Alleyway Revitalization

Planning for the Park Street - Pine Street Alley Between 12th Street and 13th Street, Paso Robles California

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By Mitchell Spector November, 2019

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Author:	Mitchell Spector
Date Submitted:	November 6th, 2019

Vicente del Rio, PhD
Senior Project Advisor

_____ Signature

_____ Date

Michael Boswell, PhD
Department Head

_____ Signature

_____ Date

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Introduction

The Vision Statement for this project is to “Create a comprehensive revitalization plan for the Park Street and Pine Street alley in Downtown Paso Robles to provide an innovative and engaging environment for the community.” The goal of the redesign is to transform an underutilized alley in the downtown area to revitalize the pedestrian network and improve social and economic interactions. The selected location is the Park Street - Pine Street alley between 12th Street and 13th Street located in Paso Robles California. The site was initially brought to City’s attention following complaints about the trash and waste bin smell. Finding a solution to mitigate the smell and improve the alley proposed an even greater opportunity to revitalize the entire alley. This senior project offers a revitalization plan consisting of 5 chapter with multiple phases of implementation.

The first chapter is the Conceptual Framework. This chapter discusses the role of alleyways in society’s urban fabric, both historically and conceptually. This follows both the societal integration and the neglect of alleyways throughout the different periods of urban planning. These help to determine the role alleys play in the modern day urban fabric and promote the use of design principles that apply to modern alley revitalization plans. The conceptual framework is further supported by design principles sourced from academic journals and research letters. These selected principles will be applied to both the review of case studies and in the proposed design elements in the revitalization plan.

The second chapter of this report review multiple case studies of alley revitalization plans from different cities. Each reviewed plan implements different design elements with plans encompassing alley systems on a different scale. For example, the Chicago Green Alley Program focuses primarily on alley drainage throughout the city’s entire alley system, which includes over 13,000 alleys. This program has a very large scale and focuses on key design elements with flexibility for application. In contrast, the East Cahuenga Alley in Los Angeles was a singular effort to revitalize a misused alley which had become a popular location for illegal activity. This project took this singe alley and created unique design patterns with vegetation, paving, shade, and seating, to combat the illegal activity and welcome new community ownership. A third Case study reviews two alleys from the city of Detroit. Both use similar design principles but yield two different results, both of which were regarded as positive contributions to the community.

The Third Chapter begins to assess the current conditions of the Park Street-Pine Street alley in Paso Robles. This provides context for the proposed plan and allows for a detailed inventory on the existing environment. This includes location of trash bins, circulation patterns, existing businesses, stakeholder information, and a SWOT analysis. The assessment aims to provide the contextual basis for the proposed design elements in the following section.

Chapter 4 contains the proposed revitalization plan with detailed design elements and estimated cost for implementation. This proposal is broken into 6 different phases each with a specified area of focus. The first phase focuses on addressing the bins and proposes a new plan for waste disposal in the alley. Phase 2 focuses on promotion of the alley as a public space by incorporating new activities, events, and experiences in the alley. These new events will allow for further community investment into the revitalization of the alley. Phase 3 focuses on the redesign and character of the alley. This phase provides detailed design elements which will improve the functionality and aesthetics of the alley. This includes plans for shading, seating, vegetation, lighting, and public art. Phase 4 includes a plan for adding curb bulb-outs and repaving the alley. This incorporates modern paving techniques to reduce the impact of the alley on the natural environment. Phase 5 covers economic benefits and business opportunities. And Phase 6 reviews the expansion of alley revitalization throughout the city into other areas in town.

Chapter 5 covers implementation of the project and suggested methods of community involvement. This includes involvement of near-by businesses in revitalization of the alley maintenance moving forward. This chapter also covers options for methods of funding towards this project or other future alley revitalizations.

Chapter 1

Conceptual Framework

1.1 Alleys as a Place

Alleyways generally refer to two kinds of paths. The first is a narrow pedestrian path between the walls of buildings in an urban environment. This type of alley is generally short and straight, although it may change in elevation. The second type of alley is a very narrow urban street or single lane. This is often used by slow moving vehicles and is more pedestrian friendly than a regular street. These alleys can be used as service roads for a variety of land uses and serves as a secondary vehicular network. It is very common in America to view alleyways as a service lane for businesses or homes. The American alleyway is commonly considered to be an appropriate place for garbage bins and dumping of unwanted furniture and goods. This is the case for the specific alleyway in discussion in Paso Robles California.

City Beautiful Movement

The City Beautiful Movement brought a desire for communities to improve the aesthetics of their cities. The movement was associated with the creation of long grand avenues with key focal points at either end. The key idea of the City beautiful movement was that “the city was no longer a symbol of economic development and industrialization, but could now be seen as enhancing the aesthetic environment of its many inhabitants. (The New York Preservation Archive Project, 2016). The focus on these grand avenues left very little room in city plans for alleys and they were often not included in the City plans. Alleys were not associated with this plan and were often forgotten as public spaces.

Garden City Movement

Alleys were also largely forgotten in the Garden City Movement, which largely focused on a self-sufficient and proportionally planned city. The focus was to balance industrial, residential, and agricultural spaces to accommodate for the population of the city. The sweeping solution that Howard proposed for the crowding, crime, grit, and chaos of England’s urban areas was the creation of planned communities of 32,000 people, ringing major cities and combining the best features of town and country (Davis & Rosenberg, 2017). These plans also omitted alleyways, which had a negative connotation due to their implementation in other areas of America, a perspective that would last for decades to come.

1930 Federal Development Standards

Alleys were a basic part of early city planning in the United States. Transportation networks in American Pre-WWII grid-based residential suburbs often contained both streets and complementary back alleys (Martin, 2002). These narrow thoroughfares were used to provide access to the back of buildings where the more unsightly elements of city life were located – utilities, storage, garages and trash collection (Zelinka & Beattie, 2003). However, In the 1930s, alleys vanished from the collective development vocabulary. As a result of the Great Depression, the New Deal was passed in 1934, which included the creation of the Federal Housing Administration (FHA). The role of the FHA was to assist with the recovery of the housing market. This was accomplished by the publication of technical bulletins that assisted developers and communities to secure financing, efficiently subdivide their land, and locate home buyers. The Administration, based on concepts from the Regional Planning Association and the Conferences on City Planning, also released what were essentially federal development standards. These standards included the use of setbacks, curvilinear streets, and cul-du-sacs, while discarding “alley” from its hierarchical street classifications, thus striking the term from the nation’s developmental lexicon. The Journal of Housing and the Built Environment by Martin, M.D. stated that, “By mid 20th century, planning concepts had moved away from a city grid system to that of a curvilinear pattern that no longer had much use for alleyways. Garbage collection, utility poles and garages moved to the front of homes, and housing patterns changed to streets without alleys and open-back neighborhoods” (Martin, 2002).

Urban Renewal

Urban renewal then began around 1950 and brought large-scale development to many communities. Large areas of land were given a legal designation which allowed for municipalities to take private land for public benefit. Entire city blocks were demolished and buildings removed. During this movement, the pedestrian scale was often over looked and replaced by heavy urban superblocks. This was a direct result of the automotive prominence in America at the time. The focus was to allow direct travel of automotive vehicles through

the city. Once again alleyways were neglected and forgotten in these large civil projects and superblocks.

New Urbanism

From the 1980's increasing number of American urbanists had represented several theories about wear and tear and decline of urban centers and mounting increase of suburban and local societies in outskirts of cities which are scattered, dispersed and based on traffic and being far from urban centers. In last years of 1980s and the beginning of 1990s, evolution of these theories had been caused to appearance of new urbanism movement based on humanistic urbanism (Lehrer,2004). It was not until the New Urbanism movement in the early 1990s that we began to see a reemergence of alleys in the American urban fabric. New Urbanism defined principles to guide policy, development, and design. These principles addressed development from all scales, including regional, municipal, neighborhood, and individual buildings. Developments utilizing these principles encouraged the use of alleys. With the ability to focus on a smaller scale when planning a city, it allowed for the emergence of alleyways into plans. Encouraging Neotraditional design and principles, such as mixed use development patterns, allowed for alleyways to become a prominent feature in city plans. The Design principles of New Urbanism encourage pedestrian oriented design and create an urban environment appropriate for the use of alleys as a shared pedestrian space.

Contemporary Programs

Existing alleys nationwide are now undergoing a revitalization movement. While New Urbanism added alleys back into the fabric of cities, contemporary programs seek to improve on existing alleys to create sustainable streets. Many communities have alley systems that are still intact. Many of these have been deemed "alley activation" or "alley greening" which are . The purpose of these movements is to re-image alleys and create a new innovative community resource. Greenberg (2009) notes that the practice of design of sustainable streets is in its infancy, but is based on established trends that emphasize context-sensitive streets and livability. Sustainable streets can create harmony among the goals of community, the demand for mobility, and the new mandate for environmental stewardship (Greenberg, 2009).

Design Principles for Alley Revitalization

The following principles have been selected to guide the design elements and implementation measures taken throughout the alley revitalization process.

The principles of New Urbanism can be applied increasingly to projects at the full range of scales from a single building to an entire community. This allows the principles to be incorporated in alley revitalization projects for a single or multiple alleys. The International Journal of Applied Science and Technology Defined 10 Principles of New Urbanism in the Journal titled Use Principles of New Urbanism Approach in Designing Sustainable Urban Spaces. The goal of the study was to collect data on the "New Urbanist approach based on using past humanistic traditional principles of urbanism in post modernism era. The goal of this paper is introduction of new urbanism approach in the course of creating appropriate urban environment in humanistic scale which is responsible for response to evolutions and urban and developmental modern improvements in framework of urban sustainable developmental goals" (Rahnama, Roshani, Hassani, & Hossienpour, 2012). The following discusses 7 of these New Urbanism design principles, which pertain to the scale of alleyway revitalization projects, as they relate to revitalization and innovation of alleyways as part of a City's pedestrian network. The remaining principles below model contemporary design principles used in modern alley revitalization plans, such as Chicago or Detroit's green alley plans. These plans will be

explored in depth as case studies for the project proposal. These design principles help to establish alleys as part of the public realm with a primary function of service to the community.

1. Walkability

Walkability is a key principle in New Urbanism with a goal that most things should be located within a 10 minute walking distance of work and home. While alleyways may not be the answer to achieving this goal, they can be very useful in creating an efficient pedestrian network and lowering the walking time to reach essentials. A key component of increased walkability is making sure that street are pedestrian friendly. This can be determined by urban form elements such as: distance of building to street, tree lined streets and walkways, on street parking, narrow or slow speed streets, hidden parking lots or garages, and service lanes in the rear. Alleys can be an integral part of the urban form which improves walkability. Alleyways can be used to service businesses and buildings to create an uninterrupted experience along the store front. In an contrasting design the alley could also become a new network for pedestrian travel only thus also increasing walkability. This allows alleys to become a flexible use for cities and alleys may be used to best suit the needs of the area or the community.

2. Connectivity

Connectivity can increase the quality of the pedestrian experience and ease traffic. New urbanism promotes the use of a gridded network to disperse traffic and ease walking. This can be done by creating a hierarchy of streets, boulevards, and alleys. The focus of the hierarchy can improve the pedestrian network and promote walking. The focus on alleyways as part of the network can help to improve the public view of alleys and shift views towards an important part of the public realm.

3. Mixed-Use and Diversity

New Urbanism promotes mixed uses and diversity in within neighborhoods, block, and buildings. Alleys can be a useful tool in promoting mixed-use and diversity. The plethora of business available to open in an alley will serve as a new experience for the community and increase diversity. Alleys may enable a variety of uses to be serviced such as hosting entrances to housing above shops or servicing restaurants and shops. Alleyways enable the mixed-use development to evolve with ease. They also serve a diverse community as public space for people of all ages, income levels, cultures, and races.

4. Quality Architecture and Urban Design

New Urbanism also places emphasis on beauty, aesthetics, human comfort, and creating a sense of place; Special placement of civic uses and sites within community. This supports the ideology behind the “alley greening” and “alley activation” to instill alleys as a public space. Greening focuses primarily on improving alley aesthetics to look and feel less harsh or rigid in design. Alley activation focuses on human comfort in the public space to create an inviting environment.

5. Increased Density

Locating buildings, residences, shops, and services closer together for ease of walking, may be used to enable a more efficient use of services and resources, and to create a more convenient, enjoyable place to live. Alleyways are a convenient way to create high density locations without compromising the pedestrian network and connectivity. In high density locations alleys can be used as “shortcuts” or bypasses to more traditional traffic flow.

6. Sustainability

Sustainable design is emphasized in New Urbanism. Some concepts of sustainability are directly affected by alleys. “More walking, less driving” can be a direct impact of opening and activating alleys and a pedestrian throughway. Another part of sustainability is to create pedestrian-friendly design that encourages a greater use of bicycles, rollerblades, scooters, and walking as daily transportation. Alleys may be used as spaces primarily for alternative methods of transportation which promote safe routes without heavy traffic. The last concept pertaining to alleys for sustainability is the environmental impact the alley will have. Alley greening is a great example as to how alleys can alleviate some of the impacts created by a dense urban environment. Alleys can have permeable surfaces and vegetation and other places to absorb harsh urban runoff or storm surges. They can also become green space with vegetation to serve as a buffer or break from the built environment.

7. Quality of life

Taken together these principles add up to a high quality of life, well worth living, and create places that enrich, uplift, and inspire the human spirit. Alleyways maybe become an central part of the pedestrian network and the human experience in urban areas and communities. Alleys can create new experiences and enhance the way humans perceive the surrounding environment that effects their quality of life. Nichols and Crompton (2005) found that property values near greenways were enhanced because of that amenity, and also found that there were multiple environmental, social, aesthetic, health and recreational benefits from a well-designed urban area. Nichols and Crompton also noted the positive impact of greenways on property tax base.

8. Provide Access

Alleys have historically been used to access the rear of properties. This access must be maintained within the existing network of circulation. However, more modern alleys have been used by businesses as second storefronts. Maintaining access to the second storefront must be maintained as part of the circulation network. This network provides members of the community with access to homes, businesses, and public spaces.

9. Define the Place

For an alley to serve its community it must first be viewed as its own unique and identifiable place. The alley should be viewed by the community as its own unique place which is connected to the surrounding streets, rather than a mere connection between two streets. A simple design principle would be to differentiate the pavement and use a unique material to contrast the two streets. The orientation of the businesses along the alley and creating a welcoming facade along the alley would also contribute to defining the place. This could be accompanied with signage, art, lighting and vegetation to instill a distinct and definitive character.

10. Community Ownership

Similar to streets, alleys provide access for all members of the community. In a manner different than streets, alleys have boundaries, a permeable edge, that allow for them to become active spaces for the community. Due to this, pedestrians can play, socialize, and interact – creating an area for intermingling and shared space. Research studies conducted by Martin (2002) found that both streetscape and alley-scape are vital to the outdoor social life of the community: the streets are the “public” social realm in a neighborhood, whereas the alleys offer a more discreet, semi-private social realm for the surrounding neighborhood. Overall, he found that alleys are part of a much larger system of neighborhood open spaces, and have important benefits to neighborhood social networks (Martin, 1996).

