

# WEST SACRAMENTO URBAN FARMS

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# PROJECT OVERVIEW

01

## SUITING UP

- Team Members
- Community Partner
- Goals

02

## GOING TO THE PEOPLE

- Spatial Context
- Visual Observations
- Social Context
- Design Strategies

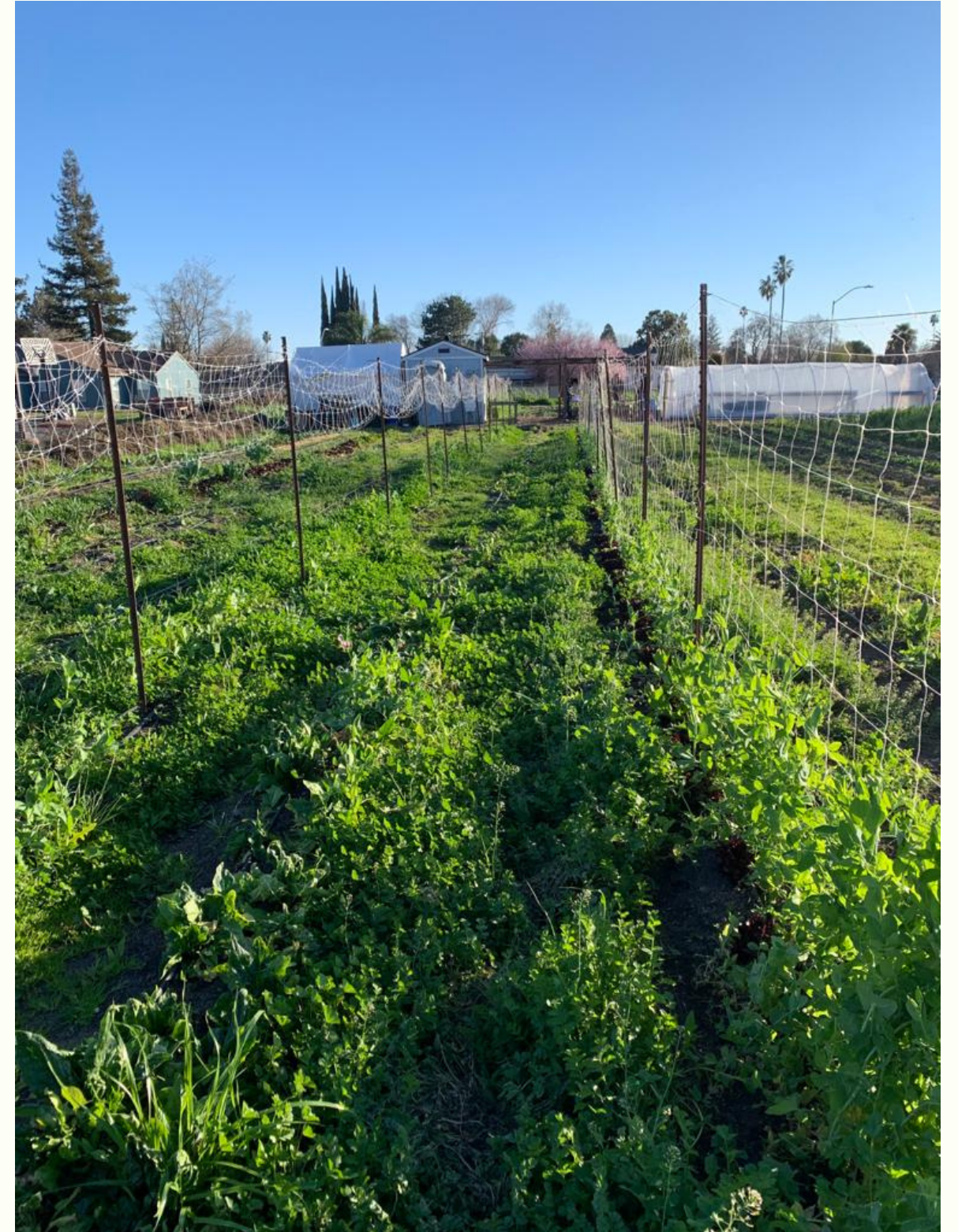
03

## YEAH! THAT'S WHAT WE SHOULD DO

- Site Maps+ Case Studies
- Case Study Summary
- Project Takeaways
- Reflection



# SECTION 01: SUITING UP



# TEAM MEMBERS



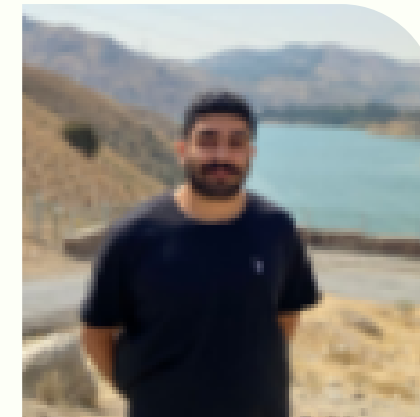
**Zach Skalak**

GIS Specialist, Writing  
Co-lead, Graphics Asst.



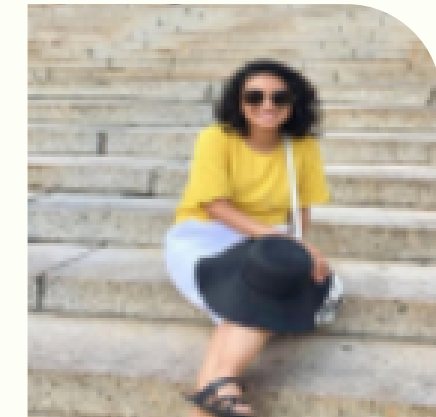
**Nathalia Burini**

Auto CAD Co-lead,  
Graphics Co-lead



**Amirali  
Kourosmehr**

Researcher, Organizer



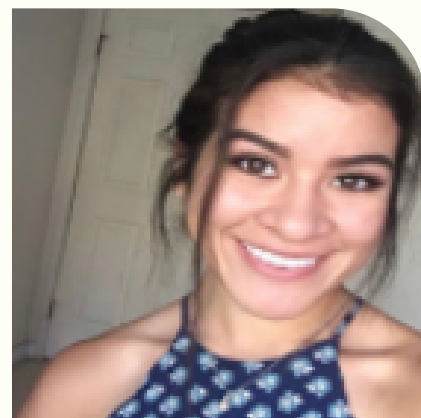
**Angela Jimenez**

Researcher writing  
Lead, outreach lead



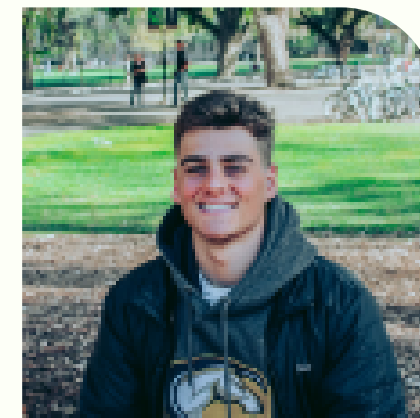
**Daniel Whelan**

Writing Co-lead,  
Researcher



**Samantha  
Garcia**

Auto CAD Co-lead,  
Graphics Co-lead



**Leo Vodantis**

Researcher, Data  
Synthesizer



**Nicolas Chew**

Researcher, Organizer



# COMMUNITY PARTNER(S)



**Sara Bernal, Center for  
Land-Based Learning**

## Farmers:

Three Sisters Farm- Alfred Melbourne  
We Grow Urban Farm & Market- Nelson Hawkins  
Bella Vida Farms- Cindy Gause  
Riverfront Farm- Sara Bernal  
Fiery Ginger Farm- Hope and Shayne

Our group would like to thank Sara for  
being a fantastic partner on this project!



