycle 1-2 years before replenishment necessary



Figure 2.3.34: Coarse pine wood chips



Figure 2.3.35: Wood chip Pathways



Figure 2.3.36: Wood chips 4" thick over asphalt pavement

Asphalt

Adaptive Qualities

Provides a relatively inexpensive, flat and ADA compliant ground plane for open programmable social space

Cost

\$3 - \$4 per sq. ft.

Uses

Ground plane for flat-graded programmable areas

Details

Professional installation necessary.
May be painted annually with murals or other markings

Life Cycle

Re-seal every 3-5 years



Figure 2.3.38: Swap meet on asphalt (Source: 1.bp.blogspot.com)



Figure 2.3.37: Murals painted on asphalt (Source: M.Fischetti)



Figure 2.3.39: Asphalt at Quartyard San Diego

Gravel

Adaptive Qualities Versatile, multi-use material that can be stockpiled on-site. Easily removed from ground plane and re-used as construction sub-base

Cost \$25 - \$35 per cubic yard

Dimensions 3/4” minus size for construction purposes. 3” for vehicular areas

Uses Construction subbase, larger grade for vehicle parking areas

Details Ensure lifts are wetted during installation and compaction.



Figure 2.3.40: Crushed #3 Gravel (Source: Gernatt Asphalt Products)



Figure 2.3.41: 3/4” Gravel (Source: RCP Block and Brick)



Figure 2.3.42: 3/4” Gravel Road Base (Source: Rhodehouse Construction)

Poured Concrete

<i>Adaptive Qualities</i>	Edging curbs may be used to delineate boundaries set in spatial scaffold, can provide a retaining edge for initial materials as well as later, more refined material
<i>Cost</i>	Varied
<i>Uses</i>	Plaza edge curbs delineate plaza areas and retain either DG or unit pavers. Poured concrete may be suitable for access ramps steeper than 5%
<i>Details</i>	Use simple formwork, can be manually mixed
<i>Life Cycle</i>	> 5 Years



Figure 2.3.43: Concrete curb (Source: External Works)



Figure 2.3.44: Poured curb edger (Source: ArchiExpo)



Figure 2.3.45: Concrete Edging (Source: DIY Advice)

Concrete Footing - Tube Formed

Adaptive Qualities	Easily obtained and constructed, provides a small footprint for larger, removable structures
Cost	\$8/ea
Dimensions	9.5" diam x 4' length
Uses	Can be used to construct a 4'x4' grid of in-plaza sleeves to support modular structures.
Details	Forms have poor structural integrity when cut or exposed to moisture.
Life Cycle	> 5 Years after pour



Figure 2.3.46: 4' x 10" Diam. Footing Form (Source: Lowes)



Figure 2.3.47: Footing Form (Source: Lowes)



Figure 2.3.48: Footing and Bracket (Source: Quikrete)

Scaffolding

Adaptive Qualities

Readily available and easy to purchase or rent. Simple to assemble with modular sets of hardware. Large array of configurations with understood, city-approved construction codes

Cost

Varied

Dimensions

Varied bay widths (6' to 8' max.) and heights.

Uses

Overhead shade structures, stages, guardrails

Details

Consult local building code and adhere to safety standards.

Life Cycle

> 5 Years, Removable



Figure 2.3.49: Scaffolding



Figure 2.3.50: Scaffolding Fittings



Figure 2.3.51: Scaffold shade and platform at the lido by EXYZT (Source: David Carr-Smith)

Prefabricated Aluminum Ramps

<i>Adaptive Qualities</i>	May be easily transported to and from a site, can be loaned out by the city and re-used on multiple GUC sites during prototyping and iteration
<i>Cost</i>	Approx \$100 - \$125 per foot, depending upon application
<i>Dimensions</i>	4' - 6' width, 30' max span between landings
<i>Uses</i>	ADA access for grades steeper than 5% and up to 8%
<i>Details</i>	Use 4' wide modular spans of ramp in combination with pieces at Prefab Aluminum Ramps 30, 60, 90, and 45 degree angles. Use in combination with tube-formed concrete footings
<i>Life Cycle</i>	> 5 Years, Removable



Figure 2.3.52: Angled aluminum walkway (Source: Discount Ramps)

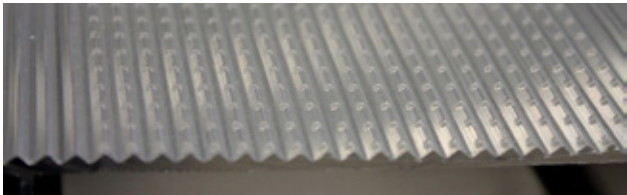


Figure 2.3.53: Aluminum walkway (Source: Discount Ramps)



Figure 2.3.54: ADA-Compliant Alum. Ramp (Source: G&A Manufact.)

Steel Shipping Containers

<i>Adaptive Qualities</i>	May be easily transported to and from a site. Modular size
<i>Cost</i>	\$2500 - \$1500
<i>Dimensions</i>	8' wide x 10' high x 40', 20', or 10' length
<i>Uses</i>	May be used for storage, concession/coffee stands, and base for additional structures
<i>Details</i>	Install ventilation on larger containers. Reinforce all cut containers with tube steel and ensure adherence to local building codes
<i>Life Cycle</i>	> 5 Years, Removable



Figure 2.3.56: Coffee shop container conversion - sliding door



Figure 2.3.55: Unmodified 40-foot container



Figure 2.3.57: Restaurant container conversion - hinged service window

Rebar

<i>Adaptive Qualities</i>	Versatile material that may be used in a variety of decorative and structural configurations
<i>Cost</i>	Varies, Approx \$0.50 per ft.
<i>Dimensions</i>	3/8", 1/2" diam come in 0.5' - 20' Lengths
<i>Uses</i>	Trellis structures, stakes for gabion and paver edge restraints, concrete reinforcement
<i>Details</i>	Pieces may be welded together or painted



Figure 2.3.58: Rebar arbor (Source: Gardening From the Ground Up)



Figure 2.3.59: Rebar stake (Source: ePlaya)



Figure 2.3.60: Welded wire and rebar trellis (Source: Shaun's Backyard)

Keystone Blocks

<i>Adaptive Qualities</i>	May be unstacked and re-used elsewhere
<i>Cost</i>	\$565 per palette (at 144 units per)
<i>Dimensions</i>	6"x16"x9" unit, 36" max wall ht.
<i>Uses</i>	Low dry-stacked retaining wall
<i>Details</i>	Use care when stacking to ensure proper lock. Do not exceed recommended heights. Compacted gravel footing may decrease settling
<i>Life Cycle</i>	> 5 Years, Removable



Figure 2.3.61: Keystone unit (Source: RCP Block)



Figure 2.3.62: Keystone retaining wall (Source: RCP Block)



Figure 2.3.63: Keystone wall detail (Source: Davis Colors)



Figure 2.3.64: Keystone wall (Source: Firth)

Shade Sails

Adaptive Qualities Shade is necessary for protection from the warm Southern California sun, and sails are easily moved around a site to determine ideal configuration

Cost \$80/ea

Dimensions 12’x8’ Rectangle, 12’x12’x17’ Triangle

Uses May be fixed to galvanized pipe in custom plaza sleeve or to concrete tire bracket.

Details Sails come in a diverse array of sizes and may be purchased online.

Life Cycle 2-3 Years contingent upon weather and length of exposure



Fig. 2.3.65: Shade Sail over playground (Source: Wikimedia Commons)



Figure 2.3.66: Concrete tire supports for shade sails



Figure 2.3.67: Rectangular shade sail (Source: Shade Industries)

Games & Play

Adaptive Qualities

Can be moved around

Dimensions

Varies, though 4'x4' grid may be used to approximate dimensions

Uses

Childrens' activities, entertainment

Details

Games and other activities enhance user experience at parks and during events



Figure 2.3.68: Bag toss at Quartyard San Diego



Figure 2.3.69: Large games at the Oval in PHL (Source: M.Fischetti)



Figure 2.3.71: Giant Jenga at Quartyard San Diego



Figure 2.3.70: Sandbox at Brut du Frigo (Source: BruitduFrigo.com)



Fig. 2.3.72: Modular plastic play equipment (Source: Richard Dattner)

GREEN URBAN COMMONS PROJECT PROCESS

The project process diagram (Figure 2.4.1) and three phase descriptions that follow illustrate how the various Framework building blocks interact and intersect over the lifespan of a GUC project. Since the Framework is concerned primarily with project initiation and initial physical design, more specific outcomes and actions are defined in phases one and two. This emphasis sets the stage for ongoing emergent use patterns in phase three. The third phase guides the ongoing physical evolution of an individual GUC based upon democratic community management and the assemblage concept of territorialization.

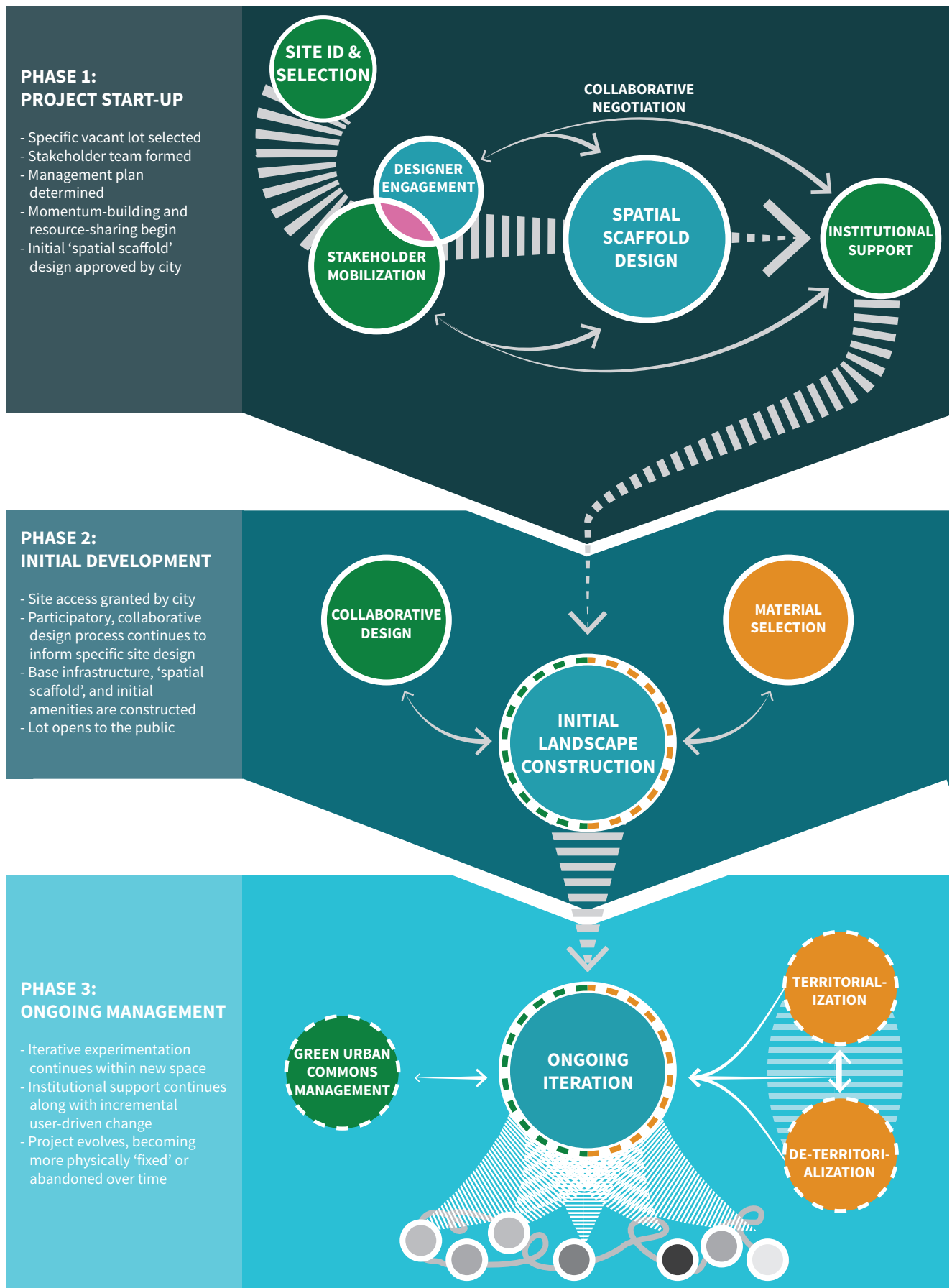


Figure 2.4.1: GUC Project Process Diagram

Phase 1: Project Start-Up

In phase one an individual, organization, or team of stakeholders selects a specific vacant lot for GUC development. This team determines a management plan and decision-making structure for future internal and external negotiations. Stakeholders base their decisions about GUC development on a set of collectively determined values and landscape objectives. Momentum building and resource-sharing begin as the stakeholders mobilize to achieve their landscape objectives. The stakeholder group collaborates with a landscape architect or design professional on an initial Spatial Scaffold design that can accommodate future adaptation and novel forms of occupation. The Spatial Scaffold plan is then approved by the City agency responsible for overseeing the property, assessing the GUC proposal in light of development regulations, code, and public safety requirements.

PHASE 1: PROJECT START-UP

RECOMMENDED ACTIONS & OUTCOMES

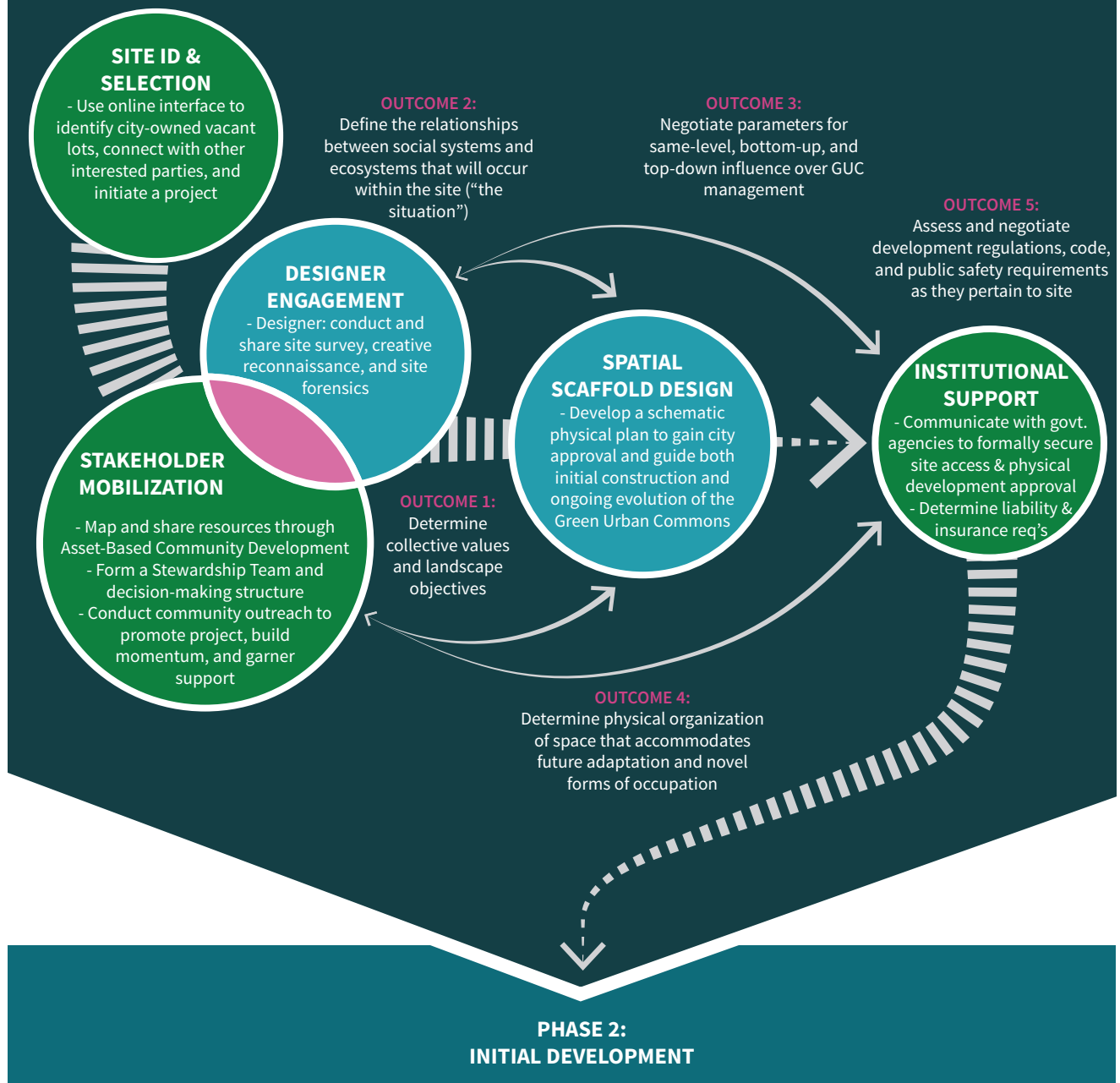


Figure 2.4.2: GUC Project Process Phase 1

Phase 2: Initial Development

Phase two begins when initial site access and construction permissions have been granted by the City agencies responsible for overseeing the GUC property. Participatory, collaborative design processes among stakeholders and the design team continue to inform specific decisions about which initial landscape amenities are constructed. Teams of users and professionals construct base infrastructure and Spatial Scaffold circulation paths, and the lot opens to the public.

