

# P O S T

## PANDEMIC SHOPPING



POST  
PANDEMIC  
SHOPPING

A Design Thesis Submitted to the Department of  
Architecture of  
North Dakota State University

by

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for the Degree of  
Master of Architecture

North Dakota State University Libraries Addendum

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May 2021  
Fargo, North Dakota

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Figure 02 | Scottsdale Fashion Square, 1960s, photo credit | Nick Smith



Figure 03 | Scottsdale Fashion Square Aerial, 1960s, photo credit | Nick Smith

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## ABSTRACT

Shopping malls were originally designed to give people the opportunity to socialize and shop within the same environment. The shopping mall concept is extremely important within the urban spacial system, as it connects both leisure activities and commercial businesses into one environment for pedestrians to enjoy. Retail consumers and visitors are able to fulfill their need for visual stimulation from their surrounding environment as well as the ability to enjoy various relaxing activities in this area. The concept of the retail experience was to bring people together and provide many opportunities for social exchange in one setting. How will this spatial organization change after a pandemic that requires social distancing? What factors will need to be considered to design a safe environment during and after a pandemic? A look into these questions will occur throughout the semester by researching case studies that provide a background to how malls are oriented to attract potential shoppers, as well as researching the current pandemic and what safety precautions can be made to new designs to support a safe shopping experience.



Figure 04 | Biltmore Fashion Park 1980s

# THE UNIFYING IDEA

The shopping mall was originally designed by Austrian architect Victor Gruen. When Gruen originally designed the shopping mall, he thought of them as a place for gathering and socializing where anyone can join the space to feel a sense of belonging. The shopping mall would also be a place where services, goods, and entertainment are offered. Instead of Gruen's idea being built, modern day shopping malls were erected. Modern day shopping malls are often large enclosed spaces that are surrounded by parking lots. Instead of lacking variety and promoting walk-ability they often promote vehicular traffic and only draw in a certain type of user.

With the spike of online shopping and new forms of technology, the shopping mall has been severely hurt financially. This has caused many locally owned boutiques and stores to close, and large department stores sit vacant. Instead of a mall being a place for socialization and community activity, it is now a quick destination for something that is needed by a particular user group.

Many shopping malls have been abandoned and now sit completely empty. Shopping malls usually find it difficult to fill vacant stores, and then have the problem of what to do with all of the open space. While researching successful and unsuccessful malls, I will be able to clearly identify what aspects are important in implementing into my design. I will also be able to study the city in which the site is located and what the community needs and desires. Not only will I have to design my thesis around Gruen's principles, but I will have to thoroughly research the current pandemic and how to successfully design a space that promotes social distancing and gives users the confidence that they are in a safe place.

# NARRATIVE

## THE NARRATIVE OF THE THEORETICAL ASPECTS OF THESIS

Shopping Malls for the Contemporary World: A Study of Spaces for Commercial and Leisure use Before, During and After a World-Wide Pandemic

Shopping has been an activity enjoyed by many people for centuries. The modern day shopping mall is quickly changing with the spike in online shopping. Many modern day malls have large department stores which are more easily accessible by online shopping. Implementing smaller scale stores will offer more uniqueness and excitement and help to draw in more diverse groups of users. This also can help to provide people with the opportunity of being able to access more stores at later or earlier hours, therefore keeping the site occupied during most of the day. This gives the community a safe and enjoyable environment to access according to their own personal schedule. Shopping malls have also been severely affected from the current pandemic which requires many states to abide by the rules of social distancing and mask wearing in social settings. Shopping has always been a activity that I find myself very interested in, and I would like to study the way the shopping mall has evolved in design terms as well as evaluate how the malls design has and will change through a pandemic.

My thesis idea is to reinvent the modern day shopping mall into a place that can be enjoyed by many diverse user groups while assuring the users they are safe during a world-wide pandemic. The users will have access to many different programs, overall drawing in more people at different hours. This will also help to promote social distancing as there will be people on the site at all different hours of the day. The project I aim to design will be a public space which allows people to come together during a pandemic while also providing safety to its guests. Not only will this allows a better solution to the modern day shopping mall, it gives people the ability to come together and enjoy life while a pandemic is occurring or could possibly occur again.

In order to develop a plan of action to design an efficient and successful space, I will need to further research a successful shopping mall with a high level of focus on outdoor typologies. With this knowledge, I will then be able to analyze which elements of the buildings are working well, and what is holding the building back from reaching its full potential. I will be focusing on malls that prioritize the health and safety of their guests, as I would like to further advance my knowledge on systems that are the most efficient in protecting guests. I will also be looking into the statistical side of what we know about COVID-19, and how as designers we are able to design our spaces to keep the health and safety of the users as the top priority. Another important factor in my design will be to promote walk-ability on the site, as well as give users spaces that they can enjoy outside in a safe environment all year round.

# T Y P O L O G Y

## THE PROJECT TYPOLOGY

Many shopping malls throughout the modern age have had issues keeping stores in business. One of the main causes for this is the overall functionality of the shopping mall. Over the past decade, malls have slowly decayed and changed communities-not always for the better. In order to help build a new identity for the shopping mall and bring back life to the community new priorities need to be addressed. To identify what factors of shopping malls are the most successful; case studies will need to be carefully analyzed and addressed. A new program that is designed around these priorities will help to make the malls design successful.

Situated within the Phoenix-Metro area, is Tempe, Arizona. The city is growing at a rapid rate. It is a college oriented city and has many visitors each year. The area of the site is situated right next to two major interstates which will draw in more visitors. The current shopping mall at Arizona Mills will be transformed into a place that incorporates many different typologies and uses. It will draw users in and promote socializing, gathering, the feeling of place, and the sense of connection all within the site. One of the most important factors is making sure the building is mixed-use, and of all of these different uses have stores open at different times of the day; not only to increase traffic, but promote social distancing as well.



Figure 05| Social Distancing in a Retail Space, photo credit | Maranie Staab |

# P R E C E D E N T R E S E A R C H

WHEN SELECTING THE FOLLOWING CASE STUDIES, THE FOLLOWING FACTORS WERE GIVEN CONSIDERATION:

1. Typology 

---

Indoor or Outdoor Mall/Mixed-Use
2. Location 

---
3. Size 

---
3. Distinguishing Characteristics 

---
4. Problem Elements 

---
5. Environmental/Social Response 

---

Specifically in regards to COVID-19
6. Sustainability 

---

How malls are going green

THE FOLLOWING PROJECTS WERE GIVEN SPECIAL CONSIDERATION FOR PRECEDENT RESEARCH:

- Brickell City Centre
- Shanghai Greenland Center
- Biltmore Fashion Park
- Scottsdale Fashion Square

# BRICKELL CITY CENTRE

**TYOLOGY:** Mixed-Use/Retail

**LOCATION:** Miami, FL

**SIZE:** 5,400,000 sf



Figure 06| Brickell City Center, photo credit | arquitectonica |

## DISTINGUISHING CHARACTERISTICS

Brickell City Centre is located in Miami, FL, and was designed by Arquitectonica. One of the main design considerations the firm took into account, was the need for a space that brings that natural environment in. This allowed them to design a space that feels like an outdoor environment with enough porosity that there is no definite boundary of the mall. The mall spreads over 7 blocks, with a special focus on connectivity, sustainable design, and growth principles.

Brickell City Centre created a well balanced neighborhood that provides people with the opportunity to live, work, socialize, and shop all within an established community. One of the most distinguishing characteristics about the project is “The Climate Ribbon,” which is a 150,000 square foot elevated trellis of steel, fabric, and glass that encloses the space while connecting the city blocks and protecting users from inclement weather. This design element also allows the space to obtain natural light and the ability to enjoy an open-air experience.

## PROGRAM ELEMENTS

- 729,000 Square Feet of Retail and Entertainment Spaces
- 1,000,000 Square Feet of Office
- 1,400 Residential Units
- 352-key EAST Hotel
- 89 Serviced Apartments
- Multiple Above Ground Parking Garages
- Two Levels of Underground Parking

## CASE TAKEAWAYS

During my 4th year of architecture school, our class had the opportunity to travel to Miami, FL. While we were visiting, we had the chance to visit Brickell City Centre. Brickell City Centre is the most unique mall I have ever been to. The design of the free flowing stores and seamless transitions walking to and from different spaces was something I had never experienced in a mall before. The outdoor/indoor atmosphere was also very pleasing, as there was a cool breeze circulating through even though we were in Miami during one of the hottest months of the year.

This design was thought out extremely well. The design of the facades, program layout, terraces, plazas, walkways and entrances were all considered while creating Brickell City Centre. The use of green spaces within the space is something that I would like to incorporate in my design. They also had small attractions for shoppers like koi ponds. I would like to be able to implement all of these small but successful design elements in to my project.

## ENVIRONMENTAL/ SOCIAL RESPONSE

- Use of a face mask is required inside shops and restaurants
- A minimum of 6’ is required to allow for social distancing
- Hand-washing and sanitizing at the provided stations is recommended
- Avoidance of touching the eyes, nose and mouth is recommended
- Around the clock cleaning crews



Figure 07| Brickell City Centre Site Plan, photo credit | Arquitectonica |

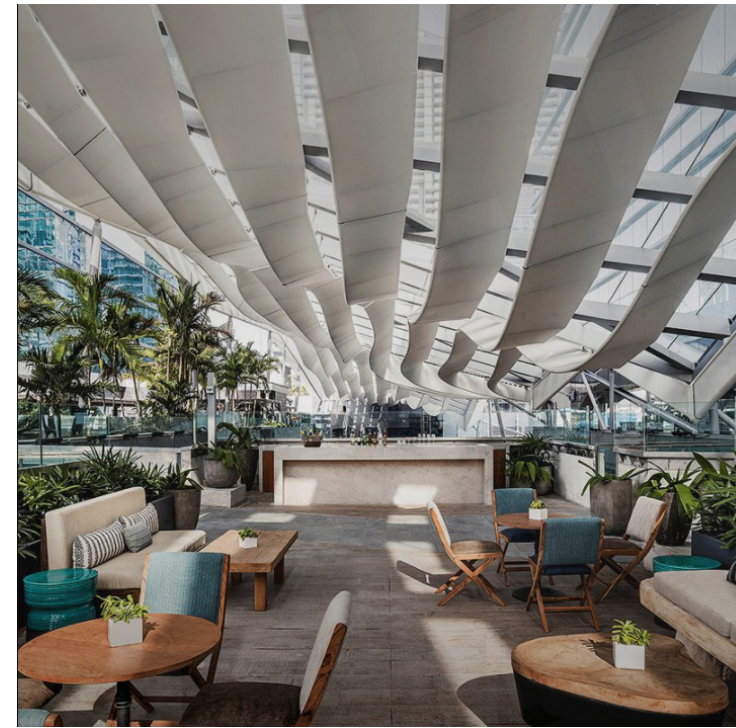


Figure 08| Brickell City Center, photo credit | arquitectonica |

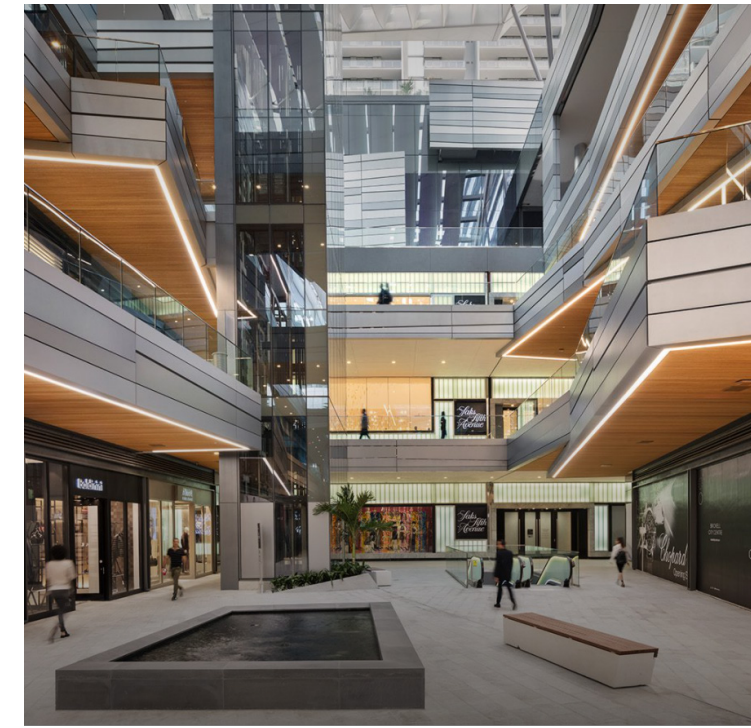


Figure 09| Brickell City Center, photo credit | arquitectonica |

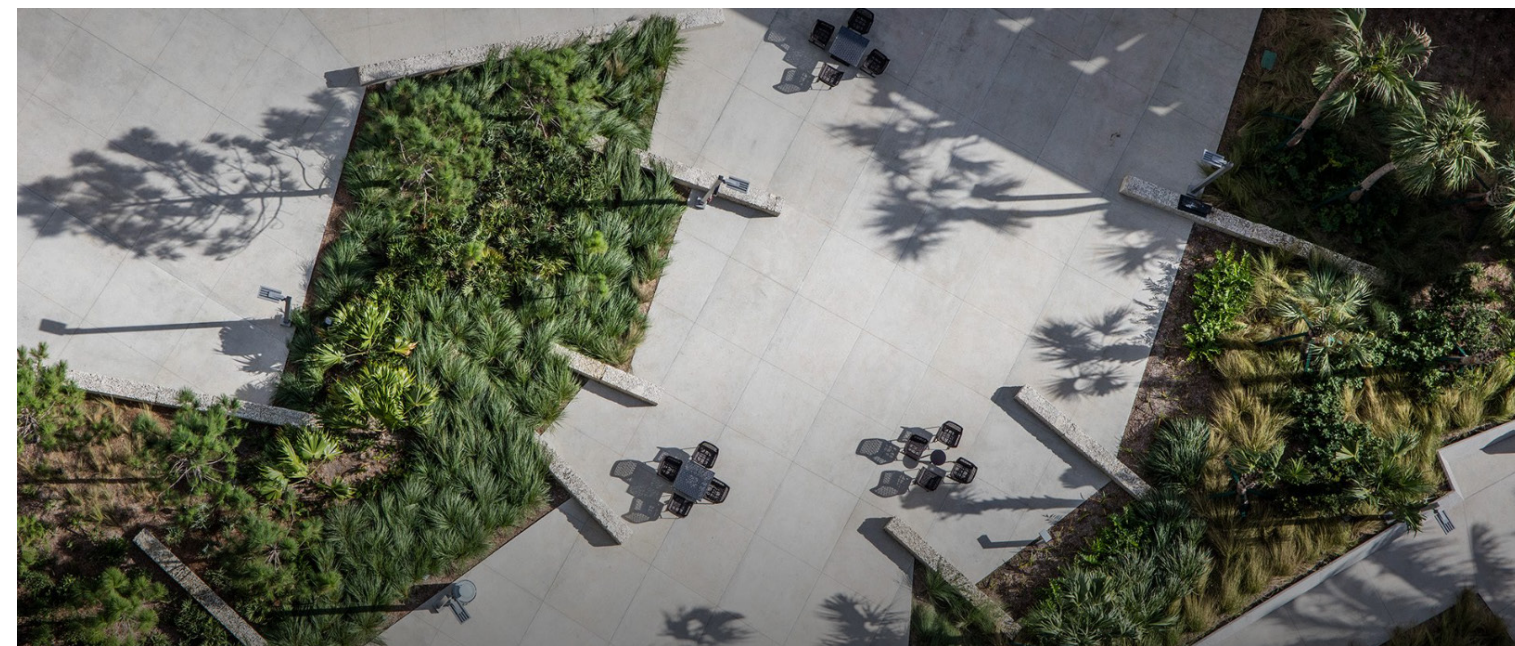


Figure 10| Brickell City Center, photo credit | arquitectonica |





Figure 11 | Site Section, photo credit | Arquitectonica

- ① • 729,000 Square Feet of Retail and Entertainment Spaces
- ② • 1,000,000 Square Feet of Office
- ③ • 1,400 Residential Units
- ④ • 352-key EAST Hotel
- ⑤ • 89 Serviced Apartments
- ⑥ • Multiple Above Ground Parking Garages
- ⑦ • Two Levels of Underground Parking

- ⑤
- ③
- ②



Figure 12 | Shanghai Greenland Center, photo credit | ArchDaily

# SHANGHAI GREENLAND CENTER

**TYOLOGY:** Mixed-Use/Retail  
**LOCATION:** Shanghai, China  
**SIZE:** 3,282,023 sq ft

## DISTINGUISHING CHARACTERISTICS

The Shanghai Greenland Center is focused on one core principle: the Urban Farm. This expansive green urban valley complex gives the ability for an enormous city to merge nature and human space. This complex is considered a street landscape park and sits above one of the most used metro systems in the city of Shanghai. The roof of Shanghai Greenland Center is split into different heights and scales in order to create interesting terraces and slopes that connect in a 3D way.

