

Davis Gateway Design Project

A Future Vision for the Richards Underpass



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A Senior Project presented to the Faculty of the Program of Landscape
Architecture in Partial Fulfillment of the requirements for the Degree
of Bachelors of Science of Landscape Architecture

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Abstract

This design project deals with the designing and planning for the improvement of Richards Underpass and Richards Boulevard. Richards Boulevard is important because it is the main connection from south Davis to downtown Davis and the University.

This document will examine the history, politics, and problems of Richards Underpass and other related issues. Furthermore, other investigation will include looking at how different cities throughout the United States use various ways to decorate and display each city's entry.

My design goals are to improve the aesthetic and traffic flow for the Richards Underpass, provide safer and better circulation for bikers and pedestrians on Richards Boulevard, create more of an urban feeling to the area by emphasizing more mixed use facilities, and create a distinct entry experience from South Davis to downtown Davis and the UCD campus. My designs are done with the assumption that there will be future proposed developments.

Dedications

I dedicate this project to my parents and brother for their love and support.

Acknowledgments

I would like to express special thanks to all my committee members: Patsy Owens for inspiring me to choose this project, and guiding me throughout the whole process; Ken Hiatt, Mark Francis, Rob Thayer, David de la Pena, and Cathy Wei for all your experience, knowledge, and guidance that has help me tremendously.

It has been an honor to learn from you all: Steve McNeil, Dean MacCannell, and Byron Culley. And to all my other professors and teachers, thank you for teaching me all about the field of Landscape Architecture and contributing to my development as a LDA student, and as a person.

To my LDA classmates: thank you for your friendships . It has been a great four years at UC Davis.

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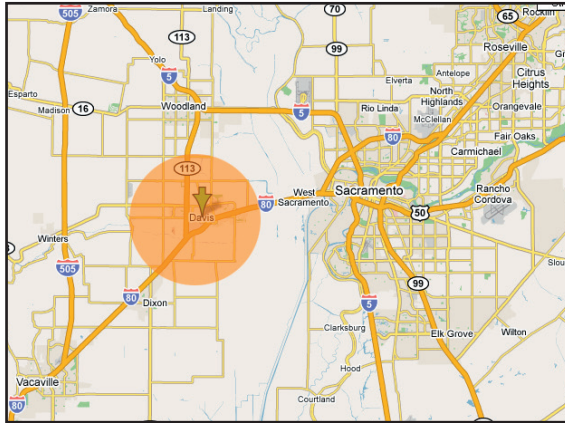
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Introduction

The Richards Underpass and Richards Boulevard is located in south Davis, California. The city of Davis is located in northern California, and is a part of the Yolo County. Davis located 11 miles West of Sacramento, Ca and 72 miles northeast of San Francisco, Ca (Wikipedia, 2008).

The city has a population of roughly 65,000 (Wikipedia.com, 2008). Davis was originally called “Davisville” which was named after Jerome Davis, a local farmer (Wikipedia, 2008). It was later shorten to Davis



Context map. Figure 1.1

by the post office and the name stuck ever since. The city of Davis was incorporated in March 28, 1917. Davis has always been notable for being an agriculture community.

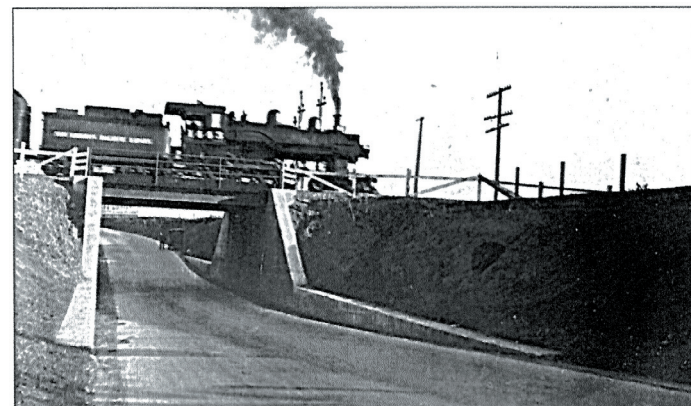
Historical Significance of Site

The Richards Underpass was originally known as the Davis Subway. Richards Underpass was built in 1917 as a part of the State Route 6. State Route 6 was one of the first roads in the state highway system. The funding for the construction of the underpass came from the State Highway Act

of 1909, California’s first highway bond act (Fitch, 1992).

The State Highway Commission was established to regulate the State Highway Act. The agency’s first concern was the potential danger of the at-grade intersection where the state highways cross railroad tracks. Davis became a potential candidate to build an underpass when the state highway came through town since the highway crosses at two major railroad tracks, the Southern Pacific Railroad. When the underpass was proposed, there were debates to where to put the underpass. Local merchants and business owners wanted to locate the underpass where it would bring traffic to the downtown business district, while the highway commission preferred to locate the underpass where there are not a lot of traffic and the Southern Pacific Co. wanted the underpass to be at the a location with the least railroad tracks. The

highway
commission



THE DAVIS SUBWAY LOOKING SOUTH, c. 1916. This is the earliest known photograph of this both hated and beloved Davis icon. Now called the Richards Underpass, it is one of only four Davis structures listed in the National Register of Historic Places. (UCD Special Collections.)
Figure 1.2 Old photo 1



History

and the railroad company agreed on the spot that is 900 west of the train station, where there are only two railroad tracks. The location that was chosen link up with the city's existing grid at First and E street (Fitch, 1992).

In the late 1930s, the highway commission was looking for a better route because Route 6 has too many twists and turns inside Davis which created traffic problems for fast moving traffic. In 1942, the city of Davis completed the plans for a 4 lane divided freeway that would become Highway 40 and later Interstate 80. The underpass is only 24 feet wide that accommodate two lanes traffic, and it did not align well with the city's street grid. By 1956, city officials doubted the underpass' ability and size to accommodate traffic through

this area (Fitch, 1992).

By 1961, city officials realized that the underpass cannot handle the increase traffic and they decided to draw up a plan to widen the under-



EMERGING FROM THE SUBWAY, c. 1920. A sign reading "Davis," with an arrow pointing to the right, greeted people emerging from the subway. Newspapers and official documents described the subway as "near" rather than "at" or "in" Davis. (California Department of Transportation.)

Figure 1.3 Old photo 2

pass. The city proposed a plan that would finish construction from 1968 to 1973, and the widening project would cost around \$700,000. The city expected the state and Southern Pacific Co. to cover 60% of the cost, while the other 40% will be covered by general bonds and gas tax (Fitch, 1992).

After four decades the Richards Underpass still remains two lanes. The population of Davis has increased to over 50,000 residents and the price tag for the widening

project has increased to \$7.5 million (Fitch 1992). The widening issue has been voted down by voters four times. Those who opposed the widening of the underpass had doubts for the need of the project. Also, the cost of the project was misleading, some claimed. Another reason is that the underpass has become the symbol of Davis's small-town atmosphere, and they argued that widening



LOOKING WEST ON FIRST STREET, 1944. The subway is just out of view on the left. The sign on the right reads "Business District," beneath which an arrow points right. The sign above it reads "Western Signal Corps School" and an arrow points to the left. (During World War II, the military operated a training camp on the UCD campus.) (Eastman B-2119, UCD Special Collections.)

Figure 1.4 Old photo 3



History

the underpass would not be needed if they city make more effort to deter from being automobile dependent and reduce growth sprawl (Fitch, 1992).



THE SUBWAY LOOKING SOUTH, MID-1940S. The Route 40 and 99 signs on the left have arrows pointing traffic to the right. A Lincoln Highway commemorative marker is next to the curb on the left. (California Department of Transportation.)