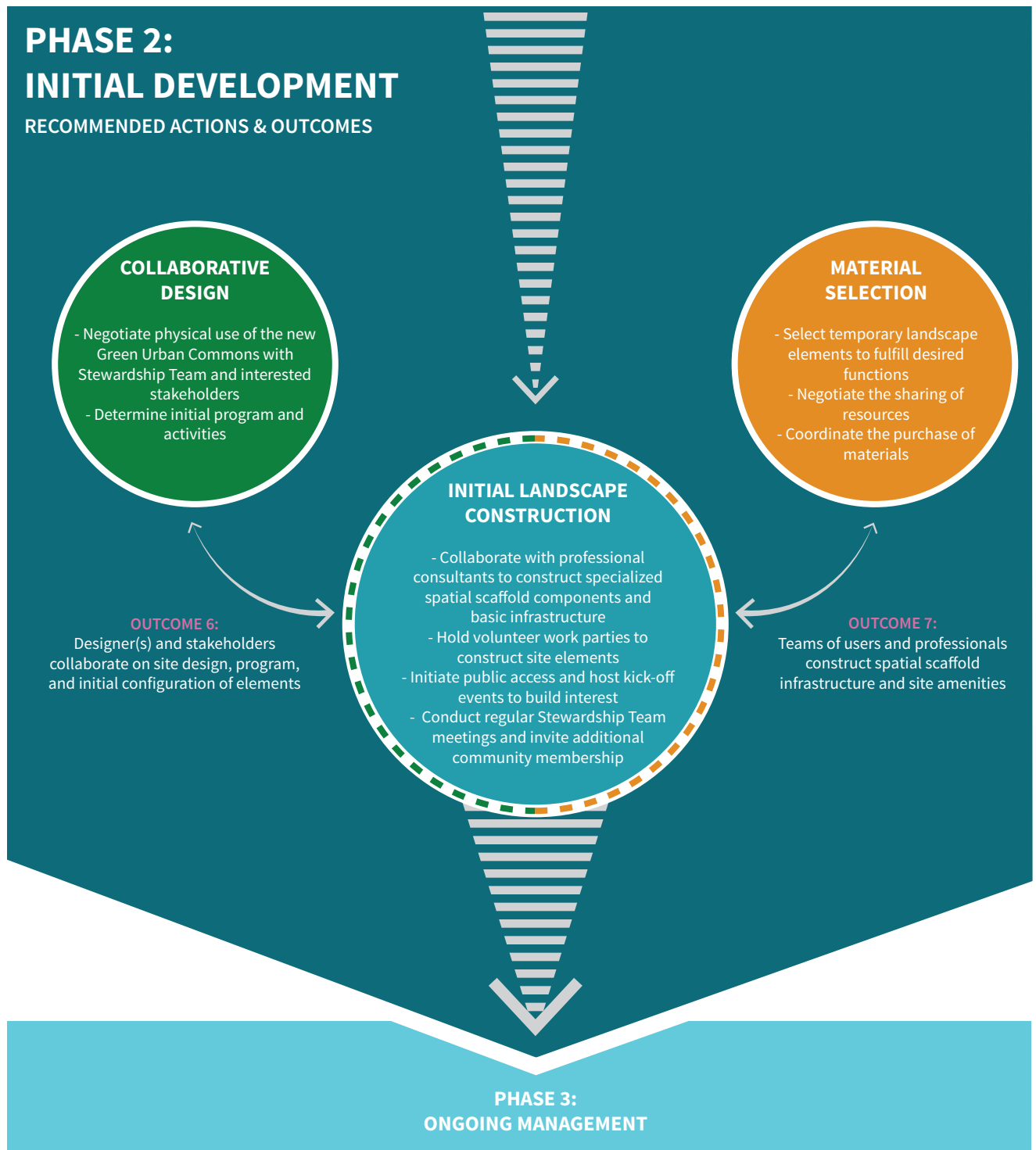


Figure 2.4.3: GUC Project Process Phase 2

Phase 3: Ongoing Management

Following initial construction of the Spatial Scaffold, iterative experimentation continues within defined landscape spaces. Internal democratic mechanisms in GUC management make value-based appraisals of landscape function, allocating resources and dictating changes to built infrastructure. Institutional support continues along with incremental user-driven change, and the stakeholder/Stewardship Team stays in communication with the city about major structural changes to the site that might need additional oversight or approval. The physical territory of the GUC evolves to form any number of possible landscape assemblages, falling on a spectrum from becoming more physically 'fixed' to being totally abandoned.

PHASE 3: ONGOING MANAGEMENT

RECOMMENDED ACTIONS & OUTCOMES

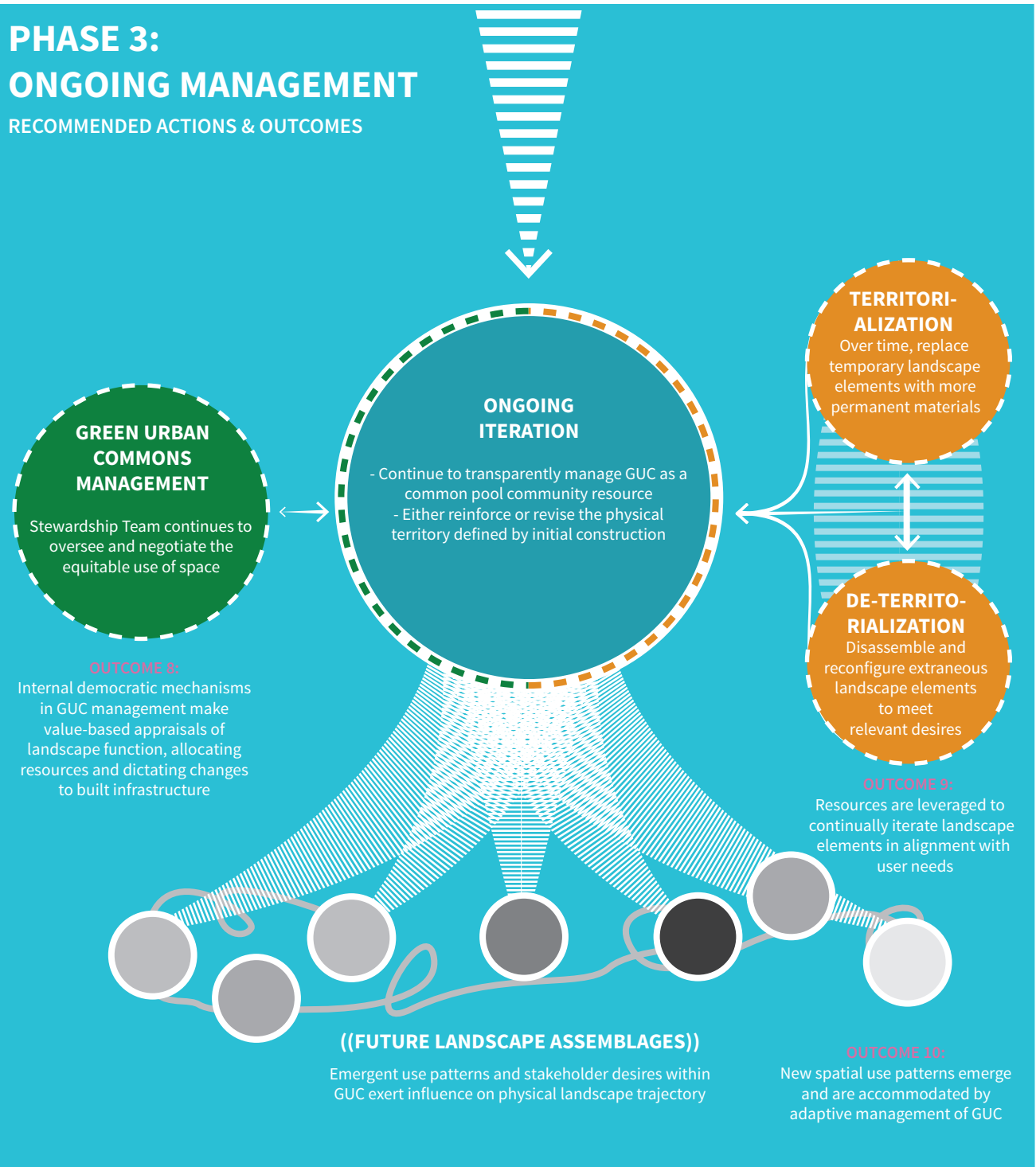


Figure 2.4.4: GUC Project Process Phase 3

SITE SELECTION AND EXISTING CONDITIONS

Site Selection

According to the 2016 SanGIS land use map, the overall study area contains 333 total acres of vacant land, 34 acres of which is owned by the City of San Diego across 104 lots (SanGIS, 2016). Time and research constraints prohibited the generation of GUC proposals for each of these 104 lots, so a series of additional maps were created and GIS analyses conducted to identify potential sites for GUC design and Framework development.

Prior to the identification of additional sample sites, the researcher had partnered with a group of stakeholders to develop schematic design proposals for a city-owned vacant lot in the City Heights community over summer 2016 (further detailed in the Pilot Project section earlier in this document). This site will hereafter be called “PopUp15,” the name given to the GUC by the Boulevard BIA. An intentional effort was made to identify two additional case study sites that would be of a different character, context, and emergent use pattern than the PopUp15 site.

The decision to prioritize publicly owned vacant lots was based on literature that stated they are “more appropriate for temporary use” than privately owned lots. In addition to this recommendation, Nemeth and Langhorst provide additional criteria for land selection, namely favoring sites of low private development interest, leftover/remnant parcels, and long vacancy duration. They also make the recommendation to avoid “underutilized land” (awaiting planned development)” and recently vacant land that is likely to develop quickly (2013). These recommendations provided the basis for an analysis of SanGIS land cover data that revealed the vacancy duration of specific tax lot parcels in 4 and 6-year increments back to 1986. Based upon public ownership, lot size, and the duration of vacancy alone, the researcher identified sites that could be characterized as “leftover/remnant parcels” and “small, fragmented spaces” suitable for temporary land use (Nemeth and Langhorst, 2013).

Access to green public space is a key consideration for public health in urban environments. To this end, an additional series of maps were generated to identify public space deficits in the study area and Promise Zone. Radial buffers of 1/8 and 1/4 mile were drawn outward from the border of existing parks, and the researcher used this map to identify spatial gaps in what can be considered acceptable walking distance to green open space. Site visits to



Figure 2.5.1: City-owned vacant lot in the Valencia Park neighborhood of Encanto

individual vacant lots were prioritized, in part, by whether or not a vacant lot fell outside of this buffer.

Following GIS mapping and analysis, the researcher's existing knowledge of study area context was used to select sites that merited a field visit. Particular attention was paid to currently undeveloped properties slated to become city parks, as these spaces have high potential to serve as a forum for iterative and user-driven 'public space prototype' GUC's. Field visits were conducted to 18 total city-owned vacant lots in the study area over several days in winter 2017, 8 of which were documented in detail. Two of these lots, hereafter called "Market Street Hillside" and "Martin Avenue Park," were ultimately selected for design exploration. These lots were selected primarily based upon their adherence to Nemeth and Langhorst's "conditions appropriate for temporary use," as well as the researcher's knowledge of context and on-site observation of conditions conducive to public access and user-driven site development (2013). Selection criteria for each site and their "fitness" for temporary land use and GUC creation are detailed further in Figure 2.5.2.

Although SanGIS data provided extensive criteria for site identification and selection, there are distinct limitations associated with the mapping process. The most significant limitation is that by operating at the grain of individual tax lot parcels, the mapping process does not specifically identify remnant lands or wasteland spaces often characterized as "interstitial spaces" or "terrain vague" (Mubi Brighenti, 2013; Solà-Morales, 2014). Many of these spaces, while occurring at a grain other than that of a tax lot, could provide spaces that are just as fruitful for the development of GUC's. Along the same lines, not all city-owned vacant lots are suitable for GUC development, nor are all potentially suitable sites for GUC listed under the land use classification "Vacant & Undeveloped". No hard and fast rules for site identification are laid out

in the proposed Framework for GUC development, as opportunities for GUC development are most likely to emanate from the daily experience and individual needs of stakeholder groups rather than GIS mapping activities.

Existing Site Conditions

The following maps and site photographs depict existing conditions and historic information for each of the three sites selected for GUC development. These analysis maps depict physical characteristics such as topography, existing vegetation and adjacent properties as well as social use patterns that were observed.

Assemblage Collages

In light of their selection for GUC development and the six characteristics of emergent civic landscape described by Barnett, multimedia collage were created to explore and express each site as an "assemblage," defined as: "objects, bodies, expressions, qualities, and territories that come together for varying periods of time, ideally to create new ways of functioning" (Deleuze and Guattari, 1987). Any landscape can be understood as an assemblage. The physical and cultural notions underlying urban territories fold, overlap, and shift like cloth in motion; always *becoming* and never twice the same. Viewed as a rich constellation of intersecting social and material elements, derelict urban spaces can be seen for what they are as well as for what they could be. The assemblage collages included for each site express the researcher's perception of the spaces as they exist and for how they might change.

	POPUP15	MARTIN AVE PARK	MARKET STREET HILLSIDE
Size	0.27 Acres	0.15 Acres	1.15 Acres
Ownership	San Diego City Development Services	San Diego Parks & Recreation	San Diego City
Community Plan Area	City Heights (Mid-City)	Southeastern	Encanto
Neighborhood	Teralta West	Mountain View	Chollas View
Within Federal Promise Zone	No	Yes	Yes
Within Renewal Community	No	Yes	Yes
Within BIA	Yes (Boulevard BIA)	No	Yes (Diamond BIA)
Distance from Developed Park	>1/8 Mile	>1/4 Mile	>1/4 Mile
Vacancy Duration	26-30 Years	21-26 Years	16-21 Years
Characteristics	Active team of nonprofit stakeholders and preliminary funding/revenue sources secured. Located on a flat site along a busy commercial corridor	Slated to become neighborhood mini park. Sloped site located in a residential neighborhood	Across the street from land slated for future development. Hillside with sporadic vegetation cover, remnant asphalt pad, and stormwater outfall (runoff mitigation opportunity)

Figure 2.5.2: Comparative Lot Table

SITE 1: POPUP15

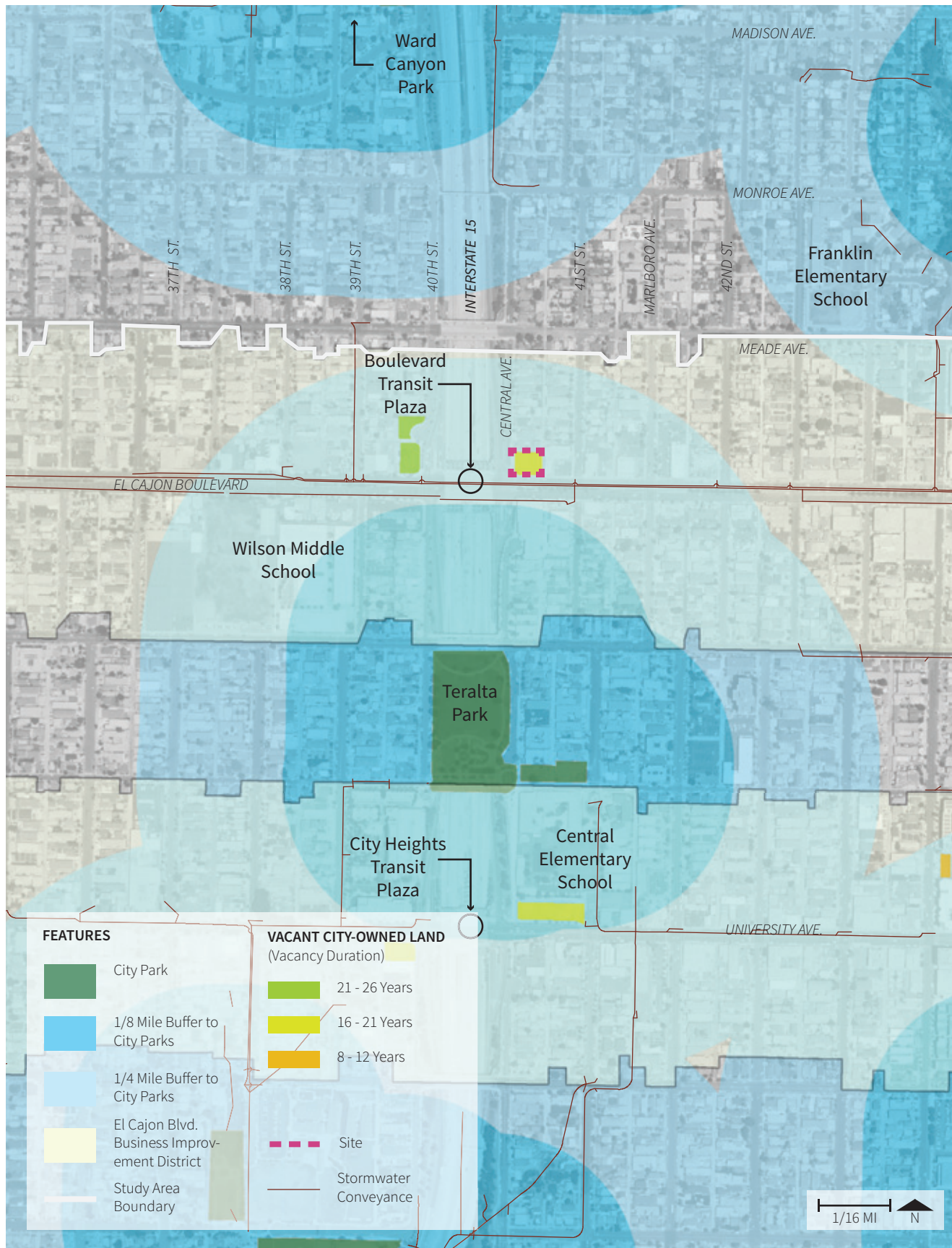


Figure 2.5.3: Site Context - PopUp15

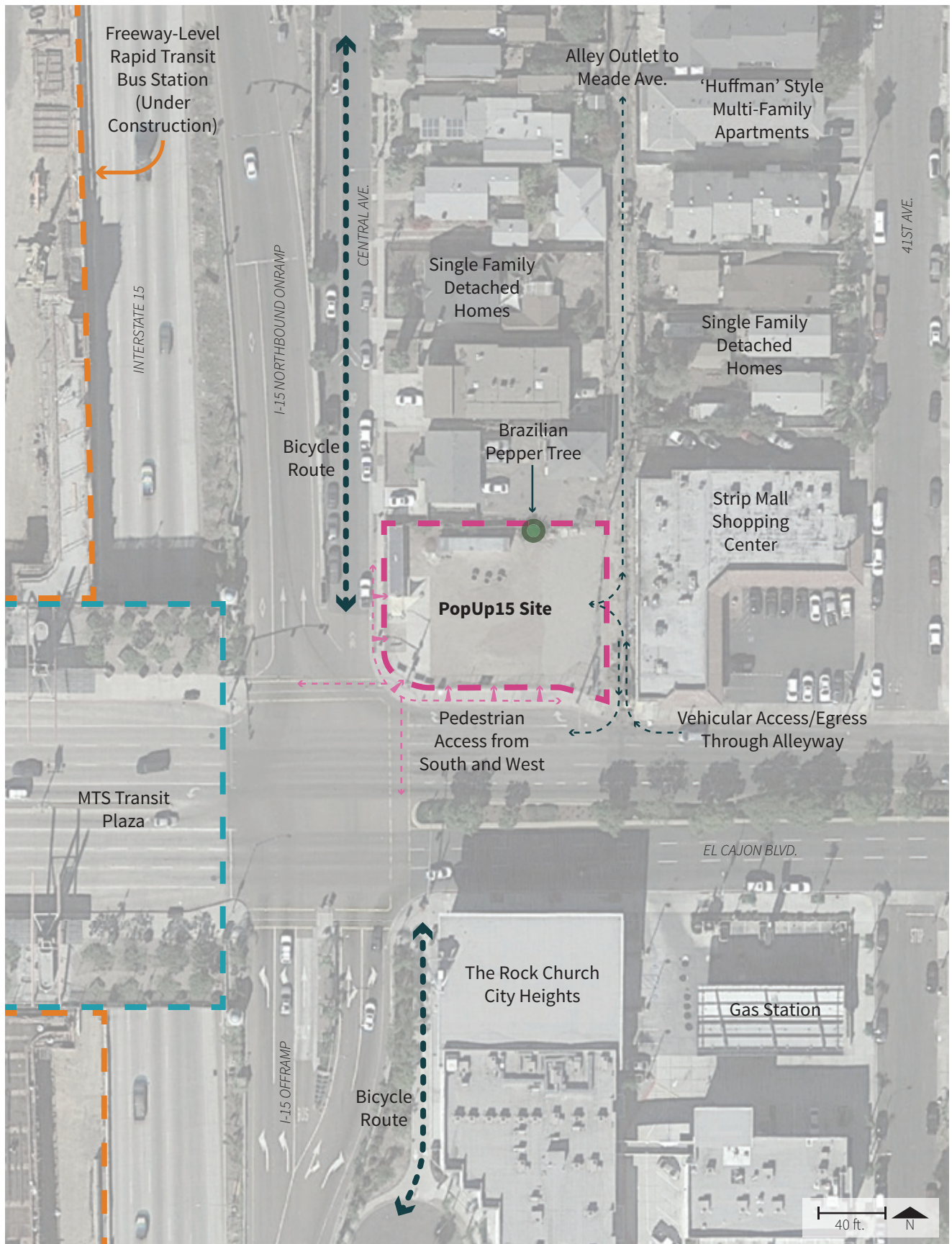
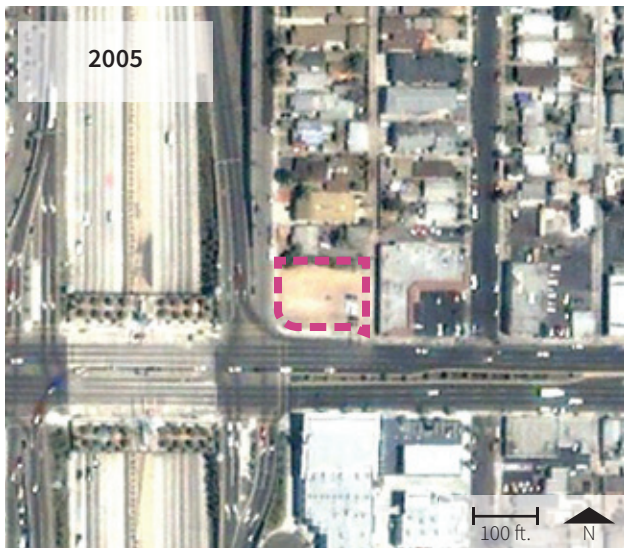