# GOALS

Professional Site Plans  
of each farm

Infrastructure  
Inventory

Case Studies

# SECTION 02: GOING TO THE PEOPLE

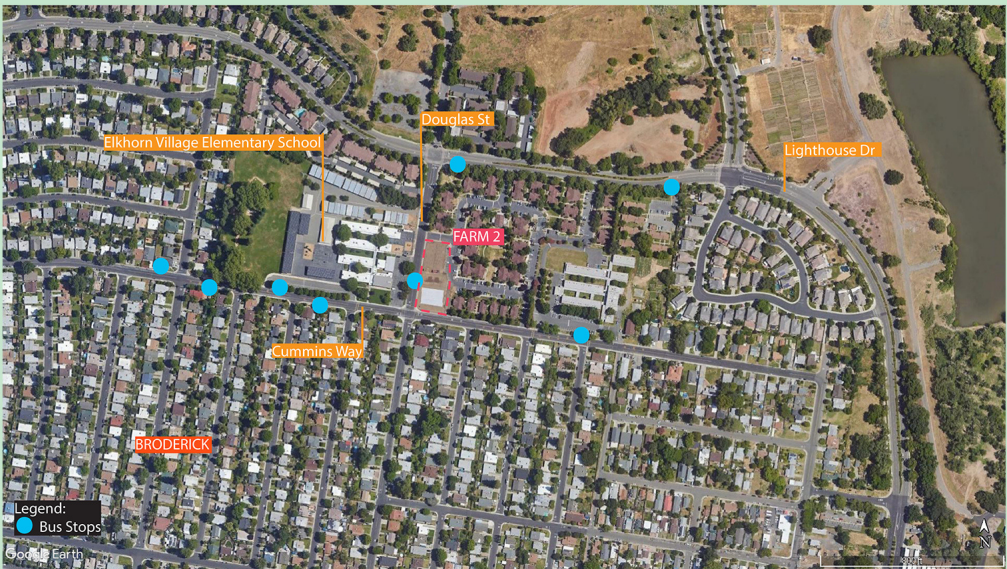




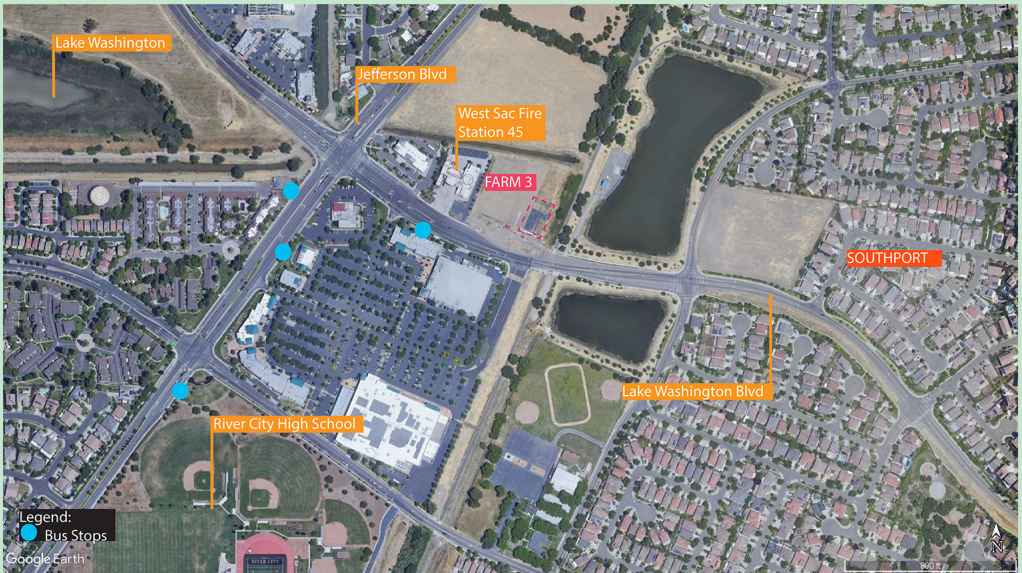
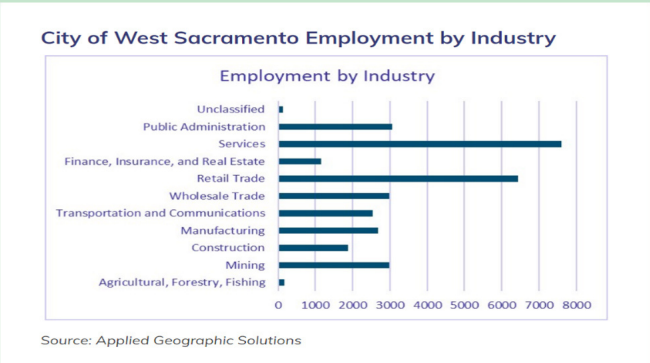
# SITE CONTEXT

Just a short distance from downtown Sacramento, West Sacramento was home to roughly 48,744 people as of the 2010 Census, now estimated at over 53,000. The city has grown dramatically since 1980, with a strong industrial sector. Scattered throughout the city, the five urban farms illustrated above lie within residential, commercial, and mixed use areas.

Cummins Way fills an unused field next to an elementary school and quiet residential streets, whereas Food for Families neighbors Yolo High School and a freeway, and Lake Washington borders a fire station. 5th and C has a central location among residential and commercial streets. Riverfront lies adjacent to Drake’s Brewing along the Sacramento River. All farms maintain a high level of connectivity to the surrounding urban fabric, with nearby bus stops, open spaces, schools, and bridges into downtown Sacramento.



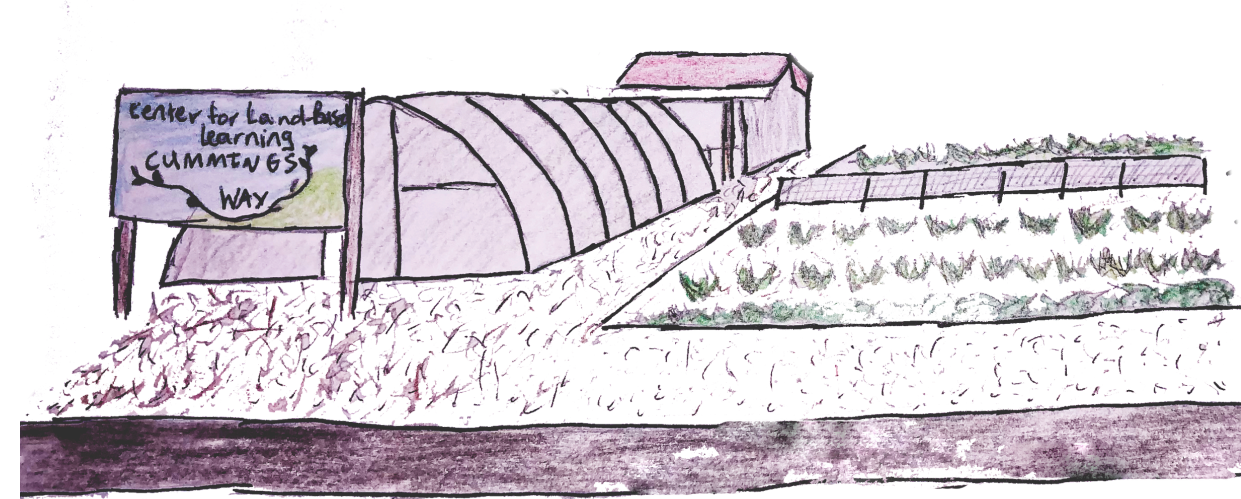
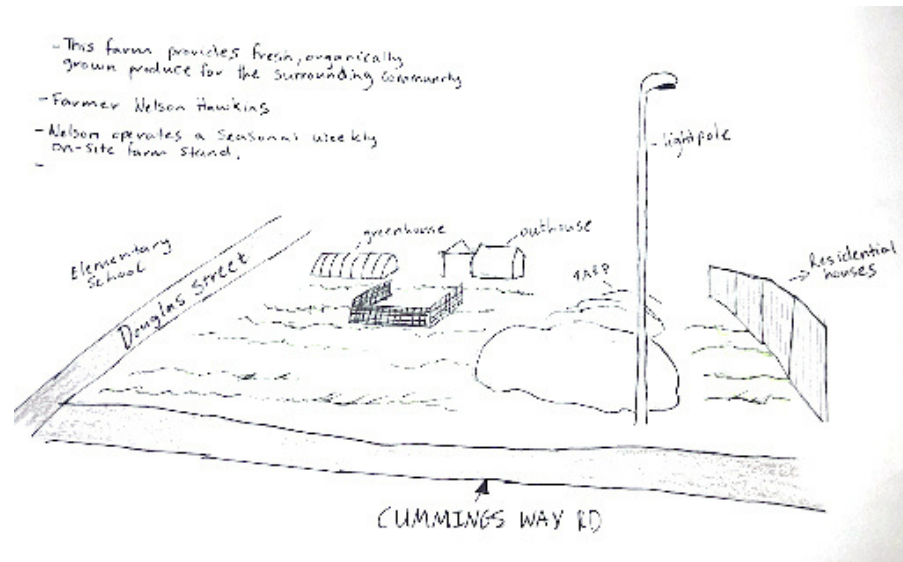
WEST SACRAMENTO URBAN FARMS



