

The Farm at St. Joe's

Accessible Hoop House  
**Design Brief**

Presented by MDes C5



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# Overview of the MDes Program

The Master of Design (MDes) in Integrative Design is a two-year masters program at the Penny W. Stamps School of Art and Design at the University of Michigan. Hand-picked with an eye for diverse global perspectives and knowledge from across the design disciplines and beyond, the MDes cohort is small in size, ensuring optimal collaboration alongside critical thinking, analysis, and an unflinching examination of complex, real-world problems. Over the course of the two-year graduate program, each MDes cohort forms a pro-bono integrative design firm of sorts, collaborating as a team on hands-on projects alongside real-world stakeholders, constituents, and partners. Centered in research, Integrative Design is not locked into one disciplinary design strategy. Instead, we are adaptive, utilizing multiple tactics as the project or problem requires.

## Stamps Design Team



### Keesa V. Johnson



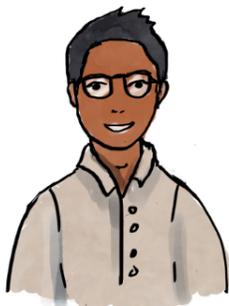
Keesa is an award-winning learning designer, creative systems thinker, and culture creative. "My life is about making visions come to life and everything I do to make this a reality is done through the experience of learning." Her knowledge spans across a variety of domains that intersect between art, science, design, and leadership. Her interests lie in adaptive inquiry (AI), co-designing immersive environments (online and mobile learning, augmented reality, simulations, hybrid and holograms), applying various design frameworks (radicalized, critical, and equity centered community design) within learning experiences as well developing micro-credentials and digital badging.

### Kristin Lauritsch



Kristin is committed to deepening her social consciousness and acknowledging and dismantling power and privilege in her design practice. She is a quantum thinker, motivated by disparity and the challenge of constraints. She believes in the ability of human centered design to engage communities and positively impact women and vulnerable populations.

### Najwat Rehman



Najwat is a designer, writer and management consultant. He has an academic background in marketing and brand management, professional experience as a graphic designer, and a budding interest in writing literary fiction (his short story, *Overdue Monsoon*, won the LUMS Short Story Competition in 2018).



## Stephanie Szemetylo

Stephanie is an industrial designer who is passionate about investigating humanity-centered dilemmas and working at the intersection of design and sustainability. Using creative and analytical modalities, she seeks to apply integrative design methodology to develop environmentally responsible products, services, and systems.



## Larrea Young

Larrea is an illustrator and graphic designer who believes that her design skills can make positive change. She has a passion for collaborating with teams and stakeholders to design effective solutions for large-scale problems. She has worked with a diversity of clients from USDA WIC to The University of Michigan Museum of Natural History to small non-profits, to create designs that help to reduce social disparities and improve the lives of others.

# Design Team Values

- Transparency
- Inclusivity
- Excellence
- Agency
- Equity
- Deep Humility
- Spark Wonder and Curiosity
- Protect People and the Environment

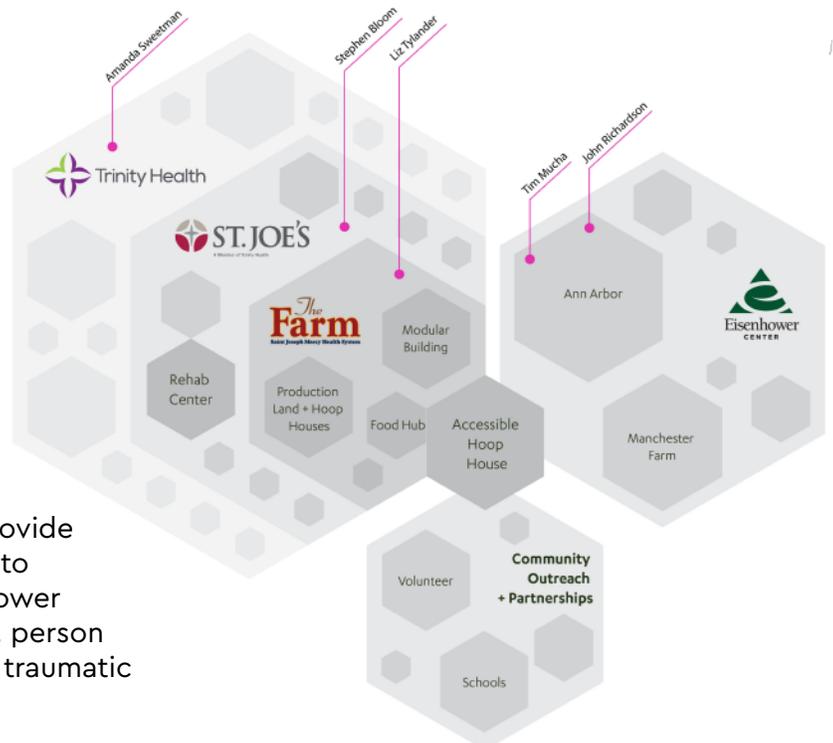
# Stakeholders

## The Farm at St. Joe's

St. Joseph Mercy Ann Arbor seeks new and innovative ways to improve health and wellness. The Farm serves our community by improving access to fresh food, nutrition education, and therapy.

## Eisenhower Center

Eisenhower Center was founded in 1993 to provide post-acute, residential rehabilitation services to individuals with traumatic brain injury. Eisenhower Center specializes in providing individualized, person centered care for individuals recovering from traumatic brain injuries.



## St. Joe's Hospital / Trinity Health

St. Joe's is a member of Trinity Health, a leading Catholic health care system based in Livonia, Michigan. Saint Joseph Mercy Health System is a health care organization serving seven counties in southeast Michigan including Livingston, Washtenaw, Wayne, Oakland, Macomb, Jackson, and Lenawee. Saint Joseph Mercy Health System is a not-for-profit entity that operates for one purpose: to further their healing ministry.