Figure 2.5.4: Site conditions - PopUp15



NOTES:

- Vehicle yard with small structures prior to freeway construction
- Used as a construction 'lay down' and equipment parking area during I-15 freeway construction
- Current (2016) construction of freeway-level rapid transit bus station

Figure 2.5.5: Historic aerial photos - PopUp15 (Source: Google Earth)



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Figure 2.5.7: Site conditions photos - PopUp15



SITE 2: MARTIN AVENUE PARK

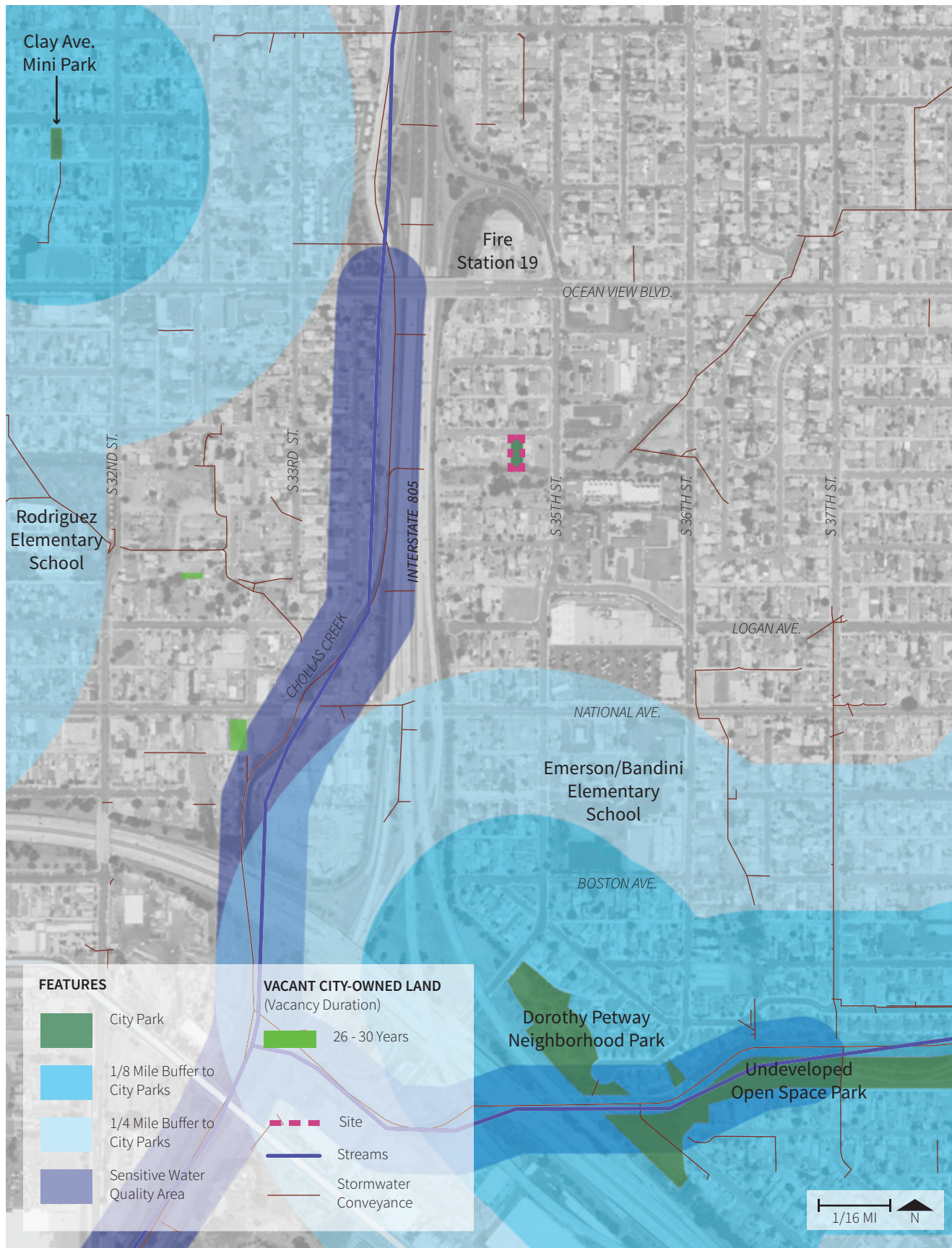


Figure 2.5.8: Site Context - Martin Avenue Park

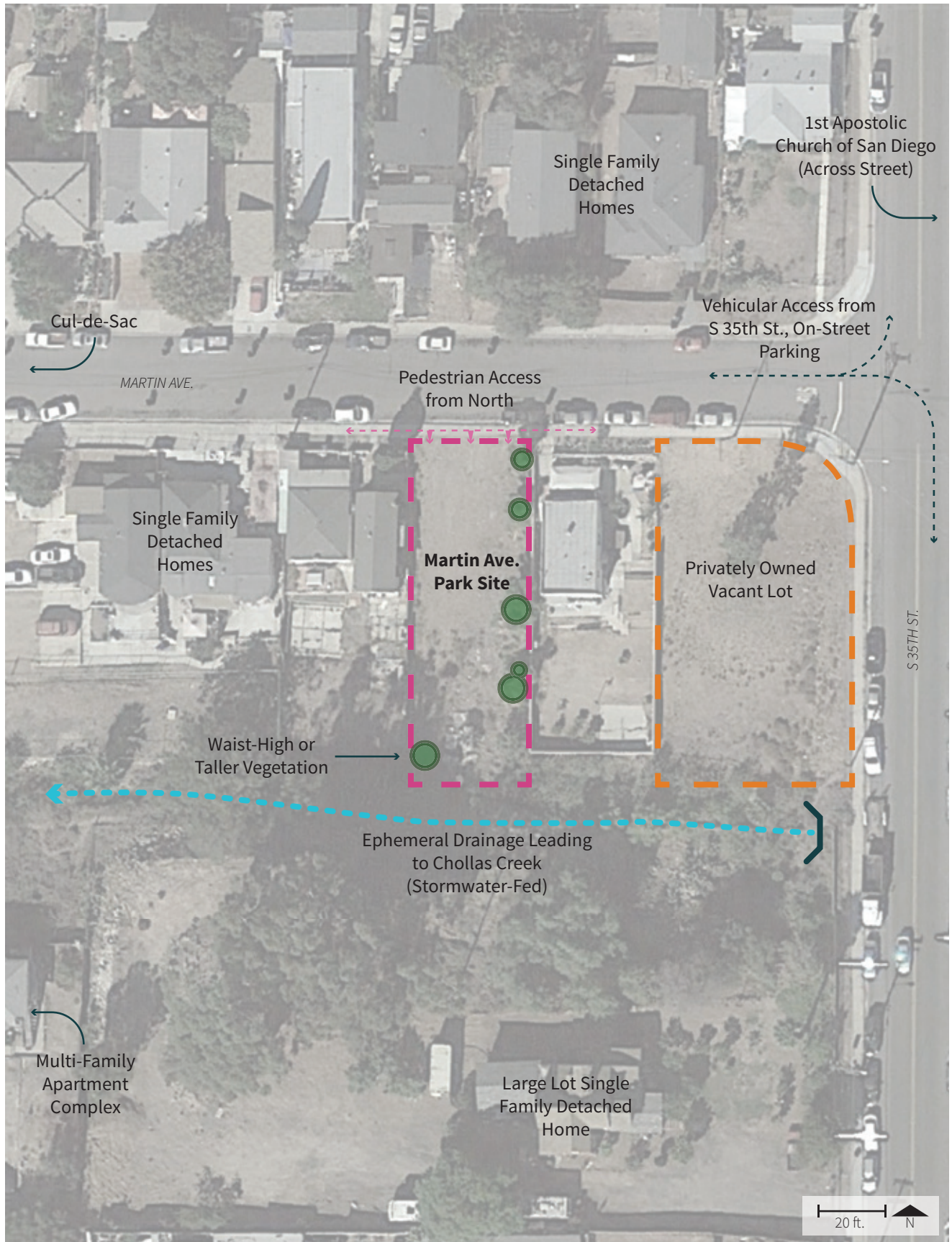
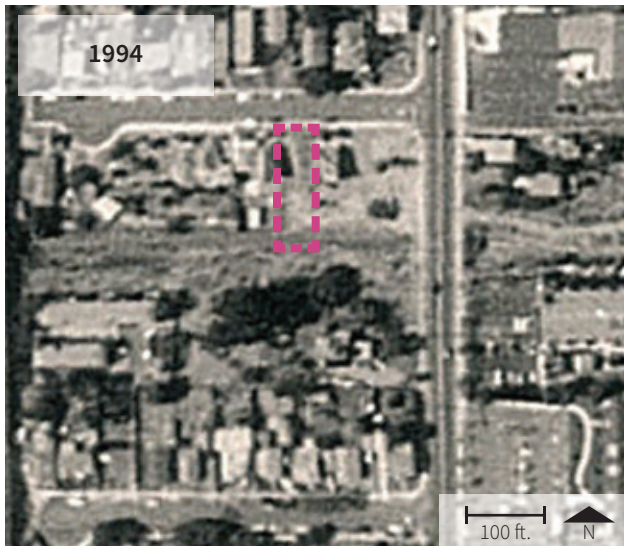


Figure 2.5.9: Site conditions - Martin Avenue Park



NOTES:

- Intermittent management of vegetation in ephemeral drainageway (increase in cover over time)
- No major changes in surrounding single-family detached neighborhood

Figure 2.5.10: Historic aerial photos - Martin Avenue Park (Source: Google Earth)



Figure 2.5.11: Martin Avenue Park Assemblage Collage



Figure 2.5.12: Site conditions photos - Martin Avenue Park



SITE 3: MARKET STREET HILLSIDE

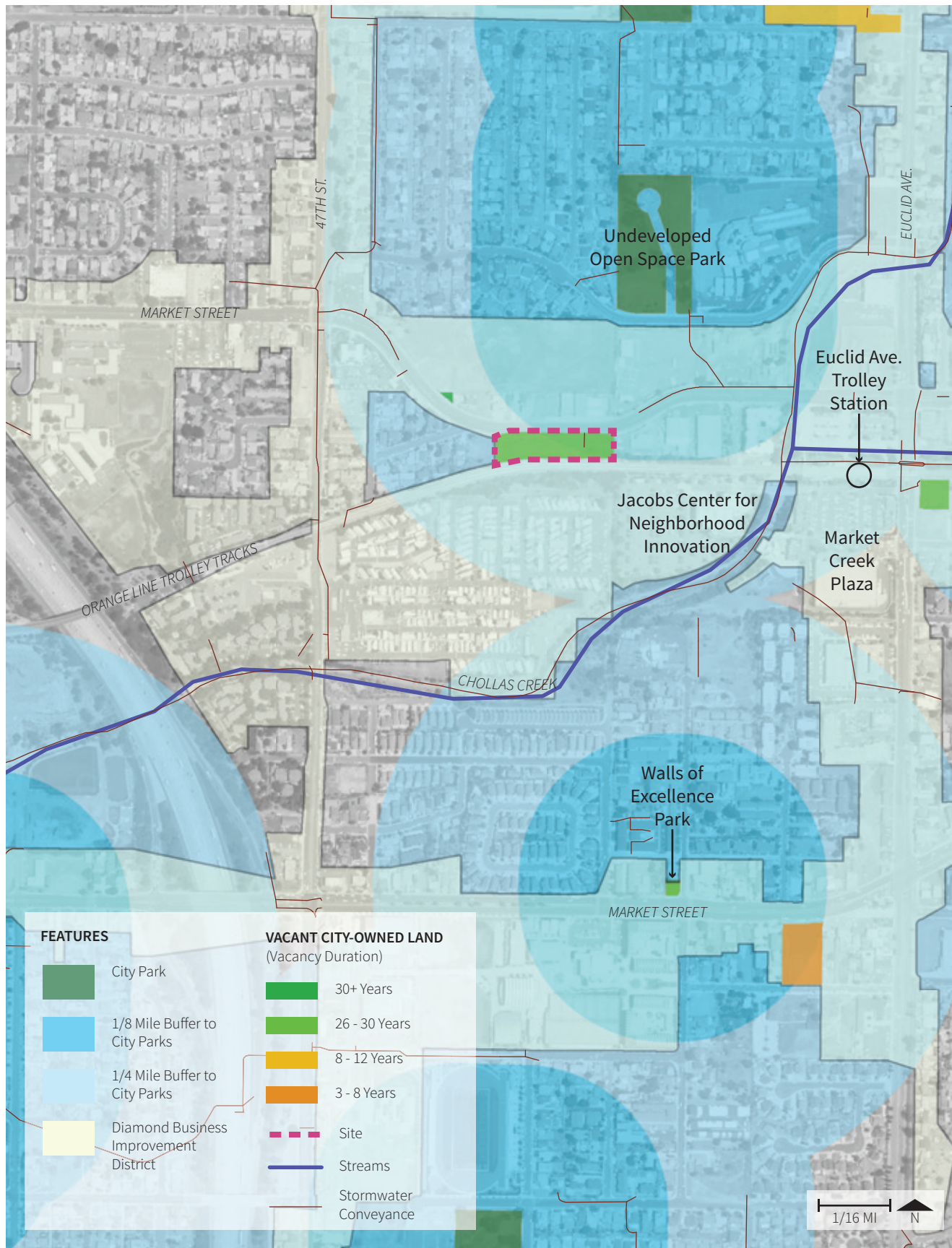
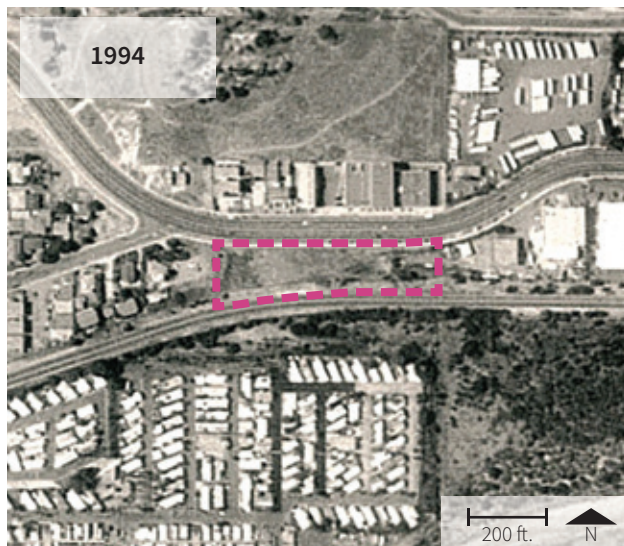


Figure 2.5.13: Site Context - Market Street Hillside



NOTES:

- Vegetation management on site has changed (increase in cover over time)
- Properties across Market Ave. demolished over 2005-2016 to make way for new development
- Adjacent boat dealer previously used the eastern portion of the site (asphalt pad) for parking
- Jacobs Center and parking across trolley tracks completed in early 2000's

Figure 2.5.14: Historic aerial photos - Market Street Hillside (Source: Google Earth)