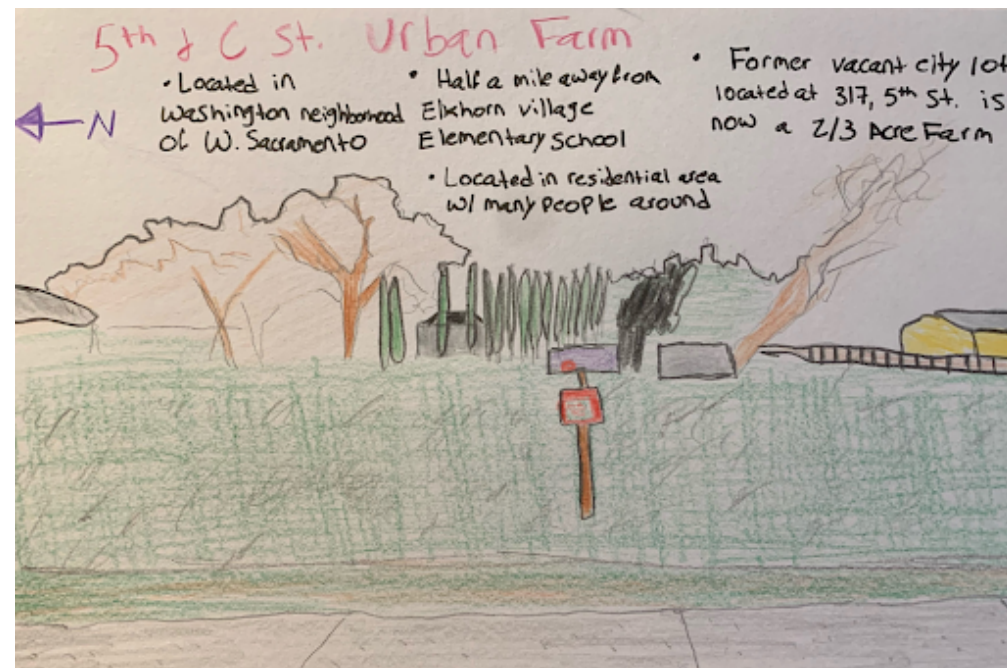
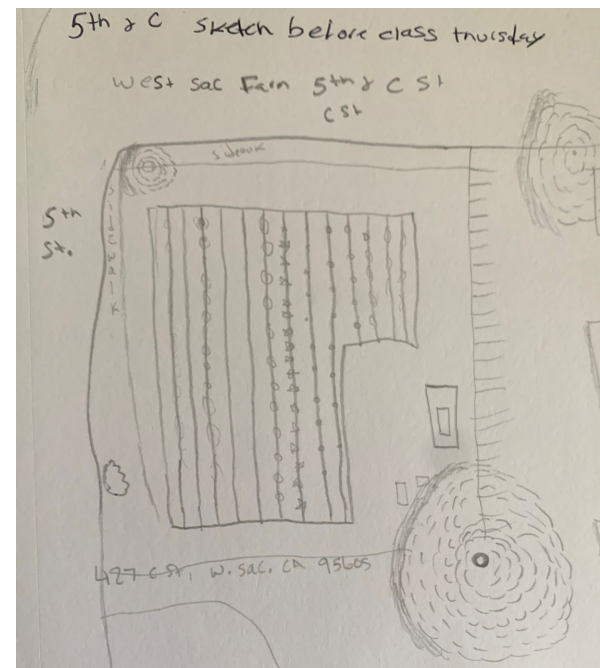


# Visual Observations

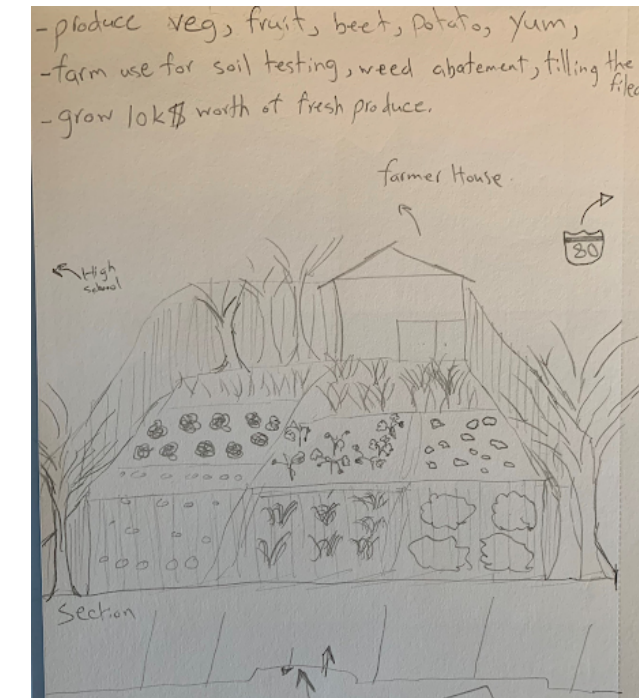
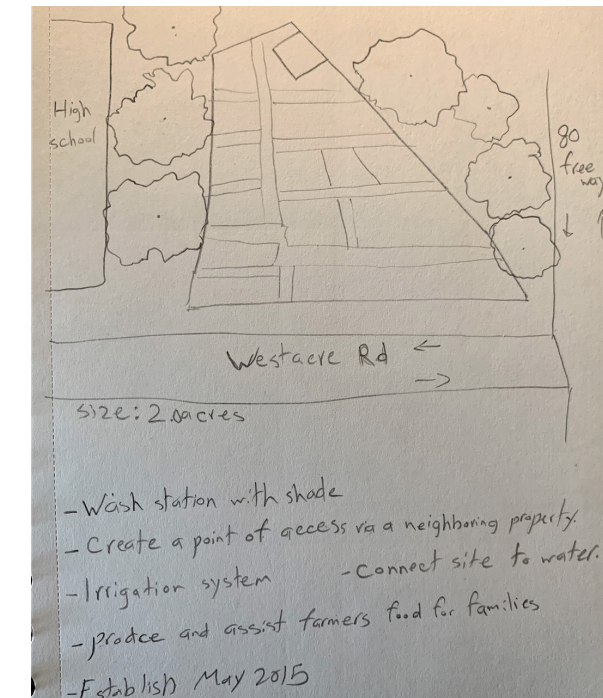
## Cummins Way Farm