11. Encourage a Variety Uses and Functions

The safe shared space of the alley by multiple users encourages a variety of uses in alleys. Providing a publicly accessible space encourages casual encounters and new experiences. These encounters allow the alley to be perceived as an extension of community space.

12. Business Functionality

One of the most important principles for the success and sustainability of alleys is the ability for the businesses to function while simultaneously serving the community. Alleys are commonly used as a service lane for businesses and as a place to store refuse and other waste. Creative planning should be used to strategically allow the alley to be perceived as public domain while maintaining its functionality. Alleys should still serve their integrated function of stock delivery and waste disposal.

Chapter 2

Case Studies

2.1 Los Angeles

Alleyways are a growing frontier for retail in parts of Los Angeles.

In Pioneer Square, independent restaurants and small businesses, such as bike repair shops, have moved in and capitalized on the repurposed passageways with outdoor seating areas, secondary business entrances, and throughways for pedestrians.

Figure 2.1 - East Cahuenga Alley Prior to Revitalization

The Hollywood Business Improvement District created the East Cahuenga Alley in Los Angeles. The plan for the lane, which was once known as “Heroin Alley”, transformed it into a pedestrian space filled with outdoor dining and an artists’ market on Sundays. The Los Angeles Sustainability Collaborative compiled an extensive report on the space to put a spotlight on what happened in one community in order to inspire revitalization in others.

Los Angeles urban alleyways were often places of dangers or sources of crime. However, in the places where alleys have been revitalized and repurposed, there is a particular delight in their new use. The success of these projects demonstrates the possibility to take a space that was once a liability and turn it into a viable resource.

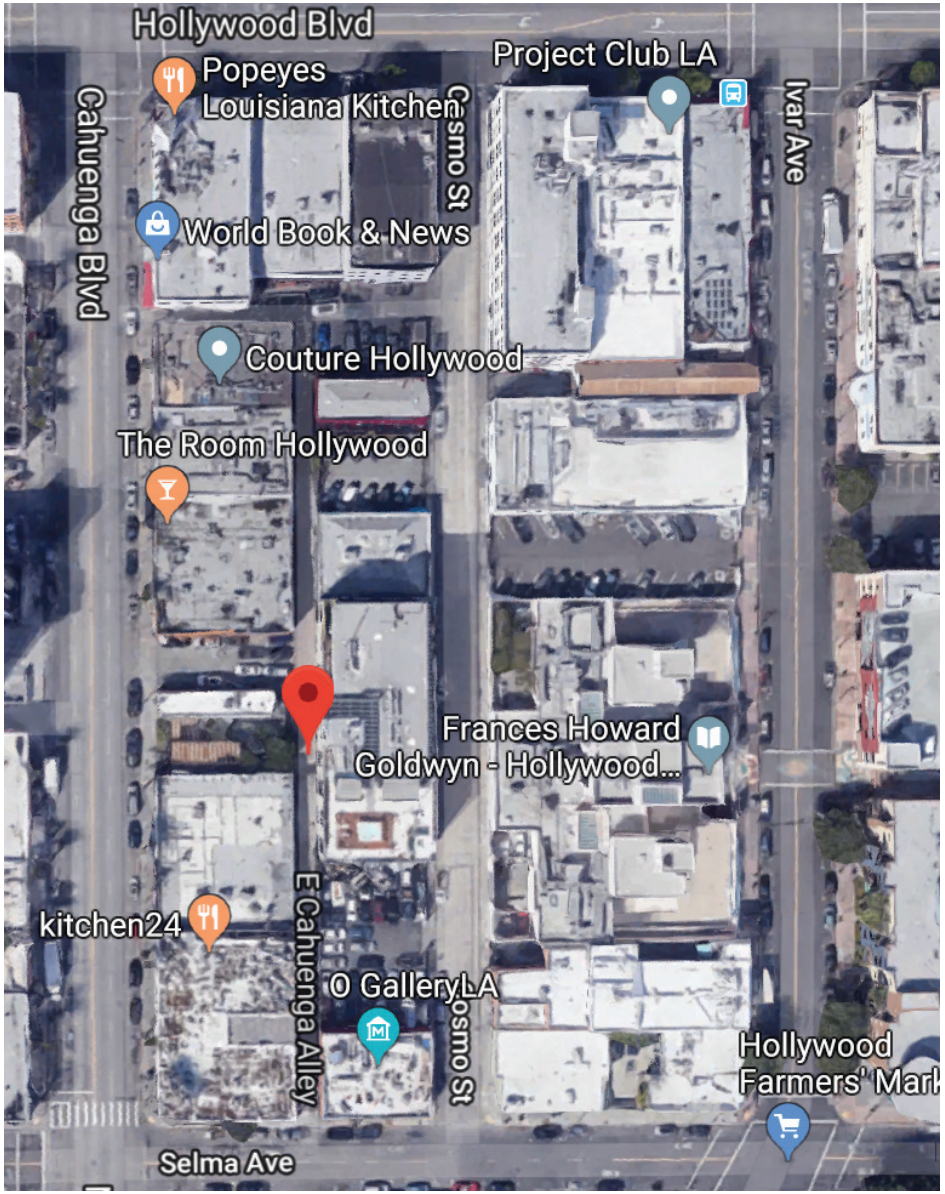


Figure 2.2 - Location of East Cahuenga Alley

East Cahuenga Design Elements

Financial

- Once revitalized, underutilized alleys can support economic development and increased profits for business owners.
- Alleys can provide easy access to a ‘second’ storefront for buildings. It bridges access between parking and commercial areas, allowing customers to park and walk to multiple locations.
- The alley may serve as a marketing tool that attracts new customers to the business establishments.
- Alley improvements also have the potential to increase the values of the properties in the immediate vicinity.

The Financial Principles of East Cahuenga Alley support business functionality and encourage a variety of uses.

Safety and Crime

- Alley revitalization may also be approached as a strategy to combat blight and public safety issues
- Surrounding businesses are less likely to go out of business or vacate their location. With less vacated stores, the commercial district becomes less blighted.
- If the alley is cleaner and designed to be more visible to the public and pedestrian friendly, it is likely to draw an enhanced public presence and activity. Based on the Crime Prevention through Environmental Design theory, a higher volume of street activity naturally deters criminal or unsafe activities.

Theses elements help to define the place, improve quality of life and align new urbanist principles defined in the previous chapter. Combating blight and increasing alley activity will also improve the perceived community ownership.

Environmental and Health

- Alley renovation projects have the capacity to correct previous unsustainable practices and create a healthier and greener built environment.
- Many different environmentally unsound activities take place in alleyways because they are not monitored. Renovated alleys have been designed to consolidate dumping and recycling stations.
- An alley renovation project may also allow for the use of sustainable materials that reduce the amount of resources used, such as permeable surfaces that capture excess water or drought-tolerant vegetation.

Figure 2.3 - Southern Entrance of East Cahuenga Alley.

- Alleys that have been renovated can turn into pedestrian alley networks. This encourages more walking and less driving. Alleys can play an important role in a balanced transportation network that encourages social and economic interactions.

Figure 2.4 - East Cahuenga Alley at Night

While East Cahuenga Alley revitalization primarily focused on business functionality and quality of life, the project aligns with many of the design principles discussed in Chapter 1. For example by removing litter and waste, the alley regained a place in the pedestrian network which improved the walkability and connectivity. The addition of vegetation and outdoor seating created a more welcoming space for public use and was symbolic of community ownership. This outdoor space lead to new business opportunities and many of the businesses opened a second entrance accessible from the alley. New businesses such as the bike repair shop also found a home in the alley.

After the revitalization process this alley has become a destination for leisure activity and dining, especially for pedestrians who attend the local farmer's market which is held on the adjacent street. This exemplifies how the alley has become an integral part of the pedestrian network which improves the quality of life and helped define the alley as a unique place. The success of the revitalization of East Cahuenga alley corroborates the design principles of chapter 1 and the design elements that were implemented provide example for the proposed project.

2.2 Chicago

In 2006, Chicago took stock of its 13,000 alleys and identified a problem.

In previous decades, most of the city's 3,500 acres of alleys were paved with impermeable asphalt or concrete. The drainage system for storm water was to have it drain through grates at the center of the alley. As those systems began to fail from lack of maintenance, the flooding of alleys had become commonplace in parts of Chicago.

In response, the city pioneered the Chicago Green Alley Program; one of the first sustainable building practices to address the city's network of alleyways. Currently, over 100 of the city's alleys have been covered with permeable surfaces that redirect storm water into the ground and away from Chicago's sewer system. This modification reduces flooding and utilizes the storm water to recharge the surrounding soil. The program began in 2001, and through 2017, more than 300 Green Alleys have been installed (City of Chicago).

The Chicago Green Alley Program primarily focuses on increasing quality of life and implementation of sustainable design practices. However, this city wide program encompasses most of the design principle discussed in chapter 1. The program will increase the functionality of the alleys by reducing clutter and improving drainage patterns. This allows for increased walkability and connectivity throughout the Chicago alley system. The alley improvements allowed for the ownership of the alley to return to pedestrians which instills a sense of community ownership. These improvements then enable a variety of uses with in the alley and increases the functionality existing businesses.

Figure 2.5 - Remodeled Chicago Alley

Chicago's Green alley Program incorporates a variety of characteristics:

- Permeable pavements (asphalt, concrete or pavers) that allow storm water to filter through the pavement and drain into the ground, instead of collecting on hard surfaces or draining into the sewer system. The pavement can be used on the full width of an alley, or simply in a center trench.
- Catch basins connected with perforated pipe and installed in retention trench to capture water and funnel it into the ground
- High-albedo pavement, a lighter-colored surface that reflects sunlight instead of absorbing it, helping reduce the urban heat island effect
- Recycled materials use, such as concrete aggregate, slag and recycled tire rubber
- Other green alley techniques include using proper grading and pitch to facilitate drainage, and using dark sky-compliant light fixtures to reduce light pollution and provide uniform illumination.

Chicago Design Elements

Rainwater

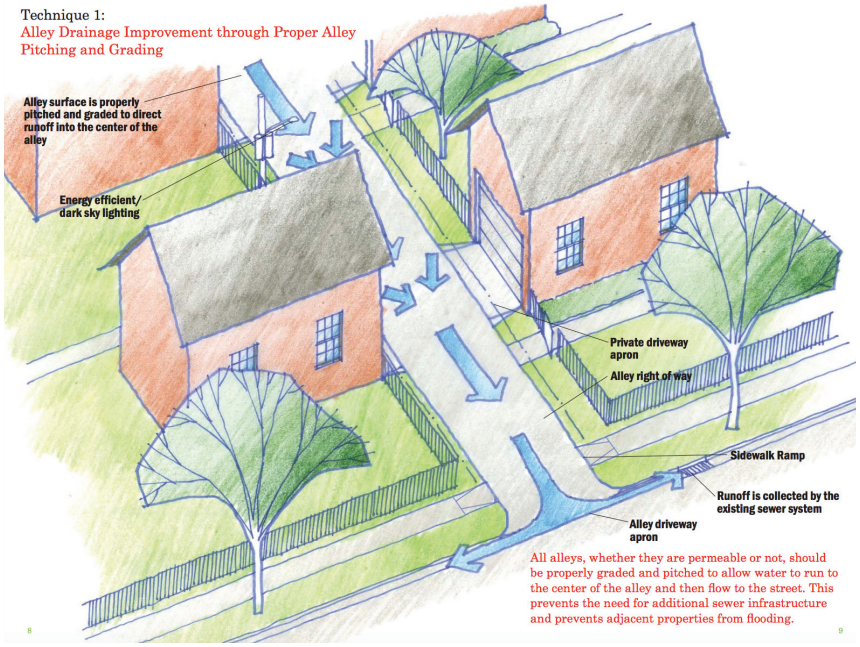
Rainwater falling on these surfaces throughout the year could pass through permeable paving back into the earth, thereby reducing localized flooding, recharging groundwater and saving taxpayer money that would otherwise be spent treating stormwater.

Heat Reduction

Using a light, reflective surface (high albedo) that reflects heat energy will help the alley remain cool on hot days and thereby reduces the "urban heat island effect", a condition where dense urban areas become several degrees warmer due to the density of buildings and amount of heat absorbing paved areas.

Material Recycling

Alleys constructed with recycled materials reduce the amount of construction and industrial waste hauled to landfills and reduce the burden on natural resources.



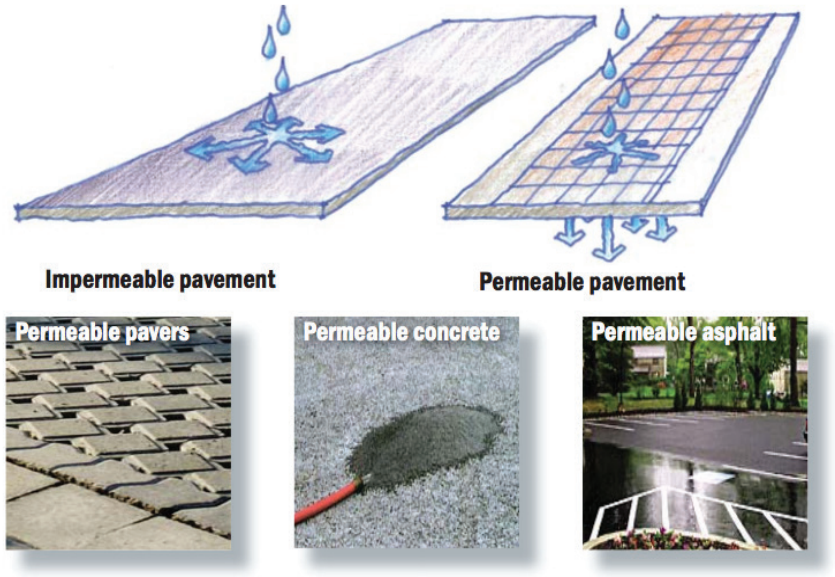


Figure 2.6 & 2.7 - Chicago Alley Improvement Techniques

Permeable pavement has pores or openings that allow water to pass through the surface and percolate through the existing subsoil. Permeable pavement comes in the form of permeable asphalt, permeable concrete, and permeable pavers. In areas where soils do not drain freely, permeable pavement can be used in combination with subsurface drainage systems, like pipe underdrains or stormwater infiltration trenches to slow runoff and reduce stress on the combined sewer system.