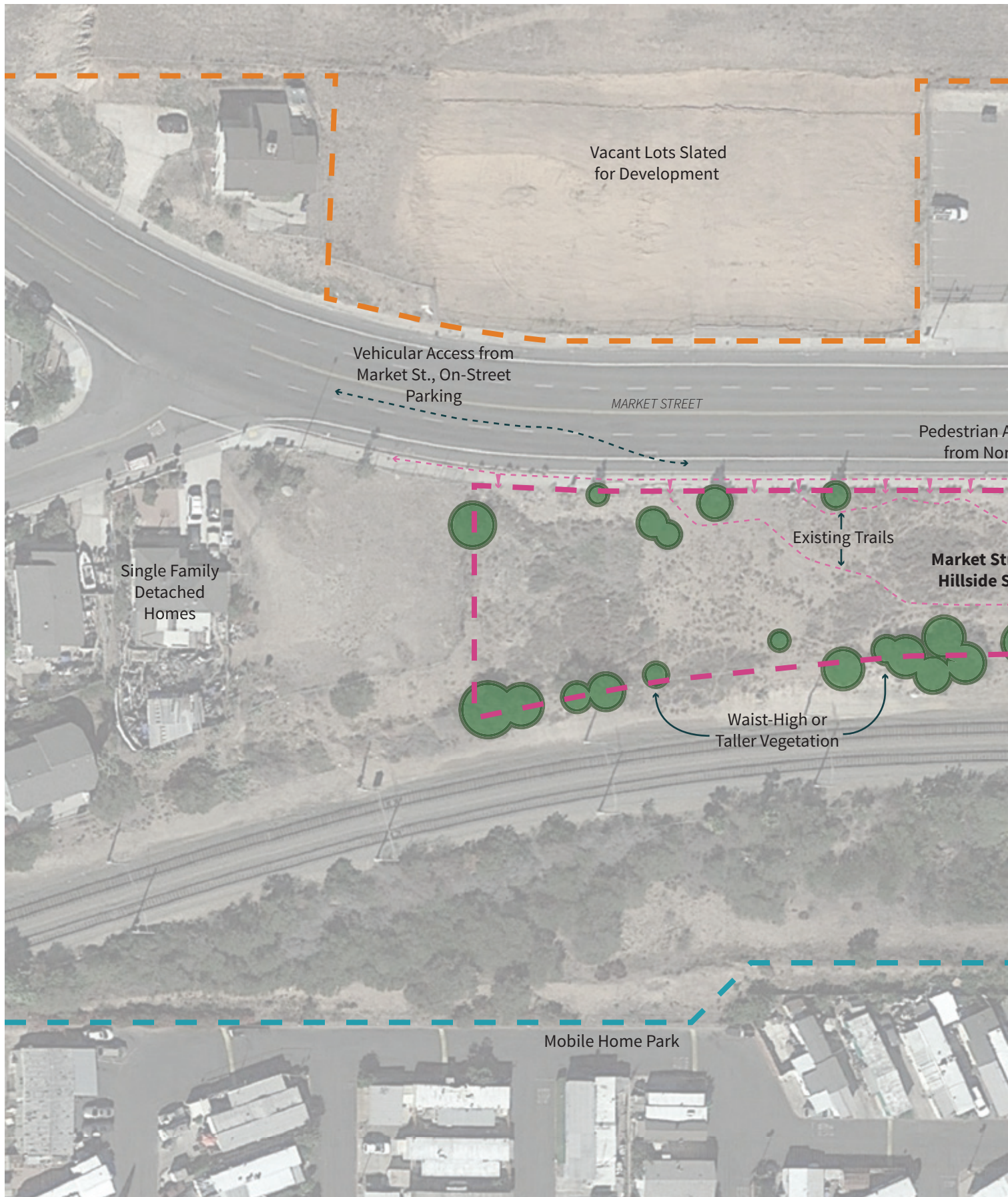
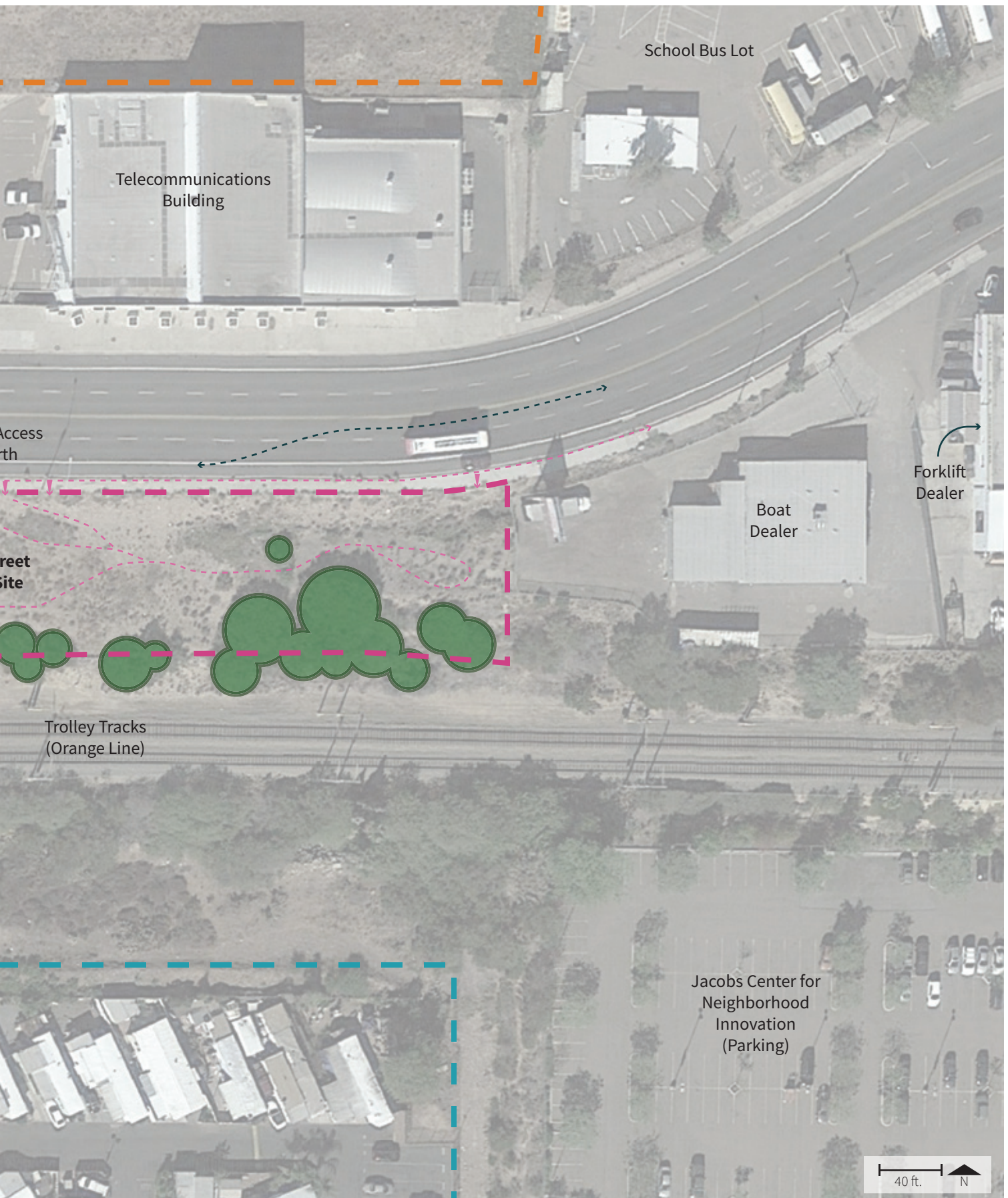


Figure 2.5.15: Site conditions - Market Street Hillside



Telecommunications
Building

School Bus Lot

Access
th

reet
site

Boat
Dealer

Forklift
Dealer

Trolley Tracks
(Orange Line)

Jacobs Center for
Neighborhood
Innovation
(Parking)

40 ft. N



Figure 2.5.16: Site conditions photos - Market Street Hillside





Figure 2.5.17: Site conditions photos - Market Street Hillside and properties across street



Figure 2.5.18: Market Street Hillside Assemblage Collage

ASSEMBLAGE DESIGN SCENARIOS

“Objects, bodies, expressions, qualities, and territories that come together for varying periods of time, ideally to create new ways of functioning” (Deleuze and Guattari 1987)

The Framework for Green Urban Commons Development was applied to three unoccupied urban lots in the Mid-City/Southeastern San Diego study area, including PopUp15. Although portions of the PopUp15 site design were developed in collaboration with the El Cajon Boulevard BIA and the project Stakeholder Team, drawings included for PopUp15 in this section illustrate a refined Spatial Scaffold as well as possible future landscape assemblage scenarios for the third phase of the Framework process (Ongoing Management). The researcher identified and undertook the latter two of three sites without community stakeholder involvement, using a combination of personal knowledge and site survey, reconnaissance, and “creative forensics” to explore the potential impact of GUC development. Selection methods and context drawings for each site are detailed in the Site Selection and Existing Conditions section of this document.

Scaled Spatial Scaffold design drawings for each site are included along with a narrative description of initial site infrastructure. In addition, the researcher determined potential activities and possible GUC scenarios for each of the three sites (expressed using drawings and diagrams). These hypothetical design scenarios are intentionally loose and are meant to express possible future assemblages for each site that could result from the same physical starting point.



*Figure 2.6.1:
National Avenue
in Southcrest near
Martin Avenue
Park*



Figure 2.6.2: Boulevard Transit Plaza at I-15

SITE 1: POPUP15

Located in the densest urban environment of the three case studies, the design for PopUp15 had to negotiate a diverse array of stakeholder interests while contending with severely compacted soil, full sun exposure, and a busy 6-lane boulevard on its southern edge. The site's relatively flat condition, degraded soil, and urban condition predisposed it to a plaza-like design. The neighborhood surrounding the site is experiencing increased gentrification pressure, so scenario schemes focus on grassroots and community-based open space configurations. Integration with the nearby transit plaza and bicycle route is also a key site concern.



Figure 2.6.3: Bikeway in City Heights near PopUp15

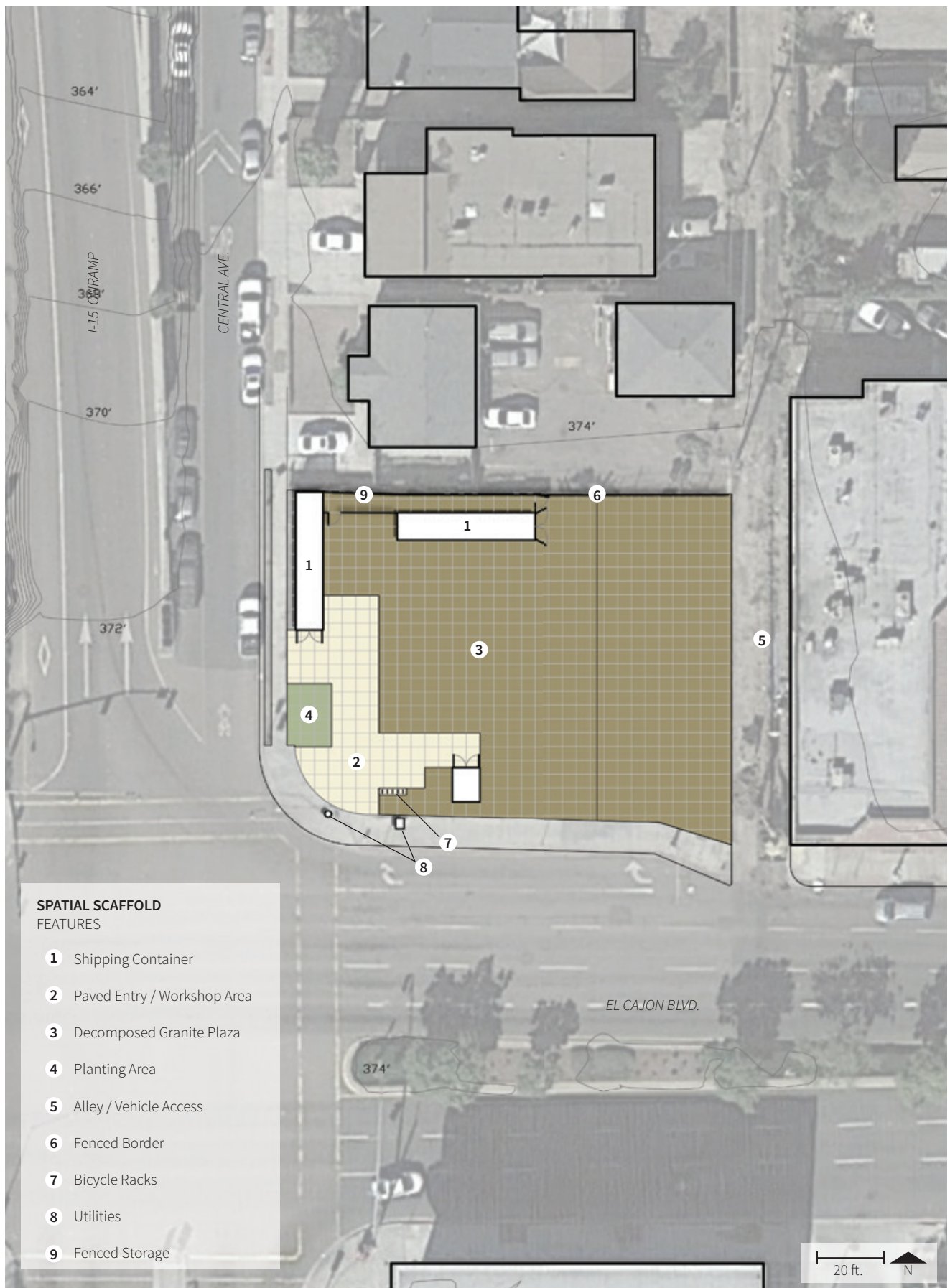


Figure 2.6.4: PopUp15 Spatial Scaffold

POPUP15

POTENTIAL DESIGN SCENARIOS

SCENARIO	COMMUNITY MAKER SPACE/INNOVATION CENTER	EVENT SPACE	OPEN PUBLIC PLAZA
MANAGEMENT STRUCTURE	Nonprofit or community run GUC, constrained public access	Public-private partnership, access limited to events	Community or nonprofit oversight, city parks dept. maintenance and investment (iterated as public park)

LANDSCAPE SPACES

A - THRESHOLD	1'x1' concrete paver patio provides ADA access and frames areas for 40' and (potentially) 10' containers to be used as workshop spaces	1'x1' concrete paver patio frames D2 40' container and bicycle parking	Decomposed granite or pavers contiguous with B1
B1 - PLAZA	Decomposed granite plaza provides forum for small-scale events and (potentially) raised-bed planters for urban agriculture	Decomposed granite or asphalt plaza for large events and fairs	Decomposed granite or pavers with a 4'x4' field of concrete sleeves to support scaffolding and other furnishings
B2 - PLAZA	3/4" minus compacted gravel parking area	Vehicle-grade pavers or decomposed granite contiguous with B1	
C - PASSIVE/SOCIAL AREA	Community bicycle workshop area with 1'x1' concrete pavers	Concession stand area with 1'x1' concrete pavers	Decomposed granite or pavers contiguous with B1
D1 - SHIPPING CONTAINER	Art gallery and event space in modified shipping container	Container houses performance and event equipment, provides backdrop for performance stage	Container stores on-site furnishings and event equipment
D2 - SHIPPING CONTAINER & GATED STORAGE	Bicycle workshop storage	Concession stand or additional storage in modified shipping container, fenced storage area encloses restrooms and "back of house" infrastructure	

GREEN SPACES

E - IN-GROUND PLANTER	Shade tree planter		
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EDGES

F - SOUTH & WEST EDGES	Chain link fencing encloses perimeter, wide gates open at southwest corner, planter beds outside fence along southern edge	Chain link fencing encloses perimeter for security, small gates open at southwest corner, planter beds outside fence along southern edge	Open
G - EAST (ALLEY-ADJACENT) EDGE	Chain link fencing encloses perimeter, wide gates open to alley for vehicle access		Open with bollards parallel to alleyway
H - NORTH EDGE	Existing fence remains		

Figure 2.6.5: PopUp15 Potential Design Scenarios and Program Area Key

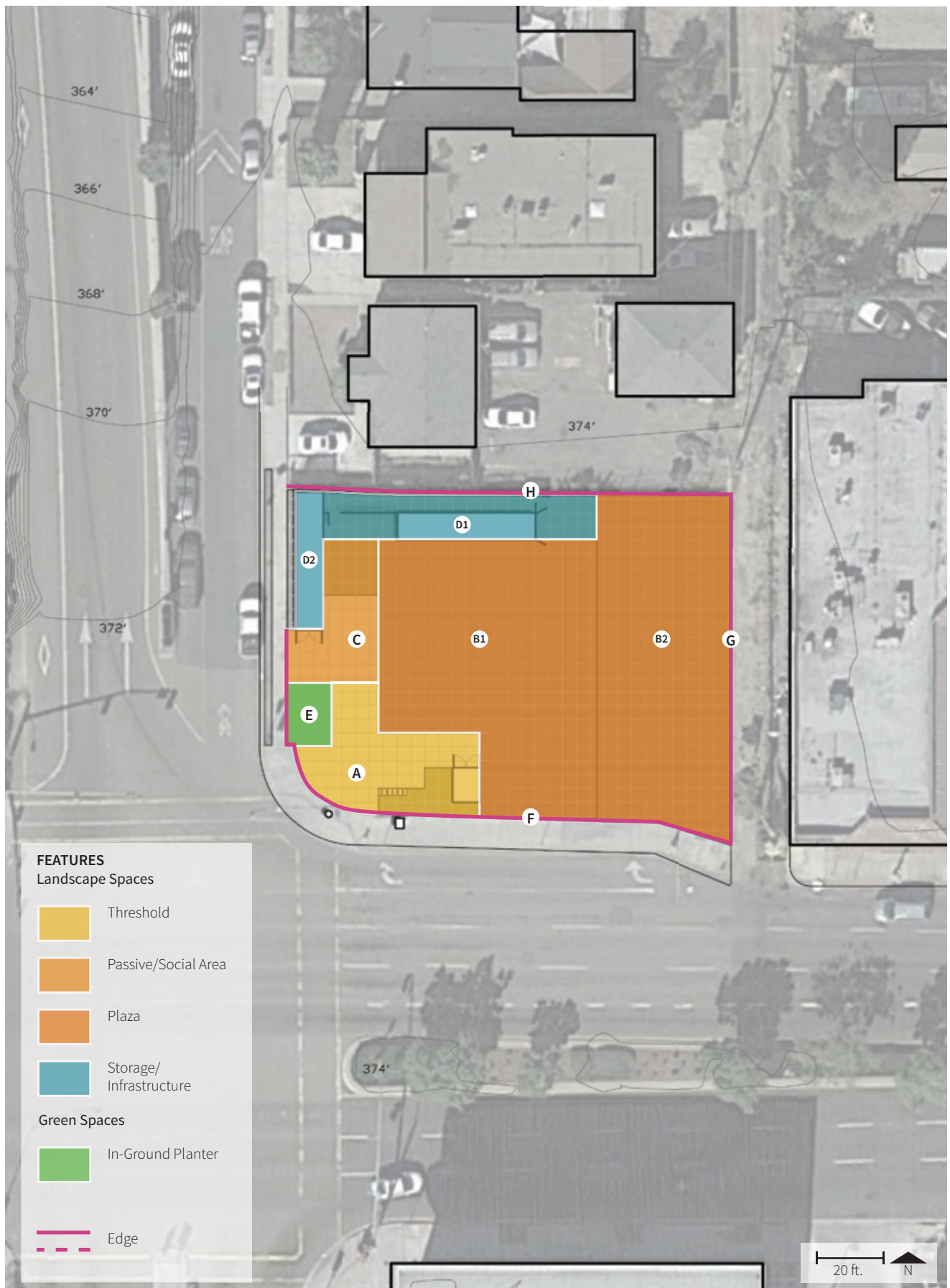


Figure 2.6.6: PopUp15 Landscape Program Area Key Plan

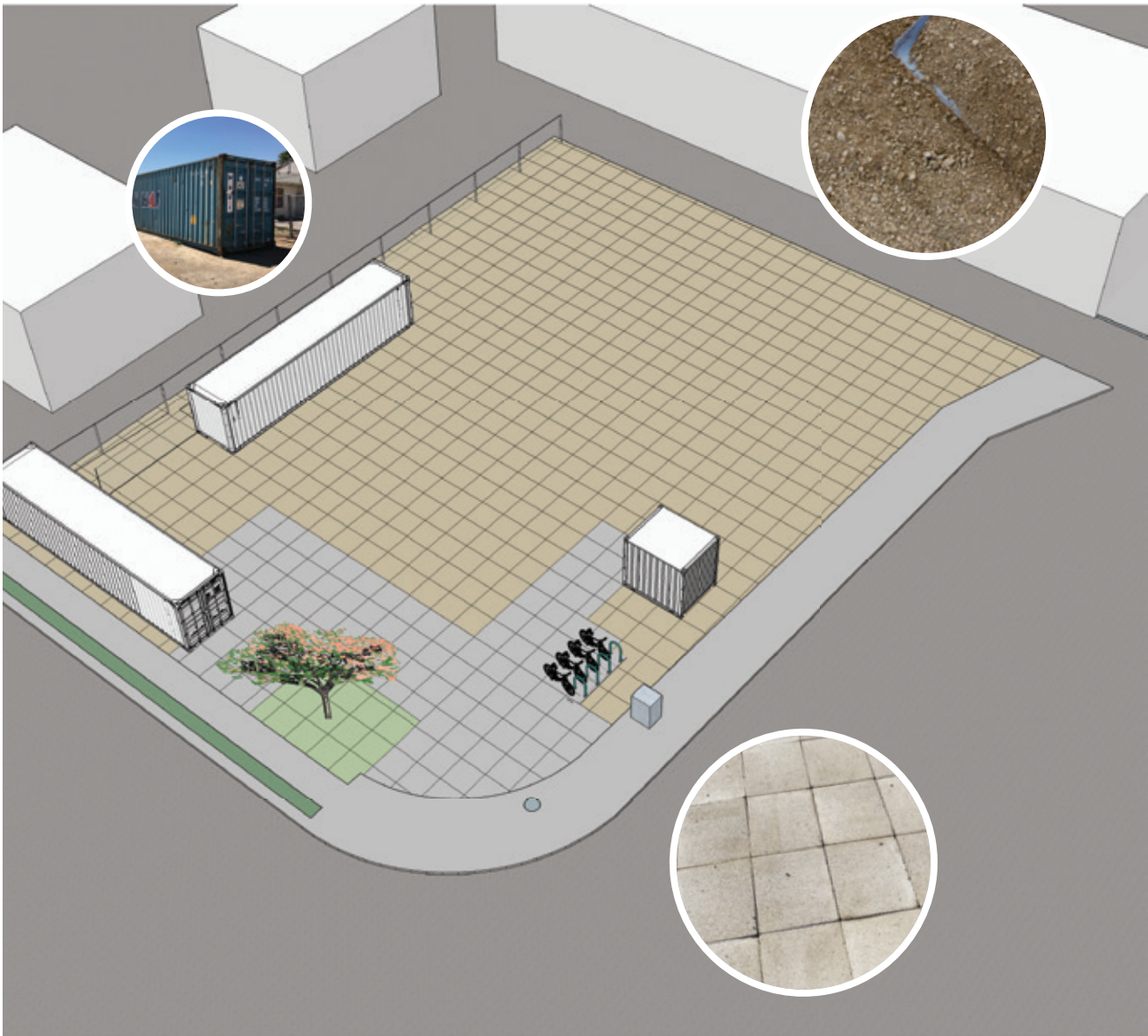


Figure 2.6.7: PopUp15 Spatial Scaffold Rendering

Spatial Scaffold

The key organizing elements of the PopUp15 Spatial Scaffold are the placement of storage containers and arrangement of the paved entry area. The articulated edge of the entry patio can accommodate a range of potential amenities such as an additional 10' shipping container or food truck. The paved area also provides ADA access to the workshop space and creates a threshold from the corner entry point to the plaza beyond. The level decomposed granite plaza area can accommodate a wide array of activities, and the enclosed northern parts of the site provide important storage and infrastructural spaces. The decomposed granite can later be extracted and replaced with more permanent paving materials.