## 5th and C St. Farm



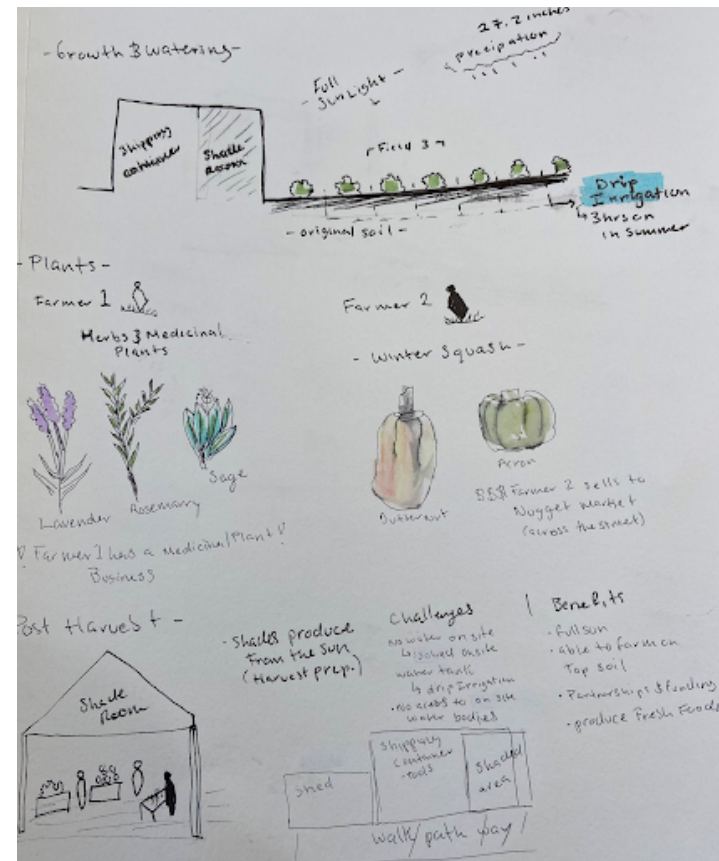
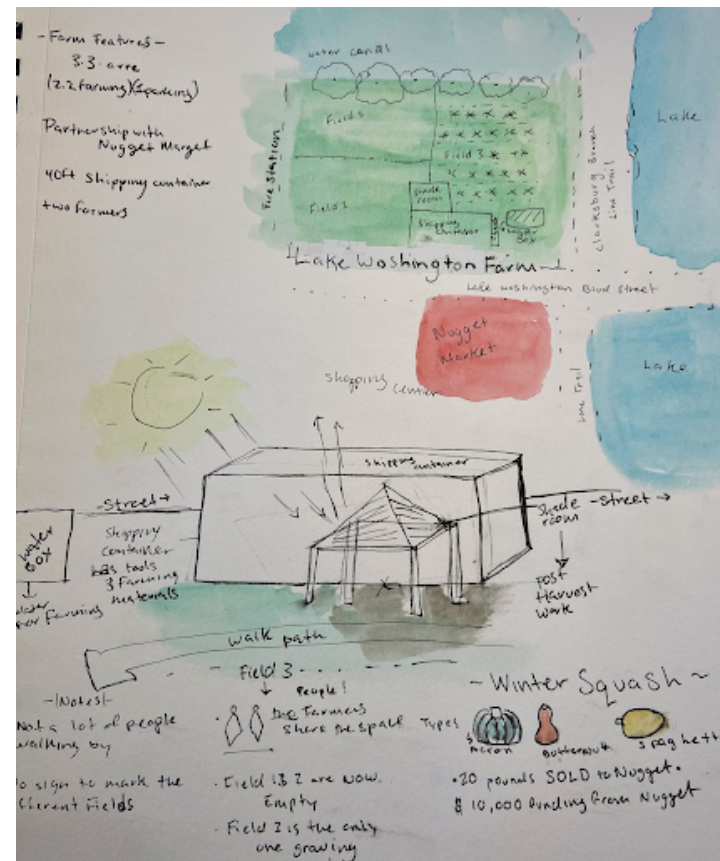
## Food For Families Farm



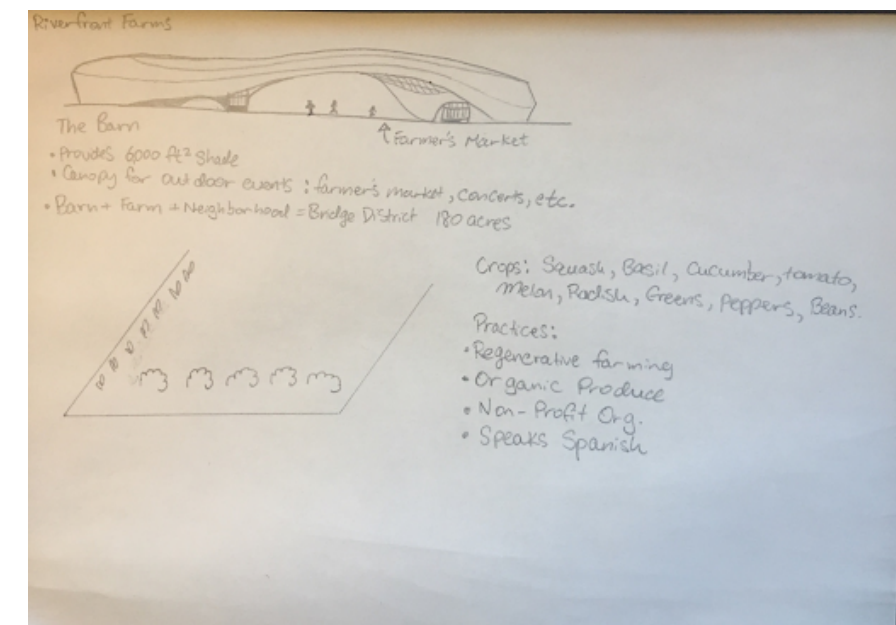
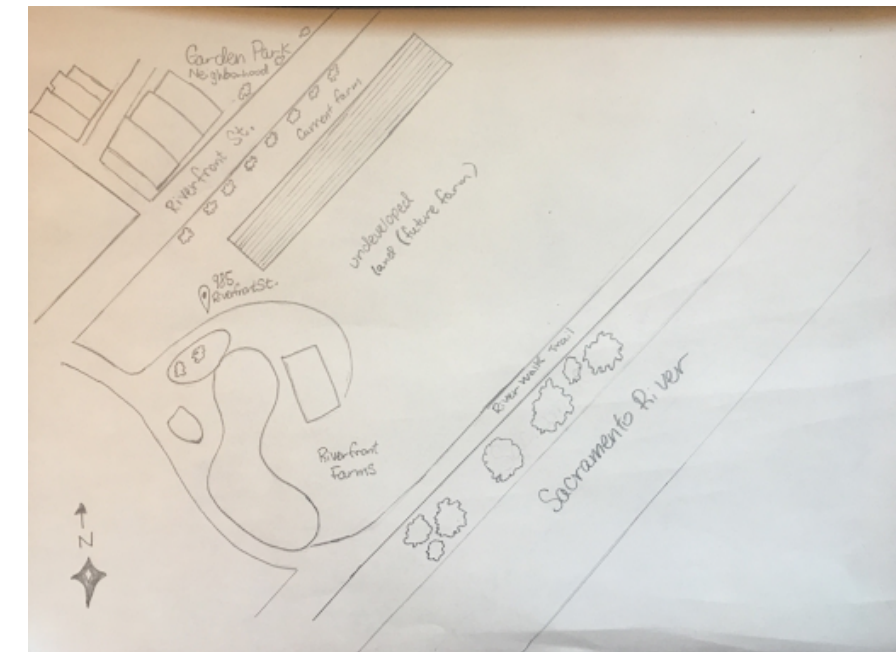


# Visual Observations

## Lake Washington Farm



## Riverfront Farm





# Social Context

## Fostering Community

The Center for Land-Based Learning trains a new generation of urban farmers to create regenerative agriculture businesses. Each of the farms is maintained by one or more farmers, with its own crops and business plan. Farmers learn how to maintain an urban farm and establish partnerships with local businesses and schools.

Farmers stay engaged with community through school field trips, agro-tourism, on-site farm stands, and CSA subscription boxes.

## Community Strengths

The West Sacramento urban Farms thrive due to strong partnerships between individual farmers and community organizations like schools, retailers, and indigenous groups.

### Partners:



CITY OF WEST  
SACRAMENTO



Restaurant demands for local ingredients keep small farms profitable, especially farmers who pander to niche markets offering produce unique to a region or culture.

## Priorities

Accurate scaled drawings of each farm  
Urban farming toolkit

- Improve space utilization
- Identify potential for new site infrastructure
- Inventory of site features
- Guide future development of urban farms in other locations

## Concerns

Non-fenced properties - issues with cars entering field, garbage dumping, and theft

Lack of funding- The City of West Sacramento allocates \$10K a year for the 7 acres of farms. This money only covers 50% of the farms' water bill.