# The Design Challenge



**"We would LOVE for a group of students to research and design a way for our organizations to optimize the use of that space and possibly create/improve upon innovative features for residents to work with and for St. Joe's outpatient groups to utilize."**

## Approach

Guide our collaborators/stakeholders/partners through a design process that can continue after our design research has ended. Our design goals, as 21st century designers, should be for long term, sustainable, and social impact that does not place short term results as a priority. We are here to empower our collaborators through design.

## Problem

How can we maximize the use and positive impact of the Accessible Hoop House at the Farm at St Joe's to make it more welcoming and accessible for its various users – current and potential.

## Context

The Accessible Hoop House at the Farm at St Joe's has been serving as, in addition to a space for growing food, a healing facility for individuals recovering from traumatic brain injuries (TBIs) (referred to as clients) at the Eisenhower Center. However, the Farm team felt that the usage and management of the space could be streamlined to expand and maximize its positive impact on clients as well as the local community.

We were also interested in exploring how a team of integrative designers with a range of skills and experiences – industrial design, learning design, community outreach, visual design and fiction writing – could work with physical and horticultural therapists, clients, health administration individuals, members of the community to collaboratively design a space for healing and community building.

## Methodology

As a design team we used an integrative approach combining elements of service, spatial, and equity centered design methods. Instead of looking at the project from one lens, we used multiple lenses to make our way through the design process.

We conducted interviews, informal focus groups, site visits, participant observations, physical space analyses (measurements, accessibility audits) and a series of design charrettes that ranged from facilitated in-person events to virtual sessions via video calls and online collaboration software.

To make our process truly equitable and participatory, we heard from and worked with as many different stakeholders (clients, PTs, MDs, Farm team members, horticultural therapists) as we could.

## Project

The key outcome of this process is a collection of floor plans for the hoop house, created by our charrette participants, that offer a variety of ways the goals of accessibility, inclusiveness and healing can be realized while ensuring that the space is welcoming and functional.

## Desired Outcomes

Guided by the inspiring future scenarios crafted by the St Joe's Farm team, we want to help shape the hoop house into a welcoming and healing community space that 'creates an invitation' for anyone to come and engage, heal and be healed.

## Design Dilemmas

How do we create a space through a disability justice lens working through creative tensions? When design meets disability issues around disability catalyze new design thinking and influence a broader design culture in return.\* Together we found ourselves situated between the tension of solving problems and respecting constraints. Our approach sought to prioritize:

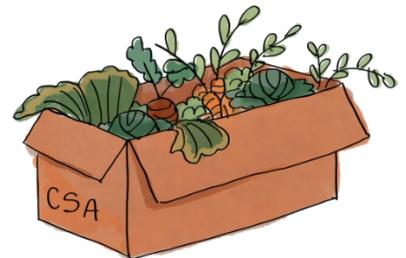
- A culture of interdependence and mutual care
- Recognizing the wholeness and the value of each individual
- Resisting hyper-productivity as a norm and competitive metrics for assessment and compensation

\*Graham Pullin (Design meets disability pg xiii)

# Accessible Hoop House Overview

## What is an Accessible Hoop House?

- A hoop house is a simple greenhouse-like structure without the elaborate heating and cooling systems of a greenhouse.
- The accessible hoop house is a community space for healing and empowering people through food, education, and relationships.
- It has a wide range of uses from physical therapy to providing a space to reconnect with nature.

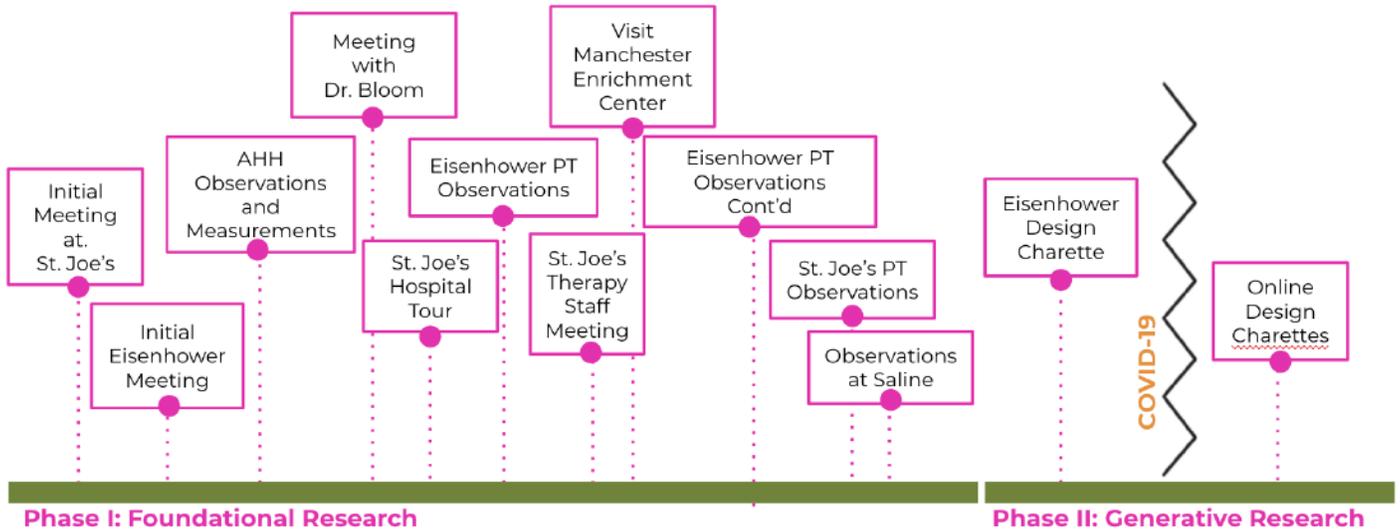


## Visioning Statement for the Accessible Hoop House

**Nourishing minds, bodies, and spirits**

**We rejuvenate our community!**

Patients are building motor skills by weeding; a nurse is meditating amongst the flowers; and in the distance we see a physician coming to pick up produce for her patients. At The Farm we are all healers and we are all in need of healing. The Farm is an accessible, rejuvenating space where we can all come together to commune with nature and each other. We have partnered with practitioners who provide a variety of therapies at the Farm. We continue to develop deep and productive relationships with partners at Eisenhower Center, Rainbow Rehabilitation, WISD Young Adult Program, Ozone House, St Joseph Mercy Rehab, and other community groups. During the growing season, community partners bring clients out to The Farm to have hands-on therapeutic horticultural experiences that are not yet possible in the places where they live. During the late fall and winter months, we bring indoor planting sessions to where they live/work to continue bringing the healing power of nature's gifts. **(Provided by The Farm at St. Joe's)**