Figure 1.5 Old photo 4

The first time the underpass widening issue was brought before the voters was in 1968. At that time the widening project was packaged together with other propositions, so they voters had to either accept the whole package or deny the whole thing. The widening project did not stand a fair chance and was deny. It was later in 1973 that the plans for widening the underpass came on the voting ballot, and this time it was on the ballot by itself. Councilman Bob Black who spearheaded a group called Citizens for a Reasonable Alternative for Richards Boulevard advocate to keep the underpass two lanes and the city should focus on improving bike and pedestrian access (Fitch, 1992).

In November 1973, the residents of Davis cast their votes on the issue. The cost of the project estimated at that

time was about \$1.1 million; however, on the ballot it was around \$360,000. It was less because state officials had increased their commitment to the project. Nonetheless, the expansion project was denied by a 2 to 1 margin (Fitch, 1992).

Fifteen years later, in November 1988, the issue was back again for another vote. The mayor at that time, Mike Corbett, was one of the supporters for the widening of the underpass. He argued that if the underpass is wider that would be safer, more convenient and more attractive which could lead to more business to downtown and improve the linkage from south Davis to downtown. Opponents of the widening claimed that the project is unnecessary and expensive, and it would not do much to improve the safety of bikers. For the third time the voters denied the expansion (Fitch, 1992).

A decade later, in 1998, the talk for expanding the underpass was brought up. Again, Davis residents who opposed the widening want to keep Davis a small community that emphasizes pedestrian friendly and bicyclist safety. They believed that by widening the underpass, more vehicles would travel through the area; thus, changing the “one of the last remaining true downtown in California” (Fitch, 1992).



History

After all the debate and voting, the measure to widen the underpass failed again. And so this is where the city and Richards Underpass are today, as it was many decades ago; it is still a two lanes underpass and boulevard, and with on going debates.



Future Vision and Goals

Richards Underpass currently has a main problem of being too narrow which leads to traffic congestion. In addition, the underpass has a smaller adjacent tunnel that only accommodates one side of travel; both pedestrians and bikers have to share the same path. The aesthetics of the underpass are not that attractive and the condition of the underpass is old and looks run down. Besides on focusing on just on the underpass itself I am also looking at small section of Richards Boulevard. The boulevard has many problems of its own. The boulevard does not live up to its name as a boulevard because it lacks the essential elements that make it a boulevard such as a median, street trees, etc. The boulevard's main problem is that it is not pedestrian and bike friendly.

For my senior project I set out to make a design that will improve the underpass and the boulevard. These are the follow goals I want to achieve with my design:

- Improve traffic flow on Richards Boulevard to make the transition through the underpass smoother
- Improve the aesthetic of Richards Underpass and Richards Boulevard
- Redesign Richards Boulevard into a true boulevard
- Provide safer and better circulation for bikers and pedestrians
- Propose mixed use facilities to the area

- Create a sense of place to this area

My vision for the Richards Underpass and the boulevard is not a complete makeover. I was one of the people who believed that the underpass should be widened. However, after researching the history of the underpass and talking to many people, residents and professionals, I have come to realize how important it is to keep the underpass as it is because not only is it a historical structure, but it is also a symbol of Davis's reputation as pedestrian and bike friendly city.

When it was time to think of a design I realized that there were many possibilities for this area. One possibility for a design is one that widens the underpass, and a complete makeover of the boulevard. That is the most extreme design that will sure stir up debates. If most of the residents of Davis did not approve the idea of the widening in the past, then it is not likely that they will change their mind soon. In addition, the proposed design would face a lot of political pressure and easement restriction. It would probably never be considered to be built.

If I had more time on this senior project I would have



considered doing multiple possible designs, but I eventually decided to pick a design that proposes many changes, but the changes that are being proposed can be implemented within five to ten years. These changes are more realistic and less controversial. However, there are certain proposed elements in my design that I am assuming that the development will happen. Detailed explanation of the design is in the “Design” section.



Site Analysis and Inventory

Parameters of the Site



Figure 2.1 Site Parameters

The areas within the yellow boundary will be considered context, and areas within the blue zone is my area of concentration. I mainly focus from the intersection at First street and E st. down through the underpass and end at the freeway entrance and exit next to the KFC restaurant. I also focus on the land use adjacent to Richards Blvd.



Background Research

Gateway/Olive Drive Specific Plan

Through my research I have gotten a copy of the Gateway/Olive Specific Plan. The Gateway / Olive Drive Specific Plan aimed to provide goals, policies, design guidelines and zoning for different land uses to improve the future vision for my study area. From this plan I have gained a better understanding of the zoning, land uses and design requirements for my site. Initially, I planned to design base on the guidelines in this plan; however, with the advices I received from my committee members I decided to design it my way, and focus on the guidelines at a minimum. A main reason why I do not want to concentrate too much on the plan is because the plan proposed to expand the underpass while my design proposes to keep the underpass as it is.

The following section are **excerpts** from the specific plan that will emphasize the most important research and relevant ideas to my design. There are 4 main areas within the boundary of this specific plan:

“1. **East Olive Drive area:** is a historic part of the City with a unique identity and a variety of existing uses including single-family and newer multi-family residential, mobile homes, office and business uses. Olive Drive is the route for a part of the historic Lincoln Highway through the Sub-Area.

2. **West Olive Drive area:** currently characterized by a

motels and restaurants and commercial service uses.

2a. **Richards Boulevard/Olive Drive Gateway:** The intersection of Richards Boulevard and Olive Drive.

3. **Aggie Village area:** 12 acres owned by the University of Davis. Consist of university-related uses, residential and retail (Davis Commons).

4. **Southern Pacific (SP) Depot:** is characterized by the existing AMTRAK train station and surrounding platforms and tracks.

Overall Goal:

Develop a specific plan that effectively and sensitively addresses vehicles, pedestrian/bicycle circulation, aesthetics, biotic, historical, design and land use characteristics of the Gateway/Olive Drive area into the future.

Land use:

a-Consider the present and future needs of the students of the University.

b-Enhance the vitality that currently exists within the University, Core Area and surrounding neighborhoods.

c-Create a dynamic plan that meets the needs of a diverse population and allows for opportunities to live, work, shop, and recreate.



Circulation:

Develop pedestrian/bicycle linkages to connect the specific plan area to the rest of Davis.

Resources: Respecting and promoting the historical character and ambiance of the East Olive Drive neighborhood.

Design:

Develop design guidelines which address the aesthetic and character of each subarea within the project area. The vision for both the East and West Olive Drive areas is to maintain and enhance their existing unique character and mix of need uses.

Plans/Goals

West Olive Drive Subarea: The general and specific plan land use for this area is commercial service. The land use and zoning will be treated the same as commercial service in the East Olive Drive Subarea. This portion of the plan assumes a widened Richards Boulevard undercrossing of the Southern Pacific (SP) tracks. The intent of the land use and design guidelines for this portion of the project is to upgrade the image of the area and provide an enhanced entry experience while entering central Davis from I-80.

Richards Boulevard: The Davis General Plan calls for widening and capacity and safety improvements to the Richards Boulevard corridor and underpass. The

improvements are necessary for the roadway to operate at acceptable levels of service.

-Richards Blvd. shall be improved to accommodate vehicular, pedestrian and bicycle traffic consistent with the Davis General Plan and the ultimate final design determined through the Richards Corridor EIR process.

-All improvements to the intersection of Richards Boulevard and Olive Drive shall recognize the importance of the intersection as a gateway to Davis. Use of paver materials and extensive use of landscaping shall be a high priority.

Safety Issues

The speed at which vehicles enter East Olive Drive after exiting I-80 has long been a concern of residents in the area. The options available for addressing the concern are use of various traffic calming measures or closure of the off ramp. Examples of traffic calming on page 27.

General design guidelines: pages 31-35

District Design Guidelines: pages 35-44

Character Types:

1. *Downtown Character:* draws upon many of the elements found in downtown Davis

-A formal and urban character

-A small-scale pedestrian orientation



-A mix of commercial and residential activities
-The landscape is characterized by shaded tree-lined streets, landscape yards and street furniture.