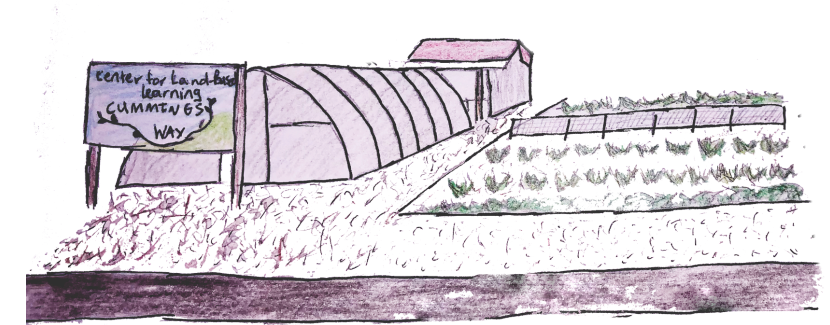
Difficult maintenance

## Questions

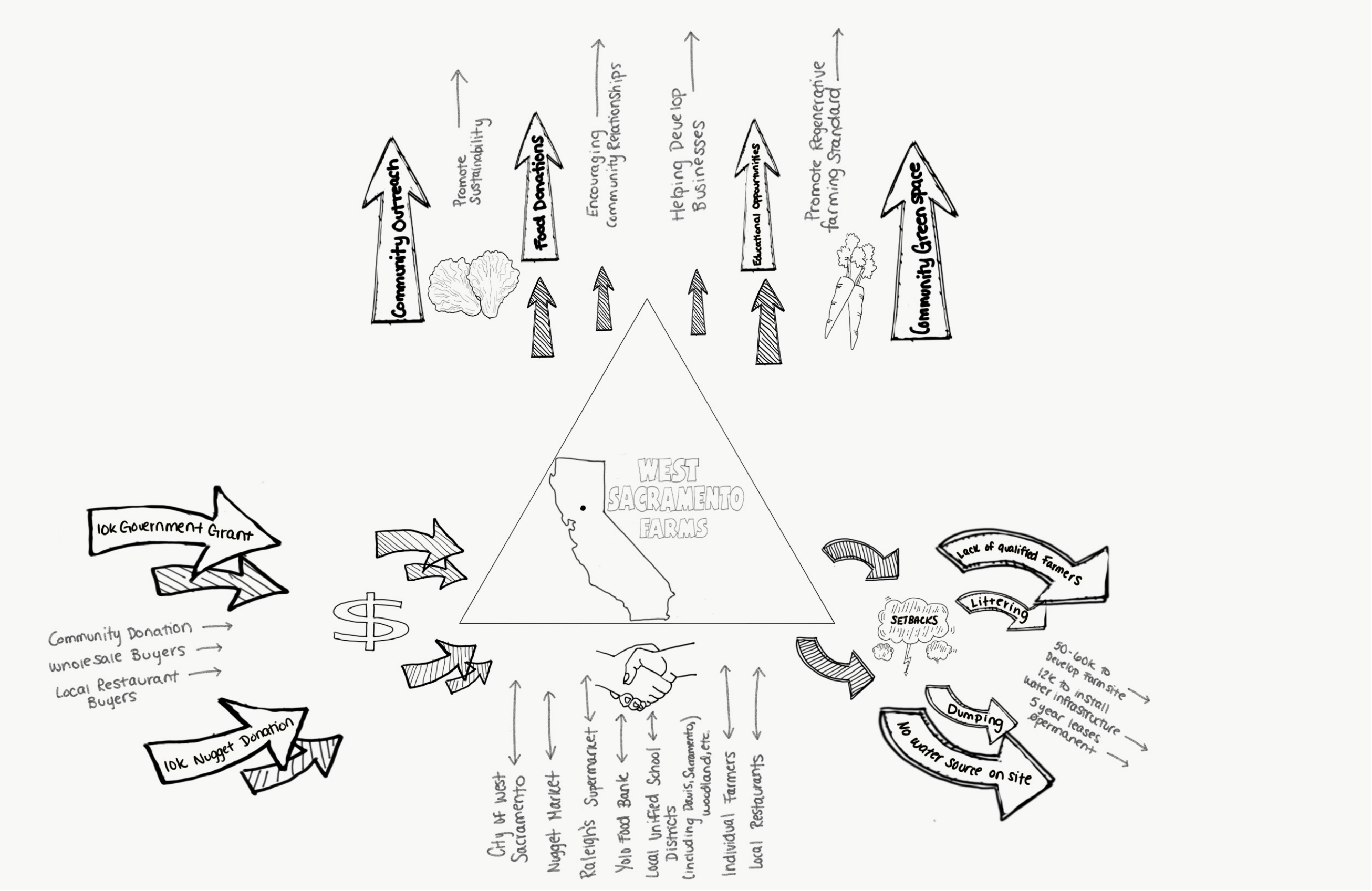
We can anticipate getting these answers through interviews with the farmers from each farm!

Intro Question: What do you like the best about West Sac Farms? What inspired you to grow here?

- Could you tell us more about the regenerative farming practices that you use on your farm? How do you achieve your goals for sustainable farming?
- How does the community interact with you or your farm? What are strategies that you use to become closer to the communities that you work and serve in?
- Do you know how large the farm is? Ideally, would it be larger or smaller, or in a different shape or orientation to the sun? What tools or infrastructure could you use to increase your operations?
- What is your favorite feature or element of the farm? Is there any other feature you would add to make it even better? Are there other farms that you would like to borrow features from?
- Did you face any challenges when you first started cultivating your business at West Sac Farms? If so, what were they? What would you change about the site if you could?