# Phase 1: Foundational Research (Sense-making)

## Methods

### Semi-structured Interviews

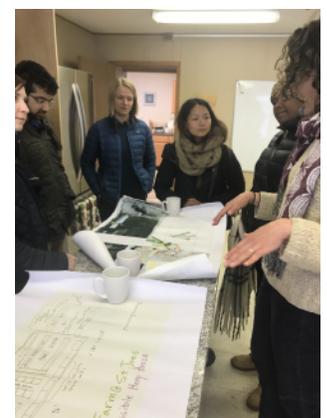
Our semi-structured interviews were guided by a need to understand stakeholders' use of the space, their needs, and how the space could best meet their needs. We chose semi-structured interviews because they allowed for organic exploration of narrative and lived experience providing contextualization of the accessible hoop house and its stakeholders.

### Informal Focus Groups

We ran informal focus groups with stakeholders and chose this method because it was efficient given scheduling and time limitations. Focus groups allowed us to generate, clarify, and amplify meaning given multiple perspectives and experiences.

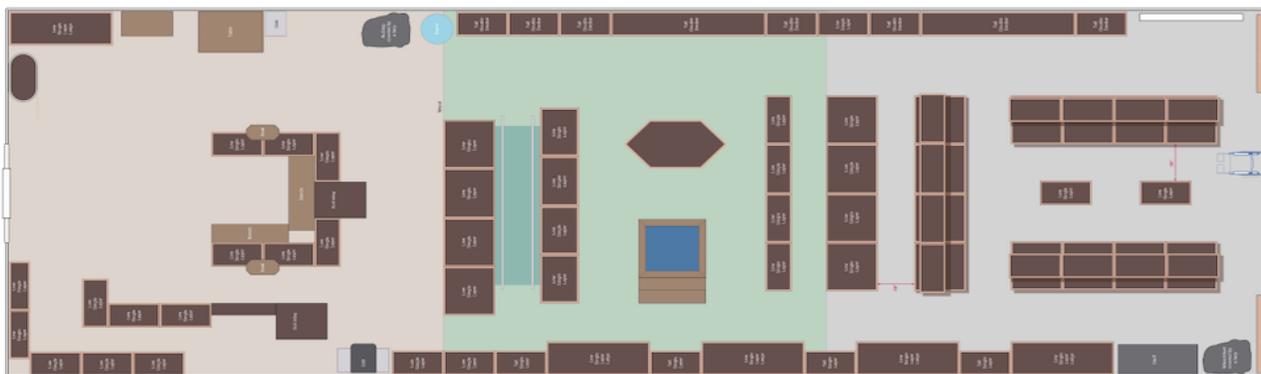
### Participant Observation

Through participant observations we were able to observe interactions between people and between people and space. This provided insight into movement, engagement, and the relationship between bodies and space.



## Spatial Observation

Spatial observations included measurements of the accessible hoop house as well as a wayfinding exercise from the hospital to the hoop house, mapping and measuring the physical space.



Current hoop house layout

## Cultural Immersion:

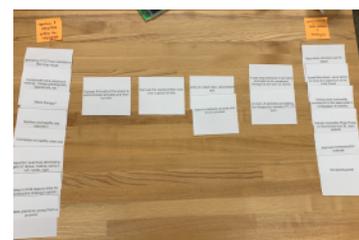
Using cultural immersion, we spent time exploring the hoop house and clinical environments in order to better understand our design context.

## Finding Consensus

We worked collaboratively with our partner, Liz Tylander, throughout the design process taking a capabilities approach to design. After we had gathered significant insights from our foundational research with stakeholders and constituents we synthesized our data using a card sorting activity.

### Card Sorting Activity

Card sorting is a method used to help design or evaluate information architecture. In a typical card sorting session, participants organize topics into categories that make sense to them and group them accordingly. To conduct a card sort, you can use actual cards, pieces of paper, or one of several online card-sorting software tools



The card sorting activity allowed us to categorize the opportunities we had gathered and identified throughout our foundational research. By doing this activity, three main categories of need emerged.



Together with our partner we presented and collectively digested opportunities in order to reach consensus on which opportunity to move forward with. The Accessible Hoop House was scheduled to have a new concrete floor poured. Where the inline irrigation system would be laid impacted the pouring of the concrete which required pre-planning in order to anticipate where the beds would be located. As a result of the timeline, we collectively reached consensus that the priority moving forward would be on designing the physical space.

# Phase 2: Generative Research (Problem-solving)

## Methods

### Mobile Prototyping Kits

Our mobile prototyping kits included the production and use of artifacts which encouraged interactive collaboration between participants allowing for generative research around ideas for the accessible hoop house.

### Digital Ethnography

In response to COVID-19, we shifted to digital ethnography research that is undertaken in online, virtual, or digitally enabled environments. It uses digital tools to gather, analyze, and present ethnographic data.

### Online Design Charrette

We adapted our mobile prototyping kits to a virtual version of the traditional charrette. We used various elements of social technology such as web conferencing and an online collaboration tool. This provided for short, collaborative meetings during which members of a team quickly collaborate and sketch designs to explore and share a broad diversity of design ideas.

### Surveys

Along with our mobile prototyping kit and online design charrette, we included a pre and post survey which allowed us to collect data providing a descriptive analysis of the rapid prototyping activity.

### Accessible Hoop House Design Charrette

In order to generate ideas for possible floor plans for the accessible hoop house, we designed a charrette to encourage generative collaboration between stakeholders.

The charrette was designed for collaboration between 4–8 participants. We start the charrette by introducing the accessible hoop house and objectives for the space. We situate participants in the role of designer, granting them agency to make decisions in an effort to inspire creative confidence.