Throughout the design, there are massive green spaces on the site which allow visitors to take part in local events and activities. This urban public space is dedicated to allow for smooth transitions between spaces and functional flow between buildings. Within the Urban Farm, there are offices, retail shops, public-transportation and green roofs all connected together through the use of different dimensions. A benefit of having such expansive green spaces, is the cooling system that counteracts the heat-island effect. This system not only refreshes the cities landscape, but the social environment surrounding it as well.

## ENVIRONMENTAL/ SOCIAL RESPONSE

- Use of a face mask is required in public settings
- Social distancing
- Hand-washing and sanitizing at the provided stations is recommended
- Avoidance of touching the eyes, nose and mouth is recommended
- Cleaning and sanitation crews

## CASE TAKEAWAYS

Shanghai Greenland Center is a great example of a design that connects many different typologies into one continuous structure. The green spaces take up a vast majority of the ground level, which allows users to move across the site swiftly, allowing for socialization as well as the opportunity for social distancing. This also would help to decrease the risk for contracting a deadly disease because of the natural environment and the air flow outdoors. This space also has one of their busiest metro stations located underneath the site, which brings people to the area allowing for more business to occur. One of the strongest elements of this design is the integration of many different typologies into one structure. The transit oriented development allows for people to travel smoothly across the site, allowing travel to different buildings all within walking distance. Shanghai is growing rapidly, and this design creates a new value of developing the urban network.

## PROGRAM ELEMENTS

- Apartment Tower
- Roof Top Bar
- Restaurants
- Retail
- Urban Park
- Center Atrium
- Two Office Buildings
- Sky Lobby
- Grocery Store
- Bus Terminal
- Metro Station
- Movie Theater

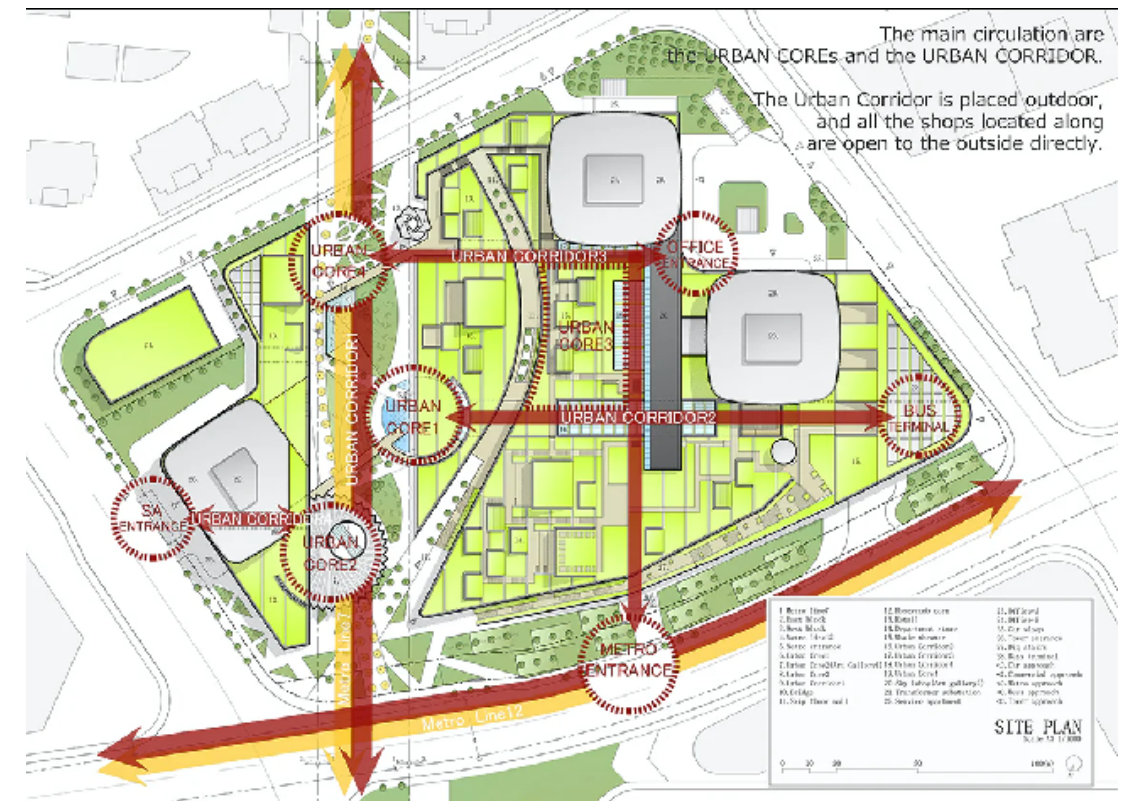


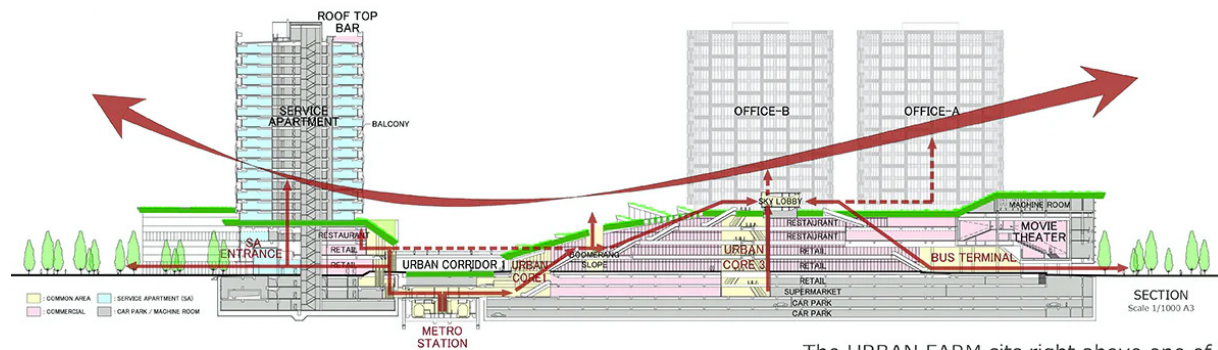
Figure 13| Urban Core and Corridor, photo credit | ArchDaily



Figure 14| Site Plan, photo credit | ArchDaily



Figure 15 | Ground Floor Plan, photo credit | ArchDaily



The URBAN FARM sits right above one of the most used metro stations in Shanghai.

Figure 15 | Site Section, photo credit | ArchDaily



Figure 16 | Center Atrium/Retail, photo credit | ArchDaily |



Figure 17 | Urban Park, photo credit | ArchDaily |

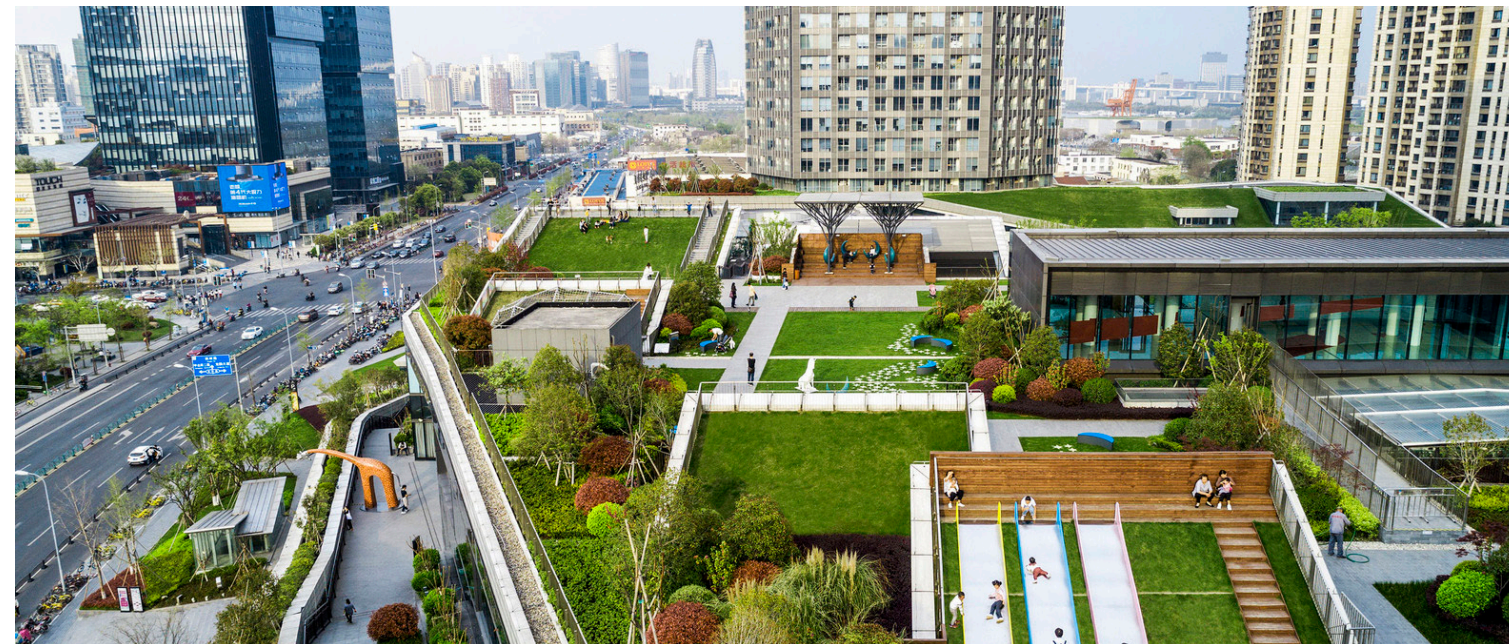


Figure 18 | Metro Station/Urban Park, photo credit | ArchDaily |

# BILTMORE FASHION PARK

**TYPOLGY:** Mixed-Use/Retail  
**LOCATION:** Phoenix, Arizona  
**SIZE:** 550,000 sf



Figure 19| The Biltmore Fashion Park, photo credit | Nelson Partners |

## □ DISTINGUISHING CHARACTERISTICS

The Biltmore Fashion Parks main focus is to give customers the opportunity for a luxury retail experience mixed with fine dining and an open-air park like experience. The mall is over 550,000 square feet, with an open-air lifestyle center design. The mall features destination restaurants that are only available in select cities. This attracts many of their clientele. The location of the building is situated next to many amenities such as the Camelback Corridor which allows many people to gather near the mall. The main element that sets the Biltmore Fashion Park apart from other malls, is its park like experience. Many people can be seen on walks with their animals, enjoying a meal outdoors, walking to retail stores, or relaxing under water misters in Arizona's warm climate.

## □ PROGRAM ELEMENTS

- 550,000 sf open-air mall
- 60 Biltmore area restaurants, dining and cafes
- 105,000-square-foot fitness club, featuring a rooftop pool
- Situated near the Camelback Corridor
- Outdoor movies
- Bubble parties for kids
- Summer concert series

## □ SUSTAINABILITY

- Security Staff uses Global Electric Motorcars instead of vehicles powered by gas.
- The Biltmore has implemented new lighting protocols that allow for minimal energy use to minimize our energy use while lowering the carbon footprint without any impact on the shopping experience.
- The Biltmore recently secured new trash haulers that will increase the trash diversion rate for recycling from 20% to 55%.
- Through new green lighting measures, Biltmore Fashion Park has reduced lighting and energy use throughout the center by an average of 261,612 watts a day.

## □ ENVIRONMENTAL/ SOCIAL RESPONSE

- Follow CDC guidelines on cleaning and social distancing, and adhere to local government ordinances.
- Installation of hospital-grade air filtration within a high-quality HVAC system.
- Follow the CDC's recommended six foot social distancing rule.
- Encourage guests to avoid queuing in front of busy stores.
- Individual retailers are encouraged to use digital queuing solutions to manage capacity.
- Curbside Pickup is available for select retailers and restaurants.
- Masks are required except for individuals with underlying health conditions or those under the age of 6.



Figure 20| Site Plan, photo credit | Nelson Partners |



Figure 21| The Biltmore Fashion Park Restaurant, photo credit | Nelson Partners |

# SCOTTSDALE FASHION SQUARE

**TYOPOLOGY:** Mixed-Use/Residential  
**LOCATION:** Scottsdale, Arizona  
**SIZE:** 2,000,000 sf

## □ DISTINGUISHING CHARACTERISTICS

Scottsdale Fashion Square is one of the largest malls in the United States with over two million square feet of retail and mixed use space. There are over 200 stores and restaurants, with a focus on luxury and contemporary brands. Right now, the shopping center is undergoing a multi-phased renovation which will redefine the luxury shopping and dining experience. One of Scottsdale Fashion Squares most unique assets is their dedication to bringing in artwork from not only local artists, but world-class artists as well. The works of art are scattered all over the retail center. The art pieces feature iconic architectural elements that are woven into the buildings design. One of Scottsdale Fashion Squares main focuses is on delivering the essential element of art to the retail experience.

