



SANTA MARIA
VILLAGE SQUARES:
**BERRIO
SQUARE**

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Spring 2011
Senior Project



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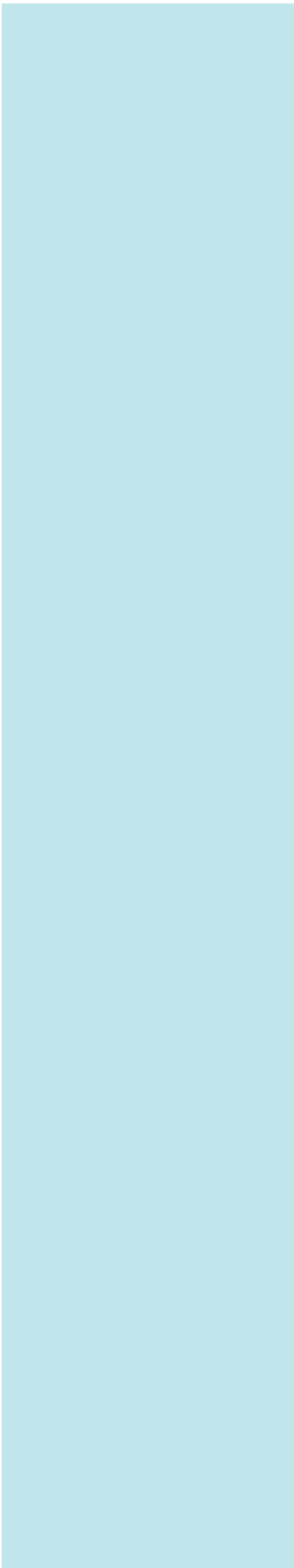
STATEMENT OF INTENT

The following document is a feasibility study and creation of potential guidelines for one of the six Santa Maria Village Squares proposed by the Community Planning Lab of Cal Poly's City and Regional Planning Department in the winter of 2011. It has been written as a Senior Project for T. James Alexander in the Spring of 2011.

The following chapters sets the outline for what would be a typical set of guidelines to develop these Village Squares. It studies, in particular, the proposed site, the land uses and projected areas, and possible design guidelines that integrate sustainability practices.

The Berrio Square incorporates many elements of study from Cal Poly's CRP Department. It includes sections on housing and population projects, design, sustainability, connectivity, community outreach, and public services. These have all been topics of study and have been implemented in the research and creation of this document.

This document is intended to serve as a tool to study the village squares concept and its feasibility for the City of Santa Maria.



1

Conceptual Development

The process for developing the idea for the village squares concept started with the residents of Santa Maria itself. From there, plans were drafted according to other successful projects and what the citizens said they wanted to see. A plan was created that brings this concept to life, increasing housing, shopping, open space, and population. The following chapter details the conceptual development of the village squares concept.

1.1: Voice of the Community

In the fall of 2010, the Community Planning Lab of Cal Poly's City and Regional Planning Department created a Community Profile for the City of Santa Maria. The information compiled in this document was based on months of research and four community outreach efforts (Figure 1.b) that took place in the City. In these community outreach efforts, the class learned what residents wanted to see in their city, what they liked and disliked most.

This information demonstrated that the people of Santa Maria want more retail locations and a variety of shopping opportunities. They want more gathering spaces and more community events. Another key fact discovered was the occurrences of cultural tensions and the resulting desire for safer neighborhoods. Residents also said they wanted more walkable streets, more bike paths, and better public transportation. The results of the community outreach event at the Santa Maria Mall during the Christmas Parade of Lights are listed in the table (Figure 1.a).

Figure 1.a: Results from community outreach event, "What do you want to see in Santa Maria?"

Santa Maria Mall Community Outreach Results		
Issues	Total Votes	Percentage
More Nightlife	244	13.07%
More Sports Fields	218	11.68%
A Variety Retail Stores	167	8.94%
Better Schools	158	8.46%
More Community Events	132	7.07%
More Public Plazas	116	6.21%
More Walkable Street	108	5.78%
More Parks	103	5.52%
More Affordable Housing	98	5.25%
More Businesses/Manufacturing Jobs	89	4.77%
Safer Community	80	4.28%
Agricultural Preservation	73	3.91%
Revitalize Downtown	65	3.48%
More Healthy Restaurant Options	62	3.32%
More Health and Medical Services	53	2.84%
More Public Transportation	40	2.14%
More Bike Paths	37	1.98%
More Traffic Calming Measures	24	1.29%
Total	1867	100.00%



After researching the existing conditions of Santa Maria and producing the Community Profile, in winter 2011, the Community Planning lab produced updated Land Use, Housing, Economic, and Parks elements for the City's General Plan. Students used the information that was learned while writing the Community Profile to create comprehensive goals and visions for Santa Maria in the year 2030. As part of this plan, the Land Use element team proposed an idea for a series of neighborhood nodes throughout the City called Village Squares. These squares would incorporate many of the needs that were expressed from the residents in the community outreach efforts as well as meet the sustainable requirement of the City as it moves forward into the future.

1.2: Case Studies

1.2.1: Lafayette Courts, Baltimore, Maryland

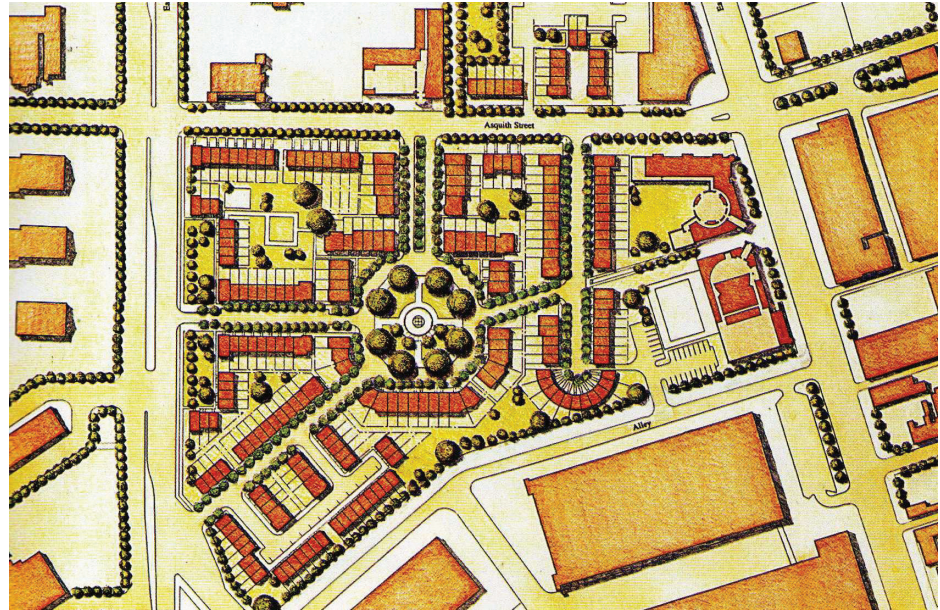
The Lafayette Courts project in Baltimore faced many of the same issues that Santa Maria faces today, including the need to reconnect streets and provide more housing. In addition, their solution contains many of the same aspects of the proposed village squares concept, including a large central public park surrounded by a mix of housing and uses (Figure 1.c).

In 1997, Faced with housing inequality and disconnectivity throughout the neighborhood, the City of Baltimore worked with urban design group CHK Architects and Planners to transform 21.5 acres of an isolated, degrading neighborhood into a vibrant community center, just blocks from the central business district.

One of the main tools that the planners used in creating the design was community workshops with neighborhood residents. The final plan had four main aspects: 1) Replacing superblocks to regain connectivity, 2) introducing a mix of housing types, 3) creating new

Figure 1.b: Survey community outreach at Farmers Market

Figure 1.c: Lafayette Courts illustrative site plan



community facilities, and 4) constructing a centrally-located, traditional park.

The goal of these points were to seamlessly integrated into the existing neighborhood. The end result was a highly-successfull, visually-pleasing, social neighborhood. Services were connected through new streets, new housing types (Figure 1.d) are properly scaled, street blocks have been re-established, new recreation opportunities are available, and the public park, filled with

trees and activity, is surrounded by housing, which increases safety. In all, 374 new units of housing and almost 100,000 square feet of new community facilities were created. Lafayette Courts spurred the redevelopment of surrounding neighborhoods.

1.2.2: Plaza de la Constitucion, Oaxaca City, Mexico

The concept of public squares filled with activity, surrounded by businesses and housing and that serve as the heart of a city is a common feature in many Mexican cities. With the prevalence of the Hispanic culture, mores specifically the Oaxacan culture (Santa Maria is home to the largest concentration of Oaxacans outside of Mexico), it is appropriate to examine their

Figure 1.d: Typical street with row homes surrounding Lafayette Courts



public square concept when applying it to Santa Maria.