2. *Cottage Character*: draws upon elements found along the Old Lincoln Highway (Highway 40). **The Old Lincoln Highway connected the east coast, Ocean City, Maryland, with the west coast, San Francisco, California, and was developed in the 1940's to accommodate the growing interest in the automobile travel.**

In northern California, buildings along the Lincoln Highway were developed to meet the needs of travelers and included bungalows and small residential courts for overnight stays, and gas stations for fueling. The buildings were freestanding, small-scale, wooden structures. Architectural elements included large porches and overhangs. Large shade trees lined the Lincoln Highway providing shade and visually enhancing the experience of the traveler. The building sites were landscaped with informal groupings of shade trees.

3. *University Character*: buildings set in landscape; landscape character knits diverse building styles together; bicycle/pedestrian orientation

-Landscape character: shade; informal, mature landscape; vehicles at periphery, separated from pedestrians and bikes

-Architectural character: formal building entries differentiated architecturally from rest of building; enter building from pedestrian arteries; windows punched in facade rather than ribbons of glass

4. *Richards Blvd design guidelines*: Street tree planting shall consist of evenly spaced, deciduous shade trees. Landmark trees such as cork or valley oaks or cedars shall be included in streetscape landscaping. Landscaping shall include trees and shrubs with flowering color. Accent trees with fall and flowering color and flowering shrubs shall be used as gateway plantings.

Parking shall not be permitted on Richards Boulevard. Each gateway shall incorporate an identity feature such as column, walls, fencing and landscaping. Enriched paving treatments, such as interlocking brick pavers, can be used to visually denote cross walks” (Specific Plan, 2002).

Before even reviewing the specific plan, I already had the intention of using trees with fall color and flowering shrubs in my design. I also wanted to decorate the intersection of Richards and Olive Drive with decorative pavings to show that this intersection is important.



Zoning Diagram



Figure 2.2 Zoning diagram

From reviewing the data that was reported in the specific plan I layout the zones and the names of the zones within my site boundary. My redesign of the land use will include most of West Olive Drive area and two blocks of East Olive Drive. The rest of the zones are there for context.



Land Use Diagram

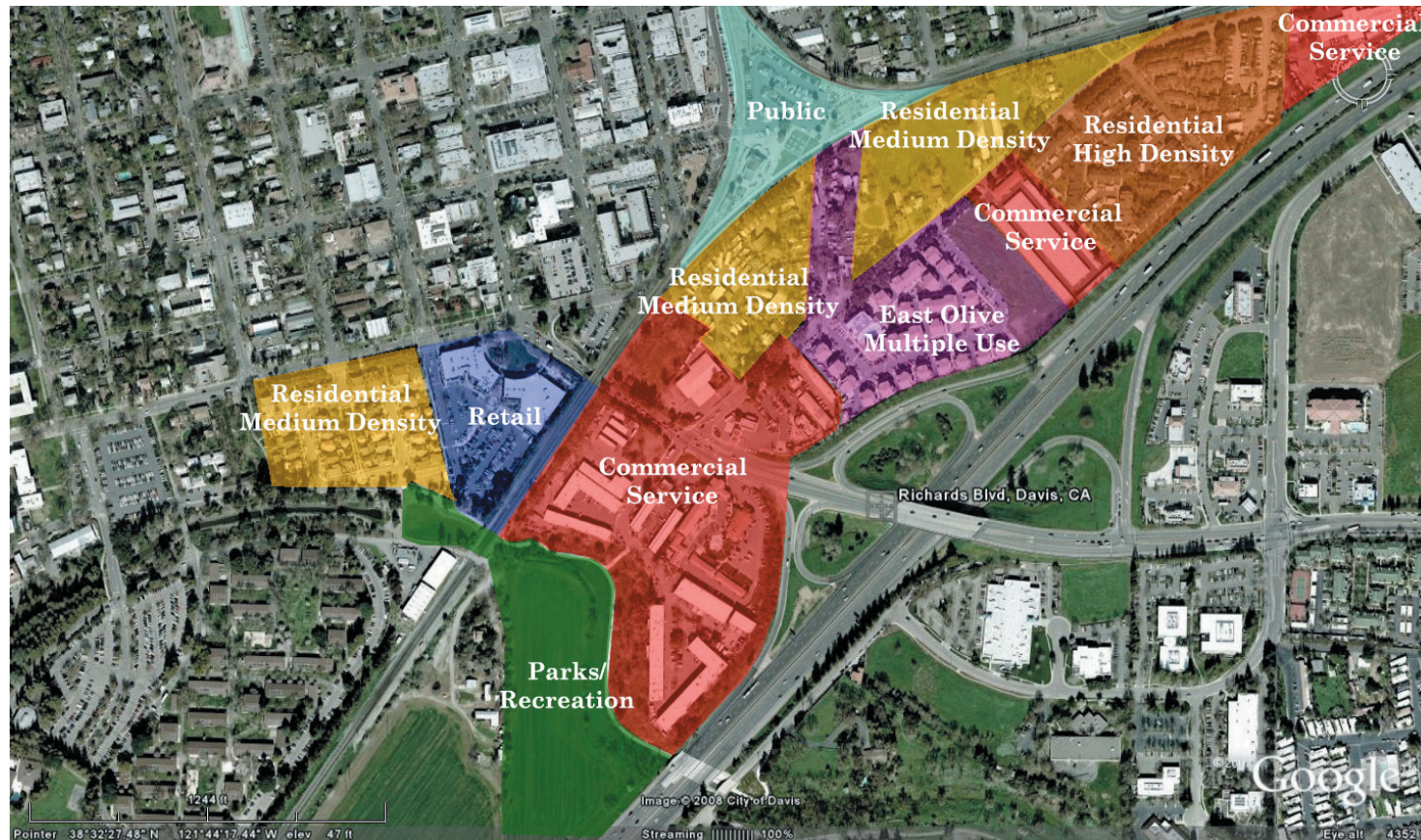


Figure 2.3 Land use diagram

The land use diagram is a little different from the zoning diagram. The land use categorize an area base on its use and occupants. Red areas show commercial services such as restaurants, motels, auto shops and gas station. Orange area shows high density residential, yellow areas show medium density residential, blue area shows retail, purple area is mixed use with residential and stores, cyan area is public domain, and green area shows green space. My design will focus on the commercial services area. I will incorporate mixed-use and some green space in this area.



Circulation Pattern Mapping

Pedestrian Pattern



Figure 2.4 Pedestrian pattern

Figure 2.4 shows the typical pattern of pedestrians traveling through the site. Most of the the foot travel is on the side where the smaller tunnel of the underpass is located. There is not a sidewalk for people to walk from south Davis to Downtown. They all share the southern sidewalk.