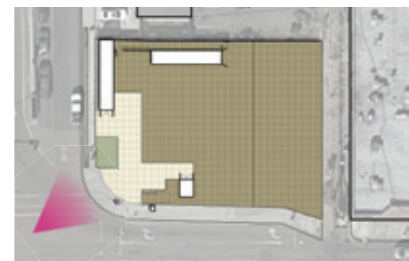


Figure 2.6.8: Key plan with view angle, NTS

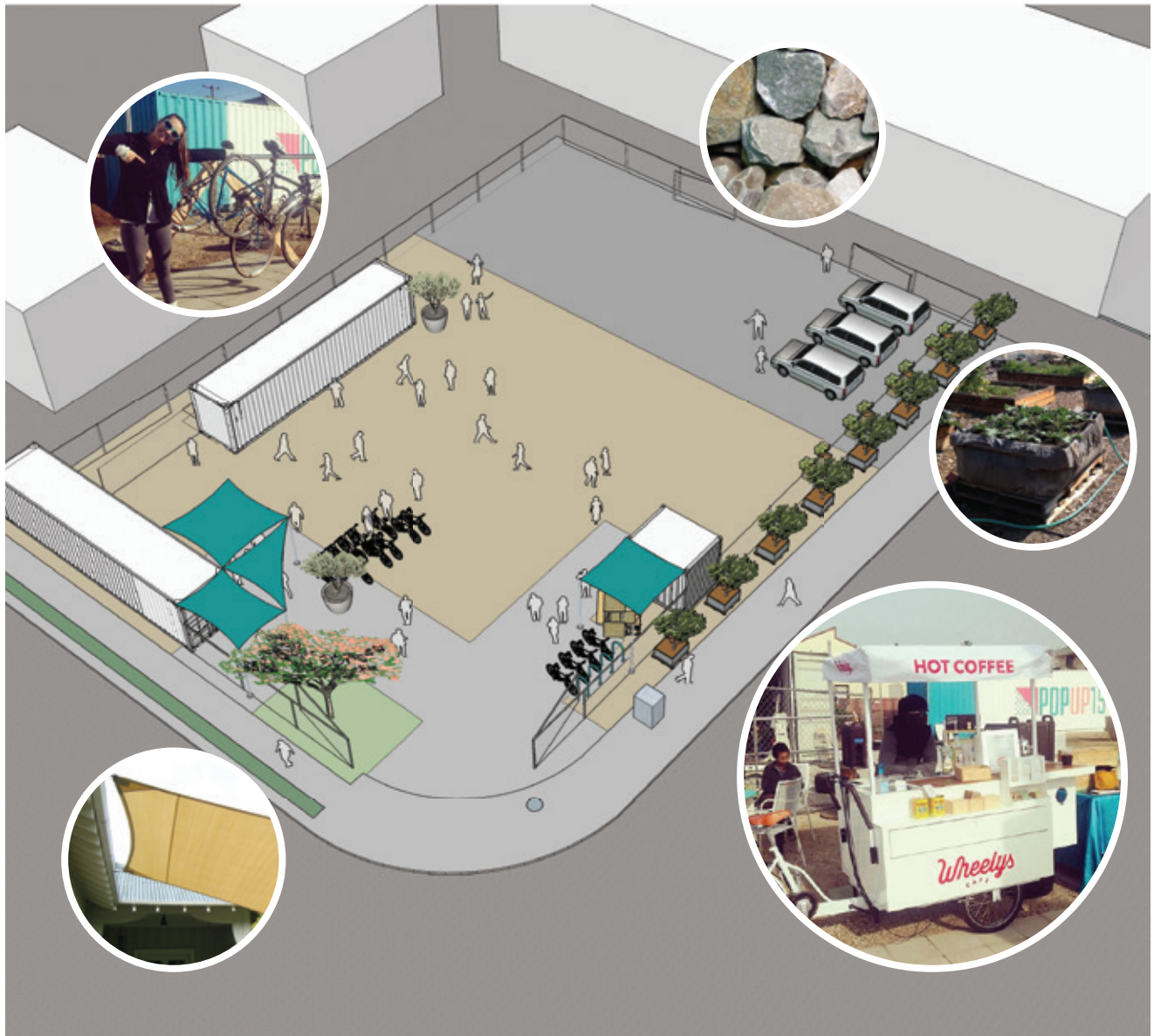


Figure 2.6.9: PopUp15 Scenario 1 Rendering

Scenario 1: Community Maker Space/Innovation Center

This design scenario assumes oversight and assumption of liability by a nonprofit or community organization such as the Boulevard BIA. Several organizations operating in the City Heights community expressed interest in using the site, including a local arts organization and a coffee cart company. This scenario site design, featuring a modest stage and highly modified storage containers, has limited public access hours that coincide with individual stakeholders' hours of occupation on site. One of the containers is converted to art gallery with rolling door entrances and the other is used as a workshop space. The restricted public access is a result of material investment by stakeholders. The alley-adjacent portion of the site is dedicated to vehicular access.



Figure 2.6.10: Key plan with view angle, NTS



Figure 2.6.11: PopUp15 Scenario 2 Rendering

Scenario 2: Event Space

This scenario design assumes oversight by a public-private partnership, with physical access limited to events. Treated as a publicly-owned venue, community members may equitably access the space for festivals and events. Amenities include a stage, festival booths around perimeter, portable restrooms, and an outdoor film screen.

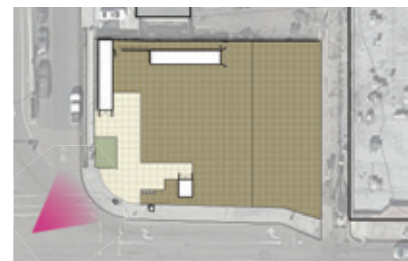


Figure 2.6.12: Key plan with view angle, NTS

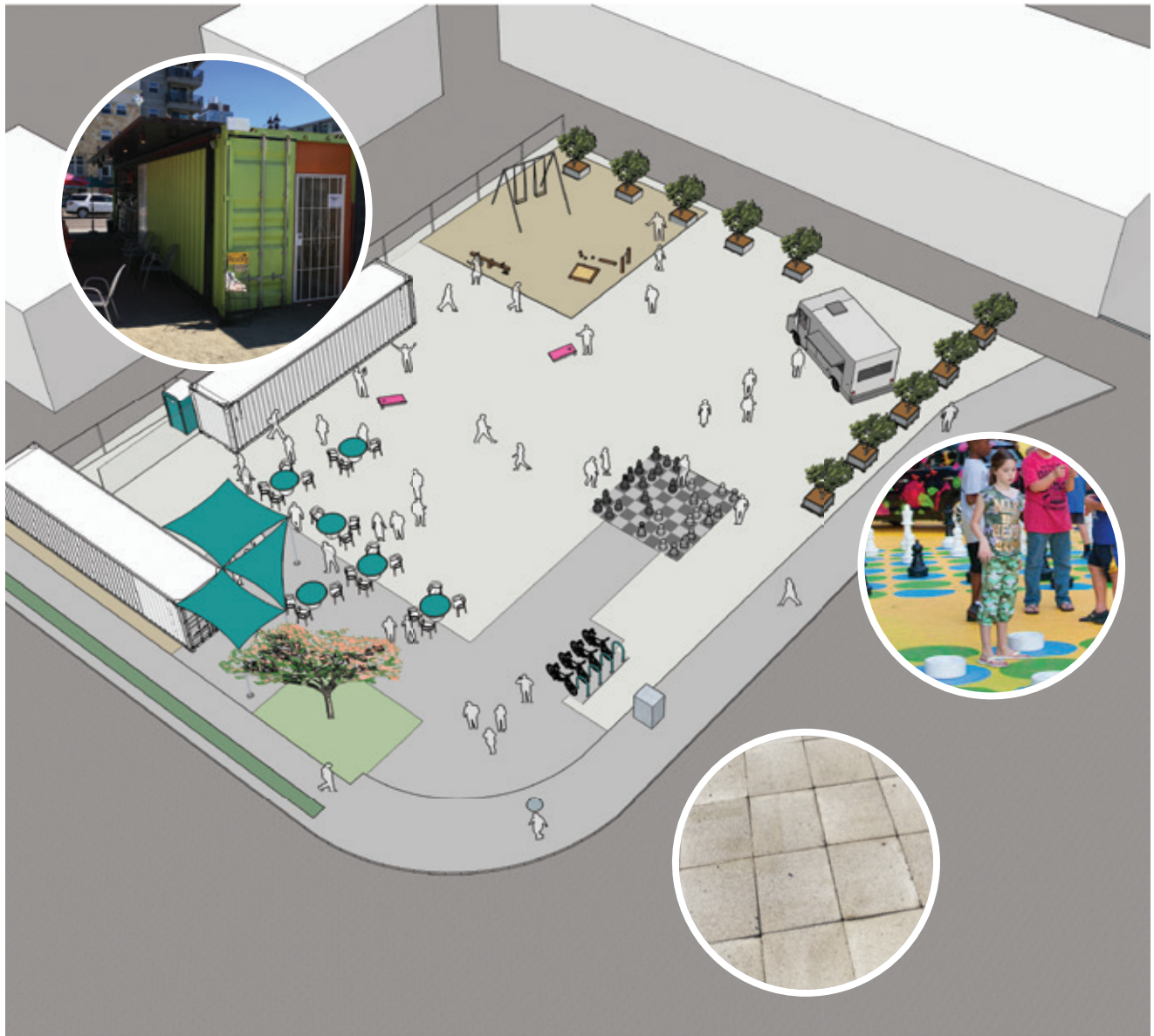


Figure 2.6.13: PopUp15 Scenario 3 Rendering

Scenario 3: Open Public Plaza

This design treats the site as a public space prototype, whereby open public access is granted in order to test the site's viability as a park. Grassroots community-based or nonprofit oversight, combined with City Parks Department maintenance and investment would allow the project to be iterated as a formal public space. More passive seating and planting areas are shown with minimal enclosure along edges. A single concessionaire/vendor activates the space, and a child play area and games attract visitors to the site.

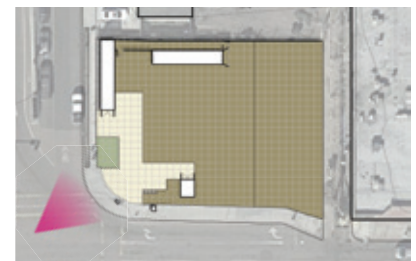


Figure 2.6.14: Key plan with view angle, NTS



Figure 2.6.15: Ocean View Boulevard near Martin Ave. Park

SITE 2: MARTIN AVE. PARK

Although the site is currently unimproved, San Diego Parks and Recreation owns Martin Avenue Park and has identified the space for public space development. According to the 2016 Unfunded Parks Improvement List, the City is seeking between \$600,000 and \$1.25 million to fund park development (SDP&R 2016). Located well over a quarter-mile distance from the next active park, the property has the potential to fill a large gap in the public space deficient community of Southeastern San Diego. The community is predominantly Latino (83%), and the area immediately surrounding the park consists of single-family detached homes (SANDAG, 2017). Canyons and drainage ways throughout the neighborhood carry water to the San Diego Harbor through Chollas Creek, and a stormwater-fed ephemeral creek runs along the southern edge of the steeply sloped site.



Figure 2.6.16: Chollas Creek - Degraded urban drainageway

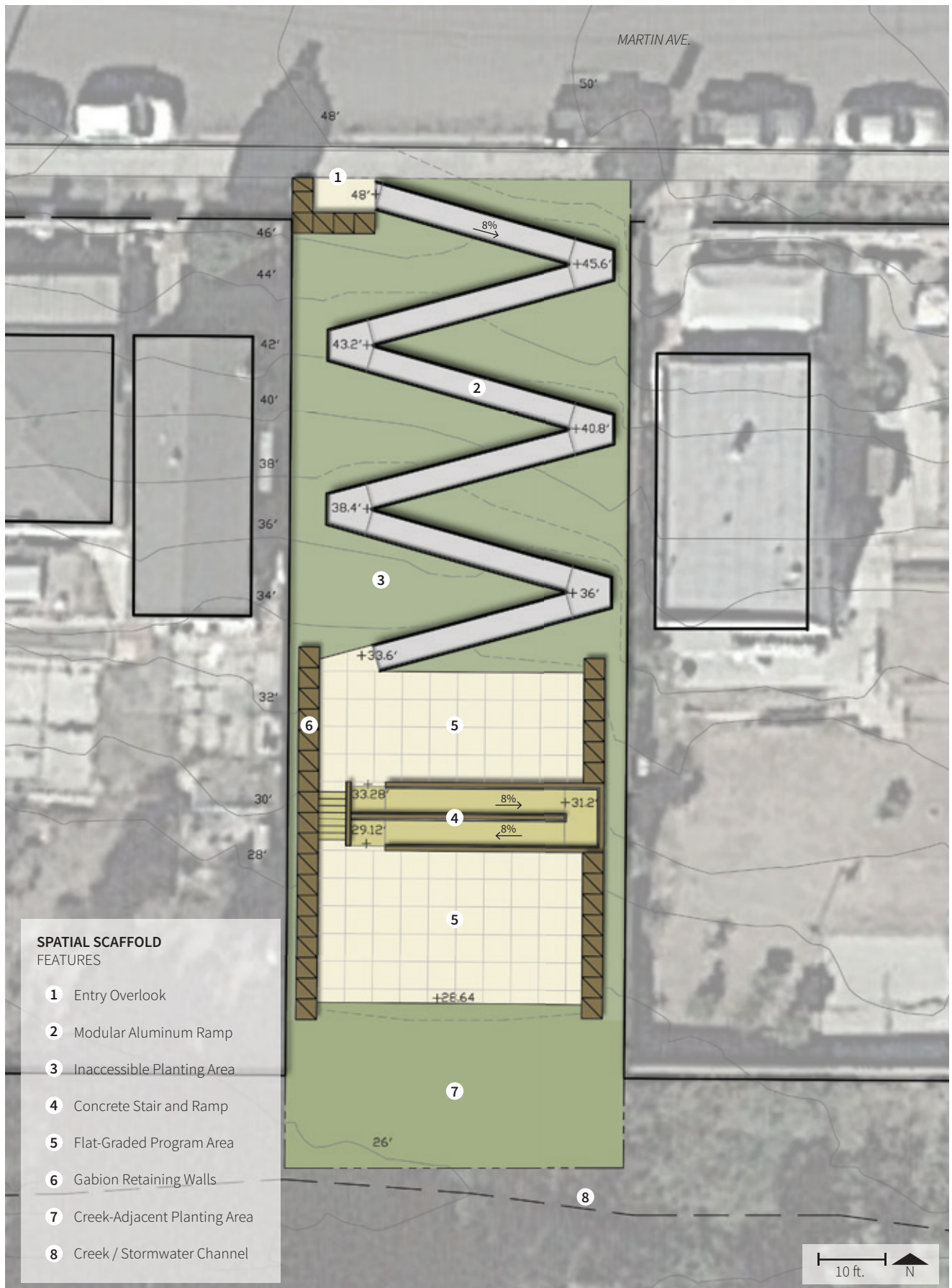


Figure 2.6.17: Martin Avenue Park Spatial Scaffold

MARTIN AVE. PARK

POTENTIAL DESIGN SCENARIOS

SCENARIO	NEIGHBORHOOD PARK	HABITAT GARDEN	COMMUNITY GARDEN
MANAGEMENT STRUCTURE	Community or nonprofit oversight, city parks dept. maintenance and investment (iterated as public park)	Nonprofit or educational organization oversight, city parks dept. maintenance and investment	Nonprofit or community run GUC, constrained public access

LANDSCAPE SPACES

A - THRESHOLD	Overlook and information stand		
B - PASSIVE/SOCIAL AREA	Barbecue and picnic area	Picnic Area	Mulched area with raised garden beds
C - PASSIVE/SOCIAL AREA	Nature play area		

CIRCULATION

D - ALUMINUM ACCESS RAMP	Optional overlook and stair areas, overhead lighting	Enlarged overlooks along ramp, overhead lighting, rainwater harvesting and shade structures	Trellis and shade structures overhead
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GREEN SPACES

E - ECOSYSTEM SERVICE/ STORMWATER	"Willow run" and rain garden	Native riparian garden	
F - INACCESSIBLE SLOPED PLANTING AREA	Ornamental xeriscape planting area	Native pollinator garden with signage along ramp	Fruit trees and pollinator plants along slope, vines growing in-ground and upward along ramp trellis
G - ACCESSIBLE/ INTERACTIVE PLANTING AREA	Ornamental xeriscape planting area	Interpretive native plant garden	Herb Garden

EDGES

H - SOUTH EDGE	Fence line even with neighboring borders	Open edge, earth contoured for maximum stormwater infiltration	Fence line even with neighboring borders
I - WEST AND EAST PROPERTY LINES	Integrate with existing neighbor walls and fencing		
J - NORTHERN STREET SIDE EDGE	Open edge		Fenced for security and pest protection

Figure 2.6.18: Martin Avenue Park Potential Design Scenarios and Program Area Key