These public squares, or “zocalos” are the heart of Mexican cities. In Oaxaca, the main public square is the Plaza de la Constitucion. To underscore its ability to endear, it was created nearly 500 years ago by Juan Palaez de Berrio and is still the center of activity for the City (Figure 1.e). There are community facilities, like a church and a government building, as well as many shops and restaurants around the zocalo (Figure 1.f). One can always hear children playing or music, find unique food and crafts to buy, or just take in the soothing sights from a bench.

The central area is filled with large trees, but also low shrubbery to increase visibility. There are fountains and performance stages available as well. There is also space set aside for local vendors to see their goods during festivals and street fairs. No cars are allowed inside the



Figure 1.e: Activity at night in the Plaza de la Constitucion, including vendors and patio dining

zocalo.

The Plaza de la Constitucion is such a valued public space, the nonprofit planning and design organization, Project for Public Spaces named it one of the world’s best squares in 2002.

1.3: Creating the Plan

The Village Squares proposal is an innovative plan that consists of a series of neighborhood centers that celebrate the cultures and people of Santa



Figure 1.f: Street cafes line the zocalo.

Maria through unique spaces across the City for residents to live, work, shop, and gather. They will serve the purpose of centrally locating many community services and amenities, providing public open space, and building on the culture and identity of Santa Maria neighborhoods. It should accomplish many positive community development goals like helping connect Santa Maria, boosting tourism, facilitating smart growth, and providing a sense of neighborhood pride and character, all while implementing various goals from the General Plan.

The idea is also based on the concept “zocalos” commonly found in Mexico. These spaces are popular for gatherings, stores, restaurants, and just creating a sense of community amongst residents.

The Village Squares proposal is meant to meet the needs of residents and the growing city. The concept specifically addresses the results gathered from the community outreach events. The squares will provide more retail space, more housing opportunities, and more gathering space for parks and to hold community events. The Village Squares will also feature basic community services. Each square would be built in a way that would allow it to facilitate community-specific needs and character as it grows. In addition, the squares

will be pedestrian friendly, located in established neighborhoods (which decrease the need to drive for basic needs), and be hubs for multiple modes of transportation.

1.4: Proposal Overview

1.4.1: Basic Layout

Each of the proposed six Village Squares would loosely follow the same pattern: An open plaza or open space surrounded by pedestrian-friendly mixed-use housing/commercial space bordered by medium-density housing (Figure 1.h). Featured land uses would include medium density residential (R-2), general commercial (C-2), mixed-use (MU), and open space (OS). The squares are meant to be built in the style and with the function of Mexican plazas, which are promi-



Figure 1.g: Group discussion with students at Abel Maldonado Community Center

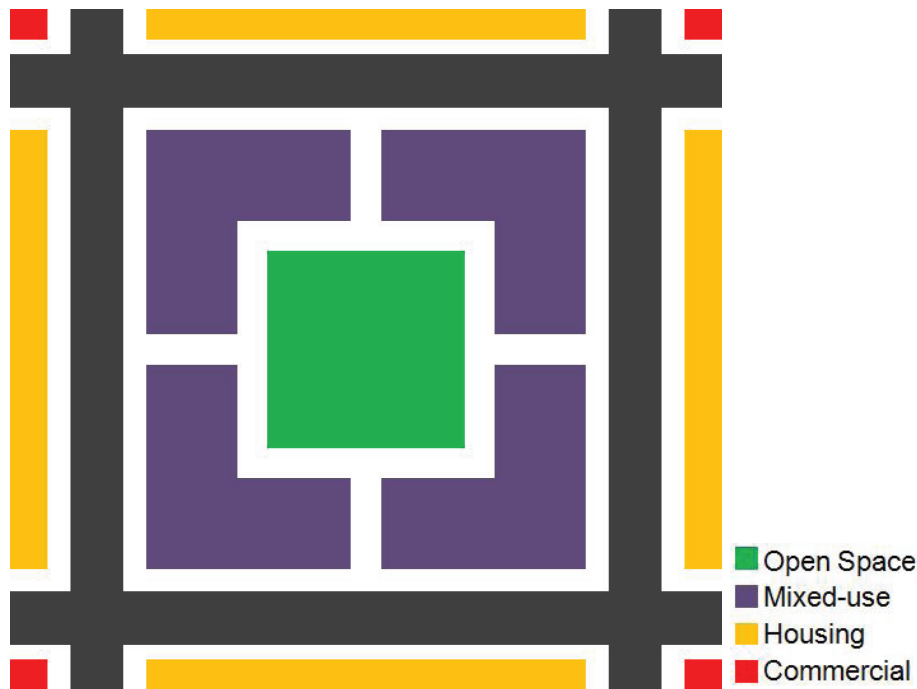


Figure 1.h: Basic village square land use layout

nent neighborhood spaces that serve as the center of community life and activity in the Latin culture. The open space in the center is surrounded by mixed-use structures with neighborhood stores and services on the bottom floor, facing inward, and housing on the 2nd and 3rd floors facing inward, with entrances facing outward.

The streets surrounding the square retain a grid pattern to allow for maximum connectivity with the existing neighborhood. All streets surrounding the square are designed and built with the pedestrian as a priority, utilizing streetscaping, traffic calming measures, and opportunities for alternative modes of transportation.

1.4.2: Locations

The locations of the Village Squares were based on their proximity to existing amenities, services, and other established attractions in the immediate area. Each Village Square has been placed near one or more of the following: a school, park, church, community center, bus stop, bike path, and a major street. All squares are located in well-established neighborhoods.

During the community outreach event at La Princesa, FoodMax (South Broadway), and Vons (East Main Street), residents were asked to share their opinion on the locations of the proposed village squares throughout the City. The Northeast and Southeast Village Squares

Figure 1.i: Summary table of proposed village squares

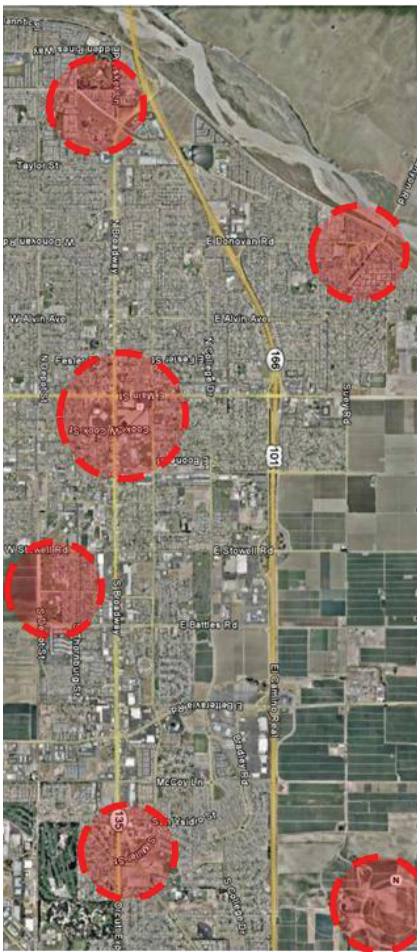
City Region	Location	Existing Attractions
Northwest Square	On Broadway, South of Preisker Park	Preisker Park, Filipino Community Center,
Northeast Square	The vicinity of Bull Canyon Road and East Donovan Road, utilizing the views of the adjacent hills and Santa Maria River basin	Tunnell Elementary, Tunnell Park, Merrill Gardens Senior Center, Pioneer Valley High School
Central Square	On Broadway, utilizing the unused Southwest corner of the mall and connected to City Hall, closing adjacent portion of Cook Street	Santa Maria Mall, City Hall, Public Library, First United Methodist Church, Abel Maldonado Community Center
Southwest Square	Corner of Battles Road and South Depot	Miname Park, Miname Community Center, Sanchez Elementary School, Santa Maria High School, Fairpark
Southeast Square	Vicinity of South Broadway and Santa Maria Way	Waller Park, Faith Korean Church, Calvary Chapel, First Baptist Church, Miramonte Park, Valley Christian Academy High School
Bradley Ranch Square	Incorporated into the Bradley Ranch plan, which is located east of US-101, in the South end of the City	New housing, services, and commercial as proposed in the yet-to-be adopted Bradley Ranch Specific Plan

Figure 1.j: Proposed locations of village squares

received the most recognition. Residents expressed that the location of the Northeast Village Square was ideal because it would provide services to an isolated region of the City, on the other side of US-101. They also expressed that the location of the Southeast Village Square was ideal because it was near Waller Park. Community member input from the grocery store outreach event supported the identified locations of the proposed squares. The following table contains a list of the locations and descriptions of each proposed Village Square.

1.4.3: Population Estimates

A major feature of the Village Squares is the housing opportunities. The concept of residents of Santa Maria living near open



space, services, and transportation is key for future sustainable development in the City.