Circulation Pattern Mapping

Bicycle Pattern

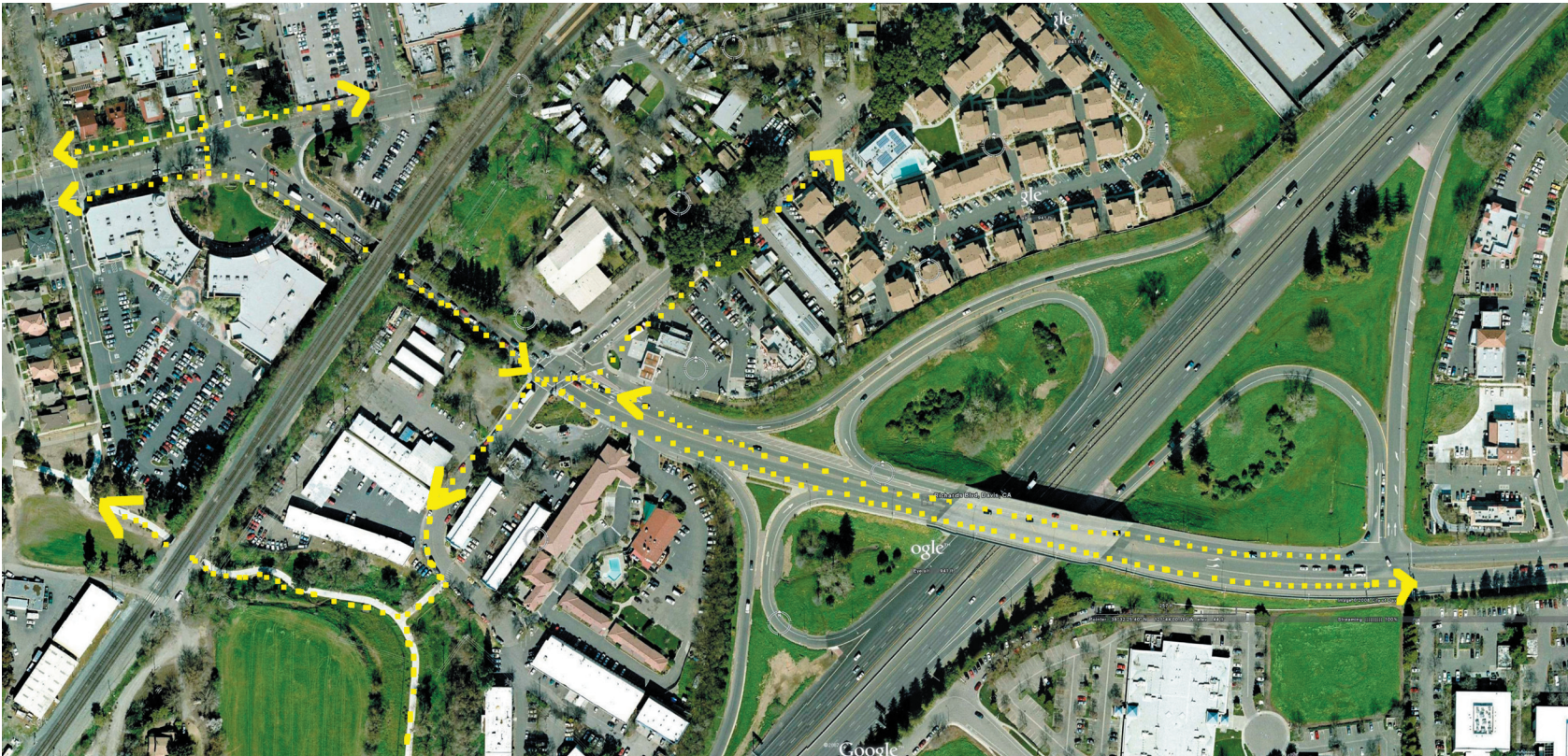


Figure 2.5 Bike pattern

Figure 2.5 shows the circulation pattern for bicycles. A similar problem between the pedestrian and bike pattern is most of the traffic is heavily concentrated on the south side of the boulevard. Although, there is a bike lane on the north side of the boulevard, the bikers still have to get to the southern sidewalk for the Putah Creek bike path or the small tunnel route to get to campus or downtown.



Circulation Pattern Mapping

Vehicle Pattern



Figure 2.6 Vehicle pattern

Brown represent train circulation, while red represent automobiles. Vehicular traffic is highly emphasize in the existing design for Richards Boulevard. There are 3 freeway entrance ramps and 3 exit ramps connected to Richards Boulevard. There is also another exit ramp from I-80 to Olive Drive. All of the freeway entrances and ramps contribute to the traffic congestion of this area. On the east side of the boulevard the layout is 4 lanes traffic. After the you move over the overpass towards the underpass, traffic lanes reduced to three at the intersection of Richards Blvd and Olive Dr. Eventually, as vehicle move through the tunnel it narrows down to 2 lanes traffic, then it opens up again at the intersect at 1st st. and E st. Train circulation does not contribute to the congestion of this area because it is move above the underpass.



Circulation Pattern Mapping

All Traffic Pattern

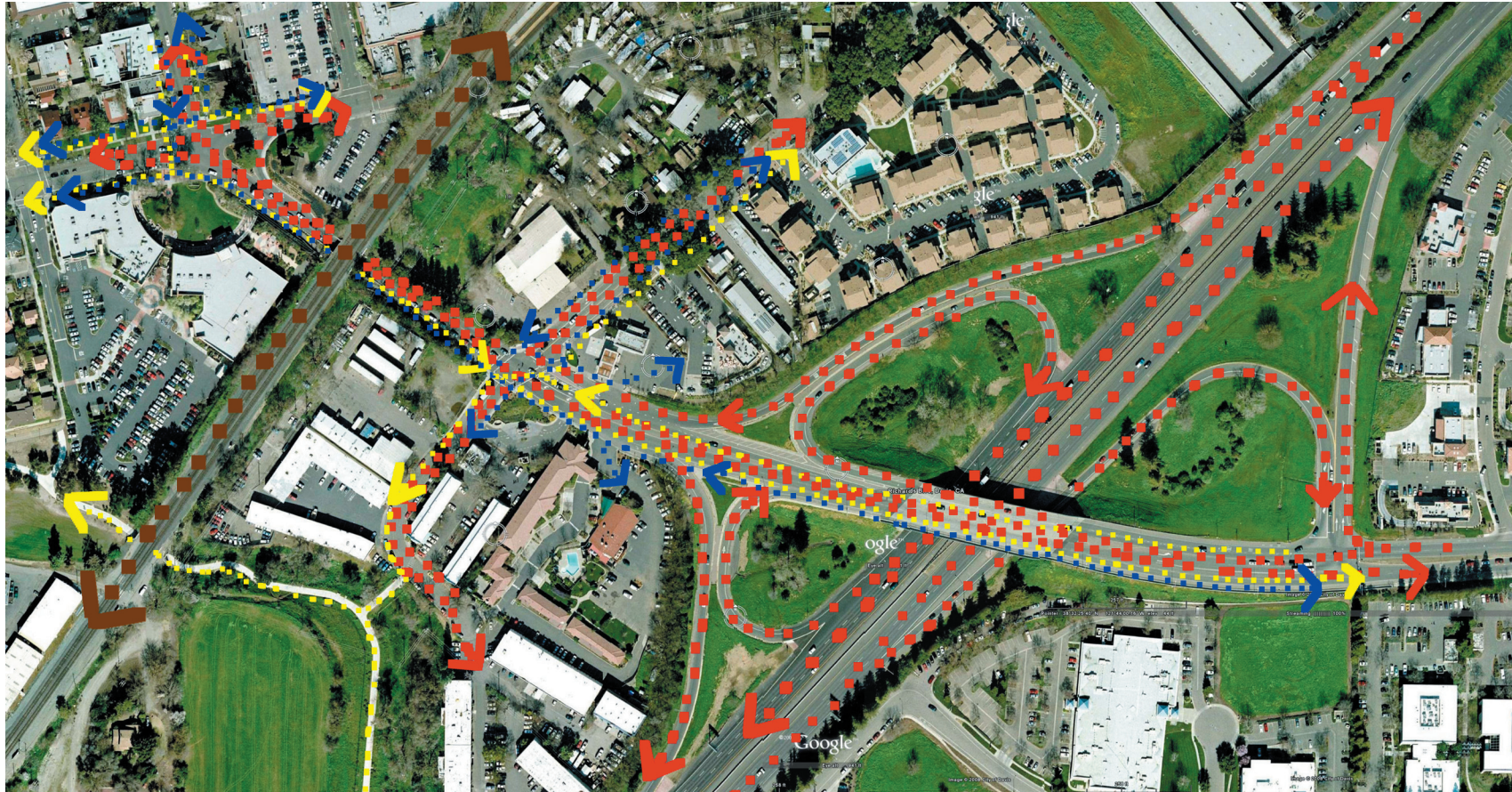


Figure 2.7 Multiple mixed pattern

When all of the pattern is overlaid on top of each other the dominate pattern is vehicular pattern. There is many overlap of circulation between all three entities of pattern. Also, the bike and pedestrian patterns overlap at many routes which is due to the lack of an efficient and friendly bike and pedestrian design. It is a hazardous transition that the bikers have to do once they get on the overpass and back over to the south side because of the I-80 West freeway entrance ramp. My design will emphasize more on making it safer, more efficient, and more enjoyable for bikers and pedestrians, while at the same time help reduce the congestion on the boulevard.