## □ PROGRAM ELEMENTS

- Over 2,000,000 sf of Mixed-Use/Retail
- More than 200 shops and restaurants
- 40 of the world's finest luxury and contemporary brands
- Art Exhibits
- Entertainment Spaces
- Currently completing a multi-phased renovation that will bring a more mixed-use atmosphere

## □ ENVIRONMENTAL/ SOCIAL RESPONSE

- Follow CDC guidelines on cleaning and social distancing, and adhere to local government ordinances.
- Installation of hospital-grade air filtration within a high-quality HVAC system.
- Follow the CDC's recommended six foot social distancing rule.
- Only select entrances are open to encourage traffic to flow a certain direction.
- Mall walking is unavailable at this time.
- Curbside Pickup is available for select retailers and restaurants.
- Masks are required except for individuals with underlying health conditions or those under the age of 6.



Figure 22| Scottsdale Fashion Square, photo credit | JPRA Architects |



Figure 23| Scottsdale Fashion Square, photo credit | JPRA Architects |



Figure 24| Scottsdale Fashion Square, photo credit | JPRA Architects |

# SUMMARY

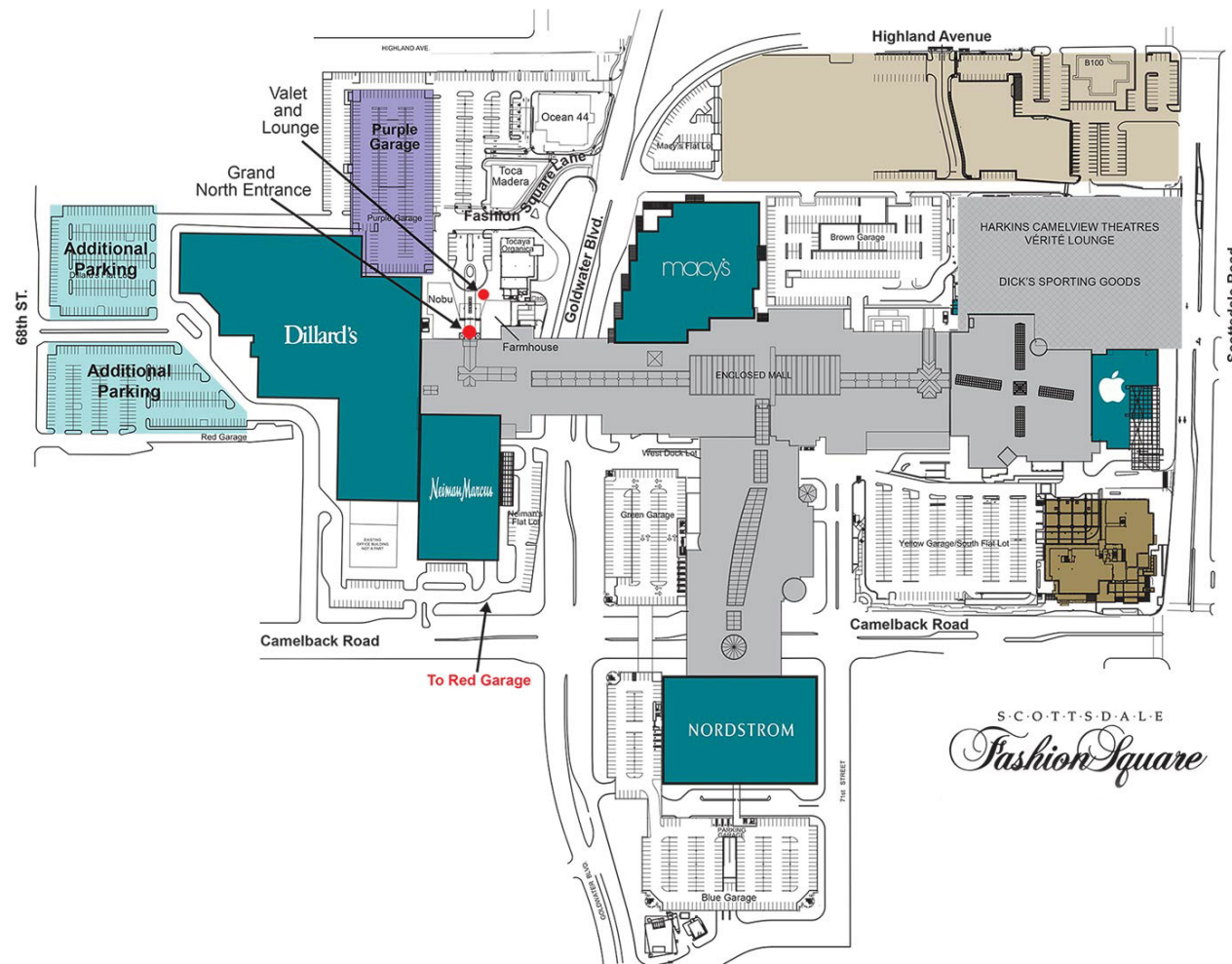


Figure 25| Site Plan, photo credit | Scottsdale Fashion Square |

In order to better understand the theoretical premise of the thesis, case study and typological research is a necessity. One of the most important topics to address is finding malls that are successful and unsuccessful. Once that is done, researching what was located on the site before the mall came to be is important. How did the site once function before the mall took its place?

In order to successfully transform a space that no longer functions to its full potential, it is important to learn how to design for the people that are using the space. Human scale is one of the biggest design elements that I will be focusing on. Mega-malls are extremely popular in modern day society, however, the functionality of the mega mall is slowly dying because of its ineffective design. I would like to transform this large scale mall into a space that has an intention to please the users by providing mixed-use spaces that are lively and open during most hours of the day.

Victor Gruen was one of the most influential pioneers in the design of shopping malls in the United States. One of his biggest philosophies was to promote walk-ability rather than vehicular traffic. The Arizona Mills mall is a great example of a mall that does the opposite. An example; a customer drives to the parking spot with the closest entrance instead of enjoying the journey to enter the space. In order to enhance Arizona Mills, I want to use the case studies that I chose to incorporate similar green spaces and walking paths instead of multiple surface level parking lots. Instead of a sea of parking spots surrounding the site, I would like to design a multi level parking structure which not only will save space, but give the users shade and promote walk-ability once inside the structure.

Having a mostly outdoor/indoor mall will not only attract more users, but it will allow for more safety during a world wide pandemic. Ventilation and air-flow is one of the biggest factors in reducing the risk of catching a deadly disease.

# MAJOR PROJECT ELEMENTS

## RETAIL

Open weekdays 9AM-9PM, and Sat. 10AM - 9PM, Sun. 10AM - 6PM

## DOG PARK

Open 24 hours 7 days a week

## BARS/NIGHT LIFE

Open Mon. - Thurs. 12PM - 2AM, Fri. & Sat. 12PM - 2AM, Sun. 12PM - 12PM

## RESTAURANTS

Open Sun. - Wed. 11AM - 11PM, Thurs. - Sat. 11AM - 12AM

## COFFEE SHOPS

Open weekdays 5AM - 9PM, Sat. 6AM - 10PM, Sun. 6AM - 8PM

## FITNESS CENTER

Open 24 hours 7 days a week

## THEATER

Open weekdays 9AM - 11PM, Sat. & Sun. 11AM - 11PM

## AQUARIUM

Mon-Sun 11AM-5PM

## ART EXHIBITS

Open hours varies with what is adjacent to it

## GATHERING SPACE

Open hours varies with what is adjacent to it

## OUTDOOR GREEN SPACE

Open 24 hours 7 days a week



Figure 26 | Social Distancing, photo credit | Lydia Saad



# USERS

## USER/CLIENT DESCRIPTION

### CONSIDERATIONS:

- RETAIL
- RESTAURANTS
- THEATER
- DOG PARK
- FITNESS CENTER
- BARS/NIGHT LIFE
- OUTDOOR GREEN SPACE
- COFFEE SHOPS
- AQUARIUM
- ART EXHIBITS
- GATHERING SPACE

### PARKING:

Currently, Arizona Mills has around 6,000 outdoor parking spots surrounding the building. The parking is not covered which isn't very practical in the Arizona heat. In order to move forward with my design, I would like to implement a parking structure which will promote more efficient walk-ability to and from stores, as well as give clients the opportunity for shaded covered parking.

### USER GROUPS:

- RETAIL CONSUMERS
- RETAIL WORKERS
- SERVICE WORKERS
- MALL STAFF
- EVENT ATTENDEES



Figure 27 | COVID-19 Pandemic, photo credit | Colin Gray

# THE SITE

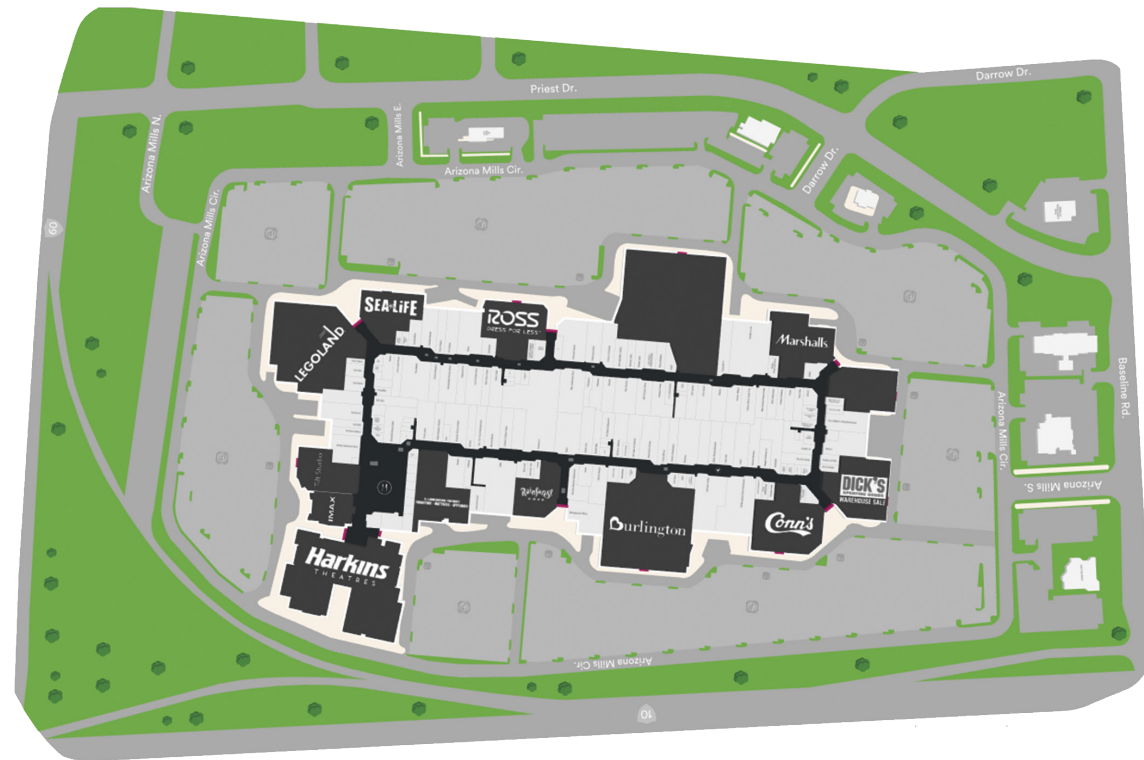


Figure 28 | Site Plan, photo credit | Archi-Union Architects

The Phoenix Metro area is one of the fastest growing metropolitan areas in the United States. The site that I chose to work with is located in Tempe, Arizona. Specifically, I have chosen the site of the Arizona Mills Mall which is located right off of two of the major interstates in Arizona. I visited this mall this past summer during the midst of the pandemic which gave me inspiration to further research and propose the idea of using this site for my thesis.

Arizona Mills Mall is an indoor outlet shopping mall. It was first opened in November of 1997. Throughout the years, the mall has expanded to over 185 stores with over 6,000 parking spots located around the mall. The mall is one large loop of stores with narrow circulation spaces, making the circulation through the space extremely difficult while social distancing during a pandemic. Throughout the years, Arizona Mills has been successful, however, with the surge in online shopping, the mall has lost some of its main attractions. The pandemic has also affected the mall greatly. In March of 2020, Arizona Mills was forced to shut down for over a month and a half. This affected many businesses.

In order to revamp this decaying shopping center and turn it in to a lively green space that promotes social distancing, I plan to propose an idea to redesign the spacial organization and convert the space from an all indoor shopping center to an outdoor focused mall. In order to do this, extensive research regarding different spacial organization and programs of malls will need to be identified.

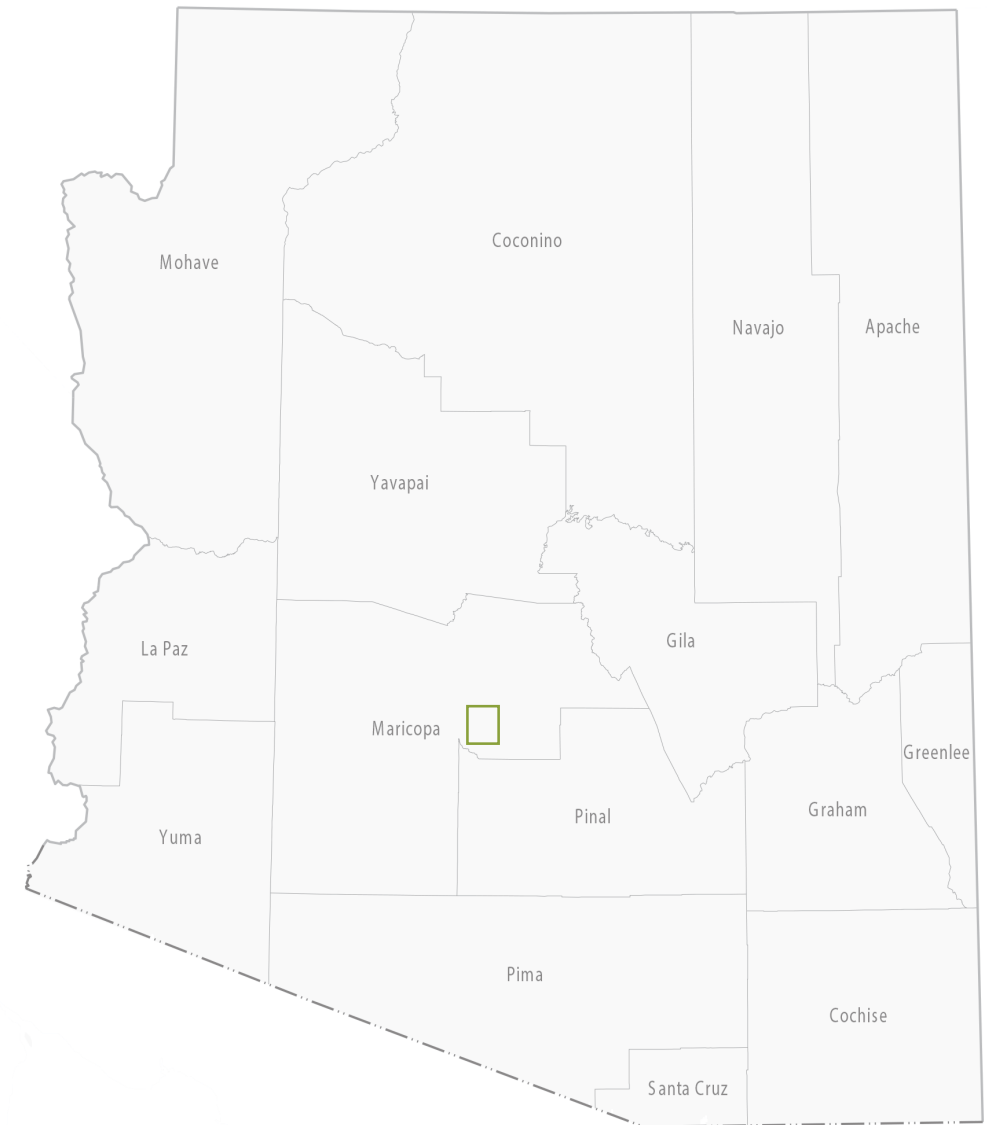


Figure 29 | Maricopa County, Arizona, photo credit | Archi-Union Architects

# SITE

## PRELIMINARY INFORMATION

### SITE SELECTION

The Arizona Mills Mall is an example of a mall that thrived when it initially opened but after the first few years slowly decayed. The mall is next two to of the busiest interstates in the state of Arizona. It has many great stores and shops around the mall, however, the orientation and design of the building is extremely unfriendly to pedestrians. As of now, the mall sits in a wide expanse of parking lots surrounding the building. The entrances are all pushed back into the building, making it unclear of where to enter. There are very little outdoor common areas, making natural outdoor pedestrian exchange almost impossible.