Each square will offer a mix of housing choices for a range of incomes. A portion of all Village Square housing will be affordable. It is assumed here that there are 12 density units per acre for medium density residential space and 20 for mixed-use residential. In each Village Square, there will be 16.52 acres of medium density residential space and 2.06 acres of mixed-use residential space. With an average Santa Maria household size of 3 people, this will result in a total of 718 people living in and around the Village Square. The exception to this result is the Central Square in the Town Square area which will be more dense and feature more housing than the other, smaller neighborhood squares.



2

Site Analysis

The site for Berrio Square is to be located in the southwest region of the City of Santa Maria, on the 12.63 acre site at the corner of Battles Road and South Depot Street. There are many houses, services, and activities in the area that will be additional draws to the village square here. A windshield survey and site inventory was completed. The following chapter for examine the existing conditions of the site and analyze the current site.

2.1: Natural Environment

The site and the City of Santa Maria sit in California Climate Zone 5. This entails warm summers, but plenty of natural cooling features like wind, fog, and the nearby ocean. The weather is described as “mild” and “comfortable.” Climate Zone 5 is also noted as being one of the lowest energy-consuming climates. The wind blows mostly in the westward direction. The temperature can reach highs in the mid-70s and average lows in the high-30s (Figure 2.a).

The soils in the area are rich, with the ground on the

site once being used for agriculture. Existing productive agricultural land is located directly across the street from the site. There is a limited amount of foliage on the site. Small shrubs, brush, and dry grasses can be found scattered throughout the site. There are no trees.

The view corridors in the area of the site are important to the visual aesthetics that add to the value of the site. The site is in the Santa Maria Valley, so it is surrounded by views of mountains in the distance. Noise in the area comes mostly from traffic on South Depot Street, adjacent to the site. Another major noise source is the train tracks that are on the east boundary of the site along South Depot Street.

Figure 2.a: Average temperatures in Santa Maria

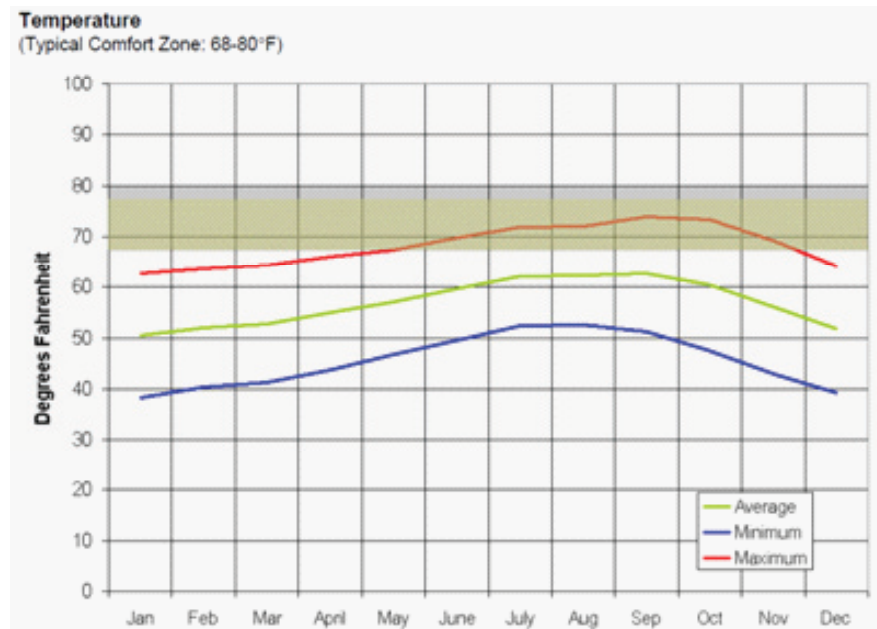




Figure 2.b: Fenced area at northeast corner of site

2.2: Built Environment

There are several services and utilities that use the site. Starting against South Depot Street, there are a series of street lights. Then, there is a stone and chain-link fence that runs the distance of South Depot Street to Battles Road on the site. Past the fence, there is a drainage canal. Along this canal, there are large 100+ foot steel power lines placed north-to-south and shorter wood power lines placed east-to-west on site as well. Then, there are railroad tracks running north-to-south on the east boundary of the site.

Near the northeast corner of the site, there is a fenced in industrial area with pipes coming from underground (Figure 2.b).

The area is rural, with no buildings located on the site. The site is surrounded by single-family residential homes on the south and west, multi-family apartments to the east, Minami Park to the northeast, and an agricultural field to the north. The single-family homes to the south and west are relatively new to the City and are homes with landscaped yards and overall good visual quality.

2.3 Circulation

The site is bordered to the north by Battles Road, to the east by South Depot Street and to the south by Provance Avenue. South Depot Street is a high-volume, main arterial for Santa Maria's west side that runs north-to-south. It has five lanes and the speed limit is set at 45 miles per hour in the vicinity of the site. Battles Road is also a five-lane street that runs east-to-west and has a 40 mile per hour speed limit. It is fairly new because of the new housing developments constructed in the immediate vicinity of the site. Provance Avenue runs east-to-west and is a new street that is located wholly within the housing development and not connected to South Depot Street. It is a traditional residential street with two-way traffic and street parking. Broadway, Highway 166, is the major arterial street in Santa Maria,

is located about .5 miles to the east of the site.

There is only one crosswalk in the area of the site, which crosses Battles Road on the east side of South Depot Street. There are no marked crosswalks leading to the site. There are no sidewalks on the site's north or east border. There is a landscaped and lighted pathway on the boundary with the single-family residential homes (Figure 2.c) and a sidewalk to the south along Provance Avenue. Sources of pedestrian traffic would be the nearby elementary school, Miname Park, Miname Community Center, and the surrounding residential uses.

The closest bus stop for the Santa Maria Area Transit (SMAT) bus service is located one block north of the site, at the Miname Community Center on West Enos Drive.

Bike paths are available and

(Left) Figure 2.c: Landscaped sidewalk adjacent to homes

(Right) Figure 2.d: Battles Road Bike Path



connected to the site. There is a Class I Bike Path and a Class II Bike Lane that runs along the north border of the site. Across the street from the site, down Battles Road, the bike trail is landscaped and well-maintained (Figure 2.d).

There is no street parking on South Depot Street, Battles Road or on the site. Surrounding parking can be found in the residential area and in a parking lot on the south end of Miname Park.

lines affecting the site. The site is about 600 feet by 700 feet.

Because the site will heavily rely on mixed-use zoning, Section 12-49 of the municipal zoning code must be adhered to. There Berrio Square meets all of the objectives outlined in 12-49.02 involving the goals of establishing a mixed-use project. A conditional-use permit must be attained to ensure some of the features of the mixed-use development, including the use of open space and minimizing parking lots.

2.4 Regulations and Code

The land on which the site is located is currently zoned as R-3 High Density Residential with a Planned Development Overlay. There are no active specific plans or design guide-

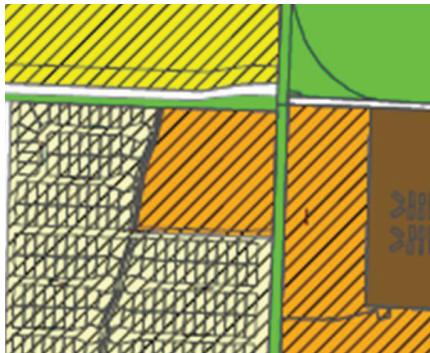
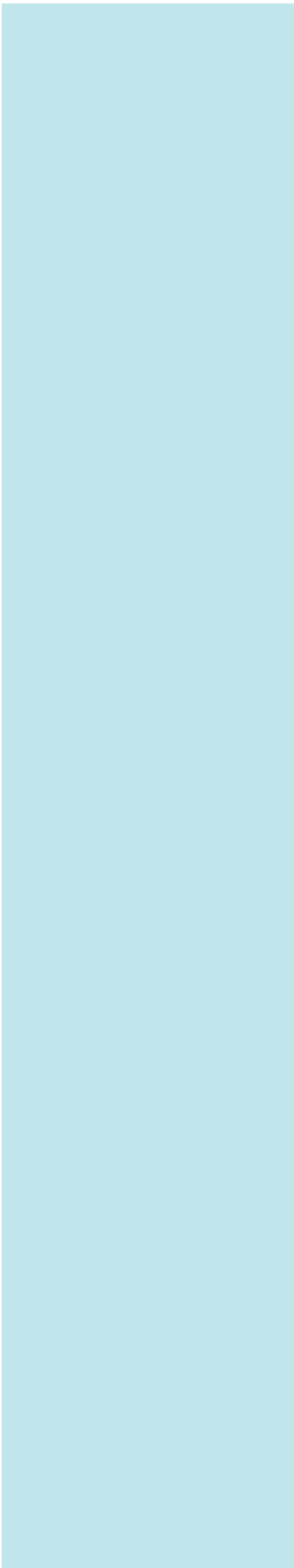