**"Our goal for this charrette is to share and implement collaborative solutions to the Accessible Hoop House at St. using this design process to achieve sustained community health, economic opportunities, and social and cultural solidarity for all.**

**Design charrette is a short, collaborative meeting during which members of a team quickly collaborate and sketch designs to explore and share a broad diversity of design ideas.**

**A designer is anyone who has agency to make a decision, however small, that will impact a group of people or the environment. Every decision we make has an impact on equity.**

**Using this definition of design, we hope that anyone who participates in this focus group recognizes their power to work towards a more equitable future for all.**

**Remember, inequities exist by design, and only intentional acts can dismantle them."**

In order to get participants in an appropriate headspace for designing, we begin with focusing questions to help foreground the issue of equity and access:

- What is the most successful aspect of the current hoop house layout? What is the least successful?
- How can we better layout the space to support users with a wide variety of needs?
- How can we make the space safer and easier to use?
- How can we create a space that is welcoming and healing to all users?

Components of the charrette included:

- Design Charrette Booklet which outlined the project, the process, and included the grounding and post-activity questions
- Current accessible hoop house floor plan
- Blank gridded floor plan
- Objects within the accessible hoop house space



Next, we led participants through our rapid prototyping activity. Participants were given a blank gridded floor plan and elements to represent the objects within the accessible hoop house space (beds, supplies, equipment, etc.) and were then asked to start designing their ideal floor plan. We encouraged collaboration and the contribution of new ideas and features not already provided. Following the rapid prototyping activity, we encouraged reflection by asking post-questions in order to generate more understanding around participants' design choices.

- What is the most successful aspect of the design you created? What were the challenges you encountered?
- Did this generate any new ideas for you about the space?
- Who benefits the most from this design? Who benefits the least from this design?
- What might be some consequences, positive or negative, the design has on the community in which it is intended?
- What assumptions are made in the creation of the design?

### **Pivoting and Responding to COVID**

The first of our charrettes was scheduled right as precautions around COVID-19 were increased. As a result, we reconfigured our charrette by dropping off the physical materials but minimizing contact which allowed for an introduction of the materials but prohibited facilitation of the session. Given the increased restrictions and shelter in place order, we eventually pivoted to moving our charrette completely online.

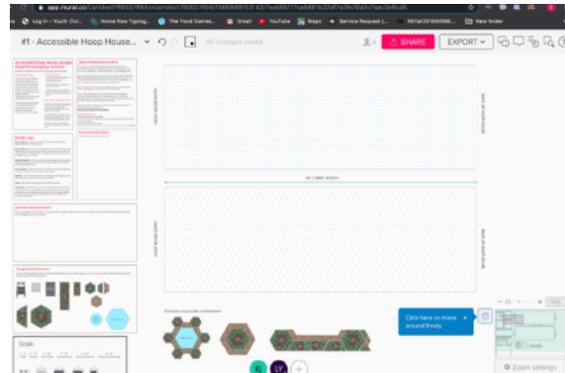
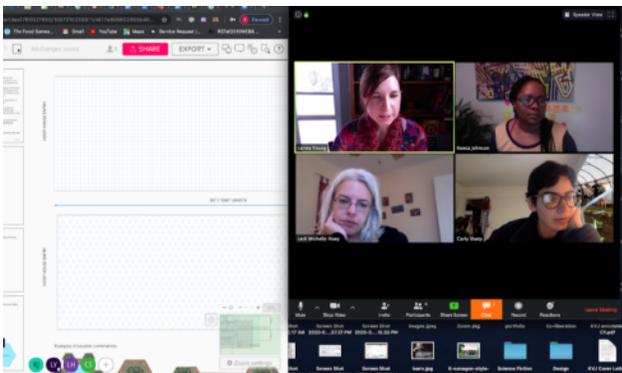
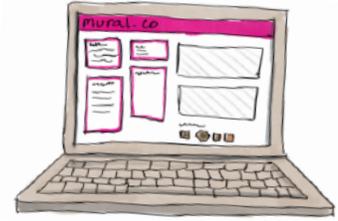
Our cohort saw this as an opportunity for an agile response and to experiment with digital tools. Facilitating our sessions digitally provided challenges around equity in terms of access, familiarity, and ability when it came to digital participation. We also took into account shifting capacity and interest of participants given the uncertainty and changes COVID-19 has presented especially those directly

employed by the Trinity hospital system. In total we were able to conduct one modified in-person charrette and 9 online charrettes with a total of 10 participants.

### Online Design Charrette

A virtual version of the traditional charrette that uses various elements of social technology such as web conferencing and a collaboration tool, that provides for a short, collaborative meeting during which members of a team quickly collaborate and sketch designs to explore and share a broad diversity of design ideas.

Our team chose to use a combination of platforms to facilitate the online charrettes: Zoom (for video conferencing), Mural (for the prototyping activity), and Google Forms (for the survey).



# Ideas List (compiled design research activities)

## General

- Be able to use the hoop house year-round
- Modular and flexible space
- Inspire wonder and curiosity

## Physical Space

- Hexagonal beds to create softer angles and improve reach for people in wheelchairs
- Increase space in between for easier movement of wheelchairs
- Arrange beds to that there are areas for wheelchairs to turn around
- Triangular shaped raised beds

## Water Feature

- Improved ways to irrigate (inline irrigation system, better nustep maintenance)
- Multiple easy to maintain water features
- Seating area near water feature(s)

## Flooring

- Hard floors throughout to eliminate safety hazards and better accessibility
- Colors/textures on the floor
- Easily washable concrete
- Use flooring textures/colors to divide space into "rooms"

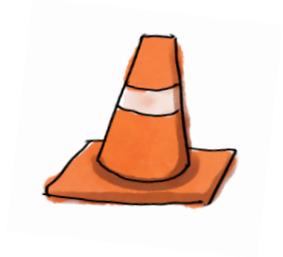
## Gathering Space

- Flexible seating that can be positioned in a circle
- Demonstration areas
- Places to eat together



## Vertical Space

- Vertical planters
- Mobile "Green" screens to create privacy
- Use vertical plants, vines, etc to make entrances and exits more inviting