In order to make this space appeal to many different user groups, it must have many different typologies and uses. In order to design a successful site, it must be attractive and draw in all potential clientele.

### CITY OF TEMPE VALUES:

- People
- Integrity
- Respect
- Openness
- Creativity
- Quality
- Diversity

### SITE ANALYSIS:

1. How can the site be more welcoming and attract potential consumers to the area?
2. How to make the site more pedestrian friendly and walkable?
3. How will it impact neighboring buildings and streetscapes?

### STRENGTHS

Close to two major interstates  
Large site  
Opportunity for redevelopment  
College city  
Many different typologies

### WEAKNESSES

The mall is surrounded with parking lots.  
May take a lot of resources to change existing site

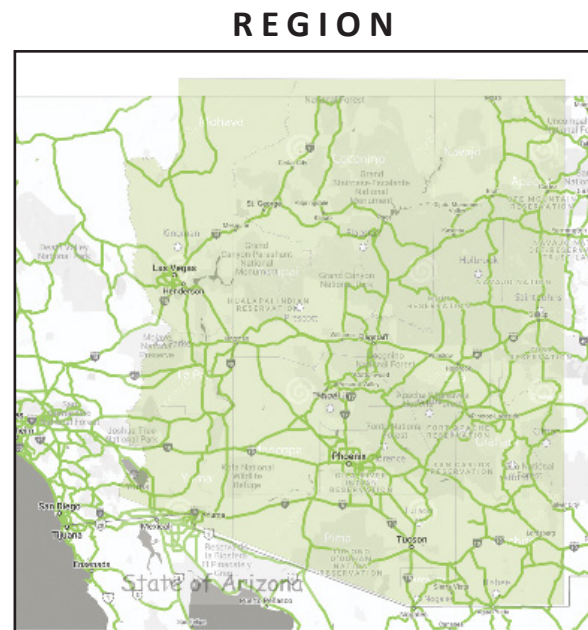


Figure 30 | Region-Arizona| Tempe, AZ

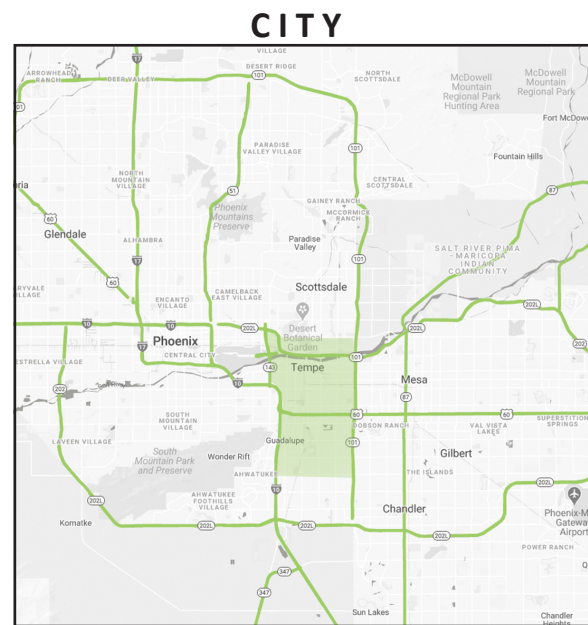


Figure 31 | City-Tempe, Arizona| Tempe, AZ



Figure 32 | Site-Arizona Mills Mall | Tempe, AZ

# THE PROJECT EMPHASIS

## 1. REDESIGN THE EXISTING STRUCTURE AND GIVE BACK WHAT THE MODERN DAY MALL TOOK AWAY

Arizona Mills has the opportunity for growth and an ability to give back to the community in a way it hasn't before. As of now, many stores are in locations that don't make them easily accessible to potential shoppers. This can be easily fixed with small design changes that promote walk-ability and give users easy accessibility to their favorite stores.

## 2. RESTORE COMMUNITY LIFE AT THE SITE

A mall should be a space where groups of people are able to come together and enjoy life. This urban structure is so large, that it almost leaves the space lifeless because there is so much empty circulation space. In order to address this issue, I would like to devote main circulation spaces that are large enough to promote social distancing, but give users a sense of place while in the space. Continuing to bring diverse typologies into the mall will allow many different user groups to enjoy the site.

## 3. IDENTIFY WHAT ARCHITECTURAL ELEMENTS SET APART SUCCESSFUL MALLS FROM THE UNSUCCESSFUL

During my research, I would like to analyze and investigate how successful and unsuccessful malls are spatially organized and what design decisions were made when redesigning these expansive structures. It is also crucial to develop an idea of what spaces are being utilized the most and redesign them with the communities wants and needs in mind.

## 4. MAKE NECESSARY DESIGN CHANGES THAT PROMOTE SOCIAL DISTANCING AND ALLOW USERS TO FEEL SAFE DURING THE MIDST OF A PANDEMIC

A pandemic is something that hasn't happened to our country in many years, however, pandemics are unpredictable and this is something that architects need to be prepared for. How will this ongoing crisis affect buildings designs in the future? What will architects need to address moving forward?

## 5. IDENTIFY AND IMPLEMENT NEW TYPES OF TECHNOLOGY INTO THE DESIGN TO HELP SLOW THE SPREAD OF DISEASE

Technology is always continuing to develop and progress. Technology is playing a huge role in the pandemic, and I would like to implement systems into my design that will help to control the spread of the outbreak, and prevent potential infected customers and workers from entering the building.

# GOALS OF THE THESIS

## THEORETICAL, SOCIAL, AND PHYSICAL GOALS OF THE THESIS

- To thoroughly research the evolution of the shopping mall and identify what factors lead to these design decisions.
- Identify case studies that have an outdoor focus and use them as inspiration for design.
- Learn about design techniques when malls were first built compared to now.
- Research pertaining to orientation, design layout, and urban spaces of shopping malls and how this led to the modern day shopping mall.
- Identify what steps malls are taking to keep customers safe during a world-wide pandemic and stores open for business.
- Determine what aspects of a mall make them most attractive to potential shoppers.
- Finding an inventive solution to keep malls open for business during a pandemic and address how this can be accomplished safely during a time where social distancing and other health precautions need to be followed.
- Find an inventive design solution to keeping malls in business during the surge of online shopping.
- Be intentional with all design considerations while implementing solutions into the thesis.

# PLAN FOR PROCEEDING

Moving forward after the completion of the proposal and program phases of the thesis project, I plan to move forward into the conceptual design phase. This will allow me to establish site context and begin the analysis of the site.

Throughout the project, I plan to utilize design tools that I have used throughout my time in school. Some examples of these tools are: AutoCAD, Adobe software products, and Revit. I will be able to use these tools to document information regarding the existing site. Once this data is documented, I will then be able to organize the data to later inform my design process. One of the most important design solutions that I will be using is spatial diagrams and conceptual massing of spaces.

Once initial massing takes place, I will thoroughly analyze each form in order to form a clear and concise design solution. In order to help decipher a strong solution, I will carefully analyze and form new plans, sections, elevations, axonometrics and design diagrams. Organization and documentation will be extremely important throughout the design process as this will help me to explain my goals and help the audience to understand the scope of the project. Furthermore, natural and passive design strategies will be implemented after extensive research is done.

## DOCUMENTATION OF THE DESIGN PROCESS

### DOCUMENTATION COMPILATION / DOCUMENTATION CREATION:

#### □ MEDIUM FOR DESIGN INVESTIGATION:

- Computer Representation
- Hand Sketching
- Hand Modeling

#### □ SOFTWARE FOR REPRESENTATION:

- Adobe Illustrator
- Adobe InDesign
- Adobe Photoshop

#### □ SOFTWARE FOR INVESTIGATION:

- Auto-desk AutoCAD
- Auto-desk Revit
- Adobe Sketchup

#### □ DOCUMENTATION ORGANIZATION:

File Labeling: Year-Matejcek\_Thesis\_Phase\_Name  
 Example: 2020-Matejcek\_Thesis\_Systems\_HVAC

## DEFINITION OF RESEARCH METHODOLOGY

The process used to arrive at a scientific research conclusion.

1. Unifying Idea
2. Topic research leading to discovery of new ideas and tools to help you answer related questions
3. Testing of new ideas and tools
4. Formulation of your own design opinions
5. Formulate those opinions into a proposed intervention

#### □ PUBLICATION OF MATERIAL:

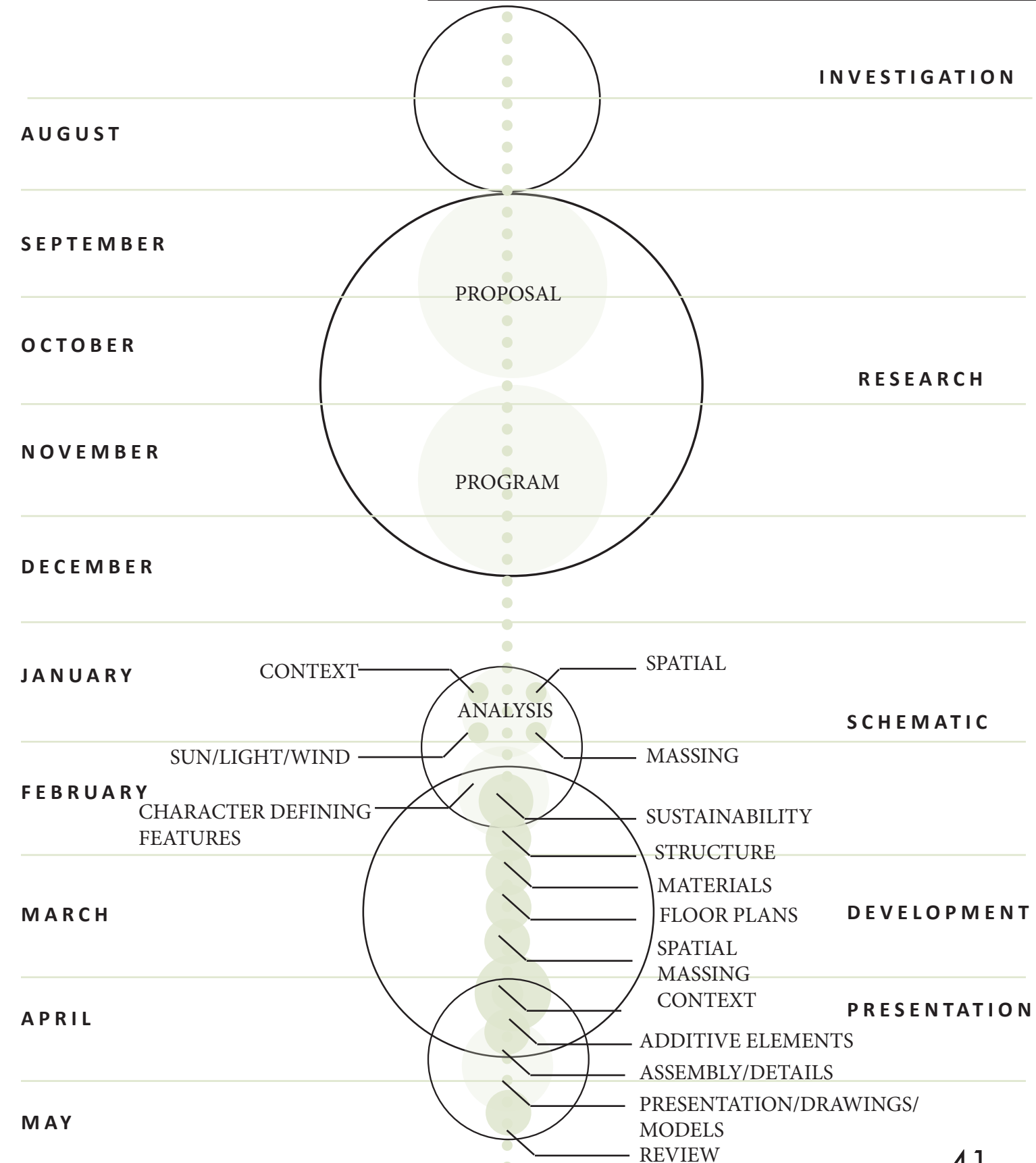
Relevant material will be recorded & credited in final thesis book available:

- NDSU Institutional Repository
- Hard cover book format

#### □ DESIGN PRESERVATION METHODS:

- Creation/Investigation of Representation
- Feedback from advisor(s)
- Documentation of Research Material
- Computer Files Backed up Weekly to Google Drive
- Computer Files Backed up Bi-Weekly to an External Hard-Drive
- Thesis Book Updated Weekly as Per Schedule
- Drawings/Diagrams credited upon acquisition in references section

# SCHEDULE



# PROJECT JUSTIFICATION

Post Pandemic shopping focuses on shopping malls for the contemporary world, with an emphasis on spaces for commercial and leisure use before, during and after a world-wide pandemic.