Figure 2.e: Berrio Square site as shown on the Santa Maria Zoning Map

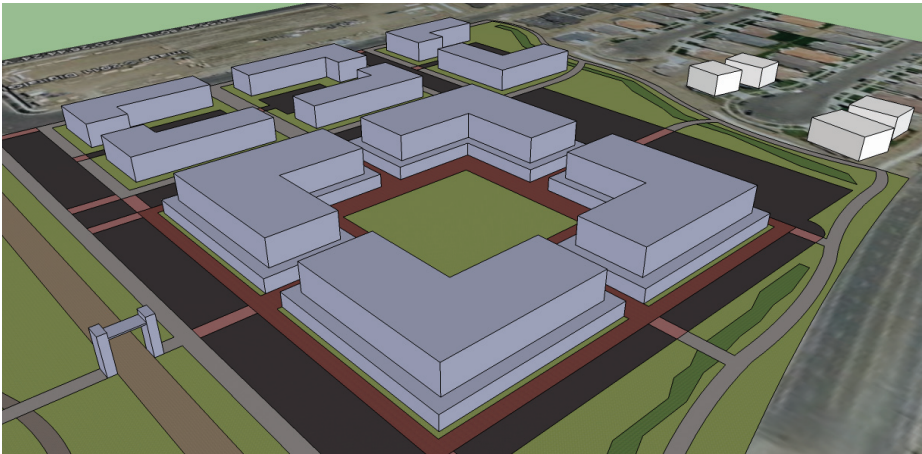


3

Land Use

Berrio Square will have four types of land uses: Mixed use, medium density residential, open space, and commercial. These land uses are meant to facilitate the growth and development that residents of Santa Maria have expressed as most important to them, which is affordable housing, more shopping, and more gathering space. In addition mixed use is used here to reduce the need for automobiles and encourage walking. The following sections will detail each of the land uses to be included in Berrio Square. A complete digital model of the site plan can be found in Figure 3.i at the end of this chapter.

Figure 3.a: Digital model of Berrio Square mixed-use buildings



3.1: Commercial Mixed-Use

Mixed-use allows for people to complete many daily functions all in one area. There will be four mixed-use structures surrounding the open space square (Figure 3.a). The first floor, facing inward on the square would be services and neighborhood commercial space, featuring local businesses.

The commercial space within the mixed use land designa-

tion is located on the inside of the Village Square. Here, local businesses and services will be placed and the environment will be pedestrian mall. With the current configuration of Berrio Square layout, there can be up to 32 available spaces for retail and service businesses on the square.

Small commercial spaces would be about 1,000 square feet per unit, with 24 units lining the inside of the square. Larger commercial spaces, in the inside corners of the square, would be 2,050 square feet and there would be four of them. Four small, corner retail spaces on the outside corner of the

Figure 3.b: Square footages of commercial space in Berrio Square

	Square Feet per Unit	Number of Units	Total Square Feet
Commercial (Small)	1,000	24	24,000
Commercial (Large)	2,050	4	8,200
Commercial (Corner)	915	4	3,660
TOTAL COMMERCIAL	3,965	32	35,860



squares would be 915 square feet. Table in Figure 3.b details the available retail space in square footages

It was expressed by the community that they wanted more shopping opportunities, better transportation options, and less of a reason to travel to Santa Barbara or San Luis Obispo to go shopping. The mixed use commercial space gives residents more specialized shopping opportunities because they are envisioned to hold neighborhood markets and culturally-specific retail experiences. With the space available, it

is planned that the neighborhood will grow into the space, creating their own environment and a new place for tourists to visit. Further, the mixed use reduces the need for a personal vehicle for all the residents in the immediate area because their daily needs will be within walking distance. This not only is more convenient for the resident, but also better for their health and better for the health of the environment.

Lastly, when exploring the reasons of why people felt the need to travel to Santa Barbara and San Luis Obispo to shop, the teams discovered that it was not for specific shopping locations, but rather the environment in which they shopped, which was offered in San Luis Obispo's quaint downtown and Santa Barbara's mission-style State Street. The Berrio Square will provide a unique

Figure 3.c: Sidewalk cafes in Plaza de la Constitución in Oaxaca City



Figure 3.d: Example of a mixed-use development

Figure 3.e: Square footages of residential space in Berrio Square

	Square Feet per Unit	Number of Units	Total Square Feet
Townhome (Small)	1,375	8	11,000
Townhome (Medium)	1,585	4	6,340
Townhome (Large)	1,713	14	23,982
Apartment (Small)	800	18	14,400
Apartment (Medium)	1,100	18	19,800
Apartment (Large)	1,500	5	7,500
Studio	450	32	14,400
High Density	1,500	53	80,000
TOTAL RESIDENTIAL		152	177,422

experience for not only Santa Maria residents, but also visitors, giving many a reason to come and shop in Santa Maria, and specifically the Berrio Square.

3.2: Residential Mixed Use

Because the center of the square is meant to be a public space with a lot of pedestrian activity, the entrances to these residences would be on the outside of the square on the first floor, with second and third floor windows facing both the outside and inside of the square. The residential space within the mixed use designation in the square will be behind and

above the commercial space on the Village Square. Residential space will include studios, townhomes, and one-to-three-bedroom apartments meant for small families. A portion of the living space in Berrio Square will be affordable housing. The table in Figure 3.e details the square footages of the housing types in this square.

3.2.1: Townhomes

The townhomes in Berrio Square will be for families. The front will face outward, away from the square and will have a small lawn with landscaping. Placing the main doorway away from the interior of the square is important to ensure minimal noise and maximum privacy from the activity occurring in the public space inside the square.

The bottom floor will contain



Figure 3.f: Example of townhomes with small front yards

living space, dining space, the kitchen, and a half bathroom. Upstairs will be a full bathroom and two-to-three bedrooms, depending on the layout. Windows on the second floor will face inward on the square. Eyes on the second floors of the Village Squares, looking down on the activity, will reduce crime in the square. This idea of self-patrolling has been proven successful in neighborhoods where there are an increased number of residents living in open, public areas.

There are three townhomes sizes for the square. The smallest size is 1,375 square feet, the medium size is 1,585 square feet and the largest size is 1,713 square feet. Most townhomes (14) are large.

3.2.2: Apartments

Mid-size apartments will be included in three of the four main square buildings on the third floor. They are meant for small families. Various layouts will be available. Based on their location in the square, their windows will face either the street or the inside of the square. Apartments will include a full kitchen, dining room, living room, bathroom, and two-to-three bedrooms.

There are three sizes of apartments. Small apartments are 800 square feet, medium size apartments are 1,100 square feet and the largest apartments are 1,500 square feet. Most are small or medium apartments, with only five large apartments located in the square.

3.2.3: Studios

The studios in the square will be live/work units for students and other single residents. Studios will be located on the third floor of one of the four main Village Square structures. Each studio unit will provide a full bathroom, kitchen, and living space and be 450 square feet. There will be 32 live/work studios in the Berrio Square.

surround the Village Square and serve as a transition from the multi-story structures of the square to the single-family homes that are already in existing neighborhoods where squares will be built. These medium density land use designations will be located to the north and south of the Berrio Square. Low density single-family homes already are adjacent to the square site on the west and medium density apartments are already across Depot Street to the square site's east.

3.3: High Density Residential

Outside of the main Village Square block, surrounding uses will be intensified. Medium density residential uses will

Medium density apartments will be two stories tall, with two-to-three bedrooms each. A portion of these units will be affordable housing to lower income residents. There is approximately 105,000 square feet available for medium-to-high density residential space at this square site. Each unit will be about 1,500 square feet, which means that there will be space

Figure 3.g: Landscaped open space in Plaza de la Constitucion in Oaxaca City



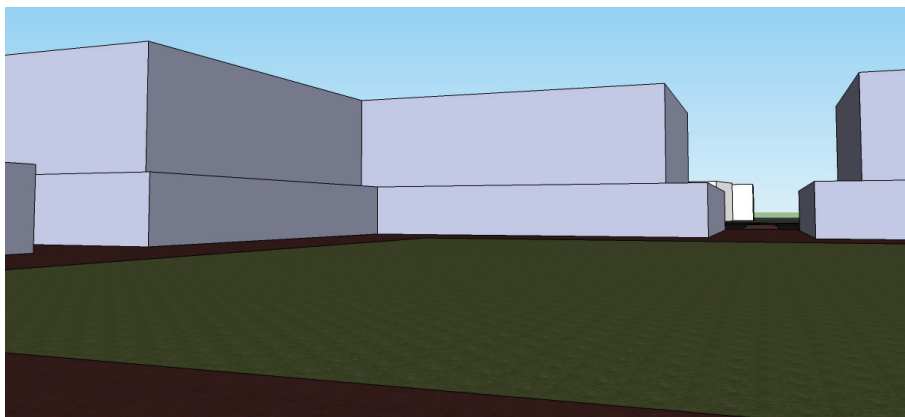


Figure 3.h: Digital model of view of open space on inside of Berrio Square

for about 70 units of medium-density residential space outside the immediate square. These numbers are included in the residential square footages table in Figure 3.e.