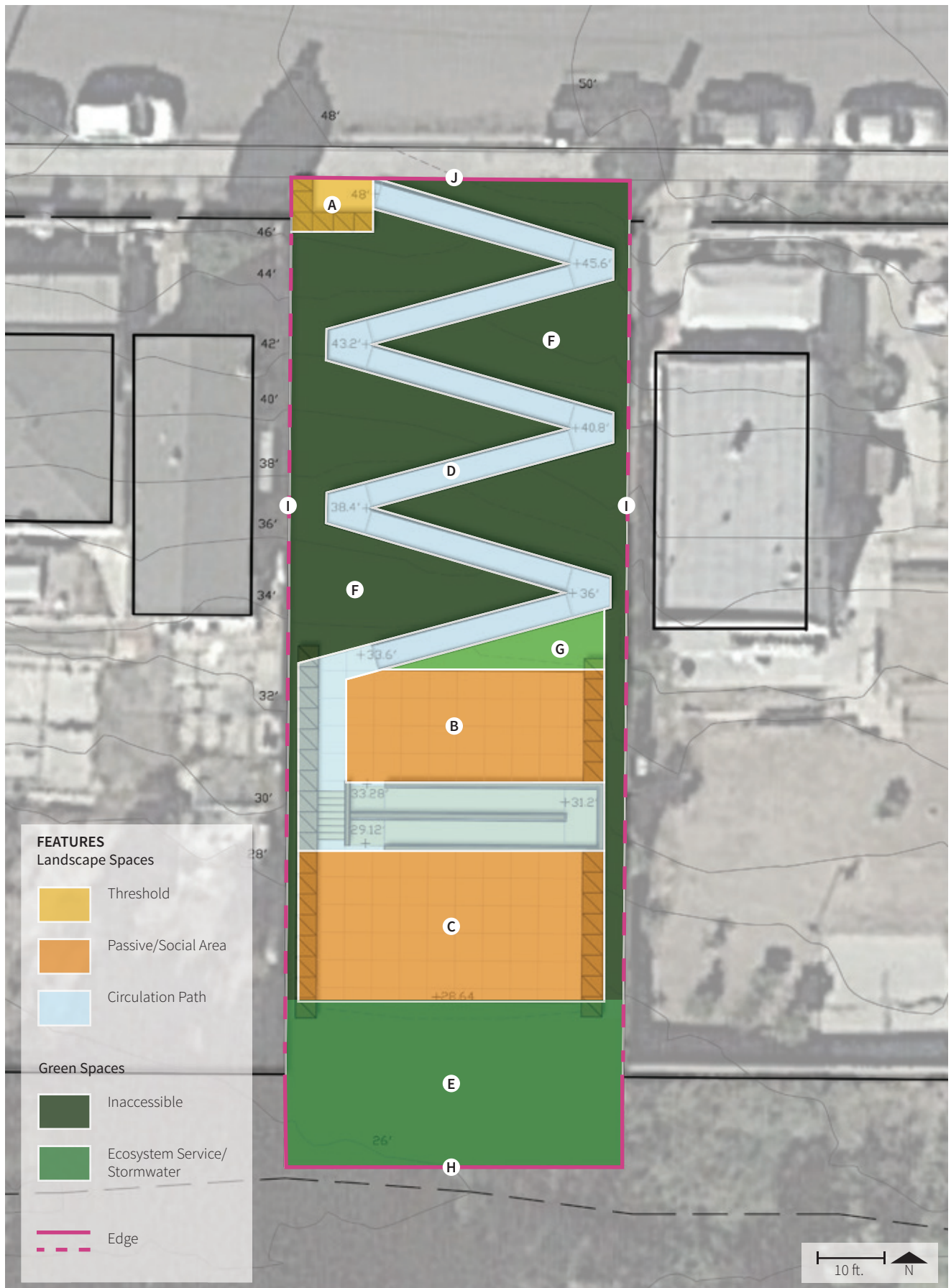


Figure 2.6.19: Martin Avenue Park Landscape Program Area Key Plan

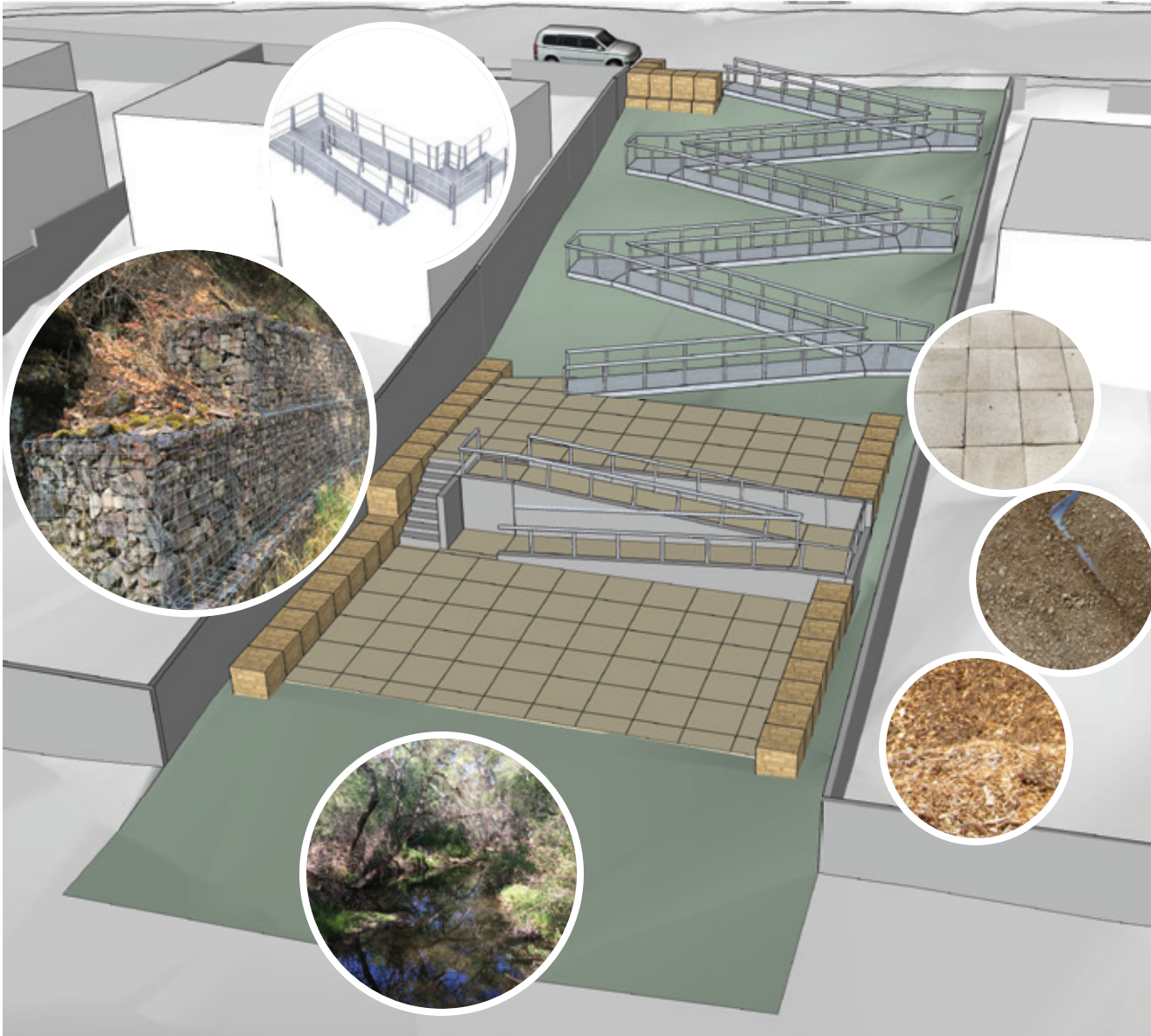


Figure 2.6.20: Martin Avenue Park Spatial Scaffold Rendering

Spatial Scaffold

The site's steep topography has the most profound impact upon Spatial Scaffold design. The design includes minimal site grading and the installation of a modular aluminum ramp to access lower, flat-graded social spaces. Gabion baskets are used for soil retention and seat walls. Because of the problematic location between homes, the social gathering spaces are located past the existing neighboring homes. Stormwater treatment and runoff mitigation are key concerns on the site, and the site's friable, exposed topsoil makes it an attractive candidate for planting areas and urban food production.

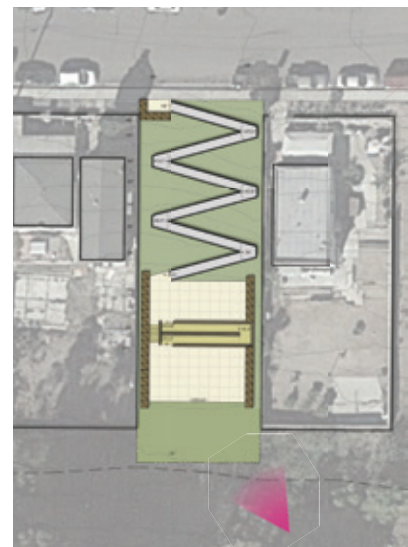


Figure 2.6.21: Key plan with view angle, NTS



Figure 2.6.22: Martin Avenue Park Scenario 1 Rendering

Scenario 1: Neighborhood Park

This scenario assumes community organization or nonprofit oversight as well as an in-depth partnership with the City Parks and Recreation Department. The Parks Department could help with maintenance, initial investment costs, and work along with the community to iterate the space as a public park. Aligned with the City’s existing objective for the space to include “landscaping,” a “picnic area,” and a “children’s play area,” this design accommodates each with an inexpensive, temporary materials palette (SD Planning Dept., n.d.). It is recommended that the city first “test” this arrangement as a “safe to fail” public space prototype before erecting more permanent landscape elements.

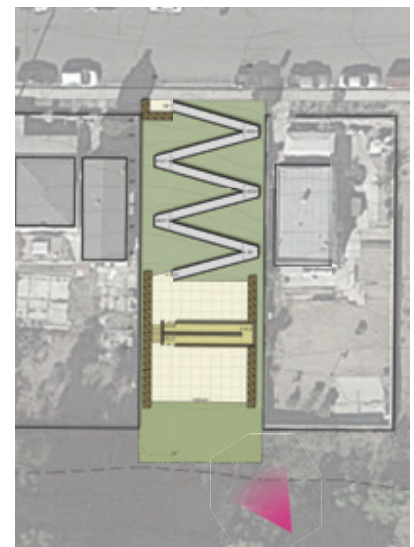


Figure 2.6.23: Key plan with view angle, NTS



Figure 2.6.24: Martin Avenue Park Scenario 2 Rendering

Scenario 2: Habitat Garden

This scenario assumes nonprofit or educational organization oversight with minimal City Parks department maintenance and investment. The design is focused on native plant cultivation and has infrastructure for passive, low-intensity visitor use. Overlooks and stairs on the ramp may be added to enhance visitor experience and increase opportunities for interpretive educational signage. A rain garden on the lower level highlights the journey of water from cloud to creek, and a natural play area is provided for neighborhood children.

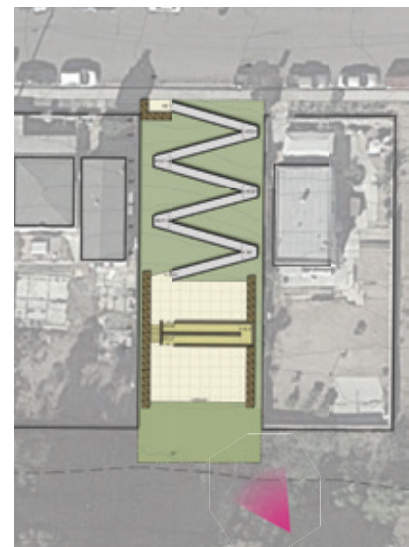


Figure 2.6.25: Key plan with view angle, NTS



Figure 2.6.26: Martin Avenue Park Scenario 3 Rendering

Scenario 3: Community Garden

This design scheme assumes minimal institutional support with nonprofit or grassroots community-based GUC oversight. An overhead trellis along walkway provides additional growing space, and the sloped hill around the ramp is planted with fruit trees. The flat-graded areas are converted for maximum agricultural production. Restricted public access and fencing protect the space from theft and vandalism.

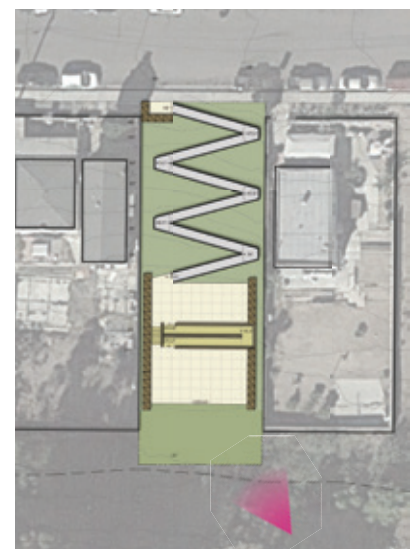


Figure 2.6.27: Key plan with view angle, NTS



Figure 2.6.28: Market St. at 47th St. near Hillside Site



Figure 2.6.29: Market Creek Plaza (front) and Jacobs Center (rear)

SITE 3: MARKET HILLSIDE

The Market Avenue Hillside is located within eyesight of the Jacobs Center for Neighborhood Innovation—the same organization responsible for overseeing aspects of the City of San Diego’s Obama-era designated Promise Zone programs. In addition to falling within the Promise Zone, the site is also within the Diamond Business Improvement Association’s district (an group with similar organizational capacities as the Boulevard BIA). The hill is also located near both trolley and bus lines. Large vacant lots across street await residential development alongside a windowless telecommunications building. Given recent efforts by the Jacobs Center, economic development in the area is both imminent and desired.

This landscape is also part of the city’s network of canyons and drainage ways. Exposed, friable topsoil can accommodate urban agricultural production as well as native habitat gardens. A drain from the higher roadway dispenses untreated stormwater to a portion of the site, making runoff mitigation a key concern. A large, degraded asphalt pad on the eastern side of the lot provides the opportunity for a large, relatively flat-graded gathering space.

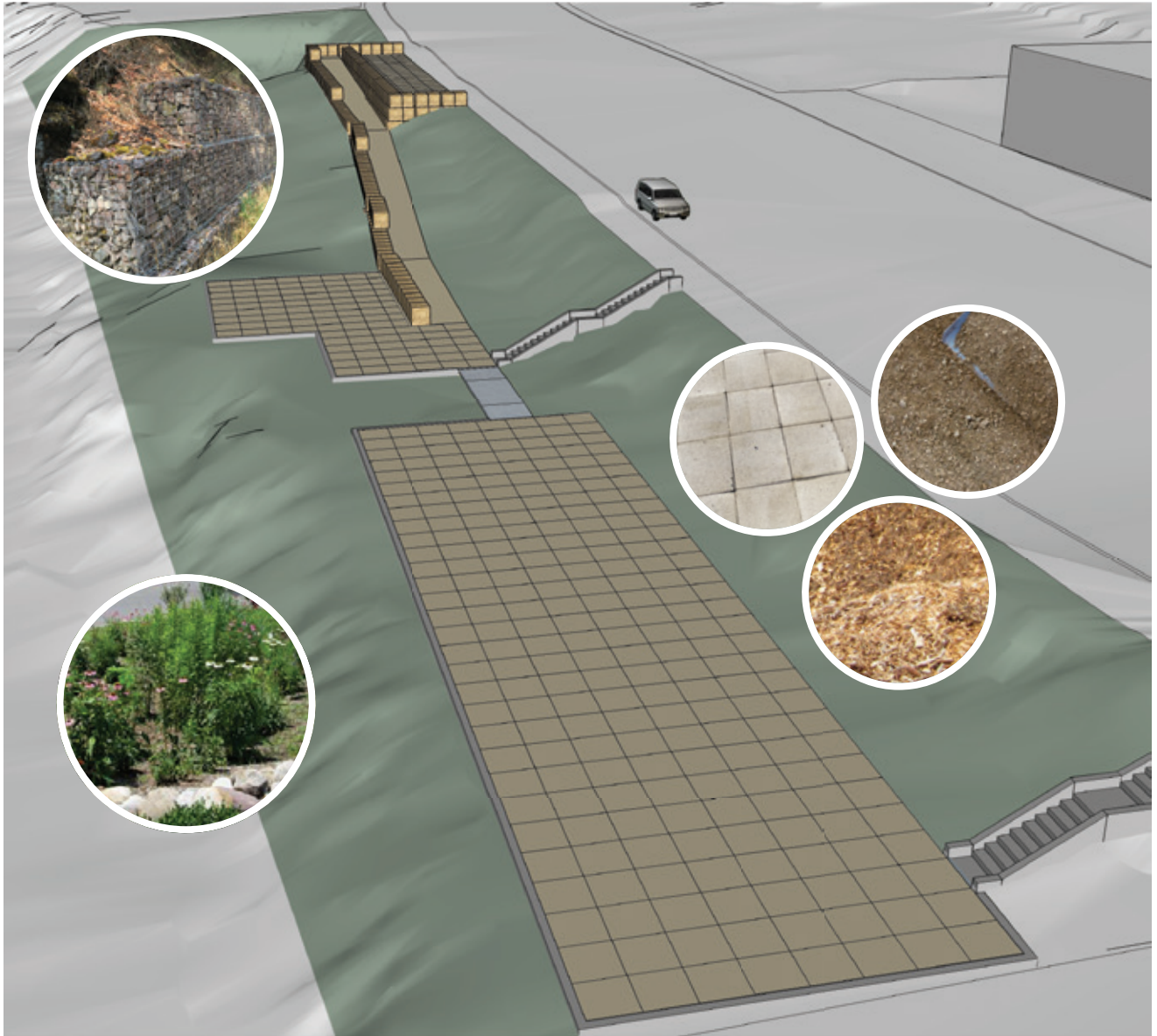


Figure 2.6.30: Market Hillside Spatial Scaffold Rendering

Spatial Scaffold

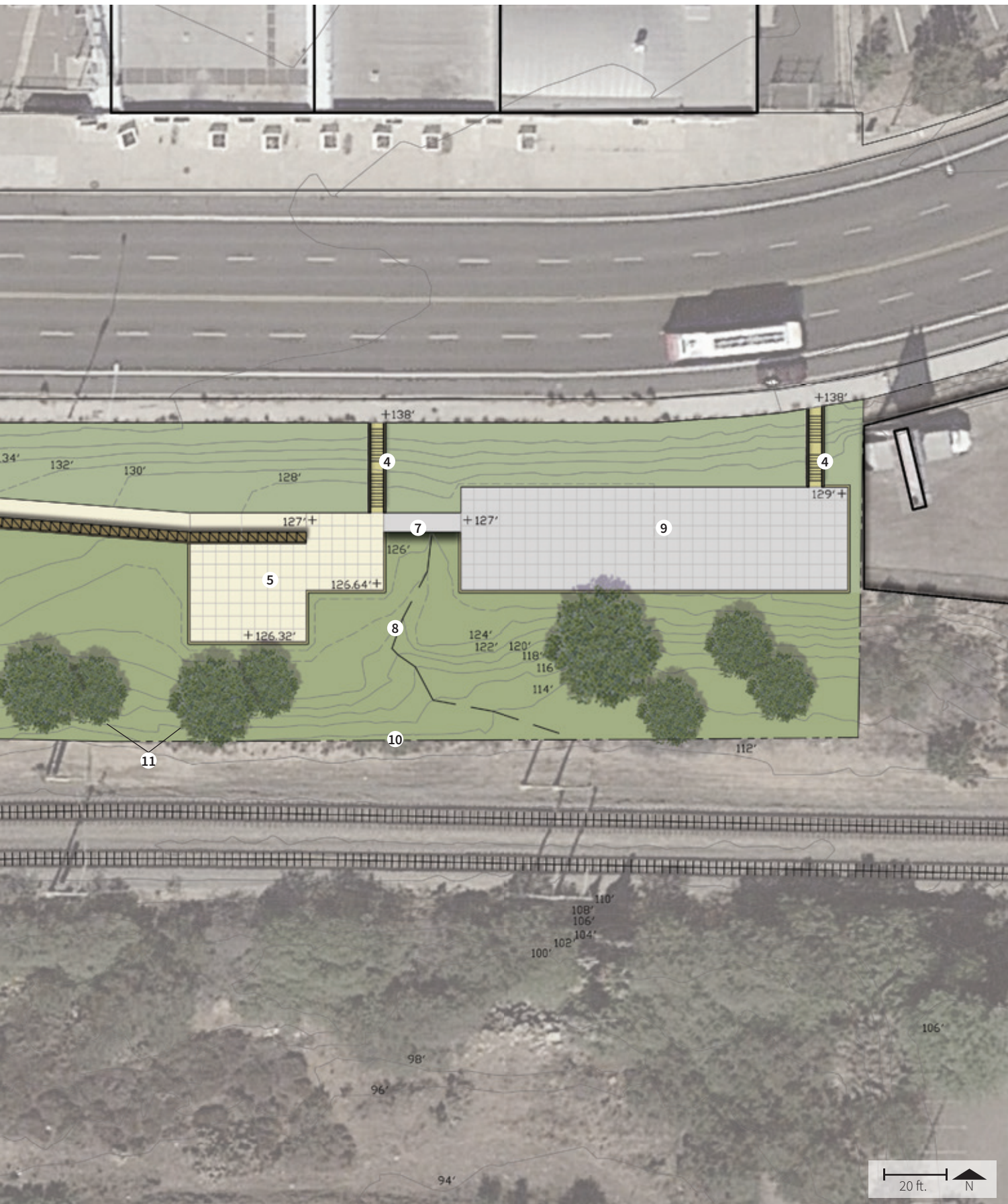
The Spatial Scaffold design for this lot includes multiple access points because of its large size. An overlook landing, retained by a terrace of gabions, serves as the main access point. A 5% graded ramp retained by decomposed granite leads from this landing through the rest of the site's social spaces. Additional stairways on the northern property line lead from the sidewalk to the design's flat-graded social areas. Poured concrete curbs retain the decomposed granite, mulch, or pavers on these flat areas, and the large existing asphalt section is repaired and re-sealed to act as a plaza space. A small aluminum or concrete bridge leads across the existing stormwater outlet pipe between the asphalt plaza and smaller flat-graded program area.