My Unifying Idea and theoretical premise focuses on the concepts from an Austrian architect named Victor Gruen. When he originally designed the shopping mall, he thought of them as a place for gathering and socializing where anyone can join the space to feel a sense of belonging. Instead of Gruens idea being built, modern day shopping malls were constructed. Modern day shopping malls are often large, enclosed spaces that are surrounded by parking lots. Instead of lacking variety and promoting walk-ability they often promote vehicular traffic and only draw in a certain type of user.

With the spike of online shopping and new forms of technology, the shopping mall has been severely hurt financially. This has caused many locally owned boutiques and stores to close, and large department stores sit vacant. Instead of a mall being a place for socialization and community activity, it is now a quick destination for something that is needed by a particular user group. When proposing an idea for my thesis, shopping came to mind as it is one of my favorite hobbies. Shopping over the years has changed severely, especially since the spike of online shopping. Many stores have closed due to this, and with store closures it is hard to get the same experience that malls once had. Finding a new way to invent the shopping mall to promote social engagement as well as refresh the shopping mall design is one goal that I have. Another goal for my thesis will be to promote social distancing and take safety measures into consideration and implementation to keep consumers safe and healthy during a pandemic.

Many communities are facing the issue of store closures, especially small businesses during the pandemic. Many locally owned stores that are in malls are having problems staying afloat with the stay at home orders, as well as the danger of the pandemic, causing fewer overall shoppers. My thesis is a real-life problem that needs to be addressed before more businesses permanently close. Many factors needed to be taken into consideration in order to have a successful project such as: environmental factors, financial factors, the on-going pandemic, the current state of the shopping mall, as well as health and safety guidelines recommended by the Centers for Disease Control.



Figure 33 | COVID-19 Pandemic

At this stage in my academic and professional development, I would like to further explore the design fundamentals of malls of the past, present and future. Once I have obtained the knowledge of malls from the past, I will then be able to successfully apply this to the present-day mall and be able to design for the future. This project will keep me informed on the current pandemic situation as I will be continually investigating the statistics from the CDC, as well as the political situation and how the pandemic is being handled by each state. I will also obtain the knowledge of the malls designed throughout history and I will apply that knowledge to my thesis projects design.

Although malls are one of the most expensive commercial projects that are built economically, they are also one of the most utilized spaces by the community. Instead of tearing down the mall that I am studying for my thesis, I will be able to find ways to redesign the mall and create temporary flexible spaces that are designed for social distancing during a pandemic. These areas will have an outdoor focus to safely engage the community in events or stores that the mall has. I will also be able to study the city in which the site is located and what the community needs and desires. Not only will I have to design my thesis around Gruens principles, but I will have to thoroughly research the current pandemic and how to successfully design a space that promotes social distancing and gives users the confidence that they are in a safe place. I also plan to continue to conduct typological research on projects that hold a strong outdoor focus and incorporate green spaces as this virus is air-borne and people are less likely to be infected outdoors with air circulation being present. I will then research each individual scenario and examine what program elements make them successful.

The project I am proposing will be justified based on a return on investment, as many stores will most likely see a boost of consumer consumption as the spaces will be more appealing and much safer to enter during a pandemic. The environmental impact of my project will be sustainable in the future as stores will implement systems that are eco-friendly and provide guests with a safer experience. The project location is justified as I am designing mostly outdoor focused spaces. Arizona's climate is extremely easy to work with as the outdoors can be utilized most of the year. Even in the hottest months, outdoor cooling systems can be used to regulate the heat, therefore, providing customers with the option to be outside.

I believe that my project is imperative in order to save the mall and the small-scale business that are being severely affected by the pandemic. To keep small businesses open, they need more support from the local community, and my project will give the community a safe way to do so during the COVID-19 pandemic. This problem could be addressed by other people in the profession, however, I believe that my knowledge, and on-going research will give me the ability to create a design that will forever change the way of the malls design.



Figure 34 | COVID-19 Pandemic, photo credit | ABC News

# PERFORMANCE CRITERIA

## ACCESSIBILITY DURING A PANDEMIC

One of the main issues during a pandemic is the issue of store capacity. Many stores have implemented new guidelines to only allow a certain number of customers in the store at a time to promote social distancing. While completing site visits, I noticed that many stores have extremely long lines just to get into the store. For many people, this can be frustrating as they have to spend much more time than expected at one store, and the time that it takes to just enter the store is often unknown as there are no limits to how long shoppers can be inside. Another issue with waiting in lines, is the unawareness of the customers and their relation to others in line. Most retailers and restaurants have floor stickers that show the appropriate distance to keep between customers, but many times these stickers are unnoticed or completely disregarded at all. This issue may be addressed by finding an alternative to floor stickers if lines are necessary. While designing the mall and transitioning stores to an outdoor focus, it will allow the stores to have more people in them at one time, as there will be constant air-flow lessening the risk of contracting the disease. It will also prevent people from waiting in long lines and unintentionally ignoring social distancing protocols as floor stickers are often ignored.

## AN OUTDOOR GREEN FOCUS

While designing the mall, it is important to design spaces with an outdoor green focus. This will allow more customers to enjoy the stores during the nice weather, feel safer during a pandemic, promote walk-ability on the site, and allow more customers to gather in one setting at a time since there is natural air circulation. To successfully design stores with an outdoor green focus, the amount of existing green spaces as well as the existing parking lots, streets and paths will be calculated. I will then be able to compare the square footages to show the difference from before to after. Having stores outdoors will allow customers to feel safe and will enhance the overall performance criteria. Walk-ability is also very important. The performance criteria will be calculated by determining the distances between the existing connections and contrasting them to the new walk-ability with the additional paths and green spaces. How people enter the site, and travel from point to point will determine how walkable the proposed design is.



Figure 35 | COVID-19 Pandemic, photo credit | CNN News



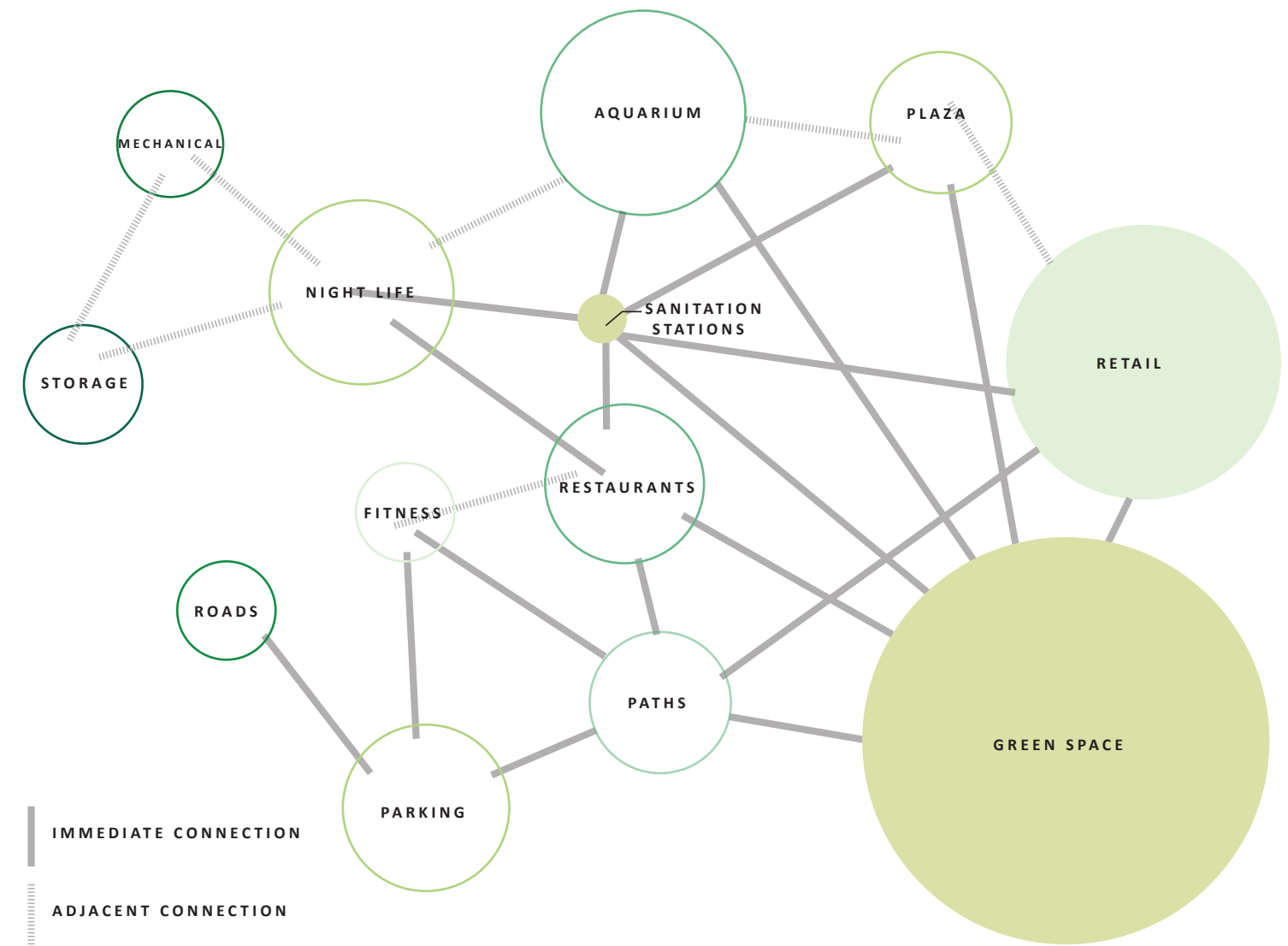
# SPACE INTERACTION

## VARIETY OF USES

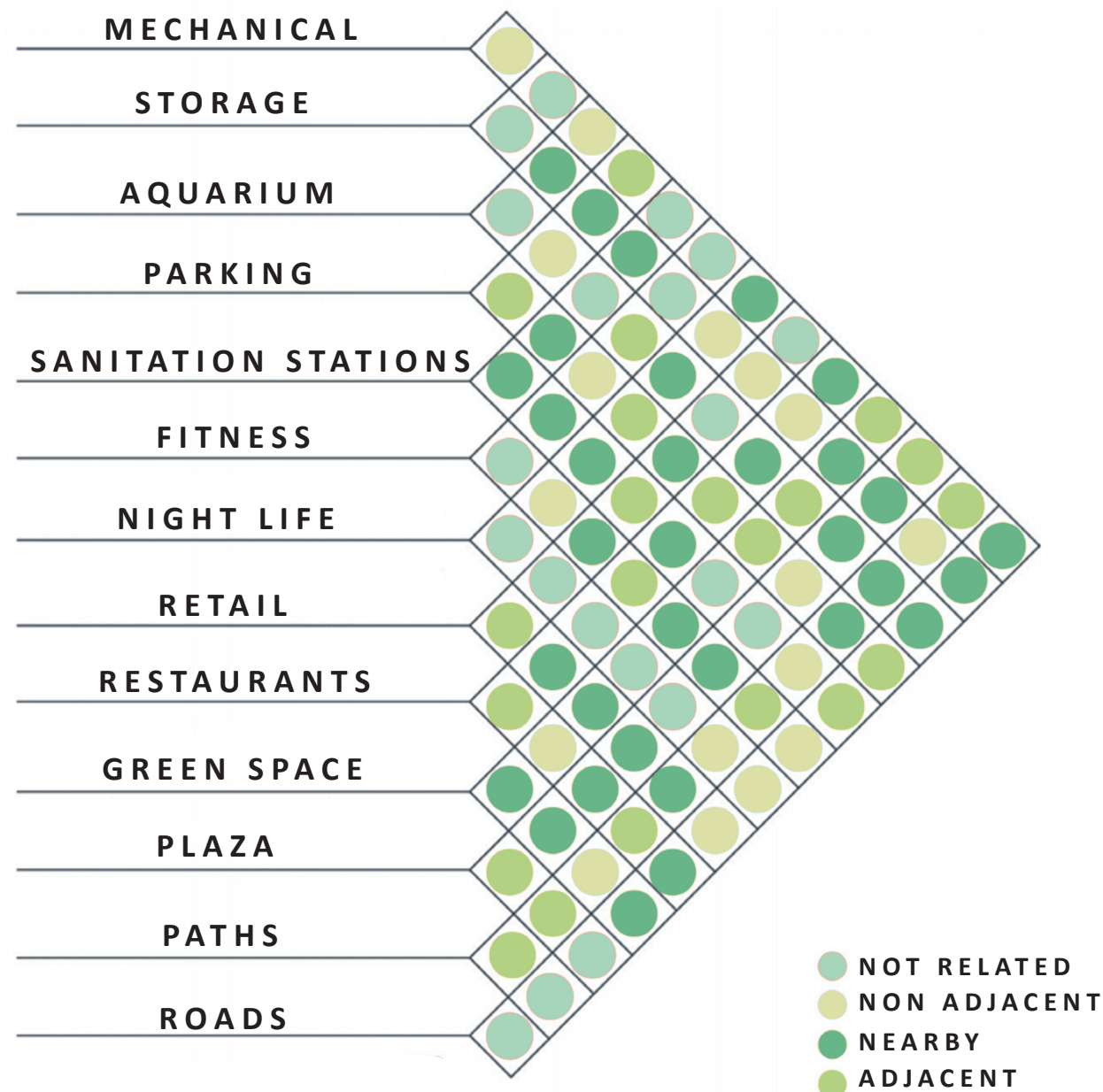
The Arizona Mills Mall currently has many stores and restaurants; however, I believe it is important to implement new programs onto the site to allow users to engage in more public activity and events. This will also allow more variety on the site to keep people busy and allow for more community engagement. The performance criteria will be measured by taking note of what is currently on the site and comparing it to the new programs that are added. This will show that my design is more than just a typical shopping mall, and it will show the benefits of the new uses. By adding a variety of uses to the site, it will keep existing groups of shoppers intrigued, while bringing in more diverse user groups. The mall that I am designing will have a large focus on retail and restaurants as well as entertainment, green spaces, education, and hospitality.

## DIVERSITY ON SITE

One of the biggest factors when drawing in potential shoppers is the diversity of the mall itself. By adding new programs, that are open at various times of the day, more user groups are able to enter and explore the site. Having a mall that is open 24 hours, with access to certain types of stores, will allow users to practice safer social distancing, as the consumers can choose the less busy hours to keep them safer. This not only will benefit consumers, but mall staff as well. Having the mall open 24 hours, will allow staff to be able to practice additional sanitation protocol, therefore keeping shoppers.