3.4 Open Space

One of the most prominent features of Berrio Square is the open spaces, specifically the main space located within the center of the square, surrounded by shopping, services, and housing. The open space in this square is patterned after the gathering spaces and plazas commonly found and utilized in traditional Mexican cities. The open space is important culturally, but also aesthetically, providing beautiful landscaping and areas to relax, and also recreationally, providing residents, especially children, spaces to play, exercise,

and be active.

Typical open space at the center of public forums and plazas in Mexico and specifically Oaxaca are called “zocalos,” (Figure 3.g) and commonly featured fountains, benches, plenty of shade trees, a performance stage, vendor space, and low shrubs to increase visibility. Inside the Berrio Square, the central plaza park will be a half acre of open space to be used for a variety of activities.

The open space in the center of the square (Figure 3.h) is envisioned to be a place that will facilitate community events, like farmers markets and cultural festivals. The open space can also be used as park space with recreational facilities and landscaping that utilizes water-efficient standards. Other uses of the park space include open plazas and community garden areas.

In addition to the open space

within the square, there will be an additional three acres of open space on site, which include trails, landscaped retention basins, bike paths, and recreational opportunities.

Included in this extra open space is the linear park making use of the open space that surrounds the railroad and runs along South Depot. Here, there will be a bike path extension, as well as landscaped park space. A bridge will be constructed over the railroad for better connectivity from Berrio Square to South Depot Street. This linear park will be 1.5 acres.

3.5 Public Facilities

It is important to incorporate public facilities and community services into Berrio Square. Space for these uses can be taken from commercial space when feasible.

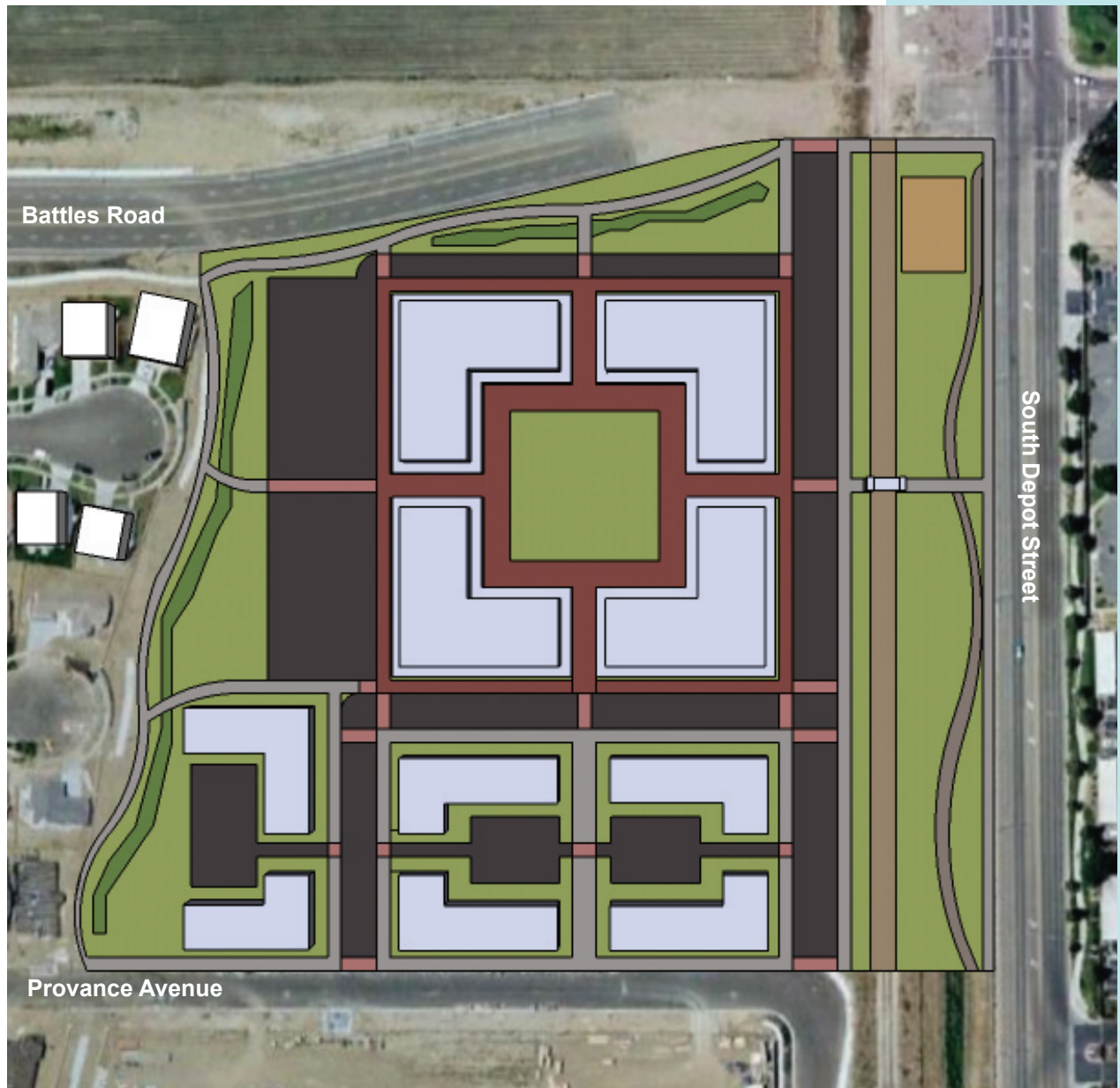
The Berrio Square will include a community center, featuring recreation facilities, gathering space for events, and services like employment counseling and teen afterschool activities.

As with each other square, Berrio Square will have a small

police sub-station in order to increase safety in the immediate area of the square. The visibility of police officers will not be intrusive and their resources will be limited, however their presence will increase the overall sense of safety and community felt by square residents.

3.6 Population Impact

The Berrio Square will impact the population of the City of Santa Maria. Currently, the typical household size in the City is 3 people per household. The square development will be adding about 152 residential units to the site. So, in all, the Berrio Square will add approximately 456 residents to the City.



Figures 3.i: Digital model of Berrio Square site plan



4

Design and Sustainability

Berrio Square will utilize modern sustainable design that will create a resource-efficient urban development for Santa Maria. The design is meant to minimize energy consumption while maximizing aesthetics. Further, the construction phases will use resource-efficient materials. Landscaping techniques will feature drought tolerant plants and water-conserving systems and the project as a whole will reduce the need for automobiles. Berrio Square promotes a centralized, local lifestyle that is pedestrian-oriented, well-connected, healthy and overall sustainable.



Note:

The evaluation of Berrio Square's design and sustainability will be based on two sets of standards that have been established to guide sustainable development: the national LEED-ND (Leadership in Energy and Environmental Design for Neighborhood Development) Rating System and California Senate Bill Number 375, the Sustainable Communities and Climate Protection Act.

LEED-ND is a set of standards for planning and developing sustainable neighborhoods was created by the United States Green Building Council (USGBC), the Congress for the New Urbanism (CNU), and the Natural Resources Defense Council (NRDC). It aims to promote healthy, affordable, environmentally-friendly practices in new developments based on

a set of criteria. Points earned by Berrio Square in accordance with LEED-ND are compiled in the table in Figure 4.r at the end of this chapter.

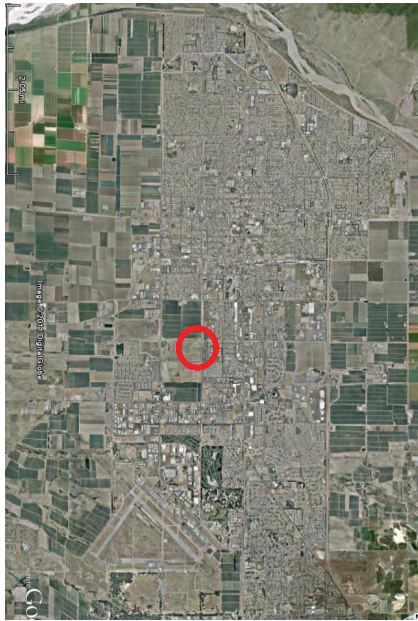
Indication of a design feature that meets LEED-ND standards will displayed with section and credit number in parenthesis. The sections are as follows:

SLL = Smart Location and Linkage

NPD = Neighborhood Pattern and Design

GIB = Green Infrastructure and Buildings

SB 375 was passed in 2008 and sets target emissions standards for greenhouse gases while creating sustainable regional plans throughout California. The design assessment of Berrio Square will be in accordance to these two sets of criteria.