## Vocational

- Washing / packing stations (tables for produce)
- Accessible sink for washing produce
- Flex space that can be used for potting, etc

## Therapy

- Sensory garden
- Stairs / elevation changes
- Keep but stabilize parallel bars
- Calming white noise (wind chimes, water features)
- Organized and marked storage for PT tools (balls, cones, bands, etc)

## Safety

- Temperature regulation - areas to cool down, heater for winter use
- Grab bars that allow for standing and moving around
- Easier access to bathrooms, bathrooms that have adult changing and better hygiene options
- Remove trip hazards from the floor

## Communication

### Scheduling

- Scheduling platform to allow users to see who is using the space when, and allow for booking of space
- Allow people to see what programming is available
- Allow people to schedule training or other meetings
- Posted hours

### Tasks

- Year-long list of hoop house tasks
- Daily task board in the space and online

## Signage

- Task board that is updated daily / weekly
- Signs for how to navigate space
- Welcome and introduction signs within the hoop house
- Signs to guide the use of various tools
- Signs with recommended activities for each area or station
- Guidebook that helps user navigate and utilize the space
- Board with upcoming events, tips, and other news

## Facilitation between users

- Card deck that allows clients to choose activities they want to do
- Way to leave messages for other users about possible activities or tasks

## Connecting with stakeholders

- Contact person and information listed for different hoop house needs
- Way to leave messages for other users about possible activities or tasks

## Programming

### Art

- Sculpture and other art throughout the space
- Ability to play music
- Interactive art such as a tile mosaic wall that uses Velcro

### Education

- Information to connect hoop house activities with healthy lifestyles
- Learning labs – invite groups to the hoop house
- Feature a diversity of experts/growers in the space
- Programs that encourage interaction with community members

### Feedback

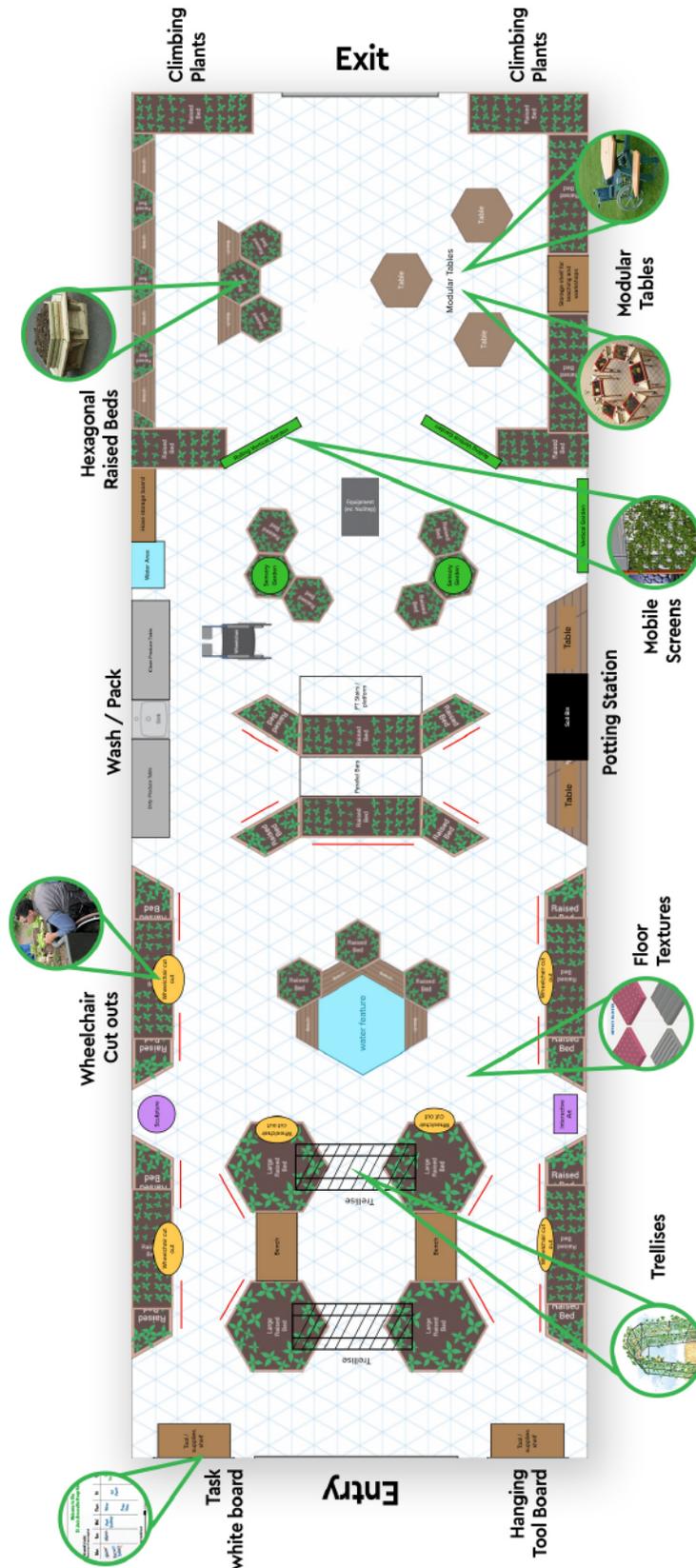
- Way to collect user feedback that is accessible (physical and online option)
- Ways to submit requests



# Design Recommendations

## Create a more accessible floor plan

By using design feedback from the community, the Farm can ensure that the floor plan adheres to accessibility regulations while allowing for flexibility to support and serve a variety of users with varying needs.