Figure 2.6.31: Key plan with view angle, NTS



Figure 2.6.32: Market Street Hillside Spatial Scaffold



MARKET HILLSIDE

POTENTIAL DESIGN SCENARIOS

SCENARIO	COMMUNITY PLAY	COMMUNITY GARDEN	OPEN PUBLIC PARK & PLAZA
MANAGEMENT STRUCTURE	Community or nonprofit oversight, city parks dept. maintenance and investment (iterated as public park)	Nonprofit or grassroots community run GUC, constrained public access	Community or nonprofit oversight, city parks dept. maintenance and investment (iterated as public park)

LANDSCAPE SPACES

A - THRESHOLD	Seating, overlook and information stand, decomposed granite base		
B - PASSIVE/SOCIAL AREA	Playground and seating area with mulch or decomposed granite, concrete curb edge	Picnic and seating area with mulch or decomposed granite, concrete curb edge	Picnic area, 1'x1' concrete paver or decomposed granite base, concrete curb edge
C - PLAZA	Asphalt base and wooden-framed skate park	Remnant asphalt base covered with mulch, raised garden beds, gathering space, and children's playground	Asphalt, decomposed granite or pavers with 4'x4' field of concrete sleeves to support modular furnishings

CIRCULATION

D - RAMP AND STAIRS	Decomposed granite pathway with gabion retaining walls, basic concrete stairs, and bridge over stormwater structure
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GREEN SPACES

E - ECOSYSTEM SERVICE/ STORMWATER	Native riparian plantings and rain garden		
F - ACCESSIBLE/ INTERACTIVE PLANTING AREA	Native pollinator garden with signage along ramp	Community garden planter beds	Ornamental xeriscape planting area
G - ACCESSIBLE/ INTERACTIVE PLANTING AREA	Children's "run" and nature play area	Terraced community garden planting beds	Native chaparral planting area
H - INACCESSIBLE SLOPED P.A.	Ornamental xeriscape planting area	Fruit trees and pollinator plants along slope	Ornamental xeriscape planting area
I - INACCESSIBLE SLOPED P.A.	Native chaparral planting area		

EDGES

J - NORTHERN EDGE	Open	Fenced for security and pest protection	Open
K - WEST, EAST , AND SOUTH EDGES	Integrate with existing neighbor fencing, extend to southern property edge and enclose for safety (trolley) and security		

Figure 2.6.33: Market Hillside Potential Design Scenarios and Program Area Key



Figure 2.6.34: Market Hillside Scenario 1 Rendering

Scenario 1: Community Play

Although the City Parks & Recreation Department does not currently own the property, this scenario assumes community organization or nonprofit oversight as well as an in-depth partnership with SD P&R. The Parks Department could help with maintenance, initial investment costs, and work along with the community to iterate the space as a public park. A full-scale skateboard park is proposed for the large asphalt plaza. Such a park could be open to the public or managed on a fee-basis by an organization like the YMCA. A playground and seating area is proposed for the smaller programmable space, and a portion of the hillside is converted to a natural play area for children.



Figure 2.6.35: Key plan with view angle, NTS



Figure 2.6.36: Market Hillside Landscape Program Area Key Plan

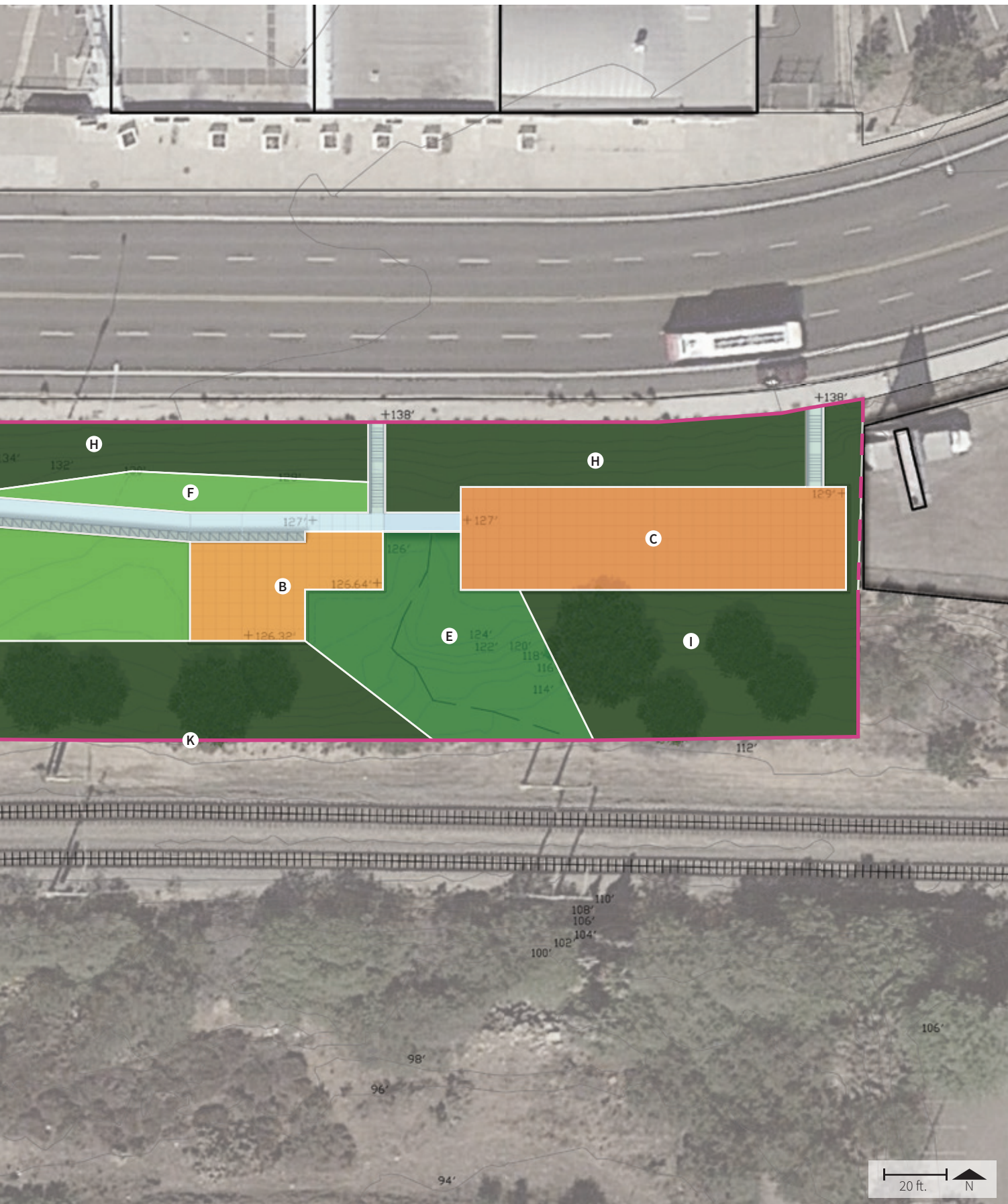




Figure 2.6.37: Market Hillside Scenario 2 Rendering

Scenario 2: Community Garden

This scheme assumes that a nonprofit or grassroots community group leads the management structure of the GUC. Oriented primarily toward agricultural production, the site design includes constrained public access for security. A small playground and raised planter beds populate the large plaza space, and the smaller flat-graded area serves as a picnic area and stormwater garden overlook. Additional in-ground community garden plots and orchard trees populate the hillside.



Figure 2.6.38: Key plan with view angle, NTS



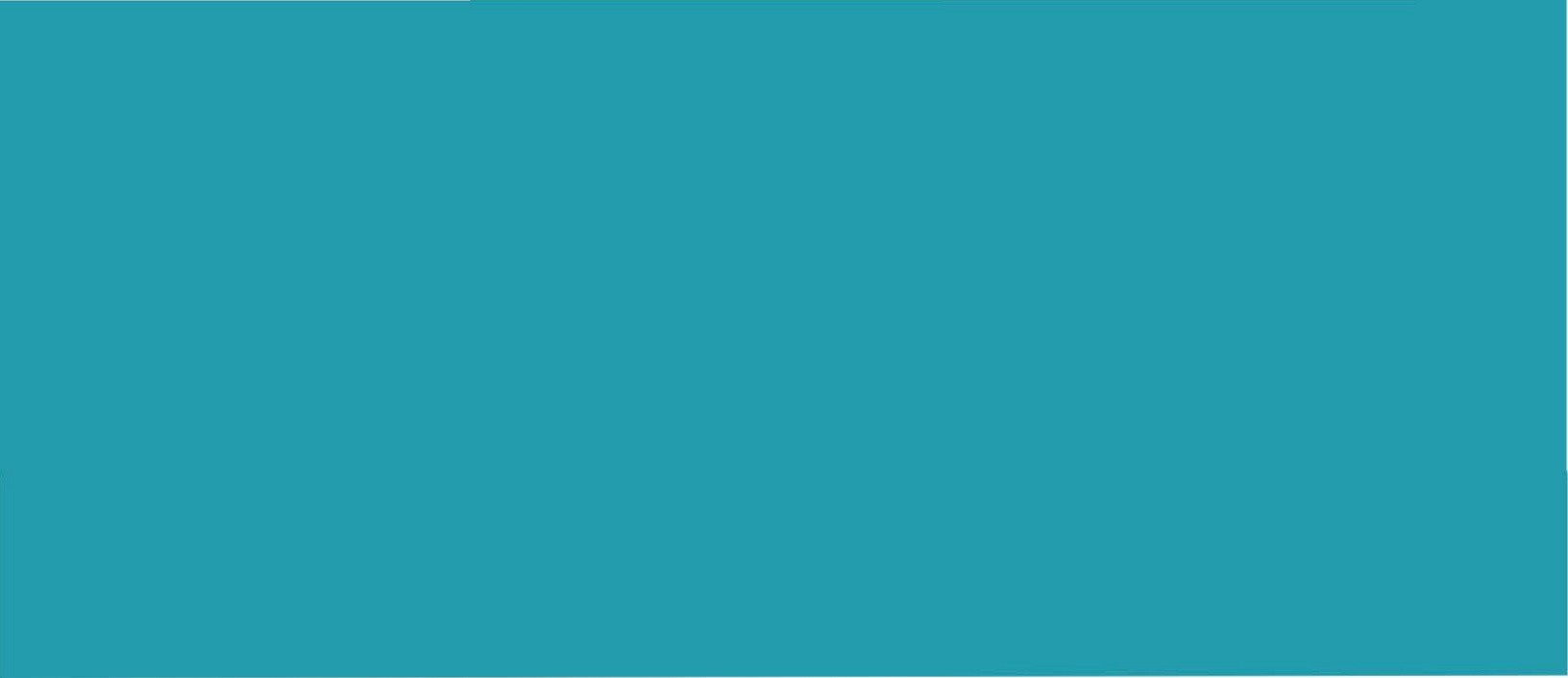
Figure 2.6.38: Market Hillside Scenario 3 Rendering

Scenario 3: Open Public Park & Plaza

In addition to the first, this scenario also assumes grassroots community organization or nonprofit oversight as well as an in-depth partnership with San Diego Parks and Recreation. The parks department could help with maintenance, initial investment costs, and work along with the community to iterate the space as a public space prototype park. The large asphalt area features a stage and event space, with the smaller flat-graded area serving as a gathering space and and ticketing/infrastructure area during events. This scenario may prove especially desirable in the event of medium-density residential development on adjacent vacant land.



Figure 2.6.39: Key plan with view angle, NTS



DISCUSSION



Fig. 3.1: Vacant lot at I-15 and University Ave



Fig. 3.2: City-owned vacant lot in Southcrest

The goal of this project is to encourage the creation of green urban commons (GUC's) in San Diego's Mid-City and Southeastern communities as a means to improve resident quality of life and urban resilience. The researcher used Rod Barnett's six hallmarks of an emergent civic landscape to inform PopUp15 action research and develop an outcome-based Framework for new GUC development in San Diego. To assess the effectiveness of the Framework's prescriptive recommendations, it was applied to three vacant urban lots in the Mid-City/Southeastern San Diego study area. These case study designs yield heuristic insights into the explicit application of emergence theory to both GUC's and landscape architectural practice in general. Although the conclusions drawn here are related specifically to the development of GUCs in the San Diego study area, insights from this project can be construed to similar urban contexts.

ACTION RESEARCH AND FRAMEWORK IMPLEMENTATION

The initial mapping and lot identification process was a positive step toward the development of new GUC's in the project study area, though the identification of opportunities alone seemed insufficient in order to effect real change in San Diego's underserved communities. The Framework for GUC Creation in this project proposes tangible landscape and social outcomes in order to create GUC's that exhibit emergent characteristics at the site scale. Emergence theory also served as a powerful operative metaphor for understanding the startup and ongoing evolution of GUCs. Through an iterative research-through-designing process, each of the three Framework components was intentionally correlated to one or more different aspects of Barnett's six hallmarks of an emergent civic landscape. Each of these components was broken down into simpler constituent parts, organized within a three-phase GUC project process, and hitched to specific project outcomes (see Figure 2.3.2). Action research and the application of the Framework to case study sites allowed the researcher to speculate as to whether or not these specific outcomes can be achieved in real-world GUC projects.

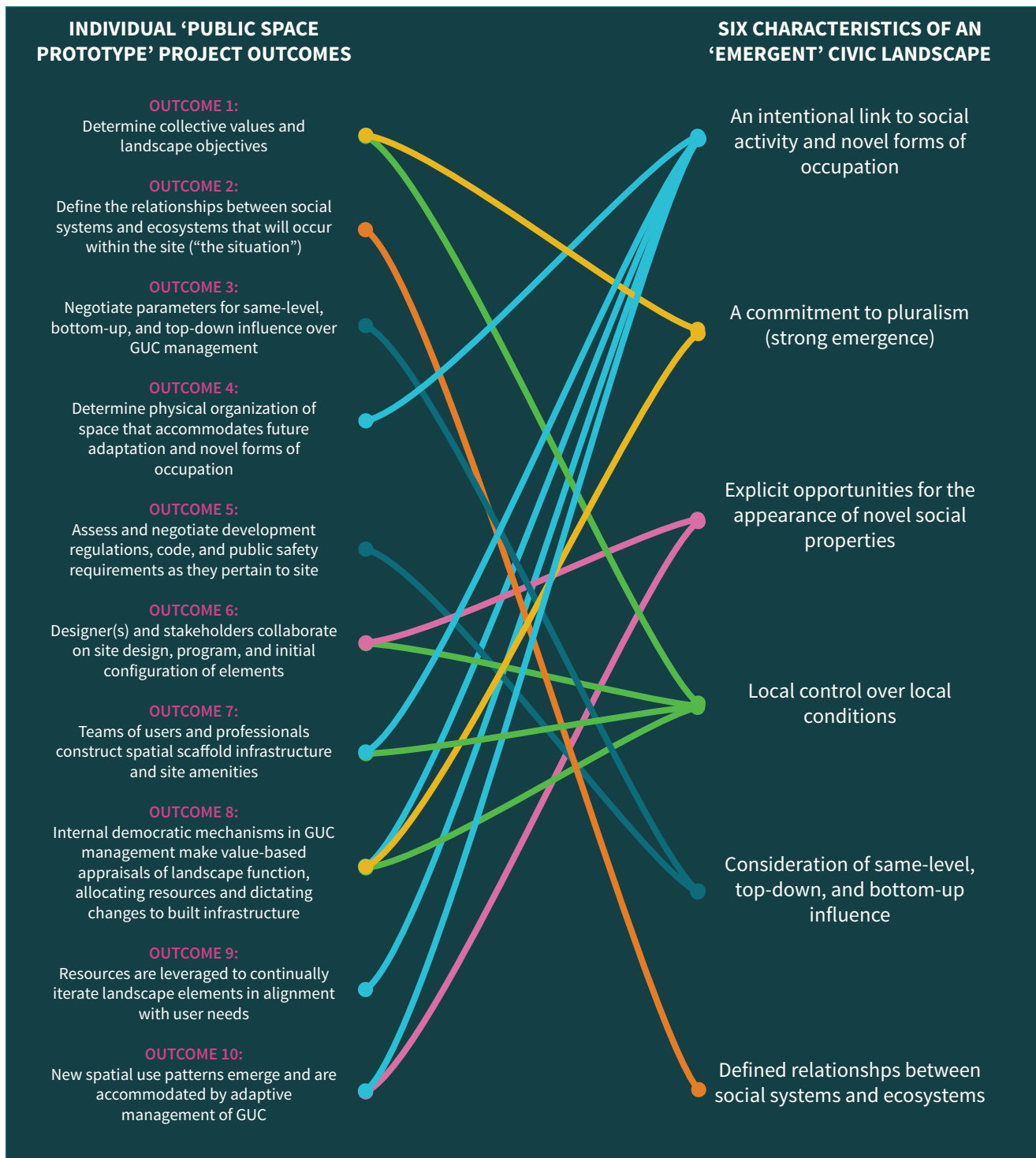


Figure 3.3: Connections between proposed Framework outcomes and emergence theory (After Barnett 2013)

Emergence and Fulfillment of Outcomes

Framework application outcomes can be related directly to Barnett's six emergent landscape criteria (Figure 3.3). If met, these outcomes will likely ensure that a new GUC will exhibit several if not all of Barnett's six emergent criteria. The PopUp15 project was particularly useful for understanding how the Framework can be applied to a specific site. Although it is difficult at this stage to claim whether or not there are on-site emergent patterns (novel forms of occupation, individual users making small incremental changes to their environment, etc.), several project outcomes have already been achieved. For example, the primary researcher worked directly with stakeholders to determine collective values and landscape objectives for the site, collaborated on site design, program, and initial configuration of elements, and engaged professionals and end-users in the construction of spatial scaffold elements and site amenities (Outcomes 1, 6, and 7). Each of these can be correlated directly to Barnett's relation of "local control over local conditions" to emergent civic landscapes. Similar relationships can be recognized across the other Framework outcomes.

The achievement of the latter three outcomes (8 through 10) is substantially more difficult to evaluate for either PopUp15 or the Assemblage Design Scenarios, as the outcomes relate to a temporal frame beyond project start-up, site design, and initial construction. Nonetheless, the stage has been set at PopUp15 for the ongoing development of emergent landscape characteristics. Future GUC projects that adhere to the Framework, GUC Project Process, and attached outcomes are also likely to be set on this trajectory.