4.1: Location

The Berrio Village Square will celebrate the culture of the Oaxacan people, which, according to city staff, make up a large part of the Hispanic population in Santa Maria and where a large concentration of Oaxacan residents currently live. The site is 12.63 acres on the corner of Battles Road and South Depot Street. There are many close-by amenities that can help serve as a draw to this

Figure 4.a: Location on Berrio Square within Santa Maria, indicated by red circle



Figure 4.b: Berrio Square site, corner of Battles and South Depot

Figure 4.c: The Basilica de la Soledad is a good example of baroque Oaxacan architecture

square. Plus, there is a large tract of open space adjacent to new housing developments that can be used for the development of the square. The character of this square would be drawn from the local Oaxacan culture.



4.2: Architectural Style

Figures 4.d-j: Examples of Spanish Colonialism architecture from around the world

The architectural style of this square is unique because it represents the cultural values of the Oaxacan lifestyle, which is prevalent in Santa Maria. This square is located in what is traditionally a Oaxacan area of the City and will reflect this distinguishing characteristic in its design and architecture. Common architectural characteristics of buildings in Oaxaca incorporate many different colors as well as using light and dark contrasts with light, called chiaroscuro effects.

Since the 18th century, Spanish colonialism and Mexican baroque architecture has been dominant. A type of architecture that evolved from Spanish Colonial, Spanish Colonial Revival, is already a prevalent style of architecture used in





Santa Maria. It incorporates Mexican baroque as well to create a structure that features smooth stucco walls, low-pitched clay-tile roofs, plenty of ornamentations, and added balconies and arcades. The Oaxacan Square will use this style in its design to shape a unique space, while at the same time creating a welcoming place for all visitors.



4.3: Design Guidelines

4.3.1: Materials

It is encouraged that materials used in the construction process be reclaimed or recycled materials in order to minimize the impacts of these materials on the environment (GIBC Credit 15).



Pavers used throughout the project will be permeable where ever feasible to allow for proper drainage. Unique colored and textured pavers will be used throughout the site to indicate changes in environment, including in crosswalks, within the square, and surrounding the square.



Figures 4.k: Exposed wood beams incorporated into the architecture of a patio dining area in the Plaza de la Constitucion in Oaxaca City



To adhere to traditional Oaxacan architecture, stucco will be used on walls. Exposed wood beams (Figure 4.k) will serve as accents in certain locations. Roofs will feature red tiles that were common on Spanish Colonial buildings.

Color of materials should also adhere to cultural standards. Earth tones and natural patterns like wood and stone may be used. Various shades of white and brown may be used. It is also encouraged that various stand-out colors be incorporated into the design of the square, as that is a common feature in Oaxacan towns.

4.3.2: Windows

Windows are to be used in a way that not only improves aesthetics from the inside and outside of the square buildings, but also as a source for energy efficiency. Windows will be installed with technologies that minimize air leakage and solar radiation. Windows must be able to open to allow for natural

ventilation.

The facade of bottom floor mixed-use commercial space must be at least 60% windows to allow for maximum sunlight.

4.3.3: Setbacks

Townhomes attached to the square facing the street will be setback at least 16 feet, including 12 foot sidewalks and 4 feet of landscaping.

Medium-density residential apartments facing the street will be setback no more than 24 feet, with 12 foot sidewalks and 12 feet of landscaping.

Commercial space inside the square will have zero setback and will be adjacent to a 24 foot wide sidewalk surrounding the inside of the square. Any commercial space facing the street will have zero setback and make use of all the space in the front.

4.4: Parking

Parking (NPD 6) around the square will be restrained where ever possible. Parking is counter-productive to the goal of discouraging car usage. Under Section 12-49.08 part (d) of the

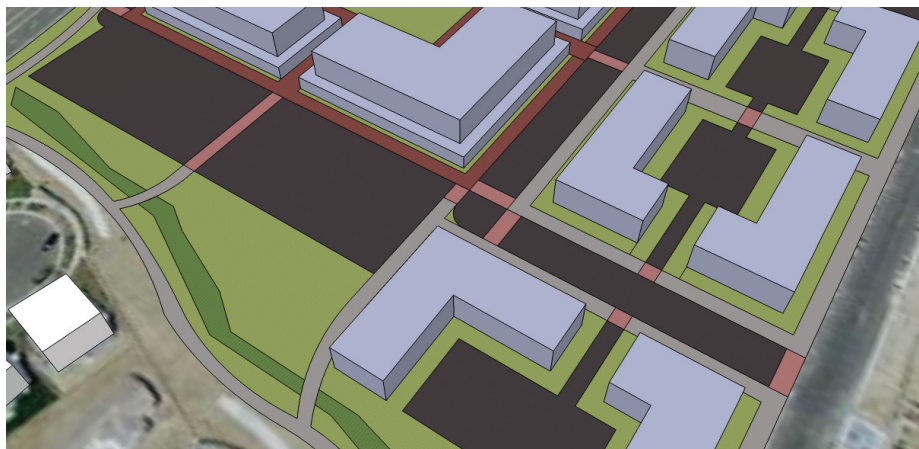
	Requirement	Total Units	Total Parking Spaces Required
Residential Inside Square	1 parking space per unit	132	132
Live/Work Studio units	.5 parking spaces per unit	48	24
Residential Outside Square	1 parking space per unit	60	60
Commercial	1 parking space per 260 square feet	35,860 sq ft	138
TOTAL			354
TOTAL with 20% reduction			283

Santa Maria Zoning Code, the project is eligible for a 10-25% reduction in parking requirement, under Section because it is located on an existing transit line, there will be at least ten jobs provided by the commercial use within the square, and incorporates pedestrian and bicycle trails.

In accordance with City requirements, the residential units of the square itself require 156

parking spaces, the commercial units of the square require 138 parking spaces, and the surrounding medium-density residential require 60 parking spaces. This totals 354 parking spaces on site. With a 20% parking requirement reduction, there must be 284 parkings spaces on site (Figure 4.l;).

Street parking will be available on all streets around the site, however, where necessary sur-



Figures 4.l: Parking requirements for the square site

Figures 4.m: Digital model showing location of surface parking lots behind buildings.

rounding multi-family residential buildings, parking lots will be constructed.

Parking lots are especially important to address in landscape standards because they are an intrusion visually and environmentally on the existing landscape. Due to this, surface parking lots around the square will be located behind buildings only (Figure 4.m). Screening, planters, retention basins, and other forms of landscaping will be used in all parking lots to assist in natural drainage and improve aesthetics.

4.5: Landscaping Efficiency

The aesthetics of the environment are important to maintain in the Oaxacan Square. This square will prominently feature a public plaza and park at the center, as is traditional in many Mexican zocalos (NPD Credit 9). However, while doing this, the development must maintain resource efficiency, which means it must minimize water usage by utilizing conservation techniques and landscaping requiring minimal water.

4.5.1 Plant Selection

The issue of regulating trees has been explored in other cities, most notable Los Angeles, which has an extensive street tree program called the Urban Forestry Division. They provide a list of permissible trees that may be planted along streets. A list of permissible trees will be created for Berrio Square. These allow for the regulation of trees that are drought-tolerant, native, aesthetically-pleasing, and are able to grow in Santa Maria's Climate Zone 5 (SSL Credit 8) (GIBC Credit 4).

Landscaping buffers will be built to the north of the side, along Battles Road, to the west of the site on the boundary with the existing single-family homes, and to the east of the site to buffer the railroad. Trees will line every street surrounding the square (NPD Credit 14). This will provide shade, retain a natural landscape, frame streets, and increase pedestrian-friendliness of neighborhoods by discouraging residents to use their cars, in favor of walking. These measures will help to decrease the urban heat island effect (GIBC Credit 9) of asphalt, create a safer neighborhood environment with more people on the street, improve the health of residents, and create aesthetically-pleasing neighborhoods.

4.5.2 Low Impact Development

Conservation management utilizing Low Impact Development techniques are implemented at this square with the intention of using natural elements and the minimum amount of water necessary to keep plants in landscaping healthy and prevent waste water. All square irrigation systems will be designed for minimal water use. Water-efficient systems like automatic irrigation controllers, weather and soil sensors, and low-volume irrigation devices are required. Water will be recycled and reused as irrigation when feasible.

Plants must be drought-tolerant and native species. Natural drainage will be preserved where ever possible. Retention



basins will be constructed along the north, west, and east sides of the side in order to retain stormwater and run-off (GIBC Credit 8). Mulch and ground-cover will be used in other portions of the site where landscaping is prevalent in order to minimize the need for water.