## Create a digital invitation to the space

### Website

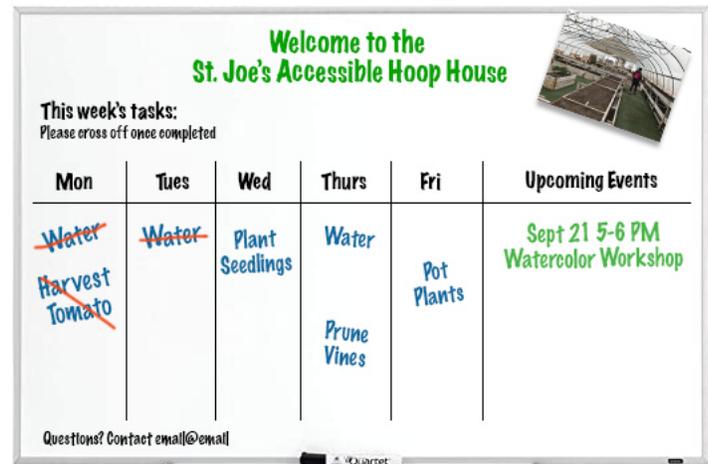
During our conversations with stakeholders, a lack of ability to access information or a way to schedule times to use the hoop house space was a major barrier. Having and maintaining an online presence is an important part of inviting community members to use the space. **Based on our research, this online platform should include:**



- 1) Information about the hoop house including vision statement
- 2) A scheduling portal to allow people to reserve times and see upcoming programs
- 3) Guides on how to use the hoop house and plan for a visit
- 4) Event and program listings, and invitation to schedule programming at the hoop house
- 5) Digital daily or weekly task lists so that users can view before arriving in the space

## Create flexible guidelines and activities for using the space

Conversations with stakeholders revealed a need for more guidance on how to use the space, particularly for therapy. We received a range of feedback from uncertainty as to what tasks need to be done on a day-by-day basis to a general sense of shyness and trepidation inside the space. **Based on our research ideas for flexible guidelines for using the space could include:**



- 1) Signage with clear directions posted in all stations and areas
- 2) Communication tools such as a white board to communicate when activities were last done or need to be done – for example: keeping track of when plants were last watered
- 3) A Guidebook to document the activities and facilities available at the hoop house and created a more guided experience for users
- 4) Color coded activities for the space that are based on categories – for example: lower body or upper body movement, varied levels of challenge, different ranges of motion (Note: more research would need to be done observing therapists in order to define categorization)

- 5) Cards or a die that would allow clients to choose their own adventure as to what activities are done that day based on goals
- 6) Floor panels with colored markers that help clients increase the length of their stride
- 7) Textured dots on lower level beds that can be markers for leg-raising exercises, used similarly as a proxy for how therapists use cones inside the gym
- 8) Activities that focus on specific ranges of motion – for example: vertical gardening that focuses on arm-raising, beds that are positioned as to encourage clients movement across their midline in order to plant seeds or weed
- 9) Including a worm garden that allows for dexterity and connection to life

## Create ways for users to provide feedback

As the accessible hoop house is space used and shared by a diversity of community members, it will be important to have multiple ways of collecting feedback so that the space can continue to meet stakeholder needs. **This could include:**

- 1) Immediate feedback from clients

Because some clients using the space for various therapies may have difficulties providing feedback at a later time or filling out more complex written surveys, it would be helpful to have a quick, visual way to collect input during or immediately following an activity.

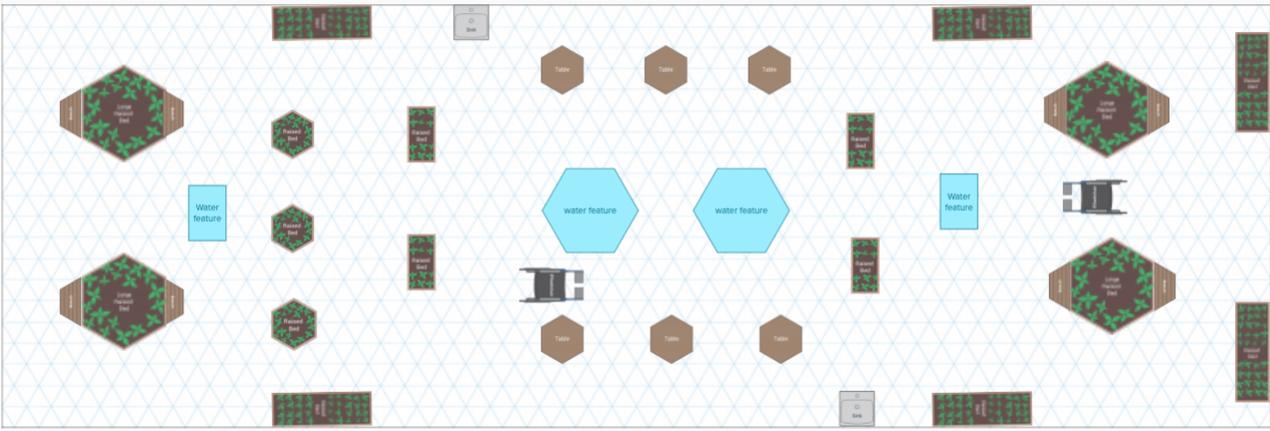
- 2) Other feedback methods such as an area in the hoop house to provide written feedback as well as online surveys





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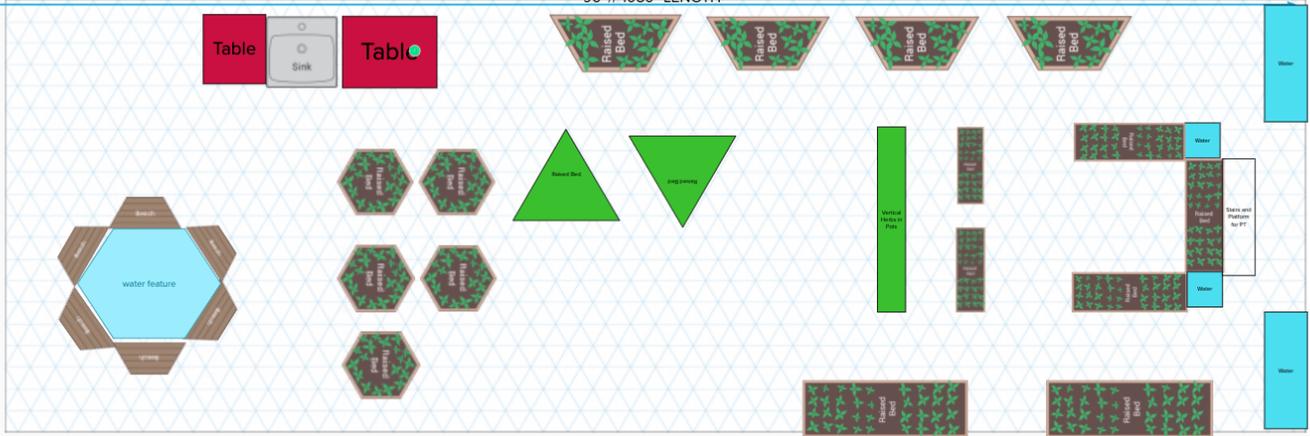
HOOP HOUSE ENTRY