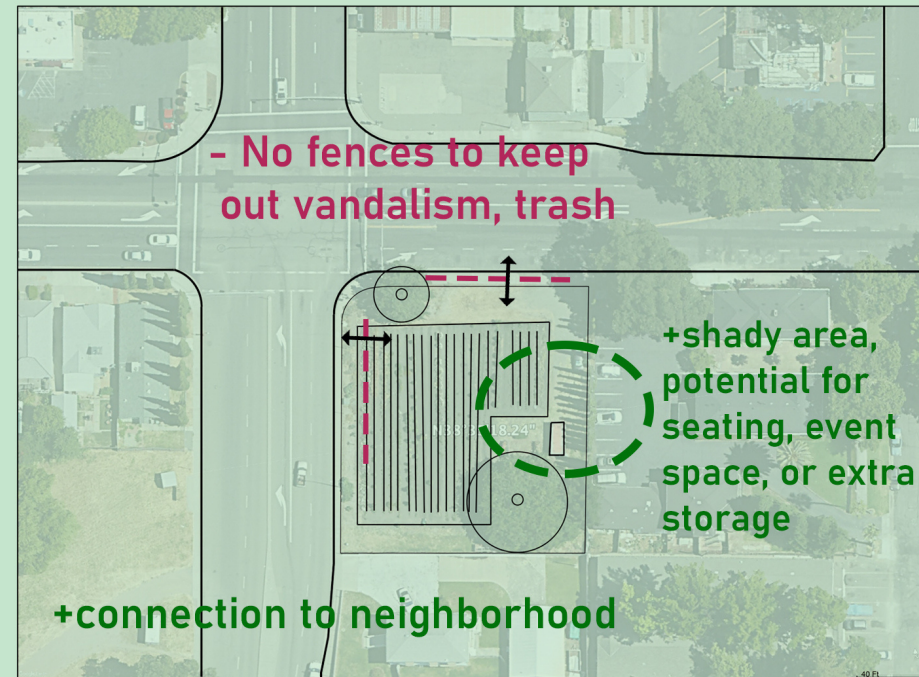
# Relatogram: Power Mapping



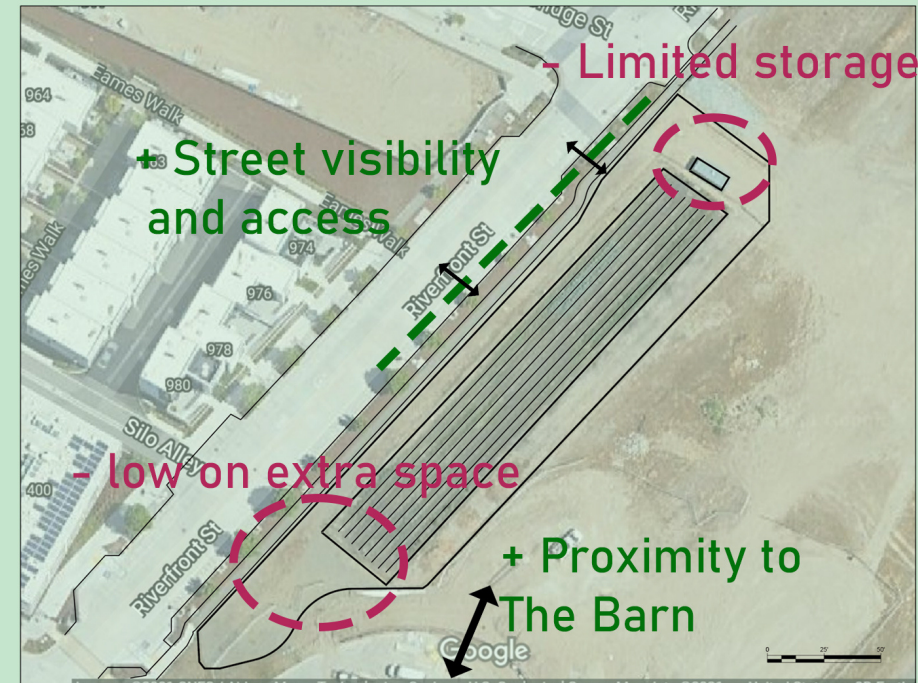


# SITE ANALYSIS

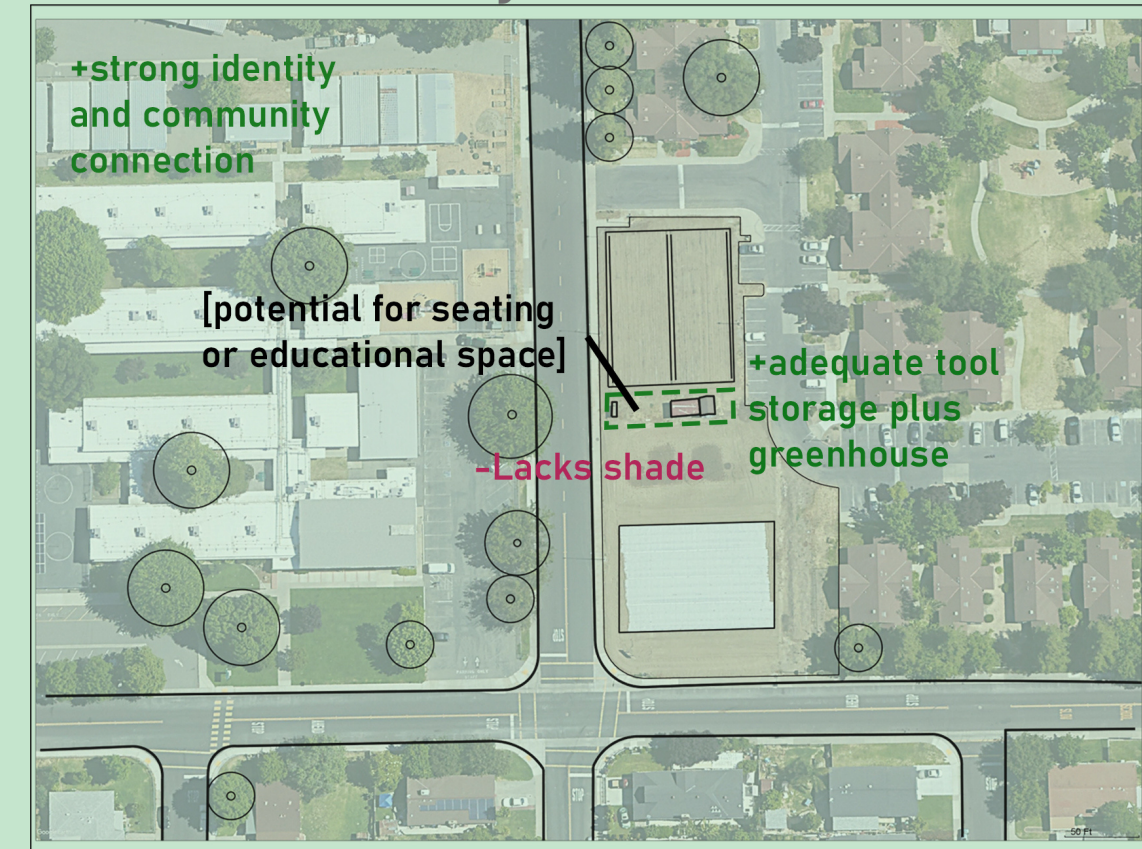
## 5th and C: 1 Acre



## Riverfront: 0.25 Acre



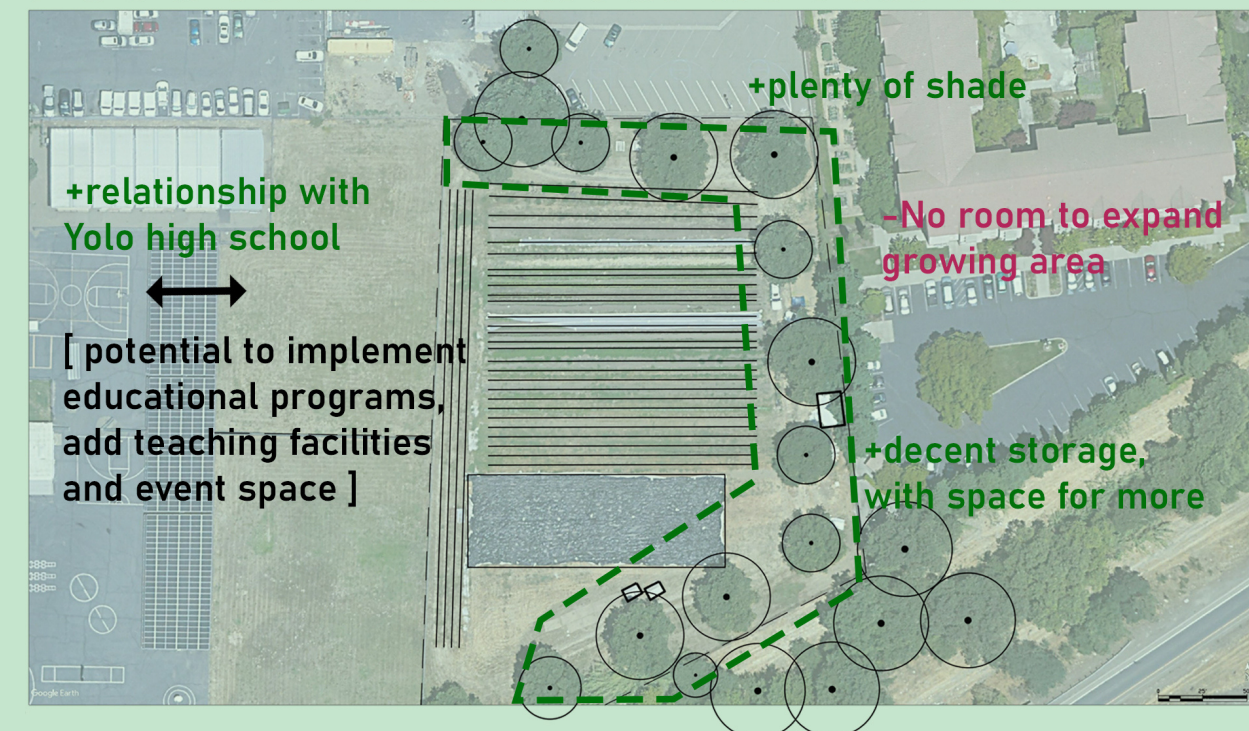
## Cummins Way: 1 Acre



## Lake Washington: 3.3 Acres



## Food for Families: 1.5 Acres





# Design Process

## DESIGN APPROACH

- Understand use of space by each farmer
- Catalog site features
- Analyze successes and areas of improvement

## TECHNIQUES:

- Visit the farms and measure with rolling yardstick
- Use Google Earth for other dimensions
- Interview farmers to determine use of space; what works and what doesn't

## SECTION 03:

# YEAH! THAT'S WHAT WE SHOULD DO



# STEP ONE: INTERVIEWS

What do you like the best about West Sac Farms?

Regenerative farming practices?

Community connection?

Size, shape, sun orientation? What tools or infrastructure could you use ?