Potential Benefits

- Reduces the rate and quantity of stormwater runoff
- Reduces stress on the sewer system
- Recharges ground water
- Filters silt, pollutants and debris

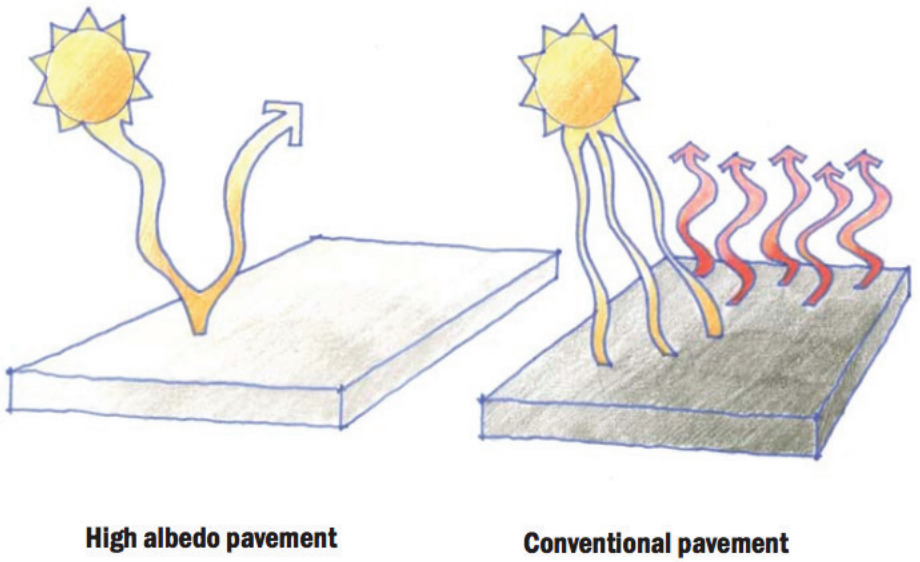


Figure 2.8 - High Albedo Pavement Technique

High albedo pavement material is light in color and reflects sunlight away from the surface. With less sunlight absorbed by pavement, less heat is radiated by the pavement. High albedo pavement therefore reduces the urban heat island effect. This reduces cooling costs, helps the survival of urban vegetation, and improves air quality, which can help reduce the symptoms of some respiratory diseases.

Potential Benefits

- Reduces the urban heat island effect
- Can be used under a wide variety of site conditions
- Conserves energy by reducing cooling costs
- Improves air quality

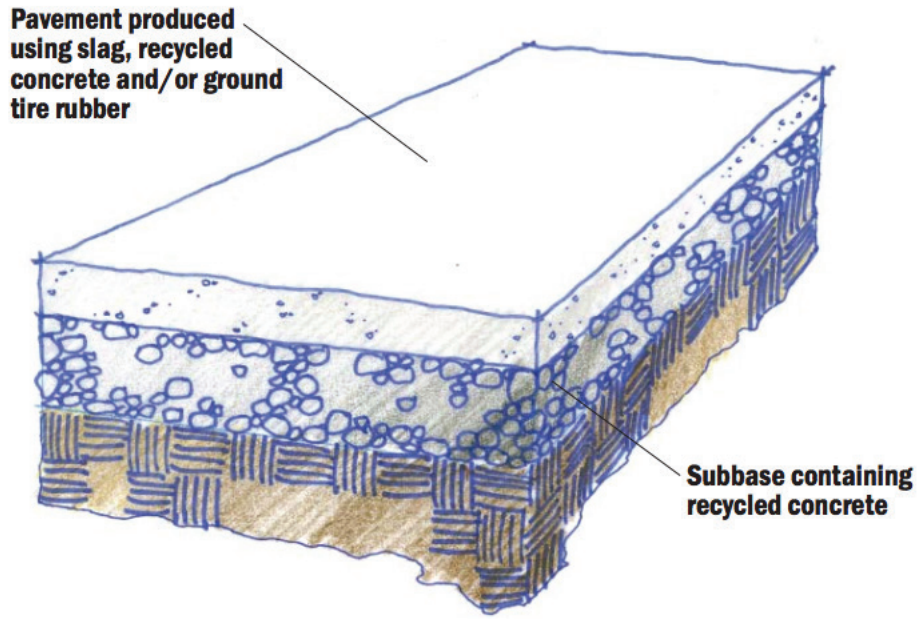


Figure 2.9 - Recycled Materials Technique

Energy efficient, dark sky compliant light fixtures are specially designed to direct light downward, focusing light where it's needed. These fixtures can also incorporate the latest technologies in energy efficiency while maintaining adequate light levels. New alley fixtures will also use metal halide lamps, which produce white light, instead of the yellow light produced by the existing high-pressure sodium fixtures. This will help people to be able to distinguish color at night.

Potential Benefits

• Reduces light pollution from site

• Reduces glare and provides better light uniformity

• White light produced by metal halide fixtures has a high "color rendition index" and therefore allows people to perceive color more accurately

2.3 Detroit

The Detroit green alley projects have repurposed uninviting and unwelcoming alleys.

While these projects are variable, they "generate more life and energy and create more pedestrian pathways" (Dunn, 2017). One such repurposing involved the collaboration of Bedrock and Library Street Collective, two businesses that were affected by a nearby alley. Together, they transformed the alley through adding pavement, lights, benches, and public art. The alley was renamed the Belt, and since its reopening, the area has seen two new businesses open in the alley - Standby and the Skip - and is now a pedestrian-friendly destination.

Figure 2.10 - Before and After Cass Farms Green Alley

The Detroit Green Alley Program revamped underutilized alleys by using sustainable design and focusing on functionality. Alleys which previously failed to serve the businesses helped to bring economic prosperity and diversity in a previously neglected spaces. The addition of new businesses increased the density and variety of uses in the alley. These new uses help to define the place and improve the quality of life for pedestrians.

The most notable feature of Detroit's Green Alley Program is the use of vegetation within the design. The eco-pavers are filled with grass which allows for additional water drainage and restoration of ground water. This space was previously paved with impermeable surface which increased the volume of storm water runoff which was drastically improved by addition of these eco-pavers. The edges of the alley were also lined with landscaped vegetation, such as low shrubs, ferns, and vines. The addition of the landscaping improves the aesthetic appeal of the alley and helps to improve the climate as well. A Study conducted by NASA found, "the presence or scarcity of vegetation is an essential factor in urban heating. The amount and type of vegetation plays a big role in how much the urbanization changes the temperature. Trees, grasses, and other vegetation naturally cool the air as a by-product of photosynthesis" (Bounoua, 2015). The landscaping and vegetation is also paired with the removal of old cracked pavement the replacement of alternating brick and concrete patterns.

Cass Farms Green Alley Design Elements

Community Involvement

The Detroit green alley projects serve as an example for community inclusion and involvement. Alleys were selected for redevelopment by the Michigan Economic Development Corporation (MEDC) and then crowd funded for additional funds. The MEDC started a crowd funding process with a goal of $50,000 and a pledge to match the raised funds once the goal was reached. While serving as a financial incentive it also increased the level of community investment into the project and the movement for green alleys.

Place-making

The focus of the Detroit green alley project was in place-making. Place-making is collectively shaping our public spaces to maximize shared value, and making the community one where people enjoy living, working and playing. The belief of the project is "When a space is seen as negative and underutilized and is suddenly recreated as something unexpected and positive; people really respond. At Midtown Detroit, Inc. We have found that many of our alleys are in varying states of disrepair and need to be rebuilt. Our Green Alley Program incorporates features such as rain gardens, permeable pavers, historic brick, LED and induction lighting, native landscaping among other place-making features. We are not only improving the basic condition of our alleys, but incorporating a design aesthetic that also creates gathering spaces for district celebrations." (MEDC, 2014)

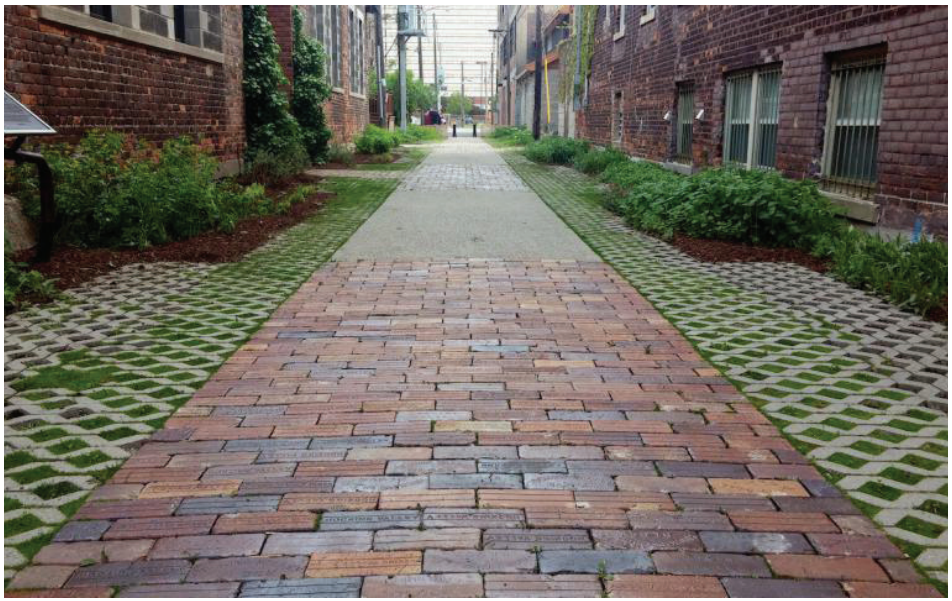


Figure 2.8 - Detroit Green Alley

The Belt Design Elements

The Belt is a culturally redefined alley in the heart of downtown Detroit. Named for its physical orientation in a former downtown garment district, The Belt is located between Broadway and Library Street and links Gratiot and Grand River. The project was conceptualized and curated by Library Street Collective. "The Belt is another example of our growing interest in reimagining underutilized spaces throughout the city. This formerly desolate alley has transformed into one of the most dynamic pedestrian-friendly public spaces in the country," (Curis, Library Street Collective, 2019).

Public Art

Public art was the driving force behind the redevelopment of The Belt. The

public space is home to murals and installations by local, national and international artists. It is part of Library Street Collective's continuous effort to ensure that artists have a space to create and engage with the public in Detroit. The Belt also features Public Matter, a fully accessible exhibition platform curated by Library Street Collective. Public Matter features rotating outdoor exhibitions of large-scale paintings (Library Street Collective, 2019).

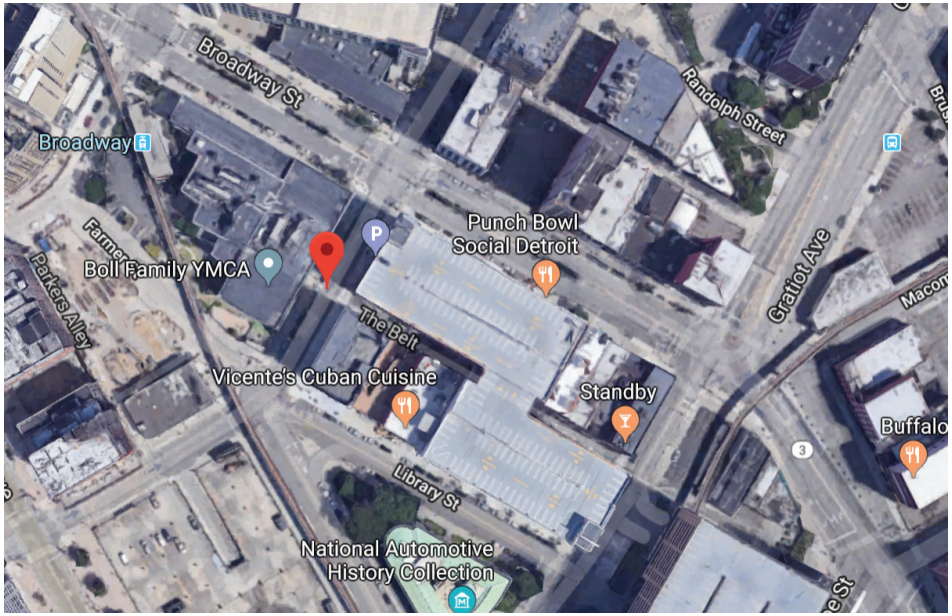


Figure 2.9 - Location of The Belt

Community Engagement

The Belt was intended with the purpose of increasing the public space for artist as a part of the community. However, this artistic venture acted as a catalyst for revitalization in the surrounding area. The area became a venue for local live music performances and social gatherings. The public art exhibits are rotated on a schedule to allow for an ever changing unique experience. This allows for further community ownership and opportunity to for artist to become a part of the community. The Belt is also home to multiple bars and restaurants which enhanced the community's night life. These restaurants also contribute to maintenance and other expenses of the alley.

Figure 2.10 - The Belt During the Day

Figure 2.11 - The Belt at Night

Conclusion

Figure 2.12 depicts a matrix of each alley and the design principle mentioned in Chapter 1. The Matrix allows deeper understanding of the importance of these Design Principles in the revitalization process.

Design Principle	East Cahuenga	Chicago Green Alleys	Cass Farms	The Belt
Walkability	X	X	X	X
Connectivity	X	X	X	X
Mixed-Use and Diversity	X			X
Quality Architecture and Urban Design	X	X	X	X
Increased Density	X		X	X
Sustainability	X	X	X	
Quality of Life	X	X	X	X
Provide Access	X	X	X	X
Define the Place	X		X	X
Community Ownership	X	X	X	X
Encourage a Variety of Uses and Function	X			X
Business Functionality	X	X	X	X

Figure 2.12 - Design Principle Matrix for Case Studies

From the matrix we can see that the East Cahuenga Alley, from the Los Angeles case study, exemplifies an ideal revitalization which supports every design principle listed. Removing the clutter from the alley serves to increase walkability, connectivity and Business functionality. The alley had previously been hindered by garbage and illegal activity. By removing all of the waste and refuse from the alley it became a functioning part of the city's pedestrian network. The alley then repaved and redesigned to include sustainable design practices which included a plethora of vegetation and an abundance of energy-efficient lighting. These practices enhanced the quality of life and implemented quality urban design. The nearby businesses, which previously neglected the alley, seized this opportunity to use the alley for outdoor dining, and seating. This increased the community ownership and even encouraged a variety of uses and functions throughout the alley, which in turn increased the density. New businesses such as a bike repair shop operated solely within the alley. These outdoor businesses erected shade structure to combat the warm Los Angeles climate and improve the comfort and functionality of the alley. The design elements used in the East Cahuenga Alley serve as an example of the success these principles may achieve when applied to the implementation and design.

In Chicago, flooding had become a major problem for a majority of the alleys. The city's storm water drainage system would rapidly reach capacity due to the large amount of surface run off. This led pooling and flooding in alleys, rendering them useless until the water was able to clear. By implementing sustainable design elements the city of Chicago was able to mitigate the flooding and restore the utility and function of the alleys. What had previously been regarded as an obstacle in connectivity and walkability was now a strong avenues among the circulation network throughout the city. Alleys could now function to service businesses and pedestrians improving the quality of life while also improving the aesthetics and quality of design within the city. The alleys which were previously a nuisance to the community have now become a strong point for functionality and aesthetics, which formulated a strong sense of community ownership. This case study is also one of the largest revitalizations of an alley system in modern history to be successfully implemented and highly regarded by citizens.

The Cass Farms Green Alley revitalization case study is the smallest scale project discussed in this chapter. The alley was targeted as an example to improve the sustainability of Detroit's alleys. They implemented eco-pavers for improved drainage and functionality of the alley. They also included a large amount of landscaped area which improved the aesthetics and quality of the urban design. The alley was also repaved with brick that matches the surrounding buildings and defines the alley as a unique location and public space. This alley is also closed off to traffic and is a focal point in the city's pedestrian network which has had a positive effect on the city's walkability and connectivity. Cass Farms Green Alley has become a part of the community and is cherished by the businesses and pedestrians for providing safe pedestrian access. This project is the most similar in scale to the revitalization plan for the Park Street – Pine Street Alley. This has the largest focus on human scale and improving walkability to improve a pedestrian network. This project also exemplifies a simplicity in design, rooted from the principles, which may be easily replicated.