Topography and Noise Assessment



Figure 2.8 Noise diagram

Noise is one of the many factors that determine what kind of activity or facility that go into the site. Knowing where the source of all the noises can help a designer place certain activities or facilities that require more quiet. Also, planting trees and shrubs as sound barrier is one method of mitigating noise.

-  Most abundant and constant noise source
-  Loudest noise source; less frequent
-  Medium volume and constant

Lightest color is the highest in elevation. The overpass is the highest and then it slopes down to the underpass which is the lowest in the elevation. This can affect drivers' visibility which can cause accidents. Know the topography of a site can help a designer plan and design properly and effectively.

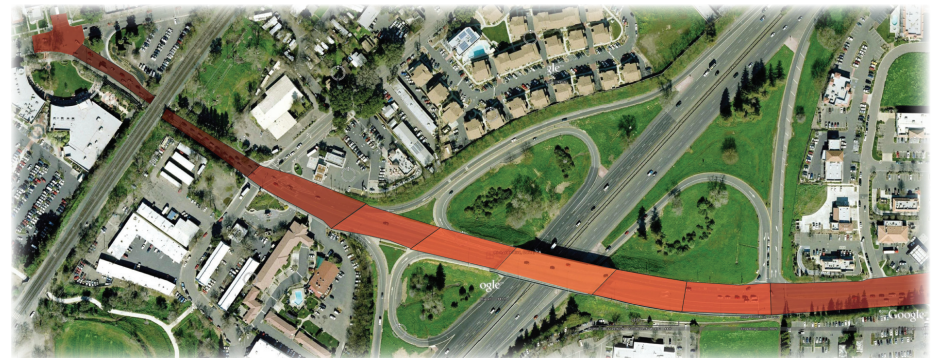


Figure 2.9 Topography diagram



Site Opportunities and Constraints Summary

Opportunities

Location: the location of the underpass and the boulevard is a plus. The area is close to downtown, UC Davis campus, and many access to I-80 freeway.

Land use: the areas are filled with different types of business. This can be improved by proposing more mixed-use facilities.

Vacant land: there are two vacant plot of land that can be used for development that could bring more businesses and residents to this area.

Entry way: this area is a key gateway into downtown which is why it has many opportunities for a city signage. Maybe even an archway. The aesthetic of the area is not attractive and could be improved. Certain facilities are really old and run-downed and can be renovated.

History: Richards Underpass and Olive Drive have historical value. They have been around since the dinosaur age (figuratively speaking), so that is why their histories are very rich and should be kept to improve.

Bike and pedestrian access: there are existing bike lanes and pedestrians access, but it can be greatly improved to make it safer and friendlier for bikers and pedestrians.

Image: Currently, Richards Boulevard does not hold true to its name, so there are opportunities to redesign the street into a true boulevard and create an image for this area.

Constraints

Narrow underpass: The underpass is only has two lanes which is why there are congestions and traffic jam during peak hours on Richards Blvd, especially from the intersection on First st. and E st. to the intersection of Olive Drive and Richards Blvd.

Railroad tracks: the underpass is under the Southern Pacific railroads which add to the restrictions of any expansion of the underpass. The trains traveling on the railroads do not contribute to the traffic congestion on Richards Blvd, but it does produce a great deal of loud noises.

Topography: as shown in previous pages, the slope on Richards Blvd can be hazardous to people because it reduces visibility of drivers.

Freeway: There are too many entrance and exit ramps from I-80 connected to Richards Blvd. This increases the danger to pedestrians and bikers. Poorly design bike lane going west bound that intertwine with the freeway entrance lane to I-80.

Politic and finance: The biggest factor that affects any development is politic. Politic controls everything from easements to money.



Surveys and Interviews

One way to fully understand a site is to talk to the residents and users of the area because they have been at the place longer and use it more frequently. They are the so called “experts” of the site. A landscape architect cannot be at the place all the time of the year, so relying on local users is a good effective ways to find out their feelings and opinion of the site. My method to do this was passing out a survey with questionnaires. These questionnaires range from short and general questions to specific questions. I ask different age groups, ethnicities, and income status. The majority of the people who answered my surveys were people I know from work, school, and other affiliates. It is much easier to get people who I know to answer a survey for me. The surveys took about 12 to 15 minutes to answer. My objective of the survey was to find out how people feel about the underpass and the boulevard. Also, I want to know how they feel about the city of Davis in general. From the responses I received it seems people generally like Davis for its bicycle friendly atmosphere, its small town, safe and friendly environment. Although, the majority of the people do not like how narrow the underpass is, and most of them avoid traveling on Richards Boulevard because it usually is congested. Here is a copy of the survey.

Richards Underpass Redesign Project

Thank you for taking the time to take this quick survey. My name is Nha Nguyen, a student at the landscape architecture major from UC Davis that is involved in the redesign of Richards Underpass for my senior project. To develop a design that is appropriate and effective for the Richards Underpass and Richards Boulevard, we want to find out more about the area, and the people who live around here, travel through here, and use this area extensively. These questions will take around 10 minutes to complete. You have the option to remain anonymous.

1. How long have you lived in Davis?
2. Do you live around or near this area of Davis?
3. How would you describe the city of Davis?
4. What do you like most about Davis?
5. Do you have a favorite hang-out spot or a place that you go to that is important to you that you don't want to see any changes or development done to it?
6. How do you feel about the Davis Commons?
7. Are there any places you feel unsafe or unwelcome in Davis or around this area? Explain why.
8. Are there any places that you feel you are restricted from going to for any particular reason? If so, why?
9. Are there any activities or use patterns in Davis that you



Surveys

would considered unique to this city?

10. Would a disturbance of those activities affect your daily life? Why or why not?

The following questions are general questions about transportation in Davis.

11. What is your opinion and feelings about the Richards Underpass in terms of traffic flow, aesthetic, etc.?

12. Do you own a bike? If you yes, how often do you use your bike to travel around Davis?

13. Do you feel safe biking or walking along Richards Boulevard? Why or why not?

For these next questions, I want you to think about the vision for the future.

14. What would you want to be built on the two vacant lands next to the Richards Underpass? What would you want people to be able to do there?

15. Besides the Davis Commons, what would attract your interest to come to this are

Thank you very much for your time. Would you like to stay anonymous: Yes No

Name: _____

Would you like to participate in any future survey, or have input in the redesign of Richards Underpass?

Yes No

Email: _____



My Inspirations

Different cities throughout the world have come up with different ways to decorated and display the city's entry way. For example, some cities in the United States constructed archway as a way to symbolize a gateway or door into the city's core. Also, archways can also be seen far away and they can be beautifully designed to make a city's entrance a piece of art. It is no wonder that some cities use archway because the form is borrowed from arches. Arches have been around since the Romans time. Architecturally, arches are structurally strong because it can disperse forces evenly through the side. Culturally, they can have many different meanings depending on the culture.



Figure 3.1 Lodi, Ca welcome archway

Figure 3.2 Dixon, IL welcome archway.



Another way some cities decorated their entry into the city is placing the city's signage on a boulders or on some other structure. This method of welcoming visitors or residents has its advantages and disadvantages. One advantage is that it can be easily incorporated into the landscapes such as decorating the signage with flowering shrubs or tree. The disadvantage of this way of signage is it has to be placed on the ground. The city's name and welcoming message is lower on the ground making it less visible for people to see from afar and while moving in their vehicles or bike.