4.6: Community Garden

In order to further exemplify the sense of community that this square is meant to create, as well as promote a healthy lifestyle, a community garden (Figure 4.m) will be placed inside the central open space of the square. Here, residents will be able to grow their own fruits and vegetables and foster a sense of collective ownership over the garden. It reduces the need to travel to the grocery store for the Village Square residents. It also is a healthy activity for a resident of any age to participate in. In accordance with LEED-ND, because there is a density unit per acre of 20 residents in this square, the Oaxacan Square Community Garden will be at least 100 square feet (NPD Credit 13).

Figures 4.n: Working together in a community garden

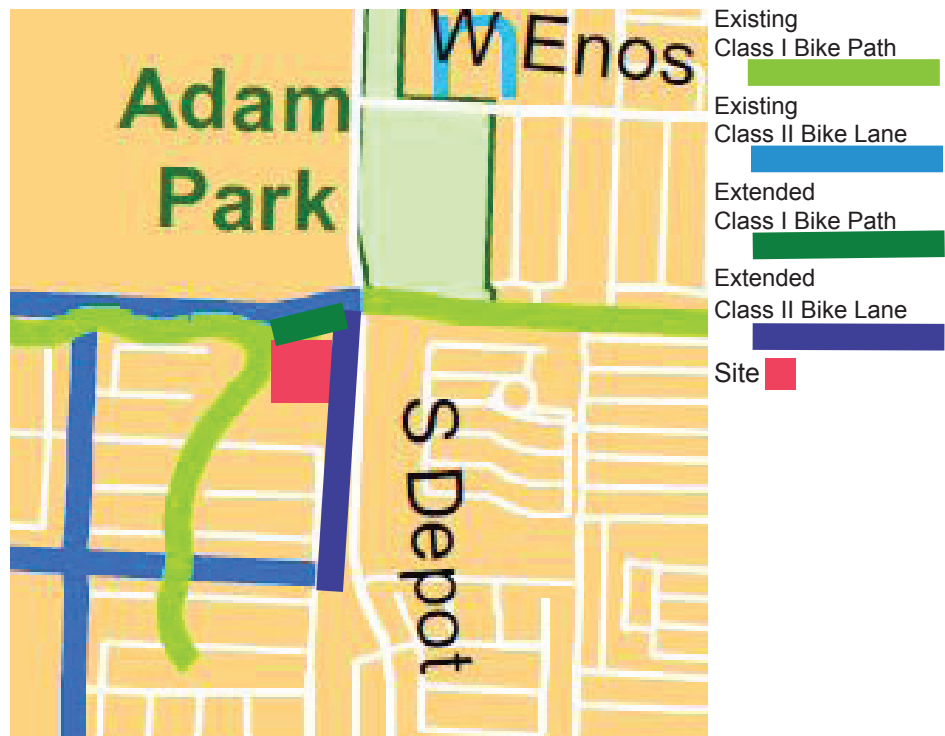
4.7: Connectivity

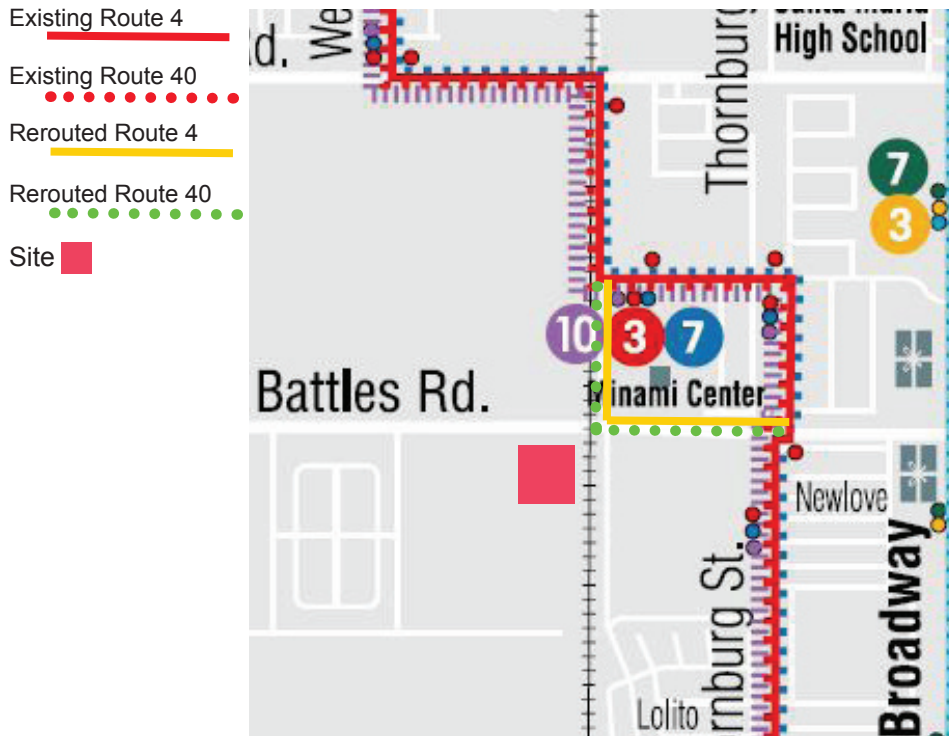
One of the main principles of sustainable growth and the basis for SB 375 is decreasing residents' dependence on the automobile and reducing greenhouse gas emissions. The Village Squares are designed with this idea most prominent. Berrio Square will utilize several techniques that will accomplish this goal—eliminating the need for residents to use their cars as well as encouraging the use of alternative forms of transportation (SLL Credit 4). The following will describe forms of connectivity on the site.

4.7.1 Biking

Bicycle paths will be featured prominently at Berrio Square (SLL Credit 4). To the north of the site, along Battles Road is a Class II Bike Lane and to the north and west of the site, adjacent to the single-family residential homes, there is a Class I Bike Path. The square will connect to these existing bike ways (Figure 4.n). A new landscaped bike lane in a new linear park will be constructed that will run parallel to the train tracks off of the busy South Depot street, away from traffic. It will be a wide, safe bike lane amongst a landscaped park. In accordance to LEED-ND, (SLL Credit 4) there will be areas for bike storage in the square.

Figures 4.n: Bike way extensions around Berrio Square





Figures 4.o: Bus re-routes around Berrio Square

4.7.2 Bus Stops

The closest bus stop to the Oaxacan Square is about a quarter of a mile away, in front of the Minami Community Center. However, a bus stop will be located at the square itself (NPD Credit 7). A bus stop at the square will be better utilized at the busy, dense Oaxacan Square. The placement of a bus stop at the square will require the re-routing of SMAT Route 4 and 40 (Figure 4.o) that would divert the route off of Broadway heading west on Battles, then reconnect to the existing route heading north on South Depot, bypassing the Minami Community Center. This re-route will not eliminate the SMAT connection at the Minami Community Center

though. Routes 45 and 62 still stop there.

4.7.3 Pedestrian Activity

Creating an environment designed for people and not for cars is a major feature of the Village Squares. The Oaxacan Square will have a well-connected, pedestrian-oriented network of streets and paths designed specifically for the comfort and safety of its residents. The car-less public open space in the middle will be a safe place for people to shop and be active, while the surrounding streets will have wide sidewalks and lined with shade trees (NPD Credit 1).

There are several factors that help qualify the Oaxacan Square for the LEED-ND credit for walkable streets: Setbacks are set at 0 in most areas and are limited in residential areas, ground-level uses are consistent, accessible, and utilize large windows, sidewalks are continuous along all streets and buildings, and car speeds are limited at 25 miles per hour around the square.

The street network will be built in a way that seamlessly connects the surrounding uses to the Village Square (NPD Credit 6). Connectivity is important to retain a pedestrian-friendly character. A grid pattern will be maintained where possible, however adjacent cul-de-sacs make this a difficult task. Pergola Street will be extended north to Battles Road.

Pedestrian activity is further promoted in the fact that the entire development is intended to incorporate live/work units with the mixed-use land designation (SSL Credit 5). Residents will live in very close proximity to their places of employment, reducing the need for a car and increasing pedestrian activity.

To accommodate a larger number of people near these employment centers, there will be a proposed 20 density units per acre, qualifying Berrio Square as a “compact development”

under the definition provided by LEED-ND (NPD Credit 2). These housing opportunities will be available to a larger portion of the population because there will be a mix of housing types within the square. A portion of the units will be affordable (NPD Credit 4).