BACK OF HOOP HOUSE

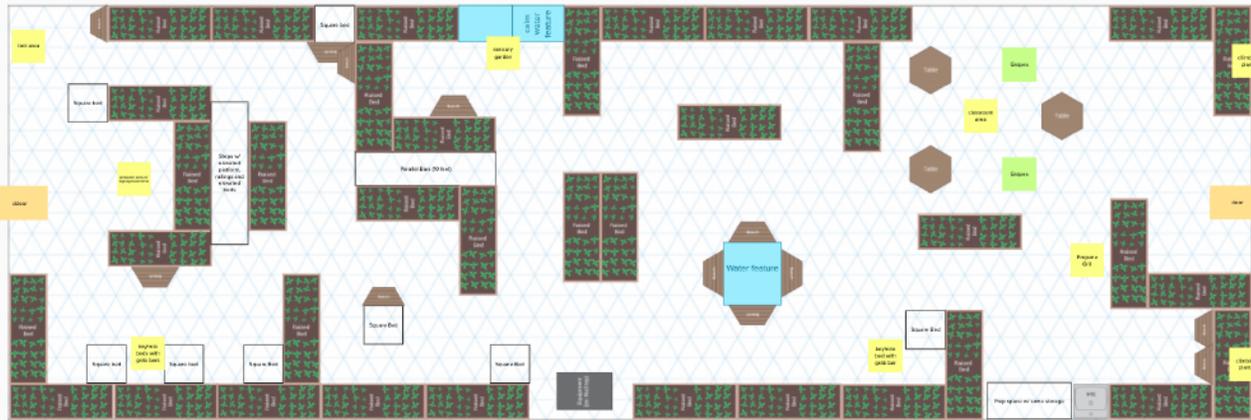
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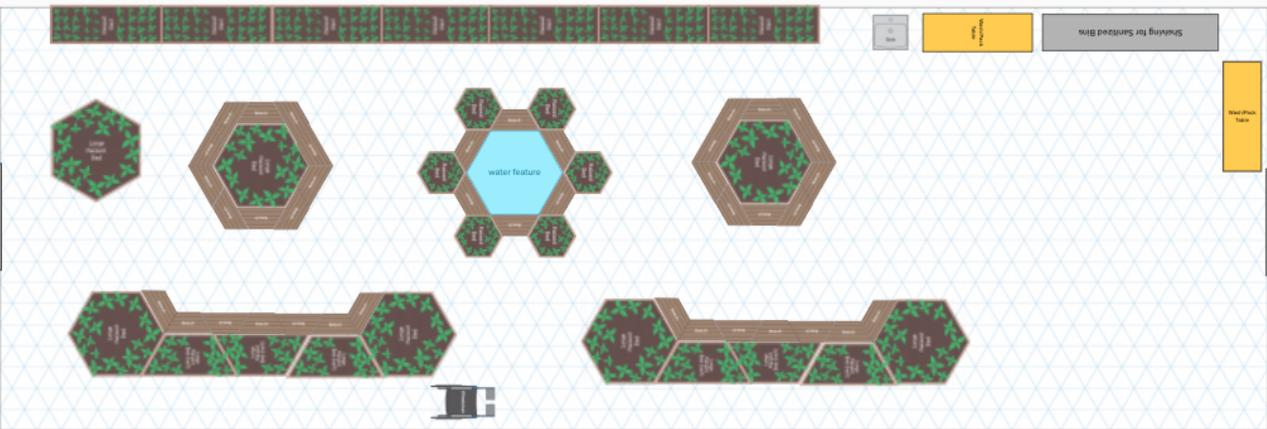
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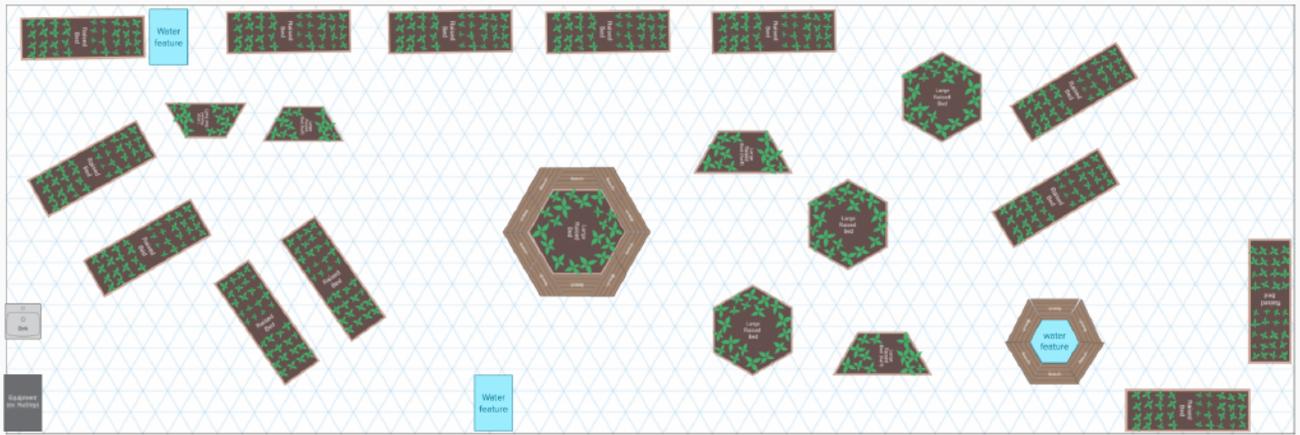
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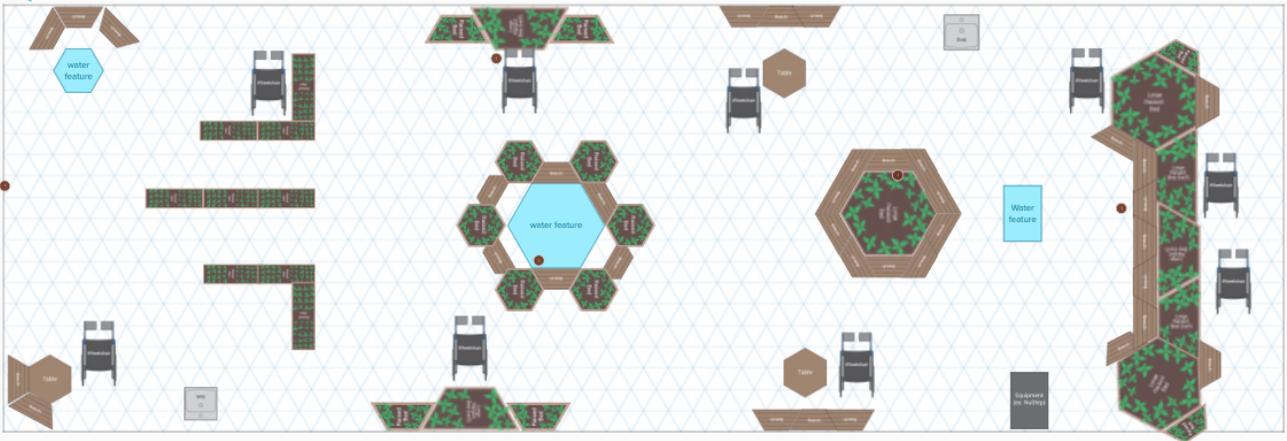