Figure 3.3 Dunedin signage

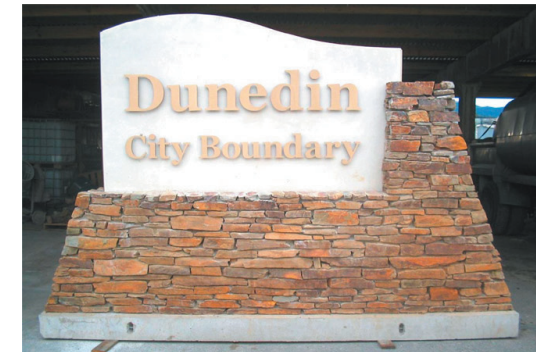
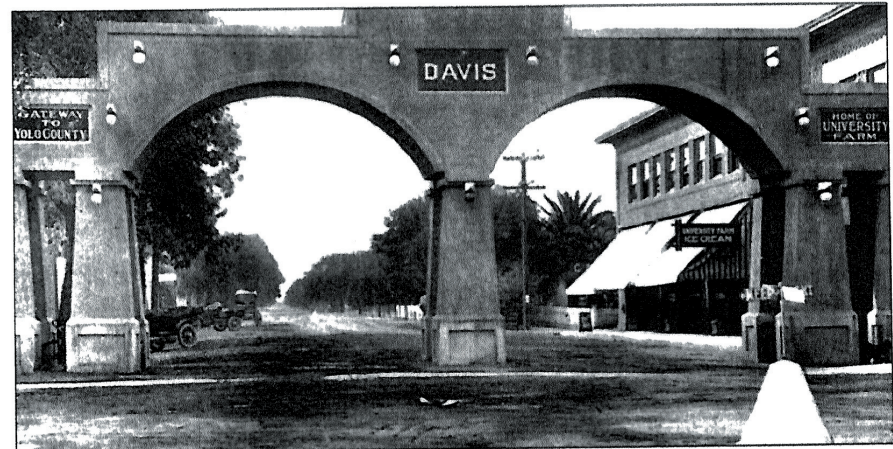


Figure 3.4 Crescent Run signage



As for the city of Davis there is really no true welcoming signage. Even though there are many ways to enter Davis, one area has the most potential due to its existing conditions. In order for the residents in South Davis get to the UC Davis campus or downtown, the shorter and most obvious route is to travel on Richards Boulevard and through under the Richards Underpass. The underpass represents an entry from south Davis to the core of Davis. Although, there is a signage on the side of the underpass, but it is obscured by the trees foliage. The signage is not aesthetically pleasing, nor is it sufficient in representing Davis' pride and reputation. From looking at ways to decorate and represent a city's entry I have decided to bring back the Davis's archway from the 1920s in my design. My inspiration comes from the popular use of archways throughout the United States.



SECOND STREET LOOKING WEST, C. 1917: SECOND OF SEVEN. This is one of two commonly copied and artistically rendered views of the Davis Arch, a structure spanning Second Street at G from 1916 to 1924. (UCD Special Collections.)

Figure 3.5 Old photo



Proposed Solutions

This page will summarize the goals I set out to accomplish and my solutions.

1. Propose new development and mixed use facilities to the area

Newly proposed park, bike museum, and mixed-use plaza. This will attract more business and people to this area.

2. Improve traffic flow on Richards Boulevard to make the transition through the underpass smoother

Close down two freeway entrance and exit to convert the section into an intersection.

3. Create a sense of place to this area

Add a modified Davis archway to create a true entry experience to downtown

Bring back element from the past

4. Redesign Richards Boulevard into a true boulevard

Add a median on Richards Boulevard

Plant more street trees

More lanes for bikers

5. Provide safer and better circulation for bikers and pedestrians

Redesign bike lanes on the overpass to be safer for the bikers

Add a left diagonal turn lane at the Olive Drive intersection

6. Improve the aesthetic of Richards Underpass and Richards Boulevard

Plant more flowering trees and shrubs

Add decorative paving

Decorate the railway of the underpass and overpass with similar theme to Davis' old bike. Repaint the area with similar theme colors





Fig. 4.1

Four highlighted areas are my proposed development. The two areas closest to the railroad are vacant land right now. The other two highlighted areas are currently occupied by a gas station, fast food restaurants, a motel, and auto shops.

1. Propose new development and mixed use facilities to the area

Newly proposed park, bike museum, and mixed-use plaza. This will attract more business and people to this area.



1. Proposed park
2. Proposed bike museum
3. Mixed use buildings
4. Mixed use buidings

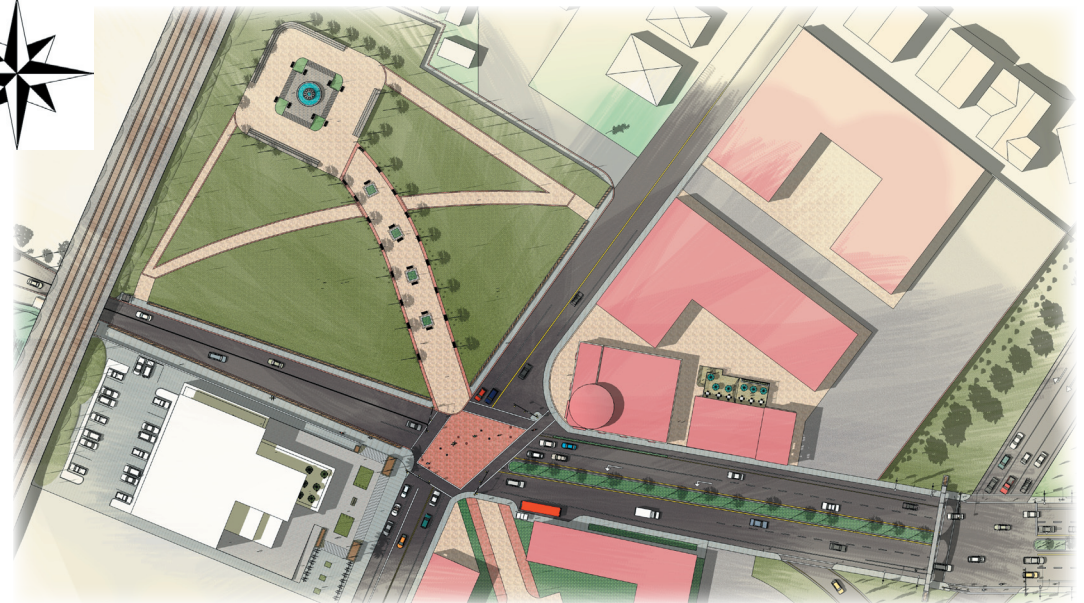


Fig. 4.2 Plan view 1

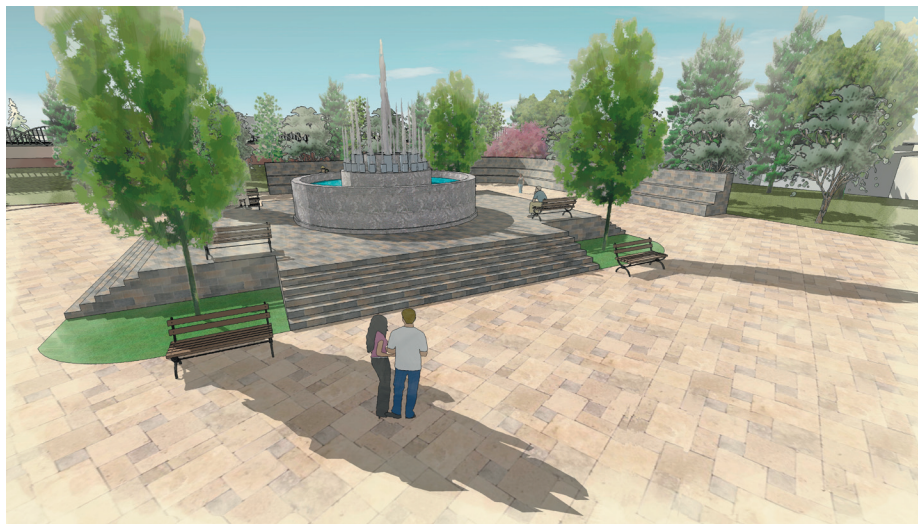


View facing southeast towards the mixed use buildings and proposed bike museum. The main path of the park correspond to the path of the mixed use restaurants. In the center of the park are retaining walls that act as benches. There are rows of trees planted to provide plenty of shade.