# ADJACENCY MATRIX



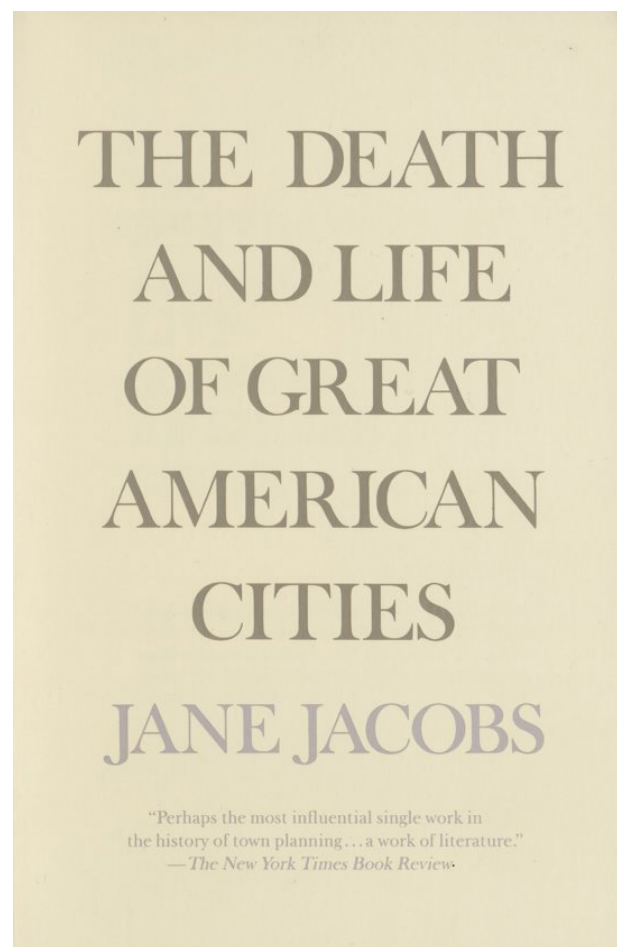
# SPACE ALLOCATION

ARIZONA MILLS MALL SITE = 3,700,500 sf

EXISTING ARIZONA MILLS MALL = 1,237,000 sf

SPACE	SIZE	PERCENTAGE
MECHANICAL	10,000 sf	.27%
STORAGE	10,000 sf	.27%
AQUARIUM	26,000 sf	.70%
PARKING	1,080,000 sf	29.2%
SANITATION STATIONS	500 sf	.01%
FITNESS	15,000 sf	.41%
NIGHT LIFE	40,000 sf	1.2%
RETAIL	1,800,000 sf	48.6%
RESTAURANTS	359,000 sf	9.7%
GREEN SPACE	200,000 sf	5.4%
PLAZA	10,000 sf	.27%
PATHS	100,000 sf	2.7%
ROADS	50,000 sf	1.4%
<b>TOTAL</b>	<b>3,700,500 sf</b>	<b>100%</b>

# LITERATURE REVIEW



*The Death and Life of Great American Cities*  
Written By: Jane Jacobs

## ABOUT THE AUTHOR:

Jane Jacobs was an American and Canadian writer and activist that led the field of urban planning with her writing. She focused on theories such as resistance, to the replacement of urban communities with high rise buildings, as well as the loss of community to expressways. Jacobs was known for her grass-roots organizing and is considered a founder of the New Urbanist movement.

Jacobs dedicated her time to studying cities, and saw them as living ecosystems. Instead of looking at cities individually, she took a systematic look at the elements of a city as if they were an interconnected system. Jane Jacobs often relied on the wisdom of those who lived in neighborhoods, in order to know what type of community planning would best suit the location. She preferred the concept of mixed-use neighborhoods in order to separate residential and commercial functions. Jacobs fought the concept of high-density buildings, as she believed that well-planned that they did not necessarily have to have overcrowding. Another belief that she had was that preservation and the renewal of old buildings was extremely important to communities.

## SUMMARY:

### PART 1: "THE PECULIAR NATURE OF CITIES":

The Peculiar Nature of Cities discusses the main importance of sidewalks, and why cities should promote them. Some of the main benefits of sidewalks are: safety, contact, and assimilating children. As sidewalks are often visible from many places, pedestrians and casual onlookers inside buildings are able to spontaneously protect people in trouble ; therefore creating a safety net for the city. Unlike sidewalks, parks and playground are not openly visible compared to that of sidewalks, and children are more at risk to being harmed. Jacobs also addresses neighborhoods as organs of self-government which require participation of the citizens in order to create a safe, and suitable environment.

*"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody."*  
— Jane Jacobs, *The Death and Life of Great American Cities*

### PART 2: "THE CONDITIONS FOR CITY DIVERSITY":

This part of Jacobs book focuses on the different mechanisms that generate city diversity, which is an essential component of successful cities. Many of these mechanisms are largely economic, however, complex mixtures of uses allows diverse individuals to populate neighborhoods and allows for users to occupy facilities within the area at different times. Social interaction and economic development are outcomes when short streets increase circulation options for their users. Another discussion mentioned in the book is that cities thrive when both new and old buildings are introduced in one area. They are then able to accommodate people and businesses of different economic means, therefore promoting diversity within the community. Visible city life can also be a result of high-density areas. The combination of all of these factors promotes diversity.

*"You can neither lie to a neighborhood park, nor reason with it. 'Artist's conceptions' and persuasive renderings can put pictures of life into proposed neighborhood parks or park malls, and verbal rationalizations can conjure up users who ought to appreciate them, but in real life only diverse surroundings have the practical power of inducing a natural, continuing flow of life and use."*  
— Jane Jacobs, *The Death and Life of Great American Cities*

### PART 3: "FORCES OF DECLINE AND REGENERATION":

The third part of Jacobs' book focuses on four major forces that are negativity impacting cities. The trend of less affluent individuals migrating into a new neighborhood because of the newfound success of a neighborhood is trending. When the neighborhood is successful, it draws in more users, therefore lessening diversity and forcing out original residents. Another topic discussed is large scale facilities such as collage campuses. Jacobs discusses the phenomenon of these massive structures creating vacuums in their bordering areas, which become terminus's of generalized use. A third force discussed is the population instability which obstructs diversity, specifically in low-income areas. The final force Jacobs explains is that money alone, no matter private or public, cannot make a city thrive.

"Being human is itself difficult, and therefore all kinds of settlements (except dream cities) have problems. Big cities have difficulties in abundance, because they have people in abundance."

— Jane Jacobs, *The Death and Life of Great American Cities*

### PART 4: "DIFFERENT TACTICS":

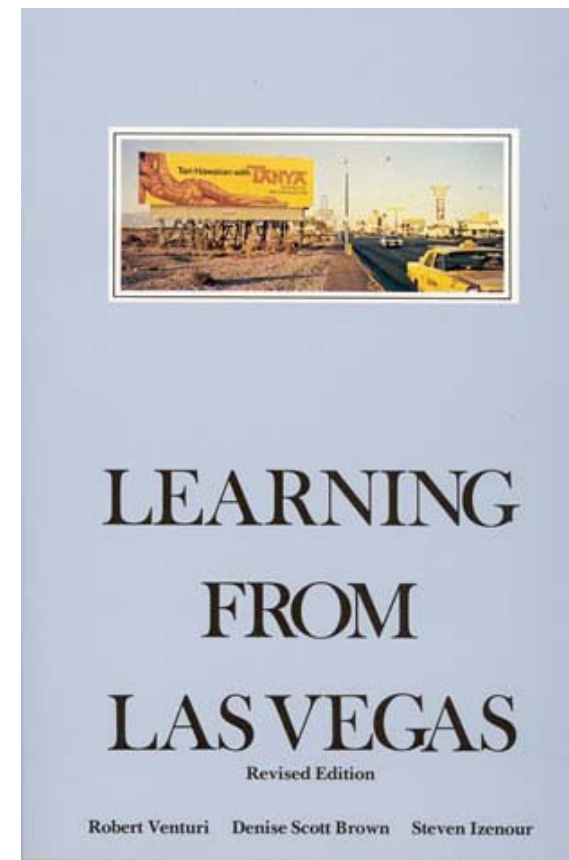
This chapter provides ideas to offer concrete tools to improve cities. Some suggestions to improve cities made in this part of the book are:

- Subsidized housing
- Reducing the number and use of automobiles by improving public transportation
- Enhancing the visual order of cities without sacrificing diversity
- Salvaging housing projects
- Revamping governing and planning districts

Cities are to be thought of as large complex entities with varied problems that only a prolonged response can address efficiently.

"There is a quality even meaner than outright ugliness or disorder, and this meaner quality is the dishonest mask of pretended order, achieved by ignoring or suppressing the real order that is struggling to exist and to be served."

— Jane Jacobs, *The Death and Life of Great American Cities*



*Learning From Las Vegas - Revised Edition*  
Written By: Robert Venturi, Denise Scott Brown, Steven Izenour

### ABOUT THE AUTHORS:

#### Robert Venturi

Robert Venturi is known as an influential writer, artist, designer, and teacher, as well as an award-winning architect. Some of his most famous and influential work includes the Sainsbury Wing of London's National Gallery, the renovation of the Museum of Contemporary Art-San Diego, and one of his most recent projects- the famous Vanna Venturi House.

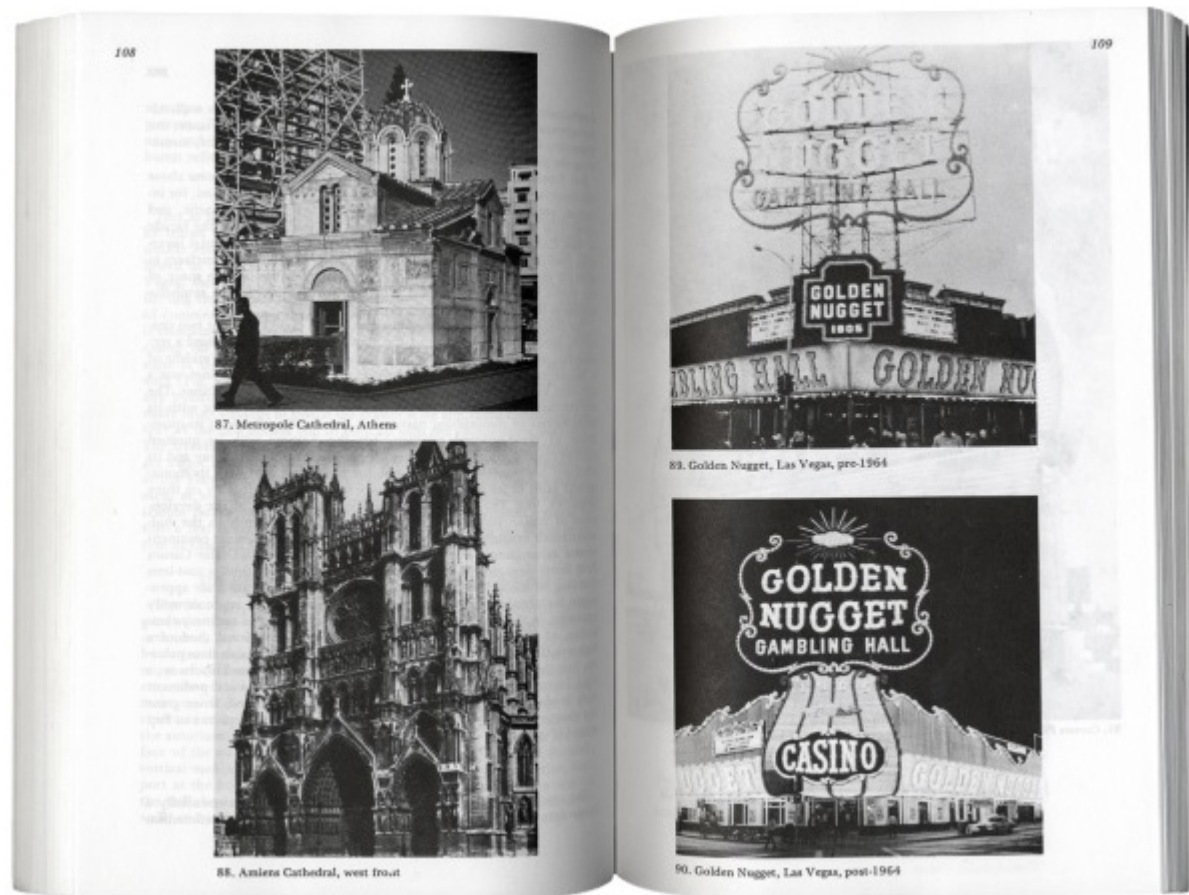
#### Denise Scott Brown

Denise Scott Brown is known as a famous writer, architect, and planner. Both Robert Venturi and Denise Scott Brown are founding principals of the influential architectural firm Venturi, Scott Brown, and Associates (VSBA.) Her work and ideas have influenced many generations of architects and planners throughout the years.

#### Steven Izenour (1940-2001)

Steven Izenour was a principal in the Philadelphia firm Venturi, Scott Brown and Associates, Inc (VSBA.) He is also the coauthor of the book being reviewed: Learning From Las Vegas. Steven Izenour has numerous famous works, with his most famous being: the Philadelphia's Basco showroom, the George D. Widener Memorial Treehouse (at the Philadelphia Zoo,) as well as the Camden Children's Garden.

# LITERATURE REVIEW



Robert Venturi and Denise Scott-Brown analyze the space, symbol and persuasion of architecture in the method of communication through the text "Learning From Las Vegas." Their goal in the revision of the book was to gain insight into the modernist progressive movement. One key symbol throughout the text is that of modern architecture is anything but permissive. Rather than enhancing the existing environments, modernist architects have preferred to change it all together.

Venturi and Scott-Brown reflect on the modernist theories on the sacredness of space in order to study the anti-spacial signs of Las Vegas. In many cases, these signs become the architecture. In the text, Learning from Las Vegas, the Las Vegas Commercial strip is introduced. The authors explain how modern architecture now prefers to change the natural environment rather than enhance it. Many modern architects are criticized due to their inability to have a nonjudgmental view. The book shows the value of symbolism in architecture, and Las Vegas teaches us how to bring light to this value.

One of the main concepts studied and reflected on by the famous modernist theorist Venturi and Scott-Brown is the theory of sacredness of spaces. The rejection of space held sacred by modernists is the anti-spacial signs and landscape of Las Vegas. In this city, the signs become the architecture. The focus within the text is the value of representational architecture along highways, which the authors believe modernists are blind to. Modernists often believe that the architectural plans should speak for themselves, while the authors believe that this aversion to dominated communication stems from an objection to signs in buildings.

Las Vegas is a city that shows its architecture through communication over space. The many signs that line the Las Vegas strip are forms of a necessary communication system that allows people to move from their current location to their final destination. Many high speed cars also rely on the signs. The authors of the book quote, "architecture is no longer enough." These signs are almost more prominent than the architecture itself.



In Learning from Las Vegas, the billboards and casinos of the city were controversially deemed worthy of architectural attention. Images courtesy of MIT Press

During the late 70's, modern architecture had abandoned the tradition of iconology and shunned symbolism of form. The book brings up the question of why Las Vegas had chosen to go against the ideals of modern architecture and rather choose symbolism over form. The main theory being argued by the authors is the spacial relationships that are created are done through symbols rather form.