Challenges to Implementation

PopUp15 action research and Assemblage Scenario Design case studies revealed several barriers and challenges to GUC project initiation and implementation of the Framework. These issues were related primarily to stakeholder participation, design representation, construction and institutional approval.

Stakeholder Organization

Despite attempts within the Framework, the researcher observed that it might remain difficult for individual community members to participate in GUC development. Stakeholder mobilization in general seems to favor

pre-established groups, particularly those organized as a formal nonprofit. A nonprofit organization has staff/resources and is often more nimble at navigating bureaucracy than groups of resident-activist stakeholders. Although community members in City Heights benefit from the services provided at PopUp15 (or, speculatively, from the designs for the other two case study sites), barriers such as time, resources, and unfamiliarity with land use negotiation seemed to discourage area residents to engage with the project. That said, the PopUp15 Stewardship Team has kept an open door to community-led activities within the PopUp15 space, and groups like Bikes del Pueblo, The Rock Church, and the Media Arts Center have drawn groups of community volunteers to participate in the construction of site elements and development of the space. Furthermore, there is risk that project initiation and oversight may be too reliant upon designer involvement in the project for spatial scaffold iteration and negotiation with city agencies. In this regard, clear designer deliverables and a work timeline – similar to those used in PopUp15 – can help define organizational boundaries, set expectations, and prevent stakeholders from relying too heavily on a designer for project sustainability.

Landscape Construction

Development of public space proved to be difficult with ad-hoc construction on a low budget. For the PopUp15 project in particular, the permitting processes for overhead or vertical structures remained a strong enough barrier that it limited the Stakeholder Team's interest in constructing certain elements such as a stage and pergola. More involved construction and grading involve permitting and contractor involvement, as well as a higher project budget. Certain user-constructed site elements in GUCs may conflict with development regulations (ex. unpermitted stage construction or site grading), and clearer boundaries are needed in order for non-professional GUC stakeholders to grasp what is and is not allowed during site construction. A useful place to begin may be the guidelines for community garden construction set forward by the City, though the diverse array of land uses within GUCs will likely entail further definition of policy.

Site Analysis and Design

The researcher's role in Spatial Scaffold determination and site analysis was a difficult territory to navigate, even with extensive contextual and theoretical exploration. Per Barnett, "landscape architectural designers should be interested in what is actually functioning in an open system, and what the mechanisms of this functioning are" (2013). It may be difficult for designers unfamiliar with emergence theory to use this Framework, particularly as it pertains to site forensics and understanding landscapes as assemblages that are always becoming and never twice the same. The values and outcomes of the Framework are meant to remove some of the mystery behind an emergentist practice of landscape architecture, though further study and pragmatic research is needed to evaluate the effectiveness of the Framework for those who have hitherto not encountered the concept.

Representation/Media for Decision-Making

When producing design drawings, it was difficult for the researcher to convey the future of user-generated space without imposing too much form or vision. This is an especially important consideration because Barnett stipulates that a designer should not be a "purveyor of top-down solutions but a discoverer of emergent processes," and that they are instead responsible for establishing "an initial set of conditions...that generates a process of realization" (2015). What, then, is the right

balance of representation? Spatial scaffold scenario projections in plan, although useful to the designer for determining programmatic use zones, are not as helpful to convey to stakeholder groups the vibrant social potential of a place. Such projective scenarios, similar to those included in the Assemblage chapter, may be useful to stakeholder groups for marketing purposes. Furthermore, the Spatial Scaffold drawings in this document may be too schematic or high level for current institutional approval processes. Not all designers, however, will be in a position to produce evocative renderings or 3D models to convey the character of an emergent GUC. The notion of 'assemblage' helped the researcher organize thoughts about how to draw projected scenarios and plan for future use (iteration within the design process itself), though further exploration into the graphic representation of emergent landscapes is called for.

Institutional Support

Based primarily on the helpfulness of San Diego's Development Services Department during the initiation of PopUp15, much of this Framework relies on the assumption that local government agencies responsible for overseeing vacant lots will be amenable to GUC construction and go out of their way to be accommodate stakeholder interests. This is not always a given circumstance, and it remains possible for government



*Figure 3.4:
Z-Street Pocket
Park - Currently
undeveloped City
Parks-owned
property in
Southcrest*

agencies to stonewall projects entirely. The researcher's hope is for this Framework to develop into a more formal GUC permitting and approval process for San Diego and other cities.

IMPLICATIONS FOR PRACTICE

Recommendations included in the Framework are strategy-based and open-ended enough to be transferable to a wide range of situations beyond San Diego. The three components of the Framework, Spatial Scaffold, Materials Menu, and Social Structure, could be useful to other communities interested in creating new GUC's.

Transferability

The Framework itself is meant to de-mystify the process of GUC start-up and implementation. The included recommendations are meant to lower organizational and knowledge barriers to the development of new public spaces on city-owned public lands, helping to loosen restrictions and open up new ways of inhabiting urban public spaces.

Role of the Researcher/Designer

The role of the researcher was to set initial conditions for the ongoing social and physical evolution of a landscape. An initial physical scaffold is proposed and constructed, from which social meaning and material conditions are intentionally left to evolve and emerge. In light of emergence theory, proposed design strategies in this project remain cognizant of citizen decision-making and layperson construction. An inherent tension, however, is that while an idea behind GUC's is that citizens participate and invent meaning within unoccupied urban lots, the designer's role includes the development of explicit spatial propositions that accommodate potential desired uses and/or strengthen current practices.

When discussing the role of the designer in emergent landscape architectural practice, Barnett asserts that the desired relationship between human and nonhuman systems on a site "will emerge from an involvement of the designer with the situation that includes a participation in the situation sufficient to develop the terms of the situation, and to enable design to be regulated by the situation." This statement means essentially that design does not occur in a vacuum,

that the designer has their own interests and biases, including the fact that they are part of the system that is being designed (Barnett 2015). To achieve desirable emergent landscape designs, Barnett affirms the importance of what Elizabeth Meyer calls "situatedness," or the notion that "landscape architectural theory is situational; it is historical, contingent, pragmatic, and ad hoc," and that it "must be based on observation, on what is known through experience, on the immediate and the sensory..." (1997). This idea of "situatedness" can be correlated to the role of the researcher. As an outsider to the majority-latino study area who identifies as a white male, the researcher had to be keenly aware of his own hidden biases and as well as the potential for his propositions to inadvertently drive gentrification and the displacement of existing community character. Careful site observation and analysis, stakeholder interviews, experience with human-centered design tactics, and the designer's past professional experience working with at-risk youth in City Heights helped the researcher assume a role characterized by definition, contextualization, and facilitation.

CONCLUSIONS

The goal of this research-through-designing project is to encourage the creation of GUCs in San Diego's Mid-City and Southeastern communities as a means to improve resident quality of life and civic resilience. By considering the project's design propositions and revisiting precedent literature, it can be speculated that this project has achieved its goal.

Resident Quality of Life

Measuring the impact that GUCs have on resident quality of life is a research project unto itself and in many ways remains beyond the scope of this project. That said, many of the positive ecological, public health, and resident perception outcomes related to iterative vacant land interventions can be correlated to PopUp15 and the outcomes of the GUC Framework. Bikes del Pueblo, for example, has converted a patch of derelict urban land into a dynamic workshop environment where residents are empowered to be physically active and encouraged to use sustainable transit. By appropriating vacant land for public benefit, GUC projects can change perceptions about entire neighborhoods by fostering "cues to care" within urban communities (Foo et al., 2013; Nassauer,

1995) and mitigating “physical disorder” linked to poor health outcomes such as cardiovascular disease and mental illness (Garvin et al., 2012). In addition to changing residents’ attitudes and perceptions, aspects of the Framework prompt the end-users of GUCs to engage in ongoing management of the project and the physical construction of space. By actually getting people involved in the construction and management of new public spaces, individuals are likely to feel that they can effect positive change in their daily living environments and alter the urban fabric in ways that more closely fulfill their own goals, expectations, and desires, thereby increasing resident quality of life.

Gentrification and Immersion

Although much can be said in favor of the iterative urbanism proposals of this project, vacant land development is a contentious process that can lead to gentrification. High budget GUC projects, for example, may involve various commercial interests that can conflict with whether GUCs function as public space or as spaces of commercial exchange. Social and financial investment in vacant land, although considered beneficial, can also increase the risk of gentrification and displacement of existing residents.

Harris’s concerns regarding temporary urbanism and gentrification might be assuaged in part by the fact that this project specifically proposes the development of GUC’s with emergent landscape characteristics. As discussed in the introductory chapter of this document, GUC’s are by definition collectively managed by diverse stakeholder groups that allow participants to assert their “right to the city” (Bela 2014, Iveson 2013). Furthermore, emergence theory as applied to landscape architecture stipulates that civic spaces should explicitly provide “local control over local conditions” (Barnett, 2013). The GUC development Framework and site designs proposed by this project, therefore, are judicious in their navigation of the pop-up imaginary of immersion. Given the fact that the aim of this project is to improve urban conditions for residents in San Diego’s most disadvantaged neighborhoods, proposed interventions are sensitive to existing neighborhood character, and the co-design strategies recommended in the Framework accommodate local capacity-building rather than external investment and the displacement of existing residents. An emergence theory-aligned design approach helped the researcher to critically navigate this conceptual terrain of “immersion,” incorporating past spatial narratives while laying the groundwork to engage visitors in both a site’s future and present conditions (Harris 2015a).



*Figure 3.5:
Parklet in the
Sunset District
of San Francisco
- a result of the
city’s formalized
oversight and
approvals process*

Urban resilience

The nascent practice of “safe-to-fail” iterative urbanism projects like GUCs has been directly correlated to notions of urban resilience (Ahern, 2011; Lister, 2016). By responding to disruptions in the socioeconomic or ecological fabric of the city, GUCs can leverage limited resources for public benefit. In addition to providing spatially explicit landscape functions, negotiated spaces like GUC interventions are also recognized as contributors to the resilience of urban systems because they “loosen” existing institutional structures and provide opportunities for community empowerment despite adverse environmental conditions (Radywl and Biggs, 2013). This loosening of institutional structures opens up opportunities for stakeholder mobilization and democratic value negotiation processes that are important to political capacity building and greater urban resilience (Arnstein 1969; Juarez and Brown, 2008; Radywl and Biggs, 2013).

Although the institutional approval process and value-based negotiation of land use build political capacity (and thereby urban resilience), the question remains: political capacity for whom? In the case of PopUp15, the BIA nonprofit was able to carry a substantial amount of the logistical burden and its embedded organizational structures and very few everyday residents were engaged in the project beyond survey discussions with the primary researcher. Further study is needed to evaluate the strategy of engaging with other community organizations in the start-up of a GUC rather than directly with neighborhood residents. Furthermore, it has yet to be seen whether or not there will be long-term benefits from the PopUp15 project that trickle out to the community or, conversely, spur gentrification.

There is also some risk that formalizing the GUC development process with a framework may decrease the landscape type’s effectiveness as a resilient niche landscape phenomena. GUC projects often rely on subversive or advantageous tactics because of gaps in institutional oversight (Haydn and Temel, 2006). By formalizing the GUC development process with the intention of lowering barriers to implementation, institutional adoption of a GUC approval process may, paradoxically, create new barriers for stakeholders that otherwise would have been able to adopt a development

approach rooted in the maxim that it is “better to ask for forgiveness than for permission.”

In addition to being correlated to the large-scale evolution of urban systems, the notion of resilience may also be applied to the scale of an individual landscape site. Individual resilient landscapes can be characterized as “those that adapt to volatile conditions while maintaining functional integrity” (Woodward, 2008). Not only is it asserted that the Framework proposed by this project can contribute to the resilience of urban systems, the “Spatial Scaffold” is intended to maintain functional integrity of the GUC, intervening in a strategic way with minimal input. The framework and resultant site designs are adaptive, flexible, and responsive to disturbance, tying into greater discourse about urban resilience, CAS theory, and emergence theory as an operative metaphor for site design (Berrizbeitia, 2001; Spirn, 2012).

It is the researcher’s earnest hope that the contents of this project inspire someone to kick-start a GUC project in their own community. Regardless of how large or small the effort may be, well-informed and good-natured action toward improving urban environments is likely to have positive effects that ripple outwards and emerge in ways that exceed expectation.



APPENDIX

A	CAS and Urbanism Diagram	XX
B	Barnett's Six Hallmarks	XX

APPENDIX A

CAS AND URBANISM DIAGRAM

This diagram, created by Sharon Wohl and Sean Wittmeyer, illustrates conceptual connections between aspects of CAS theory (center) and contemporary urban design theories (right). Direct connections between the characteristics of emergence (left) and contemporary urban design theories (right) are highlighted in blue (n.d.).

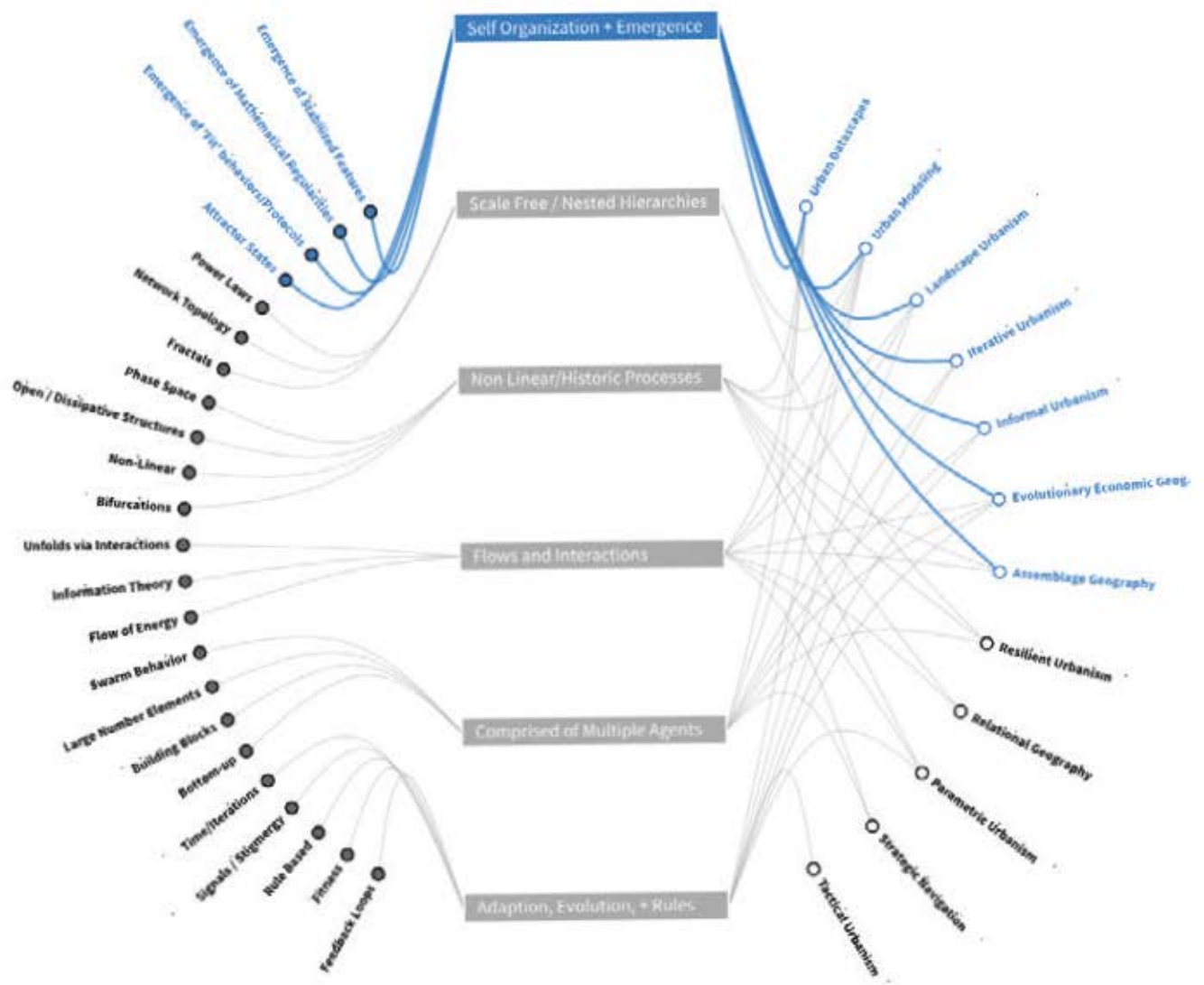


Figure 7.1: CAS in Urbanism Diagram (Source: Sharon Wohl and Sean Wittmeyer, <http://cas.seanwittmeyer.com/collection/urbanism>)

APPENDIX B

BARNETT'S SIX HALLMARKS

“...hallmarks of a public space design that [takes] seriously the fundamental propositions of emergence” (Barnett 2013 pp.203-205)

1. A “multitude of connections between environmental design and social outcome. The nature of this connectivity will be such that the emergent social phenomena would have an autonomous existence, and yet depend on the designed structures to enable and support them.”
 - a. People are “empowered to become involved in [the landscape’s] ongoing transformation”
 - b. “The higher-level properties of the designed landscape, such as its functionality, aesthetics, intelligibility, affectuality, and affordances, will supervene on the organizational conditions it provisions. These will include formulations of spatial elements, adaptability, accessibility and openness, and the articulation of material components such as surfaces, plants, water, sunlight, seating, as well as the relations between these.”
 - c. New types of occupation may emerge.
2. A “commitment to strong emergence.” In other words, “higher-level functioning in some way influences lower-level functioning.”
 - a. “Non-material features such as concepts, information and desires will have causal effects in the material world of forces and particles, fish and insects...”
 - b. “Many levels of reality emerge in the world and the various objects and processes at each level have their own types of reality.”
 - c. “The logical relationships between ideas intermingle with the exchange of materials, physical connections and processual participation of nonhuman structures. As a result of this autocatalytic operationality, social and cultural responses would be able to cause new organizational and material arrangements, which in turn would permit a third feature of landscape architectural emergence...”

3. "...the appearance of novel social properties"
 - a. "Adaptive landscapes empower people to change them."
 - b. "...people's ability to make small changes to their environmental conditions can spiral upwards into dramatic revisions of social relationships." Example: fruit trees along street – long-term change, vs. "sudden availability of a low-rent retail premise for the use of a community organization" – immediate effect.
4. "Assumption of local control over local conditions."
 - a. "...attention on the emergence of small-scale shifts in governance and management, and a commitment to currency and relevance rather than final result."
 - b. "...reliance on short-term increments of transformation" occurring "within and against a background of groundswell long durée transformation."
 - c. "The landscape architect will establish an initial set of conditions, based on a description of the situation that generates a process of realization."
5. "...there will always be at least three types of simultaneously applicable explanation possible for any designed landscape."
 - a. Bottom-up terms – access/egress, aesthetic and spatial qualities that respond to local context and engage cultural history
 - b. Same-level explanation – a diverse range of user groups that occupy the same space differently
 - c. Top-down explanation – a landscape is the way it is because it was designed and guided by experts
6. Urban landscapes are at once social systems and ecosystems, and "the landscape architect is responsible for a description of that situation"
 - a. The designer participates "in the situation sufficient to develop the terms of the situation."
 - b. "An emergentist landscape architect will combine techniques of reconnaissance and imaginative forensics in what Meyer calls situated 'forms of notation.'"
 - c. "...the landscape architect is part of the system that is being designed..."



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Figure 4.1: University Avenue in City Heights

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