Fig. 4.3

Fig. 4.4



The water fountain has jet propelled water shooting up for entertainment. There are plenty of benches throughout the park for people to sit.





Fig. 4.5

The new bike museum locate adjacent to the new park. This bike museum showcase all types of bike model. There is also a bike rental facility in the museum for visitors to rent bikes and they can bike into downtown. The museum has outdoor eating areas on the second floor with the views looking across the park and other mixed use facilities.



Before pictures



Fig. 4.6



Fig. 4.7

Bike parkings are right in the front of the museum to advocate more bike uses. There are also some on street parking in front of the museum. The architecture of the museum was inspired by the Gardiner Museum in Toronto.



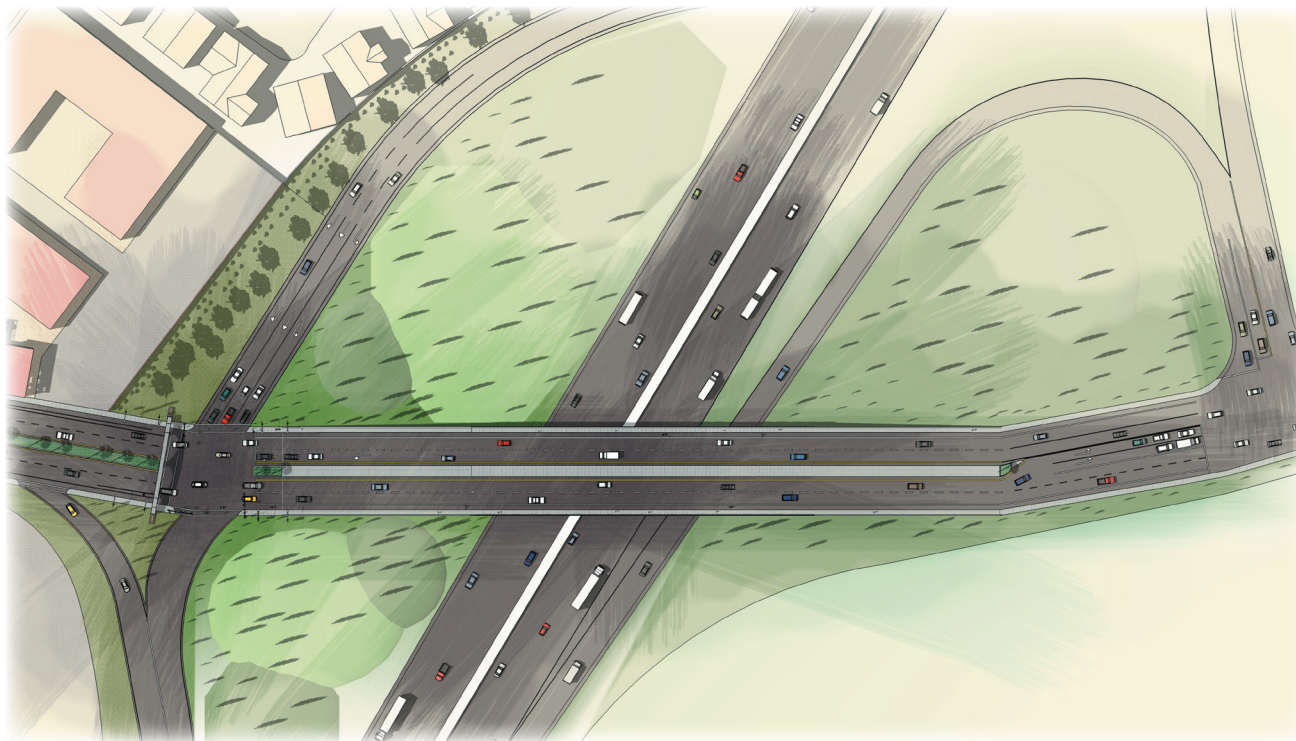
Highlighted in orange is an addition of an intersection. The yellow highlighted sections are areas with minor changes, such as decorative pavings, newly designed railway, trees plantings, etc.



Fig. 4.8

2. Improve traffic flow on Richards Boulevard to make the transition through the underpass smoother

Close down two freeway entrance and exit to convert the section into an intersection.



Bike lanes are redesigned, with an added median, archway and freeway intersection.

Fig. 4.9 Plan view 2





Fig. 4.10

The entry ramp to I-80 West is close off making it possible to expand the exit ramp on the north side while also accommodating the archway. The west-bound direction are kept two lanes with one travel straight, while the other lane is for left turn into the new proposed entry ramp to I-80 West to San Francisco.

Before



East bound traffic will have the entry ramp to I-80 to West San Francisco as it was originally designed. Although, now there are added sidewalks and clearly marked bike lane east bound.

After



Fig. 4.11



Birds eye view looking east.



Fig. 4.12

The exit ramp to the north accommodate 3 lanes. One right turn lane into Richards Blvd going west bound, 1 lane to merge back into I-80 and the other lane is for left turn into Richards Blvd going east bound. Timely traffic signals will regulate the movement of traffic





Fig. 4.13

3. *Create a sense of place to this area*

Add a modified Davis archway to create a true entry experience to downtown. Bring back element from the past

When people are coming into downtown from south Davis they will truly know they are entering into downtown with this archway prepares them for the rest of the area before even getting into the underpass.

The modified archway has the capacity to accommodate 4 lanes traffic, 2 bike lanes and 2 sidewalks to pass underneath it. It stands at a height of 24 feet and a width of 120 feet.



Fig. 4.14





Fig. 4.15

The material of the archway can be fancy marble or stone. The middle engraved sign on the archway reads: Welcome to Davis "Bicycle Capital of the World". I added the motto there because Davis was given that title. This small gesture would suggest to people that this city is very bike friendly. The engraved signage on the left reads: Home to University of California, Davis. Besides being know for its bike, the city of Davis also home to the UC Davis campus. The sign on the right reads: Gateway to Downtown. This is my intend of this archway...to replace the underpass as the gateway to downtown.



4. Redesign Richards Boulevard into a true boulevard

Add a median on Richards Boulevard. Plant more street trees. Add more lanes for bikers.