As Las Vegas' spatial organization is symbol over form, it is important to know that while understanding the architecture of Las Vegas, different landscapes require different responses and outcomes from architecture. Las Vegas could have appeared in the eyes of modernist architects that designed for the "traditional landscape." However, Las Vegas was built for a new landscape of big spaces, high speeds and complex programs where subtle and complex meanings have no place, as in a city like Las Vegas image has far greater importance than architectural form. (Venturi, Brown, & Izenour, 1977.)

The first part of text in Learning from Las Vegas, states that we should "question how we look at things." To further explain this quote, it is important to be able to look at a place objectively in order to better understand a place. Las Vegas chose to reject the modernist movement during this time, and instead favor the form of communication. In my opinion, the authors are pushing people to further investigate the idea of the use of architecture as a symbol. If large scale commercial settings are able to communicate effectively through signs and symbols, the architecture is more likely to be successful. I believe that the authors are trying to push people to be more open minded about different types of architecture rather than blindly following an architectural movement.



Figure 36 | COVID-19 Pandemic , photo credit | Texas A&M University

# HISTORICAL CONTEXT

CHARACTERISTICS OF A MALL

FORM A DISTRICT  
OF SHOPPING  
AREAS IN AN  
URBAN SPACE

TO ATTRACT POTENTIAL  
CONSUMERS, BUILD A  
STRONG ARTICULATED  
CENTER TO ATTRACT  
SHOPPERS TO THE MALL

USE THE IDEA OF AN  
"ARCADE" TO DEFINE  
SHOPPING ACTIVITIES

IMPROVE THE  
QUALITY OF VISUAL  
SHOPPING

OFFER VARIED-USE SPACE  
AND/OR FORM A PEDES-  
TRIAN-ORIENTED ENVI-  
RONMENT.

# DEVELOPMENT

DEVELOPMENT OF THE PEDESTRIAN MALL

## 1900'S - 1950'S

During this time, the development of the shopping mall was already underway. The basis of the shopping mall concept existed previously, however, during the early years of the 20th century is when the shopping mall really took off. The first strip malls were designed and built in the 1920's. Improved designs of the centralized concept were introduced and established in the 1950's, however, they still weren't ideal.

Many designs contained open spaces that existed between irregularly designed pavilions. Victor Gruen Associates designed the Northland Center, in Detroit, Michigan, where a campus of rectangular pavilions can be seen.

## 1960'S

Modernism and rationalism in architecture was starting to develop in the 1960s. The mall design's form type focused on arcade corridor connections, a "parallel-side" design for buildings, as well as the concept of the "center of space." The mall's design during this period allowed for doors to be removed from shop-fronts to let customers and air flow enter. Floor furnishings may have also been displayed externally, however the line of demarcation between private display and public domain still remained prominent.



Figure 52 | Northland Center, photo credit |Belt Magazine



Figure 53 | Northland Center, photo credit |Belt Magazine

# DEVELOPMENT

## 1970'S

In the 1970's, the use of natural daylight was starting to become an important implementation in the design of shopping malls. Natural daylight is known to improve the environmental quality in an enclosed area as well as provide emotional benefits for users. The functional effects of a traditional arcade were still prominent during this period. Many malls in the 1970's started to utilize glazed roofing, which was a distinct factor in the improvement and evolution of the shopping mall. Special climate and preferences for specific types of merchandise or services may require distinctive design characteristics. An example of a malls with a partial arcade application is the Stanford Mall in Palo Alto, California, as well as the Tucson Mall, in Tucson, Arizona.

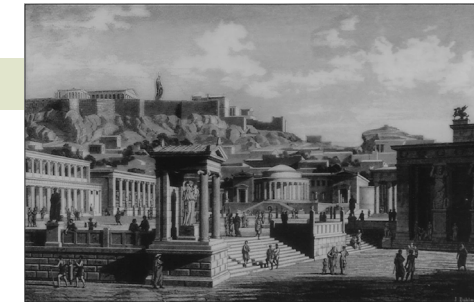


Figure 54 | Tucson Mall, photo credit | LabelStar



Figure 55 | Stanford Mall, photo credit | Simon Malls

## TIMELINE HISTORY OF THE PEDESTRIAN MALL



AGORA IN GREECE

5th CENTURY B.C.

100 A.D.

FORUM MARKET IN ROME



STRIP MALLS

1920'S

1952

FIRST OUTDOOR MALL

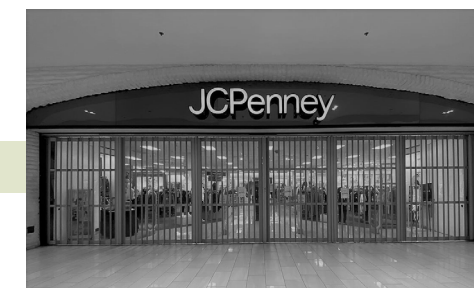


FIRST FULLY ENCLOSED MALL

1956

1980'S

FIRST LIFESTYLE CENTERS



MALLS START DYING

2000'S

TODAY

MALLS GET NEW LIFE



63



## SOCIAL CONTEXT

Many malls have been suffering severe financial loss after the spike of online shopping. Malls used to be a place of social gathering, however, they are now closed-off, massive buildings that contain vacant stores. Victor Gruen's idea of a mall mimicked a European town square that was full of variety, attracted diverse groups of people, and encouraged socialization. Unfortunately, his idea was instead replicated incorrectly all over the country.

During current times, people like to focus their attention to experiences rather than goods. If shopping malls continue to design for flexible spaces, and diverse stores, they will be able to accommodate this. The type of way people interact with each other has also changed severely. Social interaction is now a much more intimate behavior as people have become more private. Massive shopping centers are often loud and intimidating, which is why small green gathering spaces may be more affective.

## CULTURAL CONTEXT

The modern day shopping experience is culturally much different than the past. Many people prefer spending their money at local businesses, or to conveniently shop online. The pandemic has greatly influenced small businesses and many people feel a need to give back to those that support the community through their business. Small businesses offer unique goods that larger chains may not, as well as convenience. Online shopping has also greatly affected the success of modern day malls. One is able to have goods delivered to their door or picked up in store with just a few clicks and a card payment. The pandemic has also made online shopping much more attractive, as social interaction is not necessary.

To rebuild community life safely, programs must be provided and developed to allow people to slowly and safely come back together during a pandemic and enjoy spaces to socialize, gather, and find unique goods and services. The mall must obtain its own unique identity while providing flexible hours to guest to accommodate all people. Mixed-use is starting to become very popular, as it seems to be able to successfully adapt to changing community life.

## VICTOR GRUEN

### BIOGRAPHY

Victor Gruen was born in 1903, in Vienna, Austria. When Germany was annexed in Austria in 1938, Gruen decided to leave his home country and move to the United States. He then started his career in a small shop in New York. After receiving more and more commissions, he was able to get his name out there and make connections. Shortly after his arrival in New York, Gruen packed his belongings and moved to Los Angeles to start his own firm. Gruen was the first architect to ever design an open-air mall, which then led him to design the first ever fully enclosed mall in Minnesota. Victor Gruen was one of the most influential architects in mall design, and is often thought of as "The Father of the Shopping Mall."

### DESIGN INTENTIONS

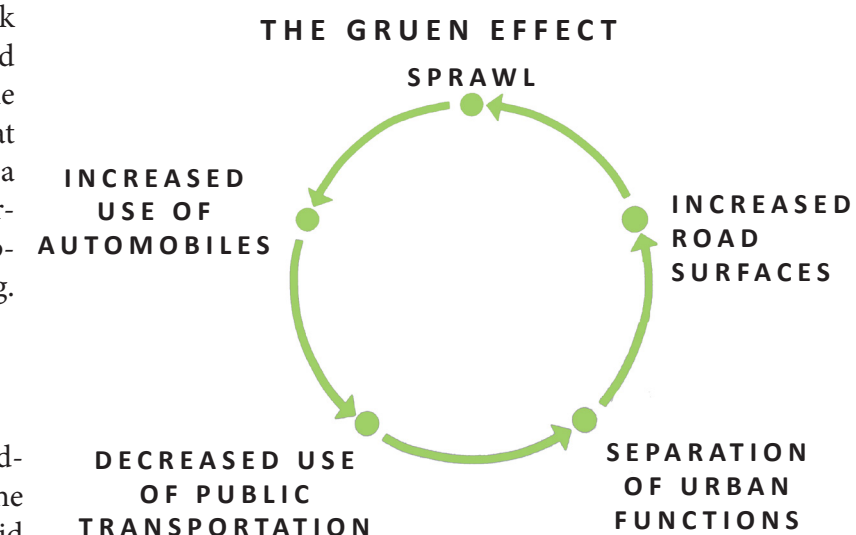
One of Gruen's main inspirations for mall design was his childhood and learning from the designs of town squares in his home town of Vienna. Gruen's goal for the modern day shopping mall was to "provide the needed place and opportunity for participation in modern community life that the ancient Greek Agora, the Medieval Market Place and our own Town Squares provided in the past" (Quito.) Some main goals that he had for the space was to provide a lively mix of commerce, art and entertainment, while allowing for the opportunity of a communal gathering.

### THE GRUEN EFFECT

Victor Gruen's intentions of providing opportunity for participation in the modern community unfortunately did not come to life. Rather than vibrant plaza spaces full of life, malls are now surrounded by parking lots. Green spaces and paths for pedestrians are also scant.



Figure 37 | Victor Gruen, photo credit | Los Angeles Conservancy



"Today shopping malls are seen as culprits in the rise of American car culture and the decline of walkable downtowns"

## WHAT IS COVID-19?

The CDC (Center for Disease Control) has great information about the progression and statistics of COVID-19, as well as guidance on the disease. I have taken this information directly from the organization's website in order to accurately depict the information pertaining to COVID-19.

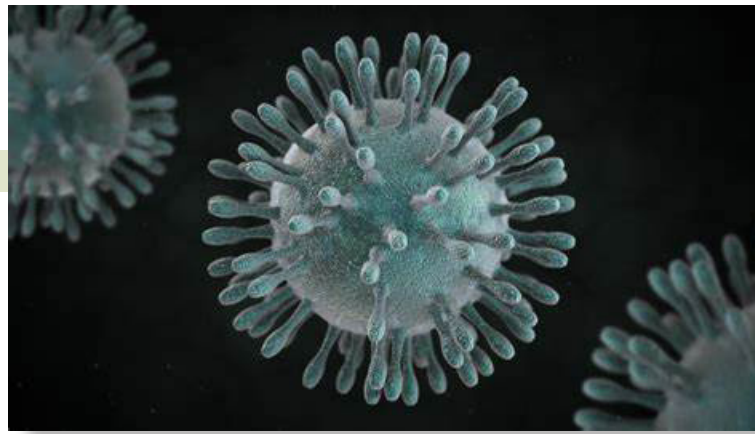


Figure 38 | COVID-19, photo credit | Washington University

COVID-19 is a new strain of coronavirus that has not been previously identified in humans. The COVID-19 is the cause of an outbreak of respiratory illness first detected in Wuhan, Hubei province, China.

Since December 2019, cases have been identified in a growing number of countries.

Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Severe Acute Respiratory syndrome (SARS) and Middle East Respiratory Syndrome (MERS).

Public health authorities are still learning and continue to research COVID-19.

## SYMPTOMS OF CORONAVIRUS

People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. People with these symptoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

This list does not include all possible symptoms. CDC will continue to update this list as we learn more about COVID-19.

## WHAT YOU NEED TO KNOW

- Anyone can have mild to severe symptoms.
- Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness.

## CDC BUSINESS RECOMMENDATIONS:

### CDC INFORMATION PERTAINING TO INTERIM GUIDANCE FOR BUSINESSES AND EMPLOYERS RESPONDING TO CORONAVIRUS DISEASE 2019 (COVID-19), MAY 2020:

#### PREVENT AND REDUCE TRANSMISSION AMONG EMPLOYEES

- Actively encourage sick employees to stay home:
- Consider conducting daily in-person or virtual health checks
- Identify where and how workers might be exposed to COVID-19 at work
- Separate sick employees
- Take action if an employee is suspected or confirmed to have COVID-19 infection
- Educate employees about steps they can take to protect themselves at work and at home
- For employees who commute to work using public transportation or ride sharing, consider offering the following support:
  1. If feasible, offer employees incentives to use forms of transportation that minimize close contact with others (e.g., biking, walking, driving or riding by car either alone or with household members).
  2. Ask employees to follow the CDC guidance on how to protect yourself when using transportation.
  3. Allow employees to shift their hours so they can commute during less busy times.
  4. Ask employees to clean their hands as soon as possible after their trip.

#### MAINTAIN HEALTHY BUSINESS OPERATIONS

- **IDENTIFY A WORKPLACE COORDINATOR WHO WILL BE RESPONSIBLE FOR COVID-19 ISSUES AND THEIR IMPACT AT THE WORKPLACE.**

- Implement flexible sick leave and supportive policies and practices
- Protect employees at higher risk for severe illness through supportive policies and practices
- Communicate supportive workplace policies clearly, frequently, and via multiple methods
- Assess your essential functions and the reliance that others and the community have on your services or products
- Determine how you will operate if absenteeism spikes from increases in sick employees, those who stay home to care for sick family members, and those who must stay home to watch their children until child-care programs and K-12 schools resume
- Establish policies and practices for social distancing

#### MAINTAIN A HEALTHY WORK ENVIRONMENT

- Consider improving the engineering controls using the building ventilation system.
- Ensure the safety of your building water system and devices after a prolonged shutdown
- Give employees, customers, and visitors what they need to clean their hands and cover their coughs and sneezes
- Perform routine cleaning
- Perform enhanced cleaning and disinfection after persons suspected/confirmed to have COVID-19 have been in the facility
- Minimize risk to employees when planning meetings and gatherings

## HOW TO COMBAT CORONAVIRUS

**TABLE:** Example Controls to Prevent the Spread of COVID-19 in Work Environments

ENGINEERING	ADMINISTRATIVE	PERSONAL PROTECTIVE EQUIPMENT (PPE)
FACILITIES AND EQUIPMENT	MANAGEMENT AND COMMUNICATIONS	PPE
<ul style="list-style-type: none"> <li>Assess job hazards for feasibility of engineering controls</li> <li>Ensure ventilation and water systems operate properly</li> <li>Alter workspaces to maintain social distancing. Examples include:                             <ul style="list-style-type: none"> <li>Configure partitions as a barrier shield</li> <li>Move electronic payment reader away from cashier</li> <li>Use verbal announcements, signage, and visual cues to promote social distancing</li> <li>Remove/rearrange furniture</li> <li>Provide remote shopping alternatives (e.g., delivery, pick-up)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Monitor state and local public health communications about COVID-19</li> <li>Encourage sick workers to report symptoms, stay home, and follow CDC guidance</li> <li>Develop strategies to:                             <ul style="list-style-type: none"> <li>manage worker concerns</li> <li>communicate with workers</li> </ul> </li> <li>Remind workers of available support services</li> <li>Communicate to partners, suppliers, other contractors on policies and practices</li> <li>Encourage social distancing and the use of cloth face coverings (if appropriate) in the workplace</li> <li>Use technology to promote social distancing (e.g., telework and virtual meetings)</li> <li>Cancel group events</li> <li>Close/limit use of shared spaces</li> <li>Ask customers who are ill to stay home</li> <li>Consider policies that encourage flexible sick leave and alternative work schedules.</li> <li>Schedule stocking during off-peak hours</li> </ul>	<ul style="list-style-type: none"> <li>Conduct workplace hazard assessment</li> <li>Determine what PPE is needed for their workers' specific job duties based on hazards and other controls present</li> <li>Select and provide appropriate PPE to the workers at no cost</li> </ul>