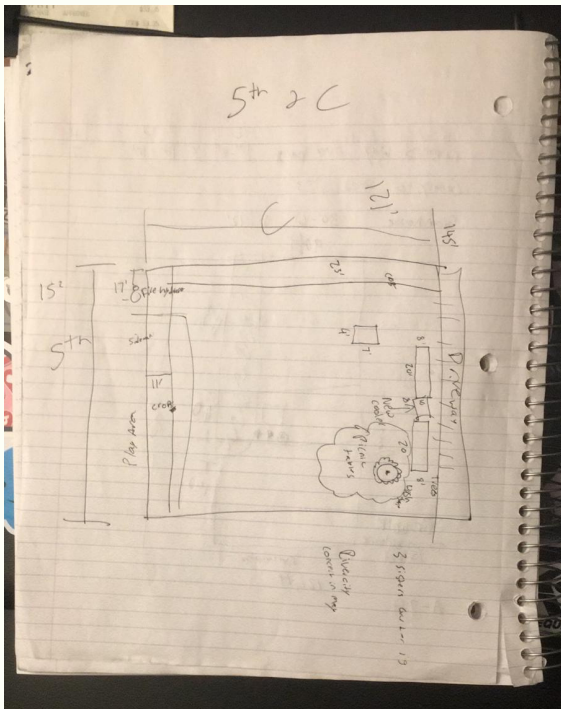
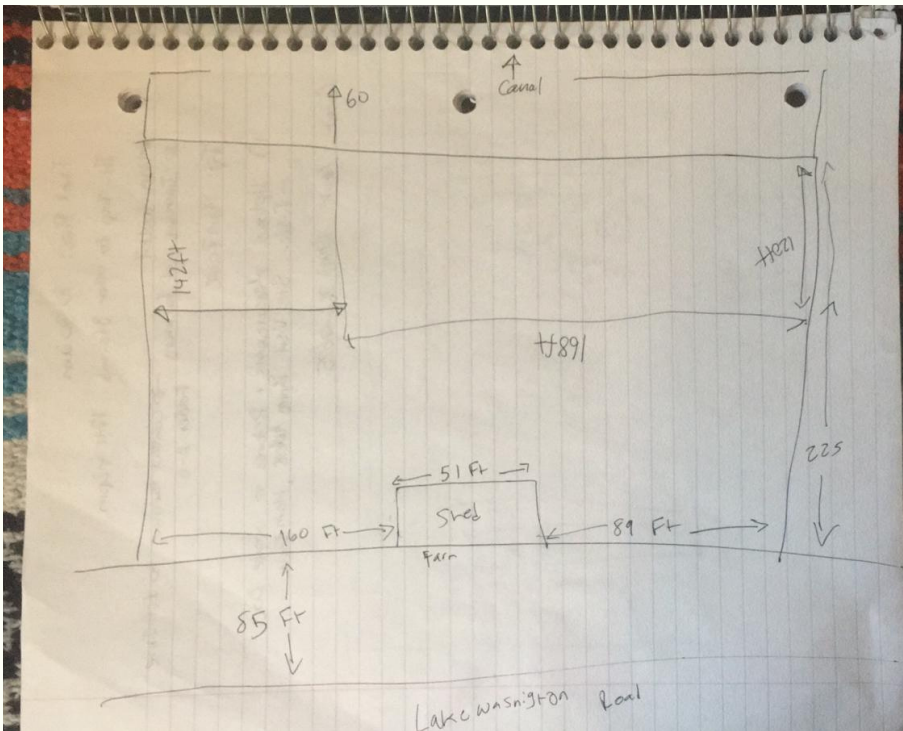
Favorite feature or element of the farm? borrow features from other farms?

Farm stand ?

Challenges? What would you change about the site if you could?



# STEP TWO: SITE VISITS



We got to meet some of the the farmers!



# STEP THREE: FINAL DELIVERABLES

## SITE PLANS:

### Goal

- Develop accurately scaled drawings of each site for official reports and promotional purposes

## CASE STUDIES:

### Goals

- Give the average person some idea of how an urban farm site operates and what infrastructure is necessary
- provide feedback on Center for Land Based Learning's Farm Academy program



# 5th & C Street Farm

2/3 acre farm  
16" = 1'-0"



## Legend:

- 1 - Shipping Containers (8x20 ft)
- 2 - Cooler (8x10 ft)
- 3 - Picnic tables
- 4 - Back Flow Preventer
- 5 - Planting Plot (9,597ft Area, 430ft perimeter)
- 6 - 42 feet Rows
- 7 - 100 ft Rows

**SITE PLAN: 5TH & C**

# CASE STUDY: 5TH AND C

## INVENTORY

Existing features:

- There are two 8x8x20 shipping containers on this site.
- There is a tree on site that serves as the shade for the post-harvest handling area
- Road access point (curb cut out to drive into site)
- There is a composting bin along the fence in the back
- Mushroom growing area

## LOCAL COMMUNITY

- Weekly farmstand operated during the late spring and summer for the community to get free produce
- No selling to local businesses; farm is a 501-C3 Non-Profit farm
- Education /Outreach:
  - Farm provides education and employment for the youth. It is through the difficult task of farming that young people learn life skills that can allow them to be successfully independent when they are older.
  - Farm works directly with the Yolo County Children's Alliance

## ADDED FEATURES:

- Two storage sheds

## MISSING FEATURES:

- Cold storage,
- Picnic tables,
- Wash station,
- Classroom/ room to protect people from the elements

## USE OF SPACE

- Favorite features: Farms flower design that is visible on 5th St. It is centrally located in the community, and is very accessible to the youth and adults alike
- Regenerative farming techniques: Very biointensive. Low-till/No-till, meaning the soil is not disturbed very much. Use of crop-rotation and cover cropping so the nutrients in the soil do not get depleted. Cover cropping is essential and really saves soil fertility and function.





## SITE PLAN: CUMMINS WAY







# CASE STUDY: CUMMINS WAY

## INVENTORY

### Existing features:

Tool Storage shed (10x 12 custom built shed)  
Planted field area  
Entire lot area  
Shade structure (under which is their post-harvest handling area aka wash and pack)  
Farmer parking (in parking lot)  
Greenhouse (added by the farmers)  
Additional storage (added by the farmers)

### MISSING FEATURES:

More T-stakes, so plant grow vertically  
Hedgerow  
Worm Composting system  
Chicken heater system

## USE OF SPACE

Favorite feature- The soil and seeing soil life enhanced  
Regenerative farming techniques, Crop rotation , Cover crops  
Insect friendly pollinator plants, making an oasis for the insects.  
Drip irrigation to conserve water and better water use efficiency.  
Uses wood chips from local arborists to keep weeds down along the edges of the site.

## LOCAL COMMUNITY

Farmstand- a weekly farm stand during the summer.  
Selling to local businesses: Discounted produce to people who are struggling financially- Donations to organizations and families

### Education /Outreach:

Strives to empower the youth in the community. Works with the yolo county children's alliance.  
Engaging with the school across the street, providing a service with fresh vegetables and addressing the underlying issues.

# SITE PLAN : LAKE WASHINGTON





# CASE STUDY: LAKE WASHINGTON

## INVENTORY

Existing features:

8x8x40 shipping container. Tool storage shed for up to 3 farmers sharing the site

10x12 tuff shed for one additional farmers tool storage

Planted field area

Entire lot area

Shade structure (under which is their post-harvest handling area aka wash and pack)

Farmer parking (in parking lot)

Farm roads and access points

## MISSING FEATURES:

Wash station

Updated irrigation (may not be feasible since site is sunken below road level-- can't underground irrigation because of utilities)

Electricity

Well-irrigation to reduce water cost

Tools: tractor, mower, rototiller [plus secure storage for those items]

## USE OF SPACE

Favorite feature:

- Bird Boxes- attract swallows which eat harmful bugs

Regenerative farming techniques:

- Cover crops
- Soil amendments- compost, gypsum, chicken manure
- Low till
- No chemicals
- Rotate crops

## LOCAL COMMUNITY

Farmstand (initially unsuccessful)

Donates produce when there is extra

Sell mostly to local businesses

Education /Outreach:

WIOA Yolo Co. youth Alliance program

Students working in summer



# SITE PLAN : RIVERFRONT

Riverfront Farm

0.25 acres

Planting area: 267' x 40'