The second Detroit alley, nicknamed "The Belt", is a unique revitalization effort focused on public art display. The alley has become a place for local artist to display their talents which instilled a strong community ownership. The alley

which had previously served as access to a parking garage became a major local attraction. The alley still maintained its function in the pedestrian network offering connectivity and walkability, but the aesthetics and quality of the urban design had increased tremendously. The surrounding businesses, such as the Library Street Collective, who started the project, used the alley as a method to promote their business. They offered events with live music, beer tasting, art walks, and other methods to engage the community and improve the quality of life. Many new businesses found a home in the alley which increased the density and offered a new variety of uses. The Belt has become a distinct asset for the community and is regarded as a successful revitalization. The community investment and involvement in this case study exemplify the success of the applied design principles. A forgotten location was transformed into a hub of community engagement and social interaction.

Summary

The case studies above are a testament to the success of the design principles in practice and offer design elements for implementation in the Park Street-Pine Street proposal. While each individual case study may not have applied every principle the methods in which they were applied helps to determine the necessities for a successful revitalization plan. Each study has a unique set of strengths, while certain elements are shared throughout every study. The shared elements, which shall be included in the proposed plan, work to produce: better drainage, increased walkability, improvement to the pedestrian network, increased vegetation, public seating and art, and improved aesthetics and functionality. Key elements may also be taken from each plan individually. East Cahuenga Alley exemplifies the benefits of removed trash, additional seating, shading, and vegetation. Chicago's Green Alley Project provides example sustainable practices for drainage, permeable pavement, high albedo concrete, and lighting. The Cass Farms Green Alley shows the effects of removing street traffic, using eco-pavers, and incorporating landscaping and vegetation to match the surrounding environment. Finally, The Belt offers insight into community involvement throughout the entire process from initial investment to upkeep and maintenance. These key design ideas from each alley will be incorporated into the revitalization plan proposed in the subsequent chapters.

Chapter 3

Site Assessment

3.1 Introduction

The purpose of the site assessment is to evaluate the current condition and function of the alley. The assessment provides context for the proposed design ideas and defines the targeted areas of improvement. The site inventory evaluates the surrounding uses and the role the alley plays in those particular locations, such as if the alley services the back of the business or if the primary entrance is located in the alley. This helps to determine the essential functions that must be maintained and also which may be improved. The site inventory also discusses the current zoning of the alley along with the specific plan delegation in downtown Paso Robles.

Stakeholders play a vital role in the success of the revitalization effort and often play a major role in determining what design ideas are implemented. In this Particular project the main stakeholders consist of three individuals who own the buildings which surround the alley, and the City of Paso Robles. All stakeholder in this project have expressed support of an alley revitalization project and have provide some materials used within this plan.

The major stimulus, which lead to the development of the project, was a string of complaints about the alley. The city had multiple complaints filed about the smell of garbage which disseminated from the alley into the surrounding downtown area. Upon further examination the alley proved to have multiple nuisance issues and other elements which may be identified for improvement. After these issues are assessed they are prioritized into sections of focus for the alley. This prioritization helps to determine phasing of the proposal. Another method of analysis provided in this proposal is a Strengths, Weaknesses, Opportunities, and Threats analysis, commonly referred to as SWOT. This analysis helps to create a precise plan that capitalizes on the strengths and opportunities within the selected site, while mitigating threats and improving weaknesses.

Site Location

The alleyway of focus is located in the heart of Paso Robles' downtown. The alley is located half a block from the historic City Park. It is bounded by Park Street and Pine, which are two major throughways for circulation through the downtown. The area is the most dense urban development found within the city. The area is part of the Uptown/Town Centre Specific Plan (UTCSP). This area is currently zoned as TC-1 which is a flexible zoning that allows for a variety of uses. An advantage of being located in the UTCSP TC-1 zone is that the city conducted an EIR for the maximum build out in the specific plan with the current zoning. This means any changes to the built environment will not require an EIR.

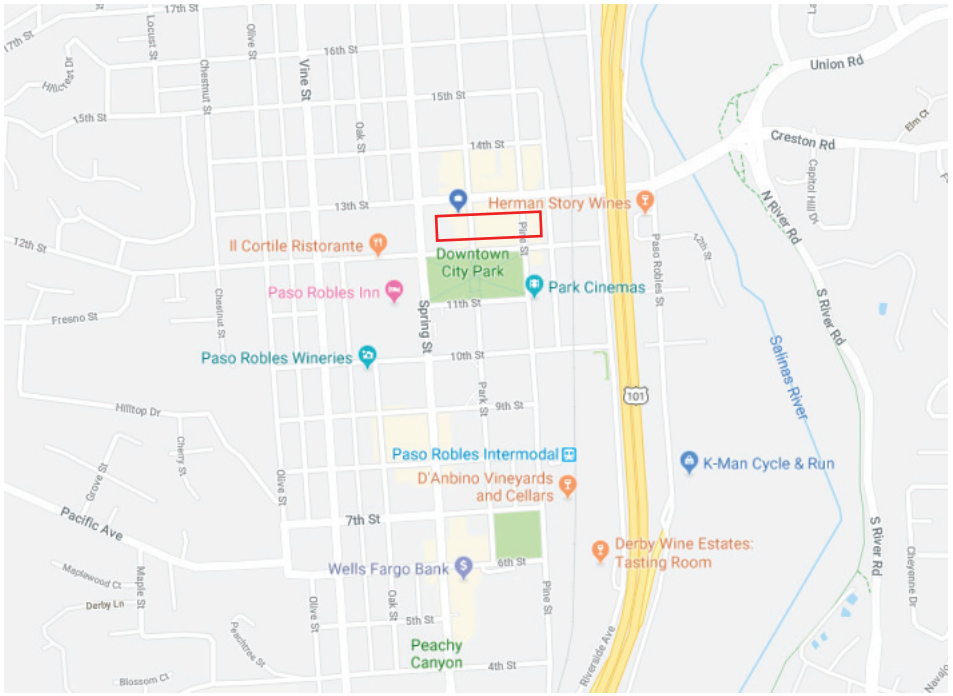


Figure 3.1- Location of Site

3.2 History of Paso

The City of El Paso de Robles, commonly referred to as Paso Robles, is located in the northern part of San Luis Obispo County on the original trail chosen by the Franciscan Friars. This Trail was known as the King's Highway, or the El Camino Real. During it's early history Paso Robles was referred to as "the Springs" or "Hot Springs" because of the natural mineral springs present in the area.

Prior to the Mission Era Paso Robles was inhabited by the Salinan Indians. During the Mission Era, the area was given the name El Paso de Robles which translates to the Pass of the Oaks. The Paso de Robles Land Grant of six leagues (25,933.18 acres) was purchased on August 1, 1857 by Daniel and James Blackburn and Lazarus Godchaux. Daniel became the owner of land that became the town of Paso Robles. The other two owners used their purchased land to raise cattle and sheep.

In 1857 the first bath house was built around the main spring located on the north-eastern corner of what became 10th and Spring Street. Ten years later the first post office as established as the Hot Springs. This name was later changed to El Paso De Robles with the intent to reflect the historic name of the land grant.

The first train to Paso Robles arrived in 1886, and two weeks later a train full of prospective buyers brought celebration to the area. There was a grand auction which resulted in the sale of several lots.

Paso Robles became a known "health resort" where many dignitaries came to regain their health. Famous concert pianist Ignace Jan Paderewski even decided to purchase a ranch west of the town after his visit to the health resort. These ranches outside of the city became important to the success of the area. Large herds of cattle and horses, grain crops, garden produce, and fruit and nut orchards could be found on these ranches. Paso Robles was once known as the "Almond City" because the almond growers created the largest concentration of almond orchards in the world at the time. Some of these ranches are still active today but most have become vineyards or wineries. To show the appreciation for these ranchers the city established an annual city holiday in October 1931 called Pioneer Day which is still celebrated today.

By 1940 the city had grown to just over 3,000 residents and construction had begun on a new Army base north of Paso Robles called Camp Roberts. The base brought an influx of new workers and made Paso Robles a very active location on the Central Coast.

Over the next 40 years various sections surrounding the city were annexed to officially become a part of the city. In 1980 the population was 9,000 residents which quickly expanded and by 1993 the population was 21,000. Currently the population is just over 30,000 residents and continuing to grow.

3.3 History of the Alley

The alley system of Paso Robles was implemented in the original plotting of the land and recorded in maps as old as 1892.

The Alley in the downtown area served as storage for businesses facing Park Street, 13th Street, and Pine Street. Being the established commercial corridor and central location in town, the alley housed the fire bell tower and many of the city's commercial establishments. This is exemplified in the 1892 fire insurance Sandborn-Perris maps which show the level of development (Seen in Figure 3.2 and 3.3).

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The alley grew into a prominent commercial location over the next 50 years. In the next update of the Sandborn maps the city blocks surrounding the alley became further developed and housed a variety of uses. The map also indicates the material of the building which displays a higher level of built environment (See Figure 3.4). The Paso Robles Historical Society has also provided Images of the alleyway during it early years of development. Most of the information on the alley is sourced from business records on the establishments surrounding the alley. These help to provide context for the Park Street - Pine Street alley as an integral part of history for downtown Paso Robles.