4.7.4 Potential Transit-Oriented Development

Because of the proximity of Berrio Square to the adjacent train tracks, there is a possibility in the future for Berrio Square to become a transit-oriented development. A transit oriented development incorporates housing around a transit center, like a train station. A transit-oriented development using the railway here will increase con-



Figures 4.p: Current state of railroad adjacent to Berrio Square site

Figures 4.q: A transit-oriented development in Portland, Oregon

7 No			Smart Location and Linkage		27 Points Possible		Green Infrastructure and Buildings, Continued		
Y			Prereq 1 Smart Location	Required	5		Credit 1 Certified Green Buildings	5	
Y			Prereq 2 Imperiled Species and Ecological Communities	Required	5		Credit 2 Building Energy Efficiency	2	
Y			Prereq 3 Wetland and Water Body Conservation	Required	1		Credit 3 Building Water Efficiency	1	
Y			Prereq 4 Agricultural Land Conservation	Required	1		Credit 4 Water-Efficient Landscaping	1	
Y			Prereq 5 Floodplain Avoidance	Required	1		Credit 5 Existing Building Use	1	
3			Credit 1 Preferred Locations	10	1		Credit 6 Historic Resource Preservation and Adaptive Reuse	1	
		2	Credit 2 Brownfield Redevelopment	2	1		Credit 7 Minimized Site Disturbance in Design and Construction	1	
4		3	Credit 3 Locations with Reduced Automobile Dependence	7	2	2	Credit 8 Stormwater Management	4	
1			Credit 4 Bicycle Network and Storage	1	1		Credit 9 Heat Island Reduction	1	
3			Credit 5 Housing and Jobs Proximity	3	1		Credit 10 Solar Orientation	1	
1			Credit 6 Steep Slope Protection	1	3		Credit 11 On-Site Renewable Energy Sources	3	
1			Credit 7 Site Design for Habitat or Wetland and Water Body Conservation	1	2		Credit 12 District Heating and Cooling	2	
1			Credit 8 Restoration of Habitat or Wetlands and Water Bodies	1	1		Credit 13 Infrastructure Energy Efficiency	1	
1			Credit 9 Long-Term Conservation Management of Habitat or Wetlands and Water Bodies	1	1	1	Credit 14 Wastewater Management	2	
	Yes	No			1		Credit 15 Recycled Content in Infrastructure	1	
31	2	11	Neighborhood Pattern and Design		44 Points Possible		1	Credit 16 Solid Waste Management Infrastructure	1
					1		Credit 17 Light Pollution Reduction	1	
Y			Prereq 1 Walkable Streets	Required			Innovation and Design Process		6 Points
Y			Prereq 2 Compact Development	Required	0	6	0		
Y			Prereq 3 Connected and Open Community	Required					
10		2	Credit 1 Walkable Streets	12	1		Credit 1.1 Innovation and Exemplary Performance: Provide Specific Title	1	
3		3	Credit 2 Compact Development	6	1		Credit 1.2 Innovation and Exemplary Performance: Provide Specific Title	1	
2		2	Credit 3 Mixed-Use Neighborhood Centers	4	1		Credit 1.3 Innovation and Exemplary Performance: Provide Specific Title	1	
4		3	Credit 4 Mixed-Income Diverse Communities	7	1		Credit 1.4 Innovation and Exemplary Performance: Provide Specific Title	1	
1			Credit 5 Reduced Parking Footprint	1	1		Credit 1.5 Innovation and Exemplary Performance: Provide Specific Title	1	
		2	Credit 6 Street Network	2	1		Credit 2 LEED® Accredited Professional	1	
1			Credit 7 Transit Facilities	1	Yes	No			
1		1	Credit 8 Transportation Demand Management	2	0	4	0	Regional Priority Credit	
1			Credit 9 Access to Civic and Public Spaces	1				4 Points	
1			Credit 10 Access to Recreation Facilities	1	1		Credit 1.1 Regional Priority Credit: Region Defined	1	
1			Credit 11 Visiblity and Universal Design	1	1		Credit 1.2 Regional Priority Credit: Region Defined	1	
2			Credit 12 Community Outreach and Involvement	2	1		Credit 1.3 Regional Priority Credit: Region Defined	1	
1			Credit 13 Local Food Production	1	1		Credit 1.4 Regional Priority Credit: Region Defined	1	
2			Credit 14 Tree-Lined and Shaded Streets	2					
1			Credit 15 Neighborhood Schools	1					
	Yes	No							
9	13	7	Green Infrastructure and Buildings		29 Points Possible		55	25	23
Y			Prereq 1 Certified Green Building	Required			Project Totals: (Certification estimates)		
Y			Prereq 2 Minimum Building Energy Efficiency	Required			110 Points		
Y			Prereq 3 Minimum Building Water Efficiency	Required			Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, Platinum: 80+ points		
Y			Prereq 4 Construction Activity Pollution Prevention	Required					

nectivity around the city and further discourage the use of the automobile. Currently, the train line here is only used as freight lines for the transportation of cargo, however in the future, with the proper demand and infrastructure in place, commercial passenger trains may want to re-route in order to utilize the Santa Maria area as a stop. Further, if the rail ceases to be used by freight lines and be-

comes dormant, the City may purchase the railroad tracks and create a light rail transportation system for the City that uses Berrio Square as a stop. It is important to plan for these real possibilities when designing the current development. Any opportunity to improve the function of the square is a valuable asset to take advantage of.

Figures 4.r: After analyzing Berrio Square using the standards set by LEED-ND, this square earns 55 points. This means that Berrio Square would receive Silver LEED-ND Certification.



5

Implementation

The process of making Berrio Square a reality would consist of various steps, including community outreach, amendment of existing code, research, and economic improvement programs. The following chapter describes the necessary steps that will help lead to the creation of this village square. This chapter also details hypothetical budgeting and phasing should the project be approved.

5.1: Community Outreach

In the earliest stages of the process to create the Berrio Square, the City Planning Commission, with the approval of the City Council, should create a Village Square Research Committee that will take on the task of gathering research and support for the construction of the square.

An economic feasibility study should be completed in the early stages of research to make sure that Santa Maria can support and sustain a mixed-use center like Berrio Square. The study must also determine the housing needs of the City as well as average incomes and ranges of affordability.

Community outreach events must be completed with residents in the surrounding neigh-

borhood where the proposed square will be located. It may be necessary to prepare models, perspectives, and other visuals to allow residents to be able to see what the square really entails. Suggested methods of community outreach would include door-to-door surveys, hands-on activities (Figure 5.a) at the local Minami Community Center or Minami Park, and an advertised neighborhood meeting.

5.2: Policy Adjustments

It is prudent that the City Council approve adjustments to local policy in order to build Berrio Square. Currently, there is no mixed-use zoning designation in the City of Santa Maria. The City should move immediately to amend the zoning code to create a mixed-use zoning designation to allow for the development of Berrio Square, but also for the development of similar mixed-use projects that can add to the sustainable, walkable, village environment envisioned in the General Plan and by many residents.

Economic incentives must be included in City-approved

Figures 5.a: Example of a community outreach activity from Cal Poly's winter 2011 Community Planning Lab event





Figures 5.b: Current view of the proposed site for Berrio Square

policy concerning the square. Existing economic incentives must be marketed in a regional context to companies and corporations that may be considering expanding. It is important to extend these incentives to local businesses to allow for residents to be able to open their own business within the square. This is a main idea of the village square concept: retail within each square should reflect and meet the needs of the residents in the immediate area which it serves.

5.3: Phasing

When actually developing the site, infrastructure should be constructed first in order to allow for the utilities necessary for construction. The City would build and finance street extensions, sewage, water piping, power lines, street lights, sidewalks, bus and bike line

extensions, and open space landscaping.

The open space in the center of the square will be built first and the pads for the four main square structures will be reserved for construction. A private developer will design and build the square buildings in accordance with the aforementioned guidelines in this document.

Following the construction of the main square structures, space and infrastructure will be set aside for private developers to purchase land to the south of the square that will be used to build medium-to-high density apartments. The Berrio Square itself is meant to serve as a catalyst that will spur development of the surrounding medium-density residential units. However, once land is purchased, the developer must adhere to the standards and guidelines set forth in this document in the design and build process of the apartments.





RECOMMENDATION

After studying the proposed Berrio Square, researching the policy, and analyzing the space, I would recommend pursuing the idea of village squares, but only after close inspection of local economic conditions and housing and commercial demand.

The concept of dense housing/retail centers is important when confronting the growing issue of land and resource consumption, traffic, and the growing population. It provides solutions to these problems through mixed-use zoning, alternative modes of transportation, sustainable practices and other smart growth techniques.

In addition, many recently adopted state policy reflects these issues and mandates solutions in future developments that are already integrated into Berrio Square. The village concept is further validated with the successful examples of other public squares around the world that are still thriving after hundreds of years.

The only constraint at this time is the current economic condition that limits growth. However once the housing and retail demand returns and development begins to increase again, guidelines similar to those in this document will be required to help manage the growth.



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