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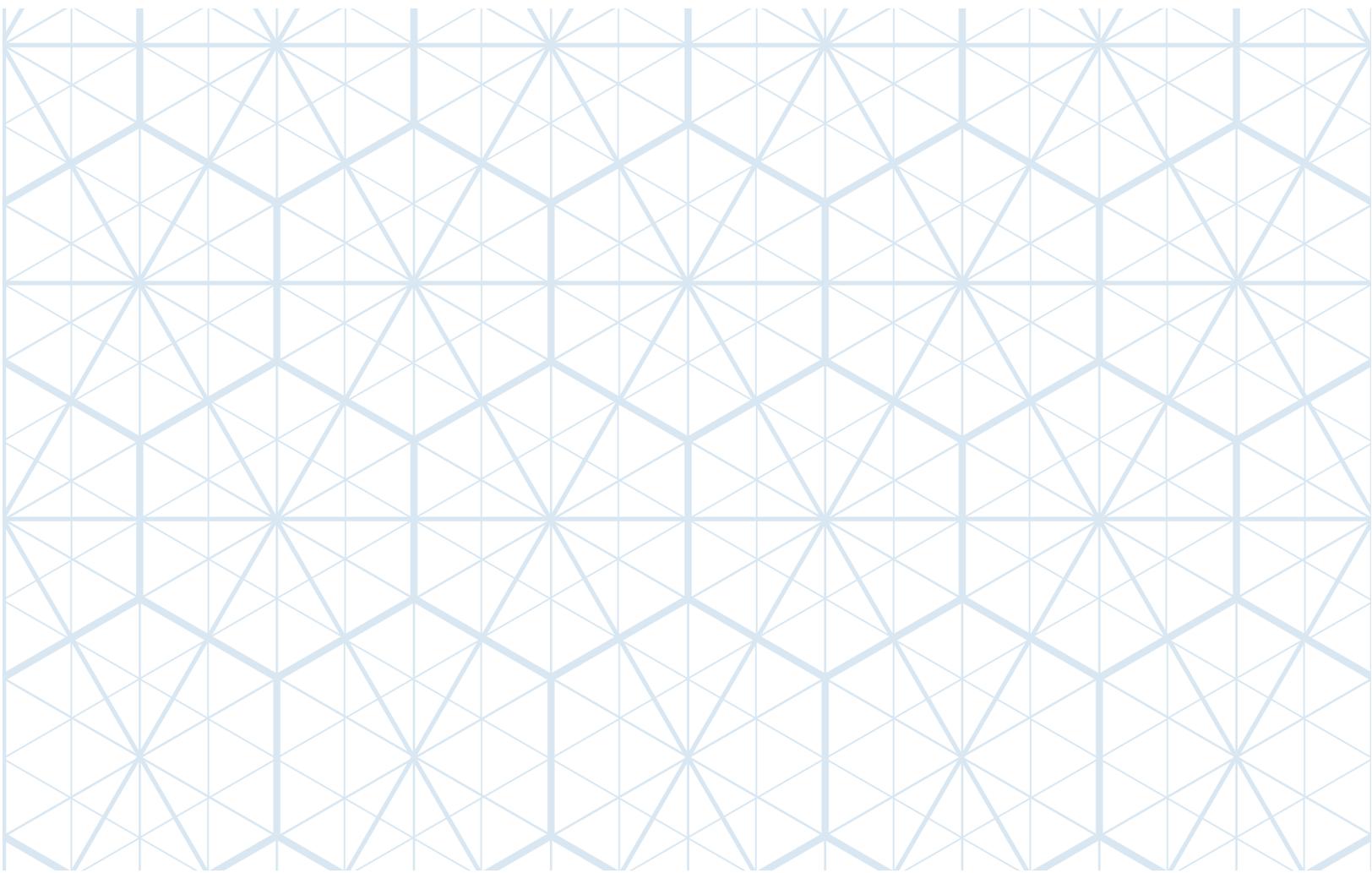
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90" // TUBS LENGTH

BACK OF HOOP HOUSE





# Thank you!

[MDesFoodies@umich.edu](mailto:MDesFoodies@umich.edu)