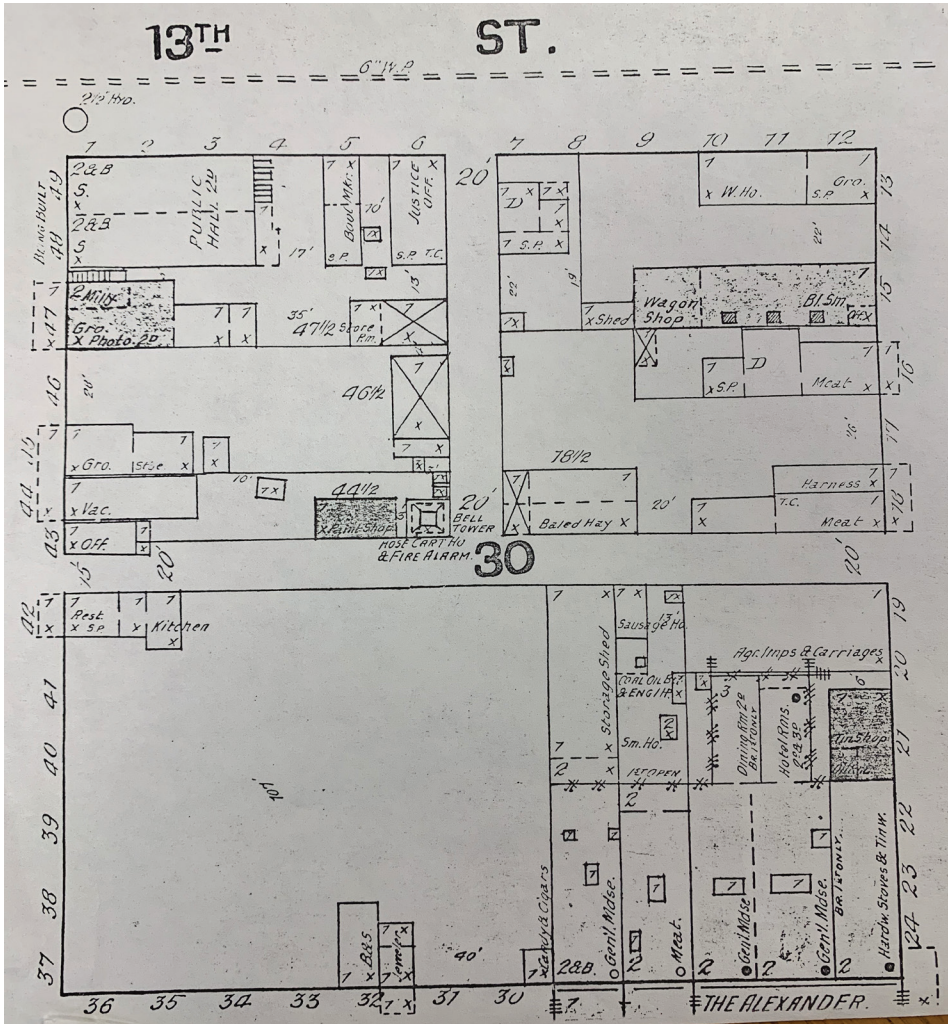


Figure 3.2 - 1892 Sandborn-Perris Map Park Street to Pine Street

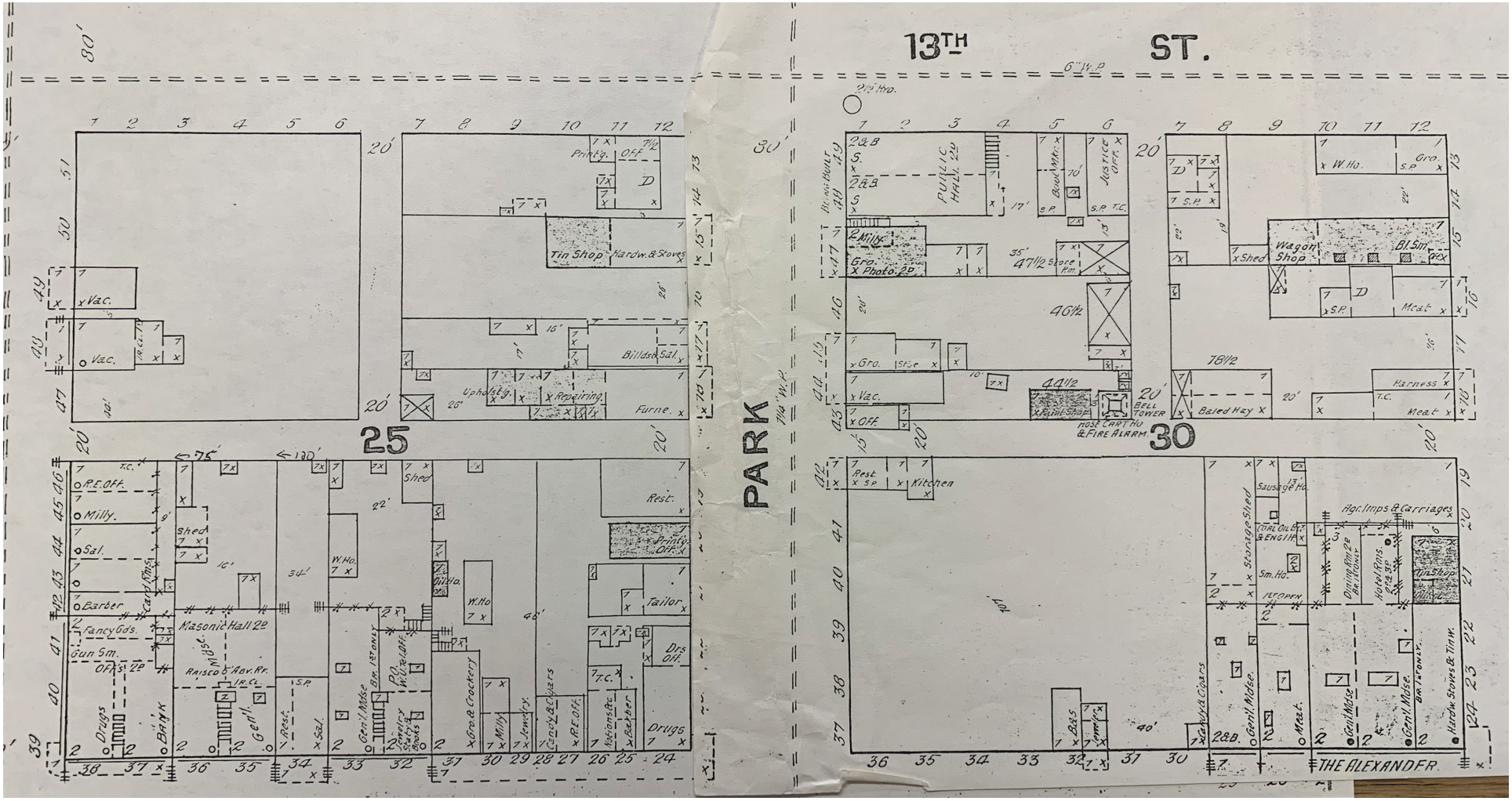


Figure 3.3 - Spring Street to Pine Street 1892 Sandborn Map

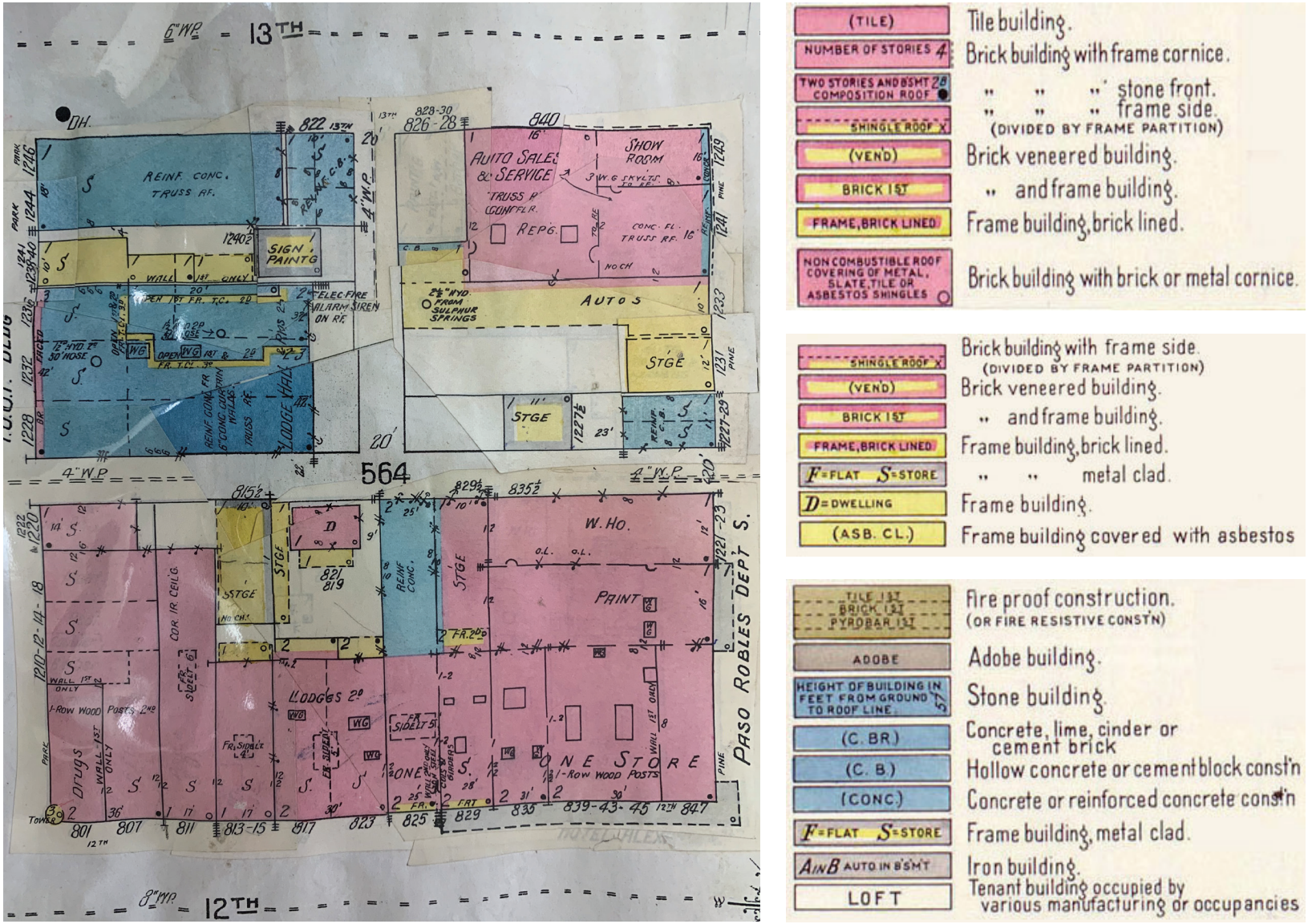


Figure 3.4- Park to Pine 1943 Sandborn Map

These maps were redrawn in 1926 and glued over with changes in 1943. The legend for this map depicts the building material.

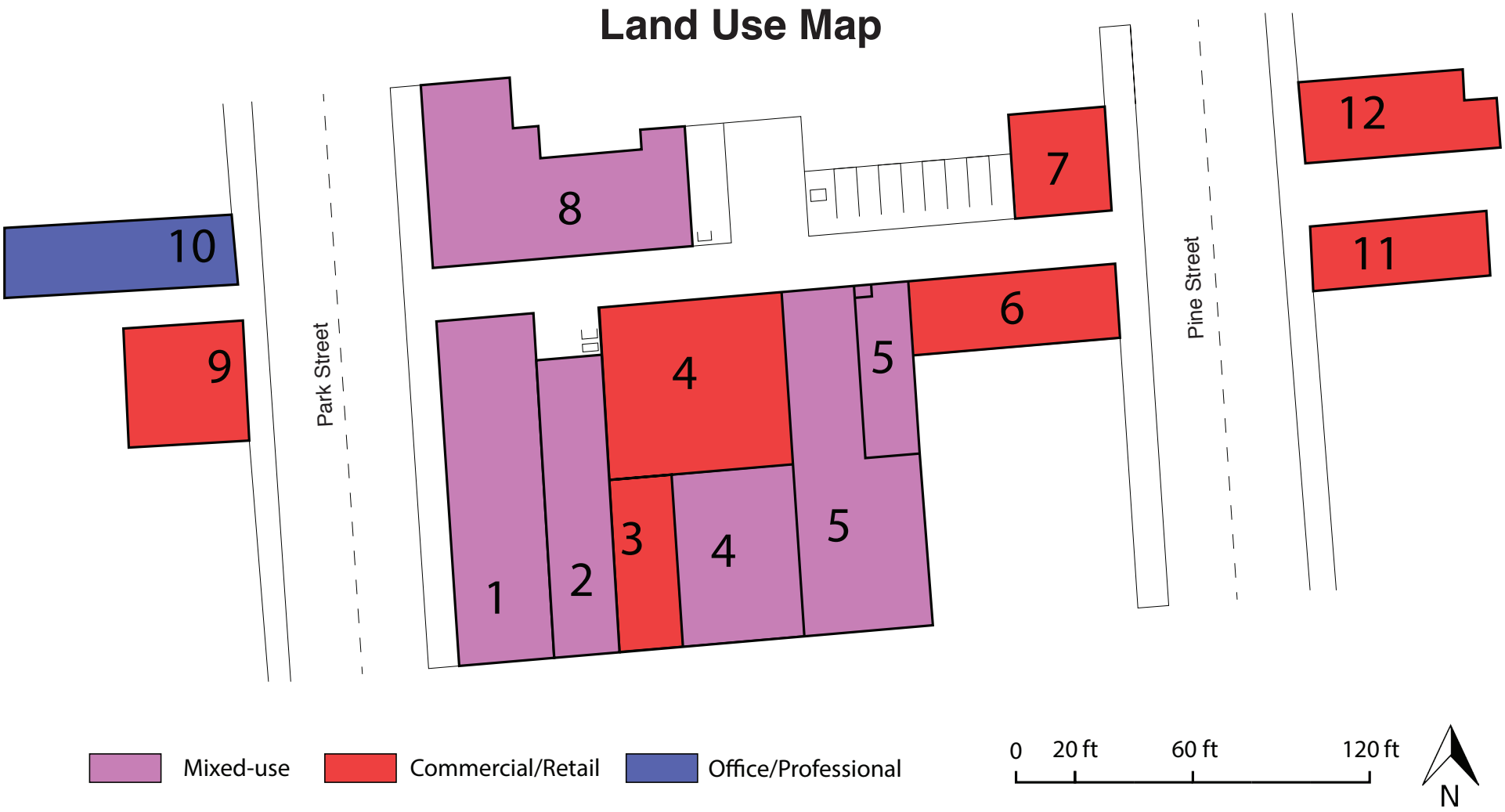
This picture was taken from Park Street looking at the building located on the north-western corner of the alley (Building 10 as seen on the next page).

This picture was taken from the center of the alley looking west toward Park Street.

The alley was a historically a location for pedestrian use.

This is a view of the alley in between Spring Street and Park Street looking east towards Park Street and Pine Street.

3.4 Site Inventory



The Land Use Map reflects the current use of the buildings surrounding the alley. The buildings which share a number maintain multiple businesses but are a part of the same building. The buildings surrounding the alley are primarily Mixed-use with the lower level being used for food or retail. However, some building are used solely for commercial/retail use and on building is even used for office/professional use. The following pages contain the building inventory which offers details on each of these buildings such as the address, zoning, business, and use of the alley.

Building Inventory

Building 1: Acorn Building

Address: 801 12th St

Zoning: TC-1

Use: Mixed-use, multiple businesses

Alleyway Use: Waste disposal and utility

Building 2: Justin Tasting Room

Address: 811 12th St

Zoning: TC-1

Use: Wine tasting room, Mixed-use

Alleyway Use: Waste disposal, utility, delivery

Building 3: Bijou

Address: 815 12th St

Zoning: TC-1

Use: Clothing retail

Alleyway Use: Unknown

Building 4: Kahunas and Jayde Boutique

Address: 817 & 823 12th St

Zoning: TC-1

Use: Clothing retail & general retail, Office

Alleyway Use: Unknown

Building 5: La Cosecha, Sole Tree, and Downtown Main Street Association

Address: 835 12th St

Zoning: TC-1

Use: Clothing retail, restaurant, tourism & events

Alleyway Use: Waste disposal, Main entrance for Main Street

Building 7: Asian Cravings

Address: 1227 Pine Street

Zoning: TC-1

Use: Restaurant

Alleyway Use: Waste disposal

Building 6: The Natural Alternative and Taste in the Alley

Address: 1213 Pine Street

Zoning: TC-1

Use: Restaurant

Alleyway Use: Waste disposal

Building 8: Mclintocks

Address: 1234 Park Street

Zoning: TC-1

Use: Restaurant, Office

Alleyway Use: Waste disposal

Building 9: Yanagi Bar and Grill

Address: 1221 Park Street

Zoning: TC-1

Use: Restaurant

Alleyway Use: Waste disposal

Building 11: Bella Jule

Address: 1224 Pine Street

Zoning: TC-1

Use: Retail

Alleyway Use: None

Building 10: Paso Robles Chamber of Commerce

Address: 1225 Park Street

Zoning: TC-1

Use: Office

Alleyway Use: Entrance partially towards the alley

Building 12: Pine Street Saloon

Address: 1234 Pine Street

Zoning: TC-1

Use: Restaurant / Bar

Alleyway Use: Waste disposal

Waste Bins

The main issue which was brought to the attention of the city was the garbage and waste disposal system for servicing the alley. Each company had their own bin which would remain in the alley and accumulate an unpleasant smell. The hot climate contributed to the strength of the aroma and the city had received many complaints.

The alley currently houses multiple trash receptacles scattered throughout the entire alley. These bins service the surrounding building and some businesses have multiple receptacles for their waste disposal needs. Figure 3.5 locates each bin location in the alley. The alleys are disperse throughout the entire alley and collectively contribute to the odor.

Figure 3.5 - Map of Waste Bin Location

Figure 3.6 - Images of Waste Disposal Bins in the Alley Provided to the City

Pavement and Drainage

Another issue with this alley is the current pavement and drainage pattern. Sections of the alley had been repaved multiple times at different points in time which led to an inconsistent quality in pavement. The drainage system was also altered in the most recent repaving which improved drainage in the area near buildings 4 and 5, but harmed the surrounding areas. Proper drainage in this newly repaved area has actually led to a worse drainage problem throughout the rest of the alley. This new drainage has led to potholes and cracks which have become an increasing problem for the longevity of the alley. The images in figures below are taken from behind building 4 in the middle of the alley. These images clearly depict the difference in the asphalt and drainage throughout the alley. These images also display the poor condition of the asphalt surrounding the newly paved area.

Figure 3.7 - Picture Looking North from the Center of the Alley

Figure 3.8 & 3.9 - Picture of New Pavement Compared to Old Pavement

Figure 3.7 Displays a view from the center of the alley, standing at building 4, to the north exit of the alley. This view displays the low quality of the pavement from with large cracks spanning multiple feet and no clear contour or drainage pattern. Figure 3.8 displays the new pavement which is properly contoured to allow for drainage in the center of the alley. This pavement is cut off and connects to the much older pavement. At the edge of the new pavement there is pooling which occurs with the conflicting contours between the new and old pavement. This pooling has caused a pothole to form in the old asphalt. Figure 3.9 displays the old asphalt on the east end of the alley. The image displays the large cracks that have formed along with multiple potholes which have water pooled in them from rain in the few days prior.