## Legend

1. Planting Area (fully netted)

2. 8'x20' Storage Container

3. Shade Structure (over  
packing area)









# SITE PLAN : FOOD FOR FAMILIES



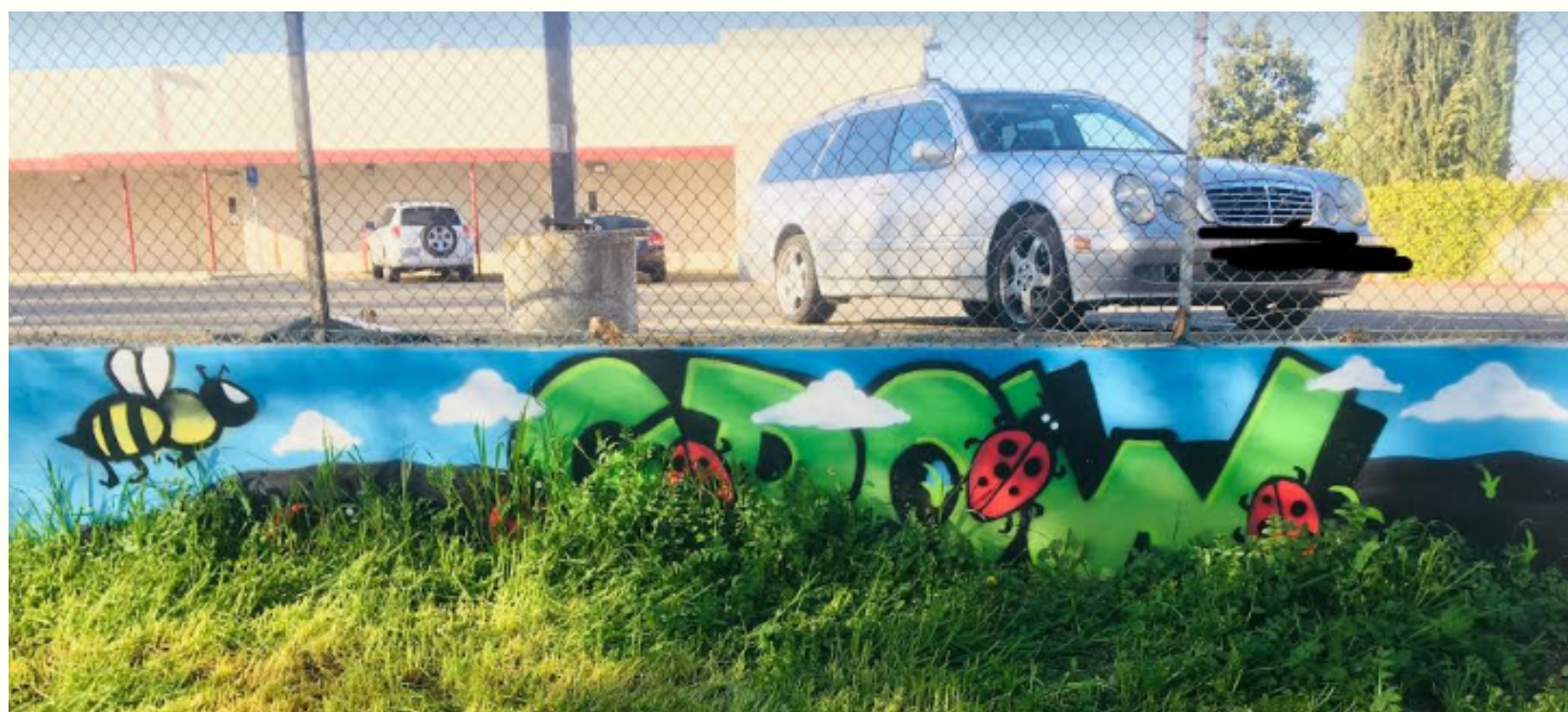
## Food For Families Farm

1.5 acre farm

### Legend:

- 1 - Shipping container 8x20ft
- 2 - Picnic tables
- 3 - Tents
- 4 - Planting areas







# Case Study: Food for Families farm

## INVENTORY

Existing features:

Tool storage area, shade structure (attached to tool storage) harvest wash pack area, hoop house (added by farmers), farm roads and road access point from the street lot perimeter, planted area. Our farm is currently 2 acres. The shape and configuration is good.

There are some trees that shade parts of the field some times of the day but they also provide shady protected spots for animals (and humans). We also run our chickens over the ground to add manure and eat seeds and bugs. Cover crops are also used to add organic matter to the soil.

## MISSING FEATURES:

Add more storage and electrical connection. Not having electricity makes some things unnecessarily difficult.

We currently use caterpillar tunnels to create better growing conditions for winter crops and we would like to add several more. A front-loader a tractor would also be very helpful to move things around the farm. These are things we are currently looking at adding.

## USE OF SPACE

Favorite feature

I think my favorite element is the location. I enjoy coming to work and passing through commercial buildings to find a green oasis in back next to a freeway. I like the juxtaposition.

All regenerative practices start with building the soil. We have a very sandy soil and we add lots of compost to it to make it viable. In more conventional farming there would be lots more fertilizer added. The goal is to build a healthy soil where beneficial microorganisms can thrive. They help make nutrients available to plants.

## LOCAL COMMUNITY

The site we are on is connected to a school and I was inspired to grow here because I thought it would be easy to connect what we were doing (farming as a business) to students I wanted to bring out to experience it. e partner with healthcare providers to deliver produce to families in the community with diabetes. We sponsor student Future Farmers of America (FFA) projects. We also work to sell our produce to people in our own community rather than travelling elsewhere to sell it. We do this through CSA programs, farmers markets and local grocers. Lastly, we work with the Raley's Food for Families Program which pays for some of our produce to go to the food bank.

# CASE STUDY TAKEAWAYS

- Acreage can be tough to come by in urban areas. Farmers must be very selective with their crops given the small space they work in. All farms employ **regenerative farming techniques** that help **preserve the soil** fertility, thus ensuring the soil can support many harvests.
- 10,000 dollars funding covers **less than 50% of the annual water bill**.
- Farms often **lack advanced equipment**, technology, and infrastructure to improve efficiency. (Walk-in cooler, chicken heater system, worm composting system)
- Lack of fencing can create issues with vandalism and dumping.
- All farms place an emphasis on **youth involvement and outreach**.
- CLBL **lease is too short** to plant hedgerows or other permaculture.
- No guidance from farm academy and CLBL on **packaging**.
- **No electricity**

# Group Takeaways

Working with the community gave us the opportunity to work with farmers from different walks of life as well as their life missions and goals.

We appreciate this chance to work directly with the community. This was much different than traditional academic projects in that it is incredibly rewarding and also challenging. We got a sense of what it is like to actually run a farm and tried our best to understand where our strengths and skills could be of value to the farmers as well as Sara. Ultimately, due to the virtual setting and associated limitations, we hope that our work is of value to the community.

# PROJECT REFLECTION

**Reflection:** Despite our differences and challenges that we go through, we managed to work together by utilizing our strengths, while improving our weaknesses.

**Daniel-** The hardest part about this project was not being able to converse as a group in person and actually visually represent our ideas to our group-mates i over zoom and WhatsApp. This process taught me a lot of patience and skills that I need learn in order to be successful in this field. Plans cannot be rushed if you want quality work.

**Amir-** This project teaches me what skills I need to develop such as photoshop and CAD. Each week we tried to use the feedback and improve our weaknesses.

**Leo-** The hardest part about this project was working within the restrictions that Covid-19 provided us with, from time zones all around the world, to work together on this project to produce the results we have obtained. In spite of these challenges, I am proud of what we have accomplished.

**Samantha** - This was my first project in which I had the opportunity to work directly with a community partner and it was a great experience despite having restrictions. Designing and constructing scaled plans remotely was something I definitely was not ready for and I had to learn very quickly. Despite everything I do believe our group worked very well and extremely effectively to complete all assignments. We each understood and followed through on our roles while also stepping up to complete anything that needed to be finished.

**Nico-** As a group we faced many challenges in the process of completing our project. Communication was another challenge, as we needed to ensure we were all on the same page,

**Zach-** I feel that I was able to achieve my goals from the start of the class (taking a leadership role, improving my graphic skills). I definitely learned how to collaborate and design in a group setting remotely, which was quite challenging at times. I enjoyed working with Sara and I feel that I gained experience with an end-to end project. I hope that what we've accomplished with limited resources will be of use to her and CLBL as well.

**Angela-** Working as a team without being able to physically meet was challenging, from this project I learned that I need to improve in my own communication skills when it comes to design. I wish I could've had more time to learn more graphic programs.

**Nathalia-** This project was challenging as I was in a different time zone to everybody else in the group, I learned a lot from this group and was very engaged throught this whole process. My design skills helped me in the mapping portion too.

# THANK YOU

Special thanks to Sudikshya, Afsar, David, and of course, Sara!