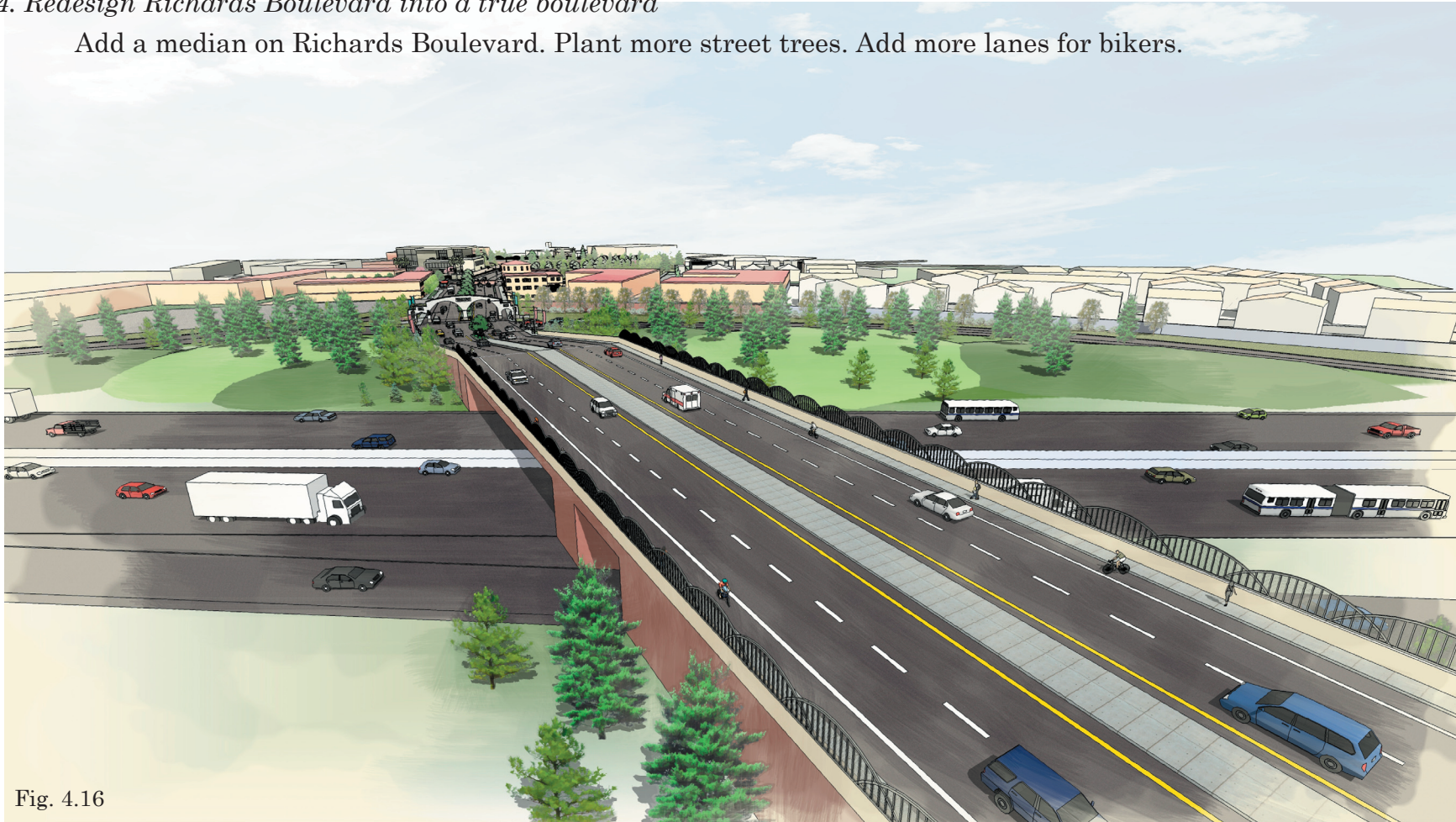


Fig. 4.16

A median is added to Richards Boulevard to accommodate street trees and provide a more boulevard look. The boulevard width was essentially kept the same; nothing was widened or reduced. I replaced the turn lane in the middle of the street into a median. Trees cannot grow on median on the overpass so that is why there are no plants on the overpass median area.



5. Provide safer and better circulation for bikers and pedestrians

Redesign bike lanes on the overpass to be safer for bikers. Add a left diagonal turn lane at the Olive Drive intersection. Add a turn in lane for the Unitrans bus to stop.

Fig. 4.17

Bike lanes now go direct to the intersection of Olive Drive without forcing bikers merging over to the middle like before. This is possible with the closing of the entry ramp to I-80. This can greatly increase the bikers' safety while also keeps the traffic moving with them have to slow down because of crossing bikers. The railway on the overpass are redesigned with arc instead of rectangular set up like before.



Cars entering the new entry ramp to I-80 West to San Francisco.



Fig. 4.18





Fig. 4.19

A current delima at the intersection of Olive Drive and Richards Blvd is the bikers and pedestrians have to get from the right side of the street to the left side where the newly proposed bike museum is. They have to cross the street because they need to go through the bike tunnel. I propose to add in a left diagonal turn lane for bikers to help make the transition smoother and more effective. On the ground will be marked with a darker paving pattern to guide the bikers while it is discrete enough not to distract the drivers. The fancy pavings suggest to people that this intersection is important.





Fig. 4.20

I added a turn in lane for the bus to stop to unload and pick up passengers. This will allow the bus not to block the bike lane; thus, increasing bikers' safety and keep traffic moving because the bikers won't move out into the street.



6. Improve the aesthetic of Richards Underpass and Richards Boulevard

Plant more flowering trees and shrubs. Add decorative pavings. Decorate the railway of the underpass and overpass with similar theme to Davis' old bike. Repaint the area with similar theme colors. Improve infrastructures.

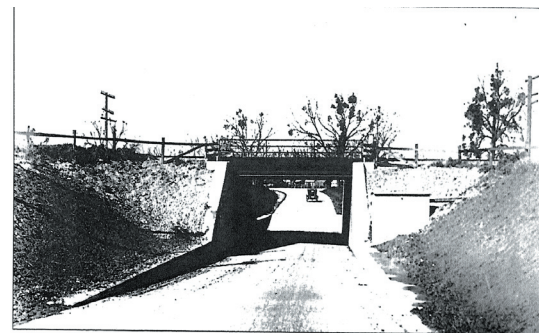
The pump house right now is an eye sore because it seems out of place and dilapidated. Not a lot people know that the pump house is necessary to pump water from under the underpass to the sewage drain. I propose to renovate the house with better materials, repaint it and place a sign with information for the pump house. It can be like a statue that park goers can come check out when they visit the park.



Fig. 4.21 Future vision



Fig. 4.22 Current photo of the pump house



THE DAVIS SUBWAY LOOKING NORTH, c. 1920. The pump house shown on the right is still there. (California Department of Transportation.)

Fig. 4.23 Old photo of the pump house

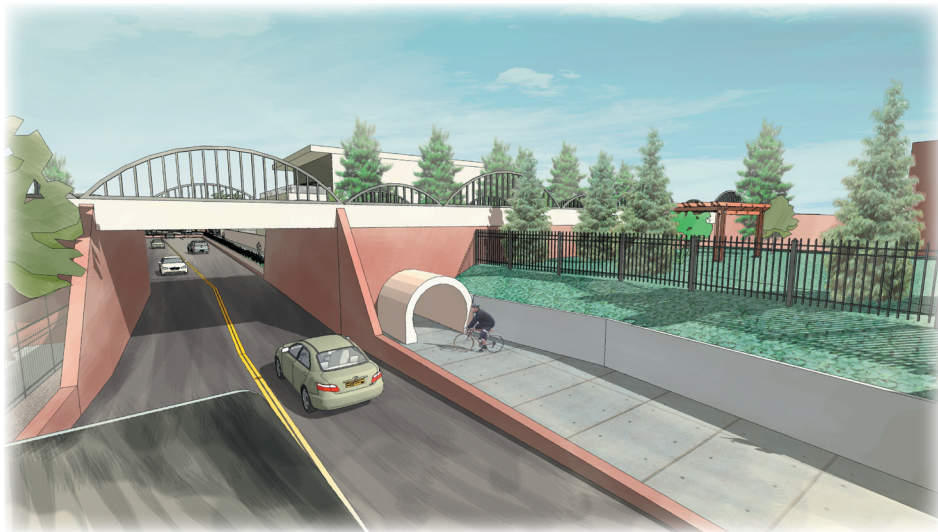


A view looking towards the east from a passenger in a moving Amtrak. The railings mimic the old Davis bicycle with the large wheel and small wheel. Although, it is only a semi circle, it still has some resemblance. More flowering plants are planted near the underpass to improve the aesthetic of the tunnel.



Fig. 4.24

Fig. 4.25



Conclusion

The purpose of this project is not to come up with a design that can solve all the issues on Richard Boulevard and the Richards Underpass. Rather it is one of the many possible designs, but most importantly this is to show that there are alternatives to widening the tunnel.



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