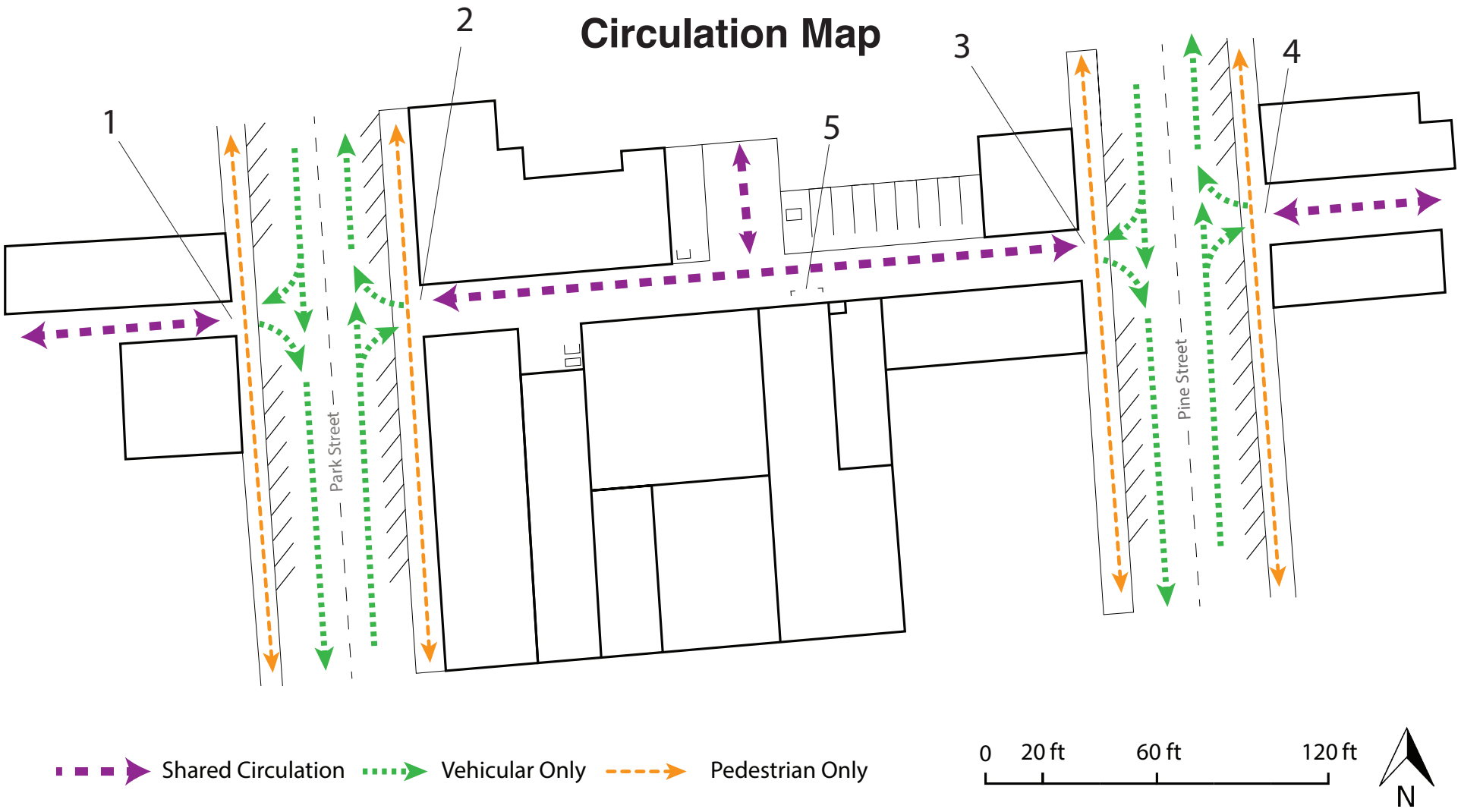
Alley Parking

Cars currently park in the alley with about 8 spots on the north-eastern parcel. The parking spots are part of his lease agreement with his tenants and this will need to be altered if the parking is removed or it will need to be provided elsewhere. There is also one dedicated spot in front of building 5 used by a tenant which may be seen in Figure 3.8.

Utility Boxes and Meters

There is also a large amount of space dedicated to electrical boxes and utility meters. The alley currently has these in highly visible locations and these are not capable of being moved. Figure 3.7 displays the largest utility box in the alley and Figure 3.9 displays the a panel of utility meters.

3.5 Circulation



The circulation map depicts the current patterns of pedestrian and vehicular circulation throughout the alley. The alley is actually one of the few shared spaces in the downtown area. Vehicular traffic is very infrequent in this area and is mostly used to service the businesses or by employees who park in the parking located on the northeastern side of the alley. Deliveries to and from building 2 are loaded in the back of the building from the loading bay which is located in the alley. This is typically used in morning hours for large deliveries but is infrequently used during the rest of the day. The few parking spots in the alley are reserved for tenants in buildings 5-7 and is implemented into their lease agreement. These few vehicles also contribute to the vehicular traffic. Currently the alley does not take measure to divert or discourage vehicular traffic through the alley. This allows for the occasional use of the alley as an

alternate route from normal traffic patterns.

The alley has frequent pedestrian use and functions as the primary access for buildings 4,5, and 6. These three buildings all have a business or multiple businesses with a storefront facing directly into the alley. These businesses attract a more substantial amount of pedestrian traffic than vehicular traffic.

Both Park and Pine Street have sidewalks for pedestrian use only. These sidewalks are lined with diagonal street parking which serves as an additional buffer separating vehicular circulation from pedestrian walkways. Park and Pine Street both have a single lane flowing in either direction separated by a double yellow. This means the alley is only accessible by right hand turns. However, during the circulation assessment there were multiple instances of vehicles making left turns into the alley.

The map depicts 5 different areas of conflict which are primarily where vehicular traffic merges with pedestrian traffic into the alley. It is important for cars to have a clear sight-line into the shared space before commingling with pedestrian foot traffic. In the case of areas 2 and 3 the sight-line is inhibited by the angled street parking when approaching the alley. These can be seen in figure 3.10 and 3.11 which display the parked car blocking the view of pedestrians on the sidewalk before turning into the alley. This is also the case for areas 1 and 4 but to a lesser degree. Area of conflict 5 is a single parking spot where a long term tennant has parked for years prior. The spot causes a potential conflict with traffic flow especially if vehicular traffic is flowing in both directions.

Figure 3.10 - View approaching conflict area 2

Figure 3.11 - View approaching conflict area 3

3.6 Stakeholders

The buildings which border the alleyway are owned by three private individuals who will be the primary stakeholders for this project. The figure below depicts ownership of each section of the alley, which is helpful to depict who will be effective or most important in the implementation for each part of the plan.

Figure 3.12 - Stakeholder Ownership

There have been 2 separate meetings with the stakeholders of this project. The first meeting was a meeting held at the Paso Robles Chamber of commerce. This meeting included the CEO of the Chamber, the Economic Development Director, the City Manager, the Community Development Director, a representative on behalf of the owner of building 8, Robert Gilson (the owner of buildings 1-4), and myself. This meeting was the first discussion with the stakeholder about the city's intent to revitalize the alley. The stakeholder expressed a strong support of the project and immediately began brainstorming ideas. He offered an idea to integrate a large mural on another one of the stakeholders buildings (building 8). He also expressed that he saw potential in the alley and that his prior investment into the business operating in the alley (Jeffry's Wine Country Barbecue) was viewed by him as a successful project. He did not seem as though he wanted to spend any more resources repaving the alley as he recently had the section in front of the new business repaved just a year prior to the meeting. When inspecting the alley the city manager expressed the idea to remove parking from the alley and offer a spot for the tenants elsewhere. He then explained that Nick Tompkins was the owner of buildings 5-7 and would need to be brought into the revitalization process to ensure every stakeholder was on the same page. At this point Robert Gilson offered to contact the owner of building 8 and Mr. Tompkins to set up a second meeting.

At the second meeting Robert and Nick both met with me in the alley to discuss the potential proposal and brain storm ideas. Nick was on board with removing the parking but expressed that it may take time as the parking spots are part of the lease agreement with the tenants in his buildings. Robert explained that the third stakeholder would not be able to attend because they had dual residence in and out of state but offered to convey the information to them. As the meeting continued both stakeholders expressed further support and requested to be included throughout the process of the revitalization plan.

3.7 SWOT Analysis

Strengths:

- Located in the heart of Downtown Paso Robles
- Natural activation already occurring
- Recent infrastructure improvement
- Low vehicular circulation
- Jeffry's Wine Country BBQ and Taste in the Alley

- Infrastructure improvements on surrounding streets
- New parking program allows for better proximity to businesses in the downtown area
- Business variety and diverse uses throughout the alley
- Current utility will support expansion
- One of the popular shared spaces in Paso Robles

Weaknesses:

- Used as a service lane for businesses
- Temperatures above 100 degrees Fahrenheit during summer months
- Trash and refuse disposal location
- Plain facades on building faces in the alley
- Exposed electrical and utility meters
- Minuscule vegetation
- Poor condition of pavement
- Poor drainage
- Building facades do not face the alley (with few exceptions)
- Awkward positioning to service trash bins
- Minimal surveillance within the alley

Opportunities:

- Three entrances to the alley
- City and developer support
- Community support
- Appropriate climate for outdoor activity
- Paso Robles Visitors Center is located along the alley
- TC-1 Zoning allows for a variety of uses
- Does not require EIR for further development
- Alley can be made accessible from current businesses
- Space available for further development
- Paso Robles Art Association for public
- Increased Revenue Potential

Threats:

- Cost to developers
- Cost to the city
- Lack of funds directed to alley improvement
- Remove focus from other downtown improvement plans
- May remove parking spaces (local interest)
- May threaten other downtown businesses
- Pedestrian and vehicular circulation conflict
- Cost to fix drainage
- May promote loitering
- Low lighting at night
- Lack of funding directed to alley improvement
- Perception of alleys as promoting crime
- Recently paved section might deter total repavement

3.8 Conclusion

Figure 3.13 - Areas of Focus

The priority of this plan is broken into two major parts which are then broken up into phases. These phases address the issues in the site assessment while also using the locations identified strengths. Phase 1 would primarily focus on solutions for the trash smell and exposed bins. This is top priority as the city has already received multiple complaints and explored options for solutions. This will be the easiest phase to justify as it is already viewed as a nuisance to the public.

Phase 2 would focus on events and activities to promote the alley as a community space. This focuses primarily on the strengths and opportunity offered by the alley. On current strength of the alley is the amount of pedestrian circulation and businesses functioning in the alley. Promoting the alley as a safe public space is an effective way to improve the public perception from a “smelly” alley to a valuable asset of the community.

Phase 3 would improve the aesthetics and character of the alley and increase functionality for multiple purposes. This phase will help to establish a distinct character throughout the alley. This will improve the design continuity throughout the alley and offer a new function for pedestrians. This will aim to increase the amount of time the public may spend in the alley comfortably.

Phase 4 would be the repaving of the alley and addition of bulb-outs on either endpoint. The repaving would address the issue of drainage and potholes. This will also contribute to improved aesthetics in alley by increasing continuity of design. The bulb-outs serve multiple purpose by offering new locations for vegetation and by increasing visibility into the pedestrian walkway when a vehicle turns into the alley. The alley location also promotes mid-block crossing which is a potential hazard for pedestrians. The bulb-outs shorten the distance between either side of the street which shortens the crossing distance and naturally reduces the speed of traffic.

Phase 5 would be to open new businesses in the alley, such as a dual front store or new facades oriented towards the alley. The goal of this phase would be to promote the idea of the alley as a unique asset capable of supporting business and perception of the alley as an investment opportunity.

Phase 6 would be the expansion of the primary area of focus into the secondary area of focus. This would be duplication of the design measures taken in the previous phases and implementing then in the secondary area of focus.

Chapter 4

Proposal

4.1 Vision Statement

Create a comprehensive revitalization plan for the Park Street and Pine Street alley in Downtown Paso Robles to provide an innovative and engaging environment for the community.

Goal

The goal of the redesign is to transform an underutilized alley in the downtown area to revitalize the pedestrian network and improve social and economic interactions. This proposal will use the design principles and site assessment to guide the design elements proposed throughout the following phases.

4.2 Phase 1: Trash Solutions

The proposed solution for waste and refuse from the businesses is to use a trash compactor. The trash compactor will take approximately 200 sq ft. The recommended location of the compactor is on the junction of the cross street and the alleyway. For details on the location view Figure 4.1. This solution will address complaints the city has received on the smell of trash during hot summer days. Using a compactor will remove the current bins and condense them into one central disposal point. Each business will have a key code to access the compactor.

Simply removing the bins will change public perception of the cleanliness of the alley and dramatically reduce the severity of smell. According to psychological studies about the effect of visual perception on smell, the “results are thus consistent with the idea that visual cortex activity exerts a specific influence on olfactory perception. More generally they provide a causal demonstration of the notion that visual representations are important for the formation of an odor quality percept.” (Jadauji, Djordjevic, Lundstrom, Pack, 2012). Humans are more likely to perceive a higher degree of smell if they are able to see the source emitting it. Thus, by removing the trash bins from direct pedestrian sight-line, they will be less likely to perceive the smell.

The waste management staff will receive training on how to properly collect the refuse from the compactor and this will ideally reduce the amount of time spent on collecting the garbage from the alley. The new route used to collect garbage will be as follows.

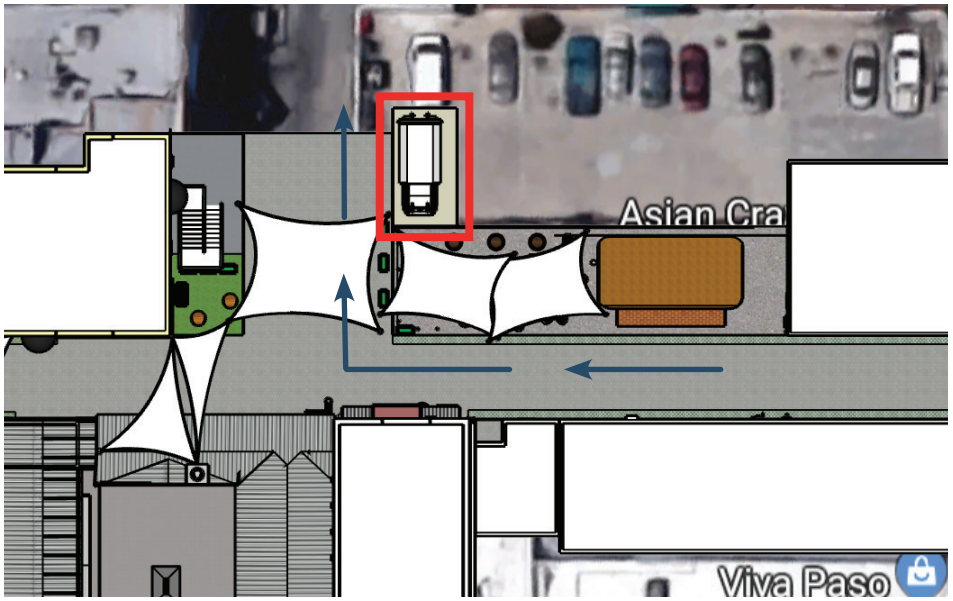


Figure 4.1 - In the red box is the preferred location of the trash compactor. The route drawn in blue is the path to service the bin and collect the trash.

The following images were provided by the City of Paso Robles Community Development Department. In 2017, as part of a downtown refurbishment plan, the department created a solid waste plan for the alley to address the complaints about the trash bins. The following figures 4.2 - 4.4 are example compactors and enclosures proposed by the city.

Figure 4.2 - Example Compactor

Figure 4.3 - The enclosure allows for disposal access from the side by entering a key code which unlocks a small door

Figure 4.4 - The compactors can be serviced from the other side by unlocking a gate to access the compactors

Estimated Cost

Item	Quantity	Unit Cost	Extended Cost
Landfill compactor	1	$15,000	$15,000
Recycle compactor	1	$15,000	$15,000
Enclosure	1	$15,000	$15,000
Electrical	1	$3,000	$3,000
Access System/Surveillance	1	$4,000	$4,000
Professional Services	1	$5,000	$5,000
Miscellaneous	1	$3,000	$3,000
* = Provided by servicer			
*Organic bins			
*Grease Tank			
Total			**$60,000**

4.3 Phase 2: Events and Activities

The second phase of the plan would include the use of the alley for public and social events. Local support from Paso Robles' Chamber of Commerce and the Downtown Mainstreet Association, as well as community organizations, would promote the alley as a communal space. Examples might include food trucks in the alley on a particular day of the week during lunch time, arts and craft exhibits, or wine and beer strolls. During warmer summer nights the alley could also have food open to the public with outdoor seating or even "dog days" for pet owners.

Increasing the activity in the alley is a natural way to increase the populations' willingness to invest in the location. By hosing events and activities we are able to increase community investment in the location which will allow for easier delegation of funding in the following phases. The elements of this phase are crucial to garner community buy-in and support for the project development.

Figure 4.5 - Live Music Gathering in Public Plaza

Therefore, proper implementation of this phase and the corresponding events is essential to the success of the project.

Estimated Cost

Item	Quantity	Unit Cost	Extended Cost
Outdoor Standing Tables	6	$100	$600
Outdoor Moveable Tables	3	$75	$225
Chairs	3	$50	$150
Benches	2	$180	$360
Food Trucks Permit	15	$10	$150
Vendor Day Permit	15	$10	$150
Live Music (5 sessions)	5	$200	$1,000
Total			**$2,635**

4.4 Phase 3: Character of the Alley

The goal of Phase 3 is to use cost effective design strategies to improve the aesthetics and ambiance to create a welcoming environment. This will be the first phase to change the appearance of the alley.

The Paso Robles art association has a formal process for approving murals and public art features around town. The alley would be entered as a site for an art feature. The mural will celebrate the historic downtown identity, the city's wine and beer industry, and Paso Robles' charm. This would be an inexpensive way to improve the alley aesthetic appeal and establish its identity as a destination point in the downtown area.

Figure 4.6 - Water Activated Mural in Hartford

Shading

Paso Robles has a warm climate and the downtown area can reach uncomfortable temperatures during the warmer months of summer. A cost-effective way to increase the utilization during these warm summer months would be to install a series of white or light-colored, visually appealing shade sails. The City Park located one block to the south approved a shade structure for the children's play area which used sails to provide a large area of shade. This increased the usage of the park and created a comfortable environment. The alley redesign plan includes a similar shade structure to improve the quality of the environment. This would also improve Paso Robles' downtown identity by creating a continuity of design features located in the downtown area. The plan uses white sails rather than black sails which were used in the park as white sail support the proposed lighting plan.

Figure 4.7- Example Shade Sails

Lighting

Lighting is also a key feature in activating the alley and improving the sense of safety after sunset. The alleys sails will be used during night time to reflect different colored lights throughout the alley. String lights will also be strategically placed throughout the alley to enhance ambiance. The string lights will also be a low-cost way to light the alley without increasing light pollution as the sails will trap the light with reflection. New alley fixtures will also use metal halide lamps, which produce white light, instead of the yellow light produced by the most commonly used high-pressure sodium fixtures. This will help people to be able to distinguish color at night and increase visibility.

Research by Farrington and Welsh (2002) concludes that improved lighting should be included as one element of a situational crime reduction program because it is associated with greater use of public space and neighborhood streets by law abiding citizens, thus increasing the perception of greater public safety (Farrington & Welsh, 2002). Lighting will increase the perceived sense of safety and openness in the alley way. The use of CPTED design principles for lighting shall be implemented to successfully deter criminal activity. One of the principles for lighting defined by CPTED states “Natural surveillance can be achieved through the placement of physical features, activities and people in a way that maximizes visibility.” The recommended among of lighting for a public space used at night should allow a pedestrian “to identify a person’s face as friend or foe from 40 - 70 feet away” (ICA, 2009).

Figure 4.8 - Colored Lighting on Sails Supporting Pedestrian Lighting

Utility Boxes

Electrical boxes and other utility meters will be covered or cleverly hidden through the increase of vegetation and/or decorative paint designs. Electrical boxes are often considered an eye sore and alleys generally house meters and control boxes for utility services. Implementation of art or landscaping can help to mitigate the dulling effect of the utility boxes without compromising the functionality. Figure 4.9 offers examples of ways to lessen the effects of visible utility boxes.

Figure 4.9 - Example Utility Boxes and Meters

Vegetation

Increased vegetation alters the pedestrian perception of the built environment and provides added aesthetic appeal. A study conducted on Effects of Urban Green Space on Environmental Health, Equity and Resilience found, “Overall, cities that build and maintain well-connected, attractive green spaces are likely to have healthier, happier and more productive citizens with fewer demands for health services” Braubach, Egorov, Mudu, Wolf, Ward Thompson, Martuzzi (2017). The alley will include green strips to provide an aesthetic appeal as well as providing continuity of the green space starting at the city park and flowing into the downtown area.

Urban Furniture

The plan includes an increase in the availability of public seating and gathering space. This coincides with the project’s goal to increase community investment and sentimental value at this particular location. Public benches and standing tables will be installed for public use to increase the usability of the space for public events and gatherings. Providing these amenities will improve the perception of the alley as public domain and pedestrian friendly. This helps to naturally deter traffic while increase pedestrian usage.

Estimated Cost

Item	Quantity	Unit Cost	Extended Cost
String Lights (24 ft)	10	$40	$400
Mural	1	$10,000	$10,000
Shade Sails	3	$6,800	$20,400
Shade Sail Installation	1	$12,000	$12,000
Colored Lighting	8	$200	$1,600
Wine barrel trees	10	$400	$4,000
Electrical Box Painting	5	$500	$2500
Vegetation	1	$10,000	$10,000
Total			$60,900

Phase 4.5: Bulb-outs and Pavement

As discussed in the site assessment chapter the pavement in the alley was completed at varying times. This created an inconsistency in the aesthetics and presentation of the alley. This phase,while the most expensive, greatly contributes to the appearance and functionality of the alley.

Pavement

Permeable pavers will be used to create a unique texture and surface identity in the alleyway. Furthermore, pavers will create visual markers to indicate clear pedestrian space. The alley way is approximately 6,500 sq ft. and will require repavement. Similar to Chicago's Green Alley Program permeable, high albedo pavers will be installed as a method to mitigate storm water flooding and improving the thermal climate of the alley. According to studies on the use of these materials from Environmental Research Letters 8, "reflective and permeable pavements, if well designed, can potentially capture all the pavement storm water runoff without creating surface ponding and/or overflow, and can carry heavy truck traffic as well as improving the thermal performance of pavement and near-surface air."(Li, Harvey, Holland, & Kayhanian, 2013). In a hot climate and urban area these are valuable and desired properties.

Figure 4.10 - Permeable Pavers

In a 2015 NASA conducted a study on the urban heating effect which found, when the impervious surfaces were at one percent, the corresponding rise in temperature was about 1.3°C. That temperature difference then held steady at about 1.3° even as impervious surfaces increased to 35 percent. But as soon as the impervious surfaces surpassed 35 percent of land area, temperatures began increasing, reaching 1.6°C warmer by 65 percent urbanization. At the human level, a rise of 1°C can raise energy demands for air conditioning in the summer from 5 to 20 percent in the United States, according the Environmental Protection Agency. So even though 0.3 °C may seem like a small difference, it still may have impact on energy use, especially when urban heat island effects are exacerbated by global temperature rises due to climate change (Bounoua, 2015).

Using eco-pavers similar to Detroit's Green Alley Project would drastically lower the percentage of impervious surfaces while also contributing grass vegetation to improve climate cooling. The proposed design for resurfacing the

alley has 2.5 ft. of eco-pavers on both sides of the alley lining the edge of the alley. These strips of eco-pavers would run from the entrance of the alley until it meet the entrance of the businesses. For the west half of the alley this spans the length of building 8 until the strip reaches the entrance of Jeffry's Wine Country BBQ. The north side of the eastern half of the alley has eco-pavers which spans from the entrance all the way to the cross street. The south side of this half has eco-pavers which spans from the entrance to building 5, the Downtown Main Street Association. These strips will drastically reduce the amount of surface run off created by the alley. Rather than permeable pavers which allow water to flow between the pavers, these strips are filled with low grassy vegetation and soil which act as a sponge to absorb water and recharge ground water. These strips will not require additional pitch which saves a large amount of area which would need to be pitched during the resurfacing of the alley.

Figure 4.11 - Example of Eco-paver Strips

The rest of the alley will be pitched toward the center of the alley to create a clear drainage pattern through and out of the alley. The same pitch from the section which was recently repaved will be implemented throughout the rest of the alley. This follows the example drainage pattern found in Chicago's Green Alley Handbook.

Bulb-outs

At the end of each alley, where the pedestrian sidewalk meets the throughway, there is not a distinct or defined entrance. To increase the recognizability of the alleyway, the plan calls for the introduction of bulb-outs. Bulb-outs will increase the pass by capture rate of pedestrians unaware of the alley's existence. Bulb-outs are also a unique way to improve the aesthetics and increase the amount of vegetation integrated into the plan.

Figure 4.12 - Mid-block Crossing Bulb-out

The bulb-outs will also narrow the adjacent street and naturally slow the speed of traffic. This is a method of improving pedestrian safety in the alleyway. In a study presented at the Institute of Transportation Engineers Annual Meeting, research by James Daisa and John Peers found, "1) Wider streets experience higher speeds for both the average and 85th percentile speeds. 2) On-street parking density significantly affects speeds. 3) Traffic volume and vehicle headways affect speeds. 4) Significant reductions in "effective" street width are required to dramatically reduce speeds."

The bulb-outs may also serve as a means to create the first pocket park in

Paso Robles. This would include vegetation and seating as specified in their respective plans. Additionally, the “pocket park” concept could transition into further phases of the plan and expand into other parts of downtown. This would also provide more continuity of green space in the downtown area stemming from the city park.

Figure 4.13 - Bulb-out Pocket in Friday Harbor

In the site assessment 4 points of conflict were identified. The bulb-outs are a natural way to address these point of conflict and add a natural buffer. This buffer would break the current buffer of parked cars in front of the entrances to the alleys to allow for a better sight-line. This can lower the potential risk when moving from separate circulation patterns to a shared space.

Estimated Cost

Item	Quantity	Unit Cost	Extended Cost
Asphalt Removal - 6,500 SF	6,500	$3.50	$22,750
Permeable Paver - SF	6,500	$6.50	$42,250
Bulb-outs	4	$40,000	$160,000
Bulb-out vegetation	4	$1,000	$4,000
Total			**$229,000**

4.6 Phase 5: New Businesses

The increased popularity of the space provides an economic incentive to expand surrounding businesses or open new ones. The proposed plan designates space on existing parcels that can support the operation of new businesses. The plan suggests the parcel on the northeast side of the alley, which is currently being used for parking, to be used for a small business operation. This business would take advantage of the outdoor seating and standing space.

Alley improvements will likely increase the property values of buildings in the immediate vicinity. This will in turn likely increase the tax base for the city.

Rebranding the alley as a place to conduct business opens the opportunity for dual front businesses. The alley may serve as a marketing tool to attract new businesses and new customers. This will likely increase the amount of revenue generated for the business and city alike.

Figure 4.14 - Roberts Alley Downtown Fargo

The proposed plan also recommends the north-western building, labeled as building 8, to open a second store-front facing the alley. This would allow for greater activation of the alley as well as increasing the potential revenue generated from the building. It is also be recommended to allow access to the alley from the back of stores facing 12 street if possible to increase the amount of circulation into the alley.

Estimated Cost

Costs of Phase 5 will likely fall on the individual building owners or tenants and will not be included in the cost of this plan.

4.7 Phase 6: Expansion

Once the primary area of focus is revitalized the scope of alley improvement can expand to the adjacent alleys. The alley continues across Park Street towards Spring Street and also across Pine Street towards Railroad Street. These alleys may have the same design principles and ideas applied to them. Alleys should improve the pedestrian network and public realm in Paso Robles downtown. The previously mentioned design elements in phases 1-5 will be reinstated in the other alleys to create design continuity through the alley system.

The primary alley serves as an example of the potential for improvement and individual design concepts which may improve the public's perception of Paso Robles' alleys. Programs implemented to improve the Park Street - Pine Street alley can be viewed as guides for city-wide alley improvement. Each phase of the revitalization plan could be implemented individually as city-wide efforts for alleyway revitalization plans.

Revitalization does not need to be confined to the specified alley in this plan and improvement programs to create sustainable improvements among the city's pedestrian network should be encouraged. The downtown alley system should be the beginning of a much larger improvement and revitalization plan.

Potential Programs

Trash solutions in phase one can be made into a citywide alley garbage consolidation plan to improve ease of access and reduce alley clutter. It could also be viewed as a utility service improvement plan in reducing the number of bins collected by waste management. Phase 2 events and activities could be applied as well by creating alley days for particular neighborhoods or downtown. Similar community programs have been successfully implemented by Parks and Recreation departments where pedestrians take back the street. These programs could include HOAs or other private stakeholders who have investment in city alleyways. Phase 3 presentation improvements could inspire an alley fund where money collected from a particular source is dedicated to an

alley clean-up program which will improve the quality and appearance of local alleys. Phase 4 repaving of alleys and using permeable solutions could become a program similar to Chicago's program where their alleys were selected and individually improved until the flooding problem was eradicated from the City of Chicago. Phase 5 Business investment could be marketed as an economic incentive once other programs have successfully improved the appeal of alleys as a place to conduct business.

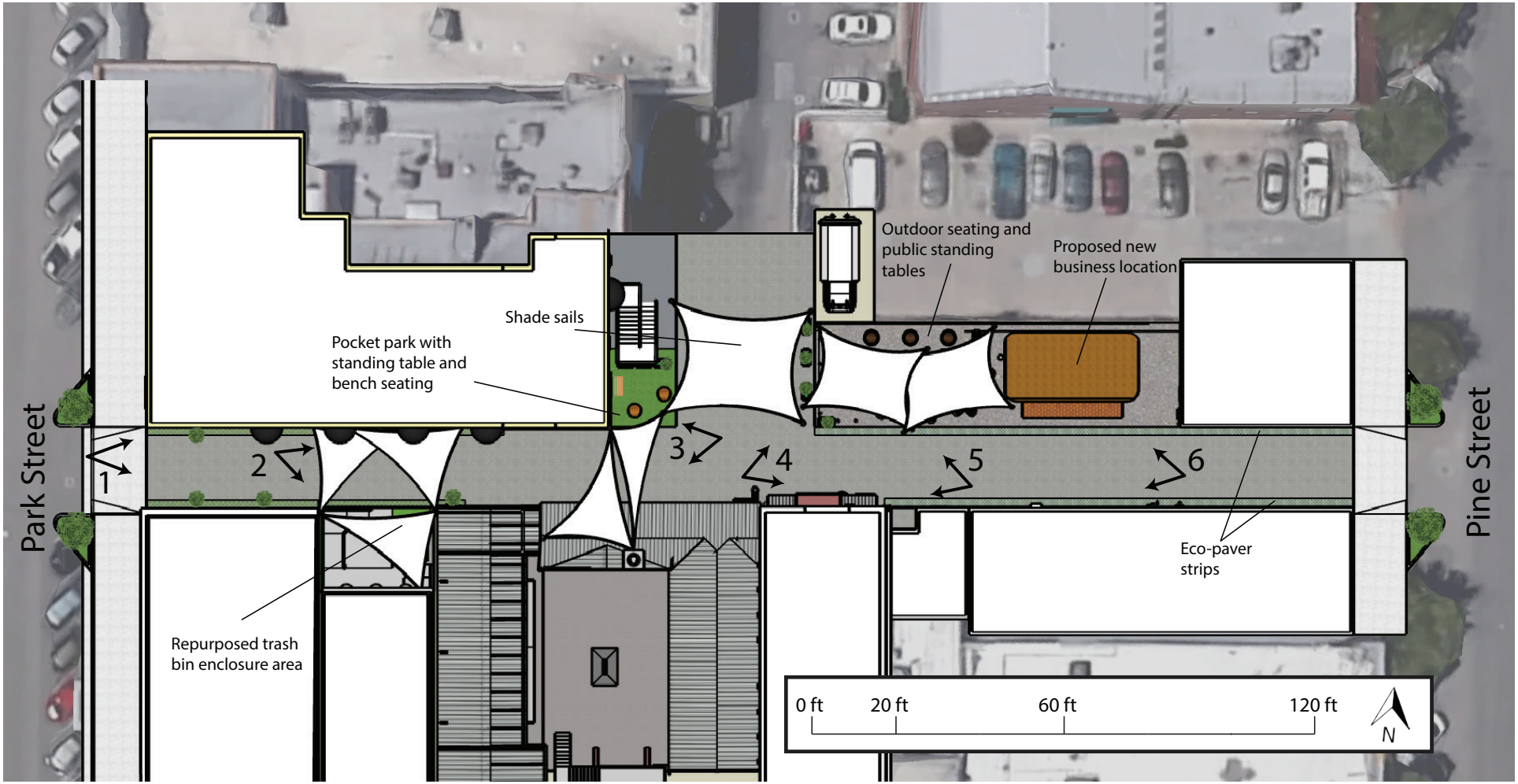
Estimated Cost for Adjacent Alley Improvement

Item	Quantity	Unit Cost	Extended Cost
Outdoor Standing Tables	6	$100	$600
Outdoor Moveable Tables	3	$75	$225
Chairs	3	$50	$150
Benches	2	$180	$360
Asphalt Removal - 6,500 SF	6,500	$3.50	$22,750
Permeable Paver - SF	6,500	$6.50	$42,250
Bulb-outs	4	$40,000	$160,000
Bulb-out vegetation	4	$1,000	$4,000
Total			$230,835

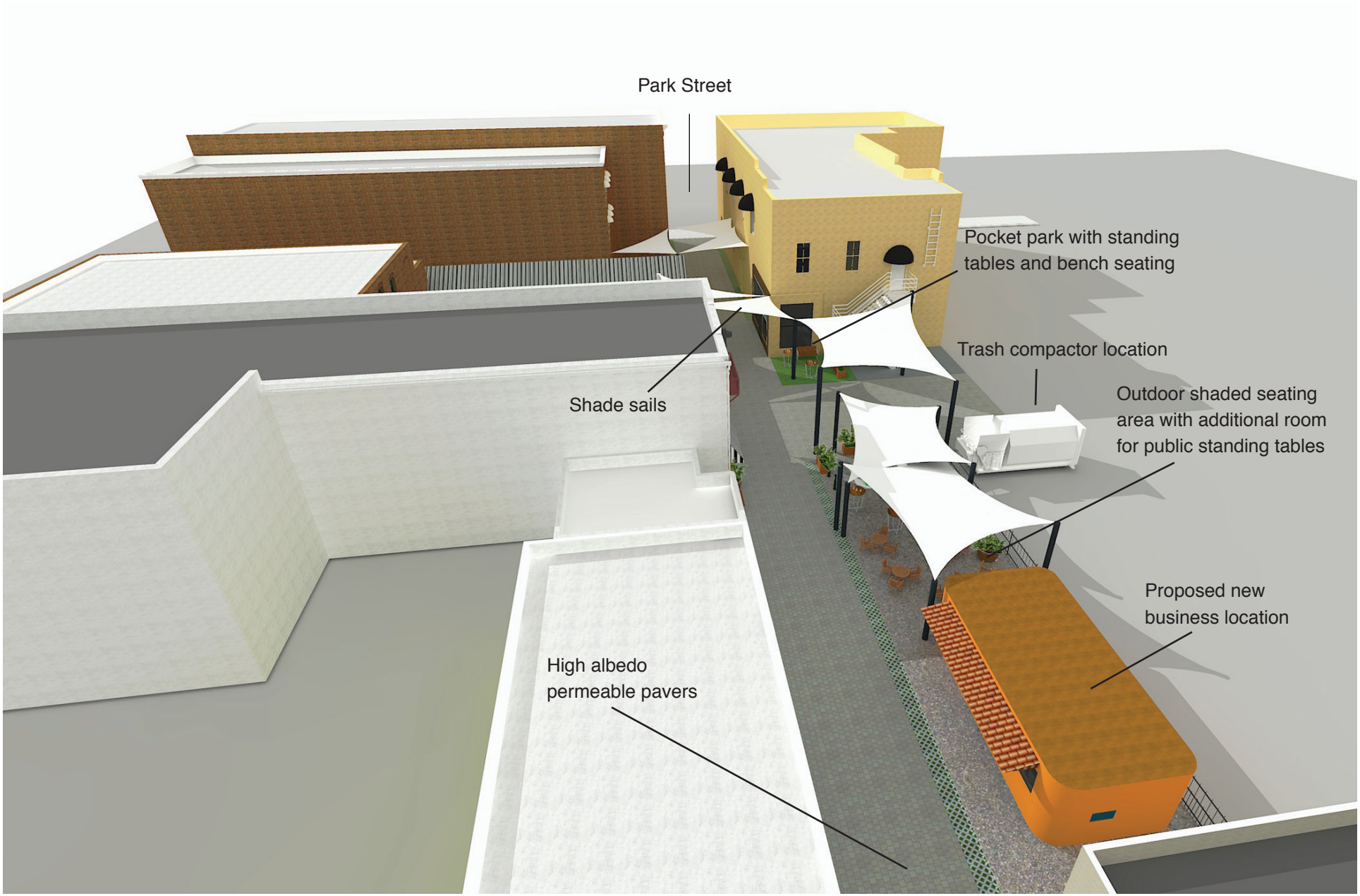
4.8 Estimated Total Cost of all Phases

	Cost
Phase 1	$60,000
Phase 2	$2,635
Phase 3	$60,900
Phase 4	$229,000
Phase 5	*business will bear the expense
Phase 6	$230,835
Total	**$583,370**

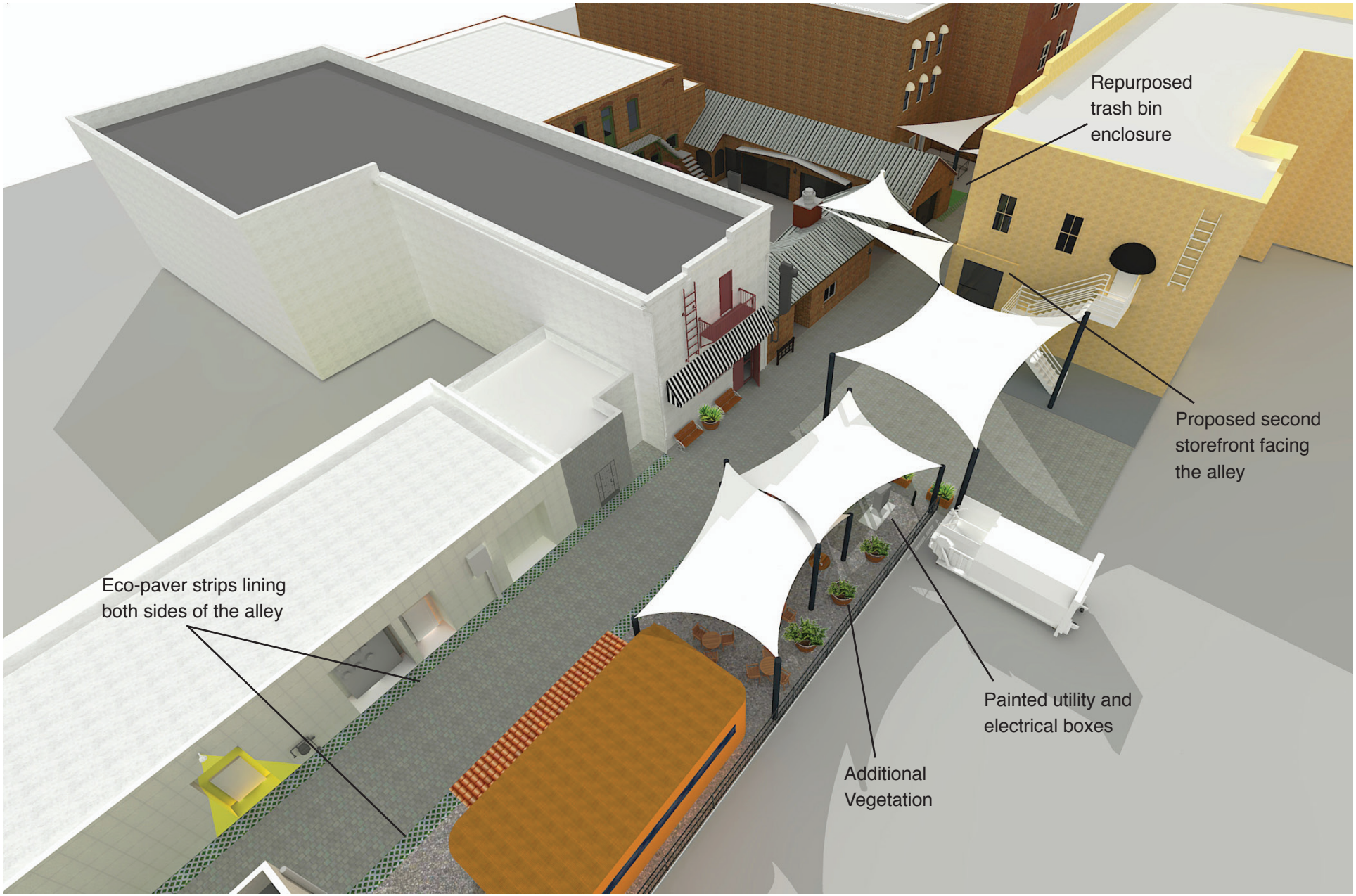
4.9 Illustrative Site Plan



4.10 Bird's Eye View Looking to Park Street



Bird’s Eye View Looking To 12th Street



4.11 View 1

Perspective 1 features a view of the alley when entering from Park Street. The image displays the proposed repavement of the alley and installation of overhead shade sails. The images also displays the brick building after removal of the dumpster and replacement with vegetation. Either edge of the alley also features storm water basins with permeable pavers intended to reduce flooding or pooling of water.

View 2

Perspective 2 features a view of the alley behind the Justin tasting room across from their loading bay. The area previously housed waste bins and was an underutilized space. This area is converted to a sitting area with overhead shade sails and vegetation. The eco-paver strips on either side of the alley continue until they reach the entrance of the businesses on either side.

View 3

Perspective 3 features a view from the center of the alley looking towards Park Street. The area on the right of the screen previously housed waste bins and has been converted to a small green space. The area has standing tables and a bench for seating. Directly behind this area is a proposed location for a second storefront. The north-western building of the alley (building 8) can benefit from the addition of a second business primarily accessible from the alley.

View 4

Perspective 4 features a view from the center of the alley toward Pine Street. This view features additional vegetation and seating. This view also includes the revitalization of the parking lot on the north-eastern side of the alley. The parking lot now contains a new business with outdoor seating. The seating is covered by shade sails which are illuminated at night. On the far left the new location of the trash compactor is also visible.

View 5

Perspective 5 features a view from the Main Street Association building towards Park Street. This features the implementation of the shade sails and use of vegetation in the alley. The planter boxes are being utilized as a visual buffer to hide the electrical and mail boxes. This depicts an active space available for pedestrian use in an area previously over run by parked cars and waste bins. This perspective also features the additional facade added on building 8.

View 6

Perspective 5 features night view from the entrance of Taste in the Alley toward Park Street. The images feature the proposed development of the current parking lot on the north-eastern side of the alley. The new business is coupled with an outdoor sitting area which is shaded during the day and well lit at night.

Chapter 5

Implementation

5.1 Summary

The revitalization plan has multiple phases, some of which will be easier to implement than others. These phases are not interdependent and each may be individually achieved as part of the effort to revitalize the alley. Phase 1, 2 and 3 of the alley redesign cost less than 65,000 dollars and would require minimal labor to be successfully implemented. To implement every measure of the plan was estimated to cost 583,370 dollars.

Community Involvement and Support

The three primary stakeholders have already expressed support of a plan to revitalize the alleyway. Jeffry's BBQ in the alley was a major boost in the community's perception of the alley. This project created an organic activation of the space and allowed a business to demonstrate success in a previously neglected and forgotten location. The overall perception of these improvements have been positive and the community seems eager for more growth and activity.

Taste in the Alley is another example of business which exemplifies the potential of the revitalization. Businesses are currently operating and functioning in the alley and have become integrated in the community as part of the downtown area. The "drawbacks" of being located in an alley have not seemed to effect the overall success of these businesses. These businesses serve as indicators of support from the community for business in the alley.

Community involvement may also be increased by the involvement of the community in the planned mural and public art display. The alley provides a chance for local artist to display their art and be involved in the creation process.

5.2 Project Funding

Local Park Funds

The City of Paso could set up a Local Park Fund similar to the City of Los Angeles. The City of Los Angeles requires "residential development projects requesting a zone change to either dedicate land for recreation and park purposes or pay a fee in-lieu as a condition for approval. It also charges a separate park impact fee, the Zone Change Park Fee, applied to the finalization of zone changes for multi-unit residential projects. The revenue collected from these fees is used to acquire new park land, fund capital improvements at existing recreational, and park facilities within one to two miles of the new development. The fees collected cannot be used to offset staff operation and maintenance costs, to purchase materials and supplies, or to replace equipment – funds can only go towards construction costs."

Cities can use park funds collected from development projects around alleys for alley revitalization projects. A city can check if the projects fit the description for a recreational facility in which the city can declare alley projects as recreational facilities to qualify for park funds. Those business and property owners adjacent to the project could also help fund items such as maintenance.

Community Development Block Grants

Another potential source of federal funding for alley revitalization projects are U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program (CDBG). This program provides communities with resources to address their unique development needs such as alley revitalization. HUD does not provide CDBG assistance directly to individuals, businesses, nonprofit or organizations or other non-governmental entities.

If selected over a 1, 2, or 3-year period, not less than 70 percent of CDBG funds must be used for activities that benefit low- and moderate-income persons.

Private Funding

The last source of funding does not require public money. Alley projects can be funded purely through private funds. Property and business owners may see the benefits of investing in their alleys and decide to contribute towards alley improvements. Private funds for alley renovation may be contributed by community and neighborhood groups, business improvement districts, associations and individuals. In this plan three primary stakeholder may be asked to contribute funds as they will likely gather benefits from the revitalization plan.

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