## CORONAVIRUS NUMBERS

Arizona cases Updated Dec 16 at 7:43 PM local	United States Cases Updated Dec 16 at 7:18 PM local	Global Cases Updated Dec 16 at 7:18 PM local
<b>CONFIRMED</b> 429,219 +2,098	<b>CONFIRMED</b> 16,996,147 +245,996	<b>CONFIRMED</b> 74,087,090 +1,865,456
<b>DEATHS</b> 7,530 +102	<b>DEATHS</b> 310,065 +4,051	<b>DEATHS</b> 1,646,687 +34,673
<b>RECOVERED</b> -	<b>RECOVERED</b> 7,718,143 +94,733	<b>RECOVERED</b> 41,893,773

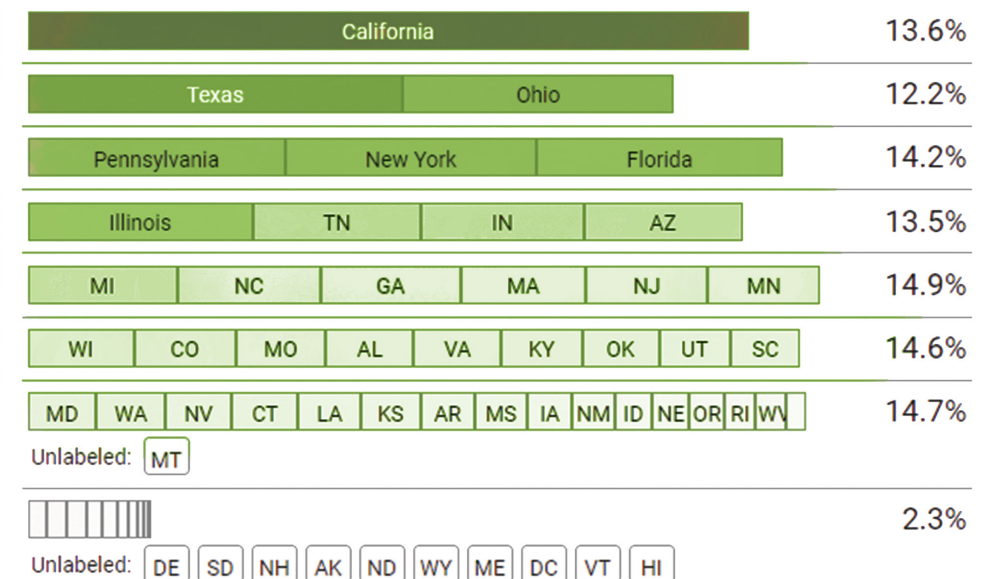
### WHICH STATES ARE CONTRIBUTING THE MOST

#### Which States Are Contributing the Most

SHARE OF NEW COVID-19 CASES IN THE U.S., PAST 14 DAYS

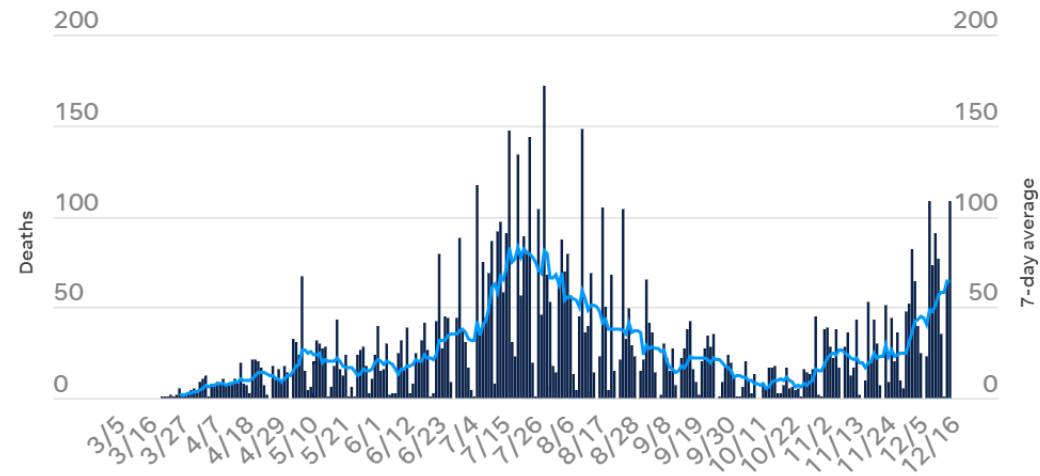


Arizona has reported 87,243 new cases in the past two weeks, 2.98% of the national total of 2,930,177



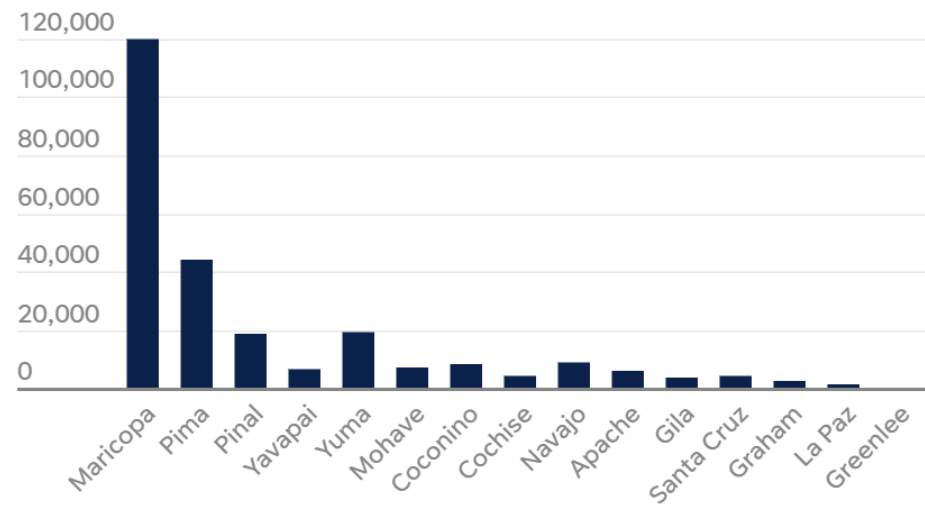
**CORONAVIRUS CASES**

**NEW CASES      DEATHS**



**CASES BY COUNTY**

**CASES PER 10K POPULATION      CASES**



**NEW CASES OF COVID-19 ANNOUNCED IN ARIZONA**

**NEW CASES      DEATHS**

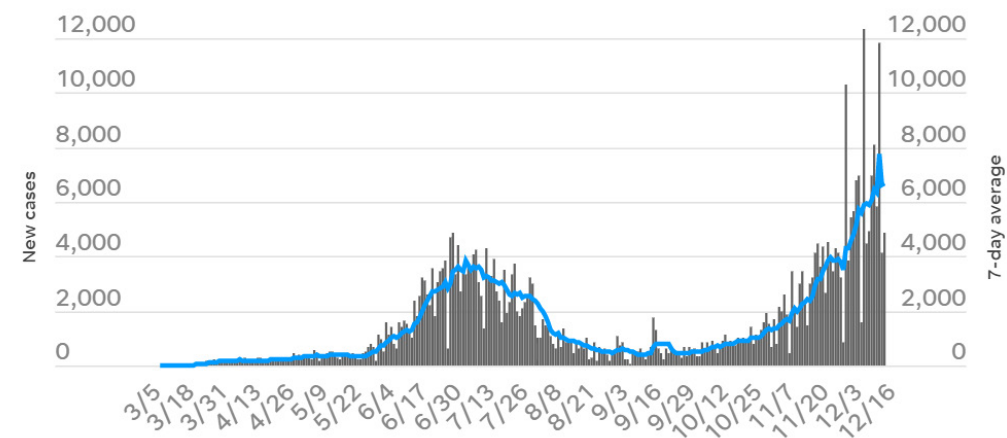


Figure 39 | COVID-19, photo credit | Medical News Today

## COVID-19 SAFETY RECOMMENDATIONS AND STANDARDS FOR FOOD DISTRIBUTION AND PURCHASES AT ARIZONA FARMERS MARKETS

The Arizona Department of Health has great information about the progression and statistics of COVID-19, as well as guidance on farmer's market instructions pertaining to the disease. I have taken this information directly from the organizations website in order to accurately depict the information pertaining to COVID-19 and farmer's market guidelines.

To minimize COVID-19 transmission risk, Arizona farmers markets are asked to enact the following recommendations regarding distancing, sanitation, and communication for the benefit of customers and farmers.

### FARMERS MARKET MANAGEMENT TEAM:

- Use social media and newsletters to communicate with vendors and customers that they should not come to the market if they are sick or have been in contact with someone who is sick.
- Provide adequate spacing for vendors' booths and equipment (cones, chalk, tape, spray paint) to ensure physical distancing (at least 6 feet between individuals) while entering the market, waiting in lines, and moving inside the market.
- Promote pre-ordering, alternate pick-up locations/procedures (including drive-thru), and delivery options.
- Encourage to-go options for food and beverages.
- Provide signage at market points of entry with information about safety protocols in place (i.e. Keep 6-foot distance; You Touch – You Buy; Look with eyes, Not with hands, etc.)
- Encourage vendors to provide at least two staff at every vendor's stand -- one person handling payment or money and a different person handling products.
- Provide fully stocked handwashing stations for vendors, customers, and market staff. Stations should include hand soap, portable water, graywater catch basin, single-use paper towels, and how-to signage handwashing in relevant languages. Consider placing a station at the market entry and encourage attendees to wash hands before entering. Encourage vendors to bring their own fully stocked handwashing stations for their booths.
- Encourage vendors to supply hand sanitizer (with at least 60% alcohol) at their stations. Hand sanitizer should only be used as a last resort if handwashing is not available; you cannot sanitize soiled hands.
- Single-use gloves should only be worn if hands are washed before and after gloves are used. Gloves should only be used for one task (i.e. only handling produce – not produce and money) and should be replaced when switching tasks, after performing appropriate hand hygiene, or as soon as they are soiled/torn.
- Eliminate food sampling, tastings, and cooking demonstrations.
- Limit or eliminate non-essential/non-related services, such as bands, other entertainment, or seating areas that promote gatherings. Do not allow customers to bring pets to the market (service animals are not considered pets).
- Share factsheets and information about proper handwashing technique.
  - <https://www.cdc.gov/handwashing/posters.html>
- Place visible signage throughout the market with CDC-recommended safety and behavior guidelines.
- Reach out to your local county environmental health departments. Find your county info here.

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To minimize COVID-19 transmission risk, Arizona farmers markets are asked to enact the following recommendations regarding distancing, sanitation, and communication for the benefit of customers and farmers.

### FARMERS MARKET/ COMMUNITY SUPPORTED AGRICULTURE PICK-UP SITES:

- Do not come to the market if you are sick; ask someone else to attend/work on your behalf.
- Do not allow customers to touch anything other than what they are buying. Limit customers inside the booth when possible to facilitate physical distancing.
- Where possible, place a table or some other barrier between the customer and vendor, with food/products behind the vendor.
- If able, provide your own fully stocked handwashing equipment. Stations should include hand soap, portable water, graywater catch basin, single-use paper towels, and how-to signage about handwashing in relevant languages.
- Gloves and hand sanitizer are not a replacement for handwashing.
- Staff each booth with at least two people -- one person handling payment or money and a different person handling products. If you're a one-person operation, consider only accepting exact cash, check, or credit card.
- Where possible, utilize tap-to-pay, prepay options, or smart phone pay options (i.e. PayPal, Venmo). When running card transactions, use manual entry without touching the card, utilize "chip dip" card readers, and/or remove signature authorization so that only one person is touching the device.
- Minimize hand-to-hand exchange of products.
- Consider creating prepackaged or pre-bagged items that customers can quickly pick up, with online preordering when available.
- Where possible, choose easily sanitized surfaces for your booth, such as non-porous plastic and metal instead of wood and fabric.
- Perform routine environmental cleaning of frequently touched surfaces (i.e. displays, table surfaces, payment devices). Use a bleach-and-water solution (0.1% solution; 1:50 dilution) or disinfectant with a label that says "EPA approved" for killing bacteria and viruses. Always follow directions on product labels.
- Enhance safety protocols for all farm/market employees, including promoting good hygiene practices including handwashing and sanitation, utilizing sick policy, and designing work tasks and breaks to promote physical distancing. See "Sanitation" section on Produce Safety Alliance website: <https://producesafetyalliance.cornell.edu/resources/general-resource-listing>

The Arizona Community Farmer's Market website (<https://arizonacommunityfarmersmarkets.com/visitor-information>), has great information about the rules and regulations of the market in regards to COVID-19, as well as guidance on farmer's market instructions pertaining to the disease. I have taken this information directly from the organizations website in order to accurately depict the information pertaining to COVID-19 and farmer's market guidelines.

#### CHANGES IN EFFECT AT ALL OUR OPEN MARKETS:

Masks:

All of our Farmers' Markets are located in cities and counties with issued mask mandates, see links below. Although we are an outdoor event, masks are required if physical distancing cannot be observed while at such event. There will be signage posted showing where you should stand to shop from if at the market without a mask.

- [Maricopa County Mask Mandate](#)
- [City of Phoenix Mask Mandate and FAQ](#)
- [City of Chandler Mask Mandate](#)
- [Town of Carefree Mask Mandate](#)

#### CUSTOMER SAFETY GUIDELINES:

Simple steps you can take to keep yourself, your family and your community health and safe!

Suggestions for before you come:

- Put together a shopping list to shorten your visit
- Wash your reusable produce bags between market visits
- If you are sick, please stay home and ask a friend or family member to pick things up for you instead, if you do not have that option, contact us and we will do what we can to help
- Please only send ONE person from your household to shop to ensure physical distancing.

Suggestions for safer shopping:

- Please limit your human interactions to a wave, make sure to observe physical distancing when conversing with people outside of your household. Make sure to sanitize/wash your hands before and after petting animals, this is for your safety, their safety and their owners safety
- Please shop with your eyes, not your hands
- Do not pick up and touch items you will not be purchasing
- Please practice socially spacing by keeping a distance of 6+ feet from other customers and vendors. There is a limit of 1 customer per tent of booth space. Look for signs stating customer limits inside of booths
- Do not consume food or drinks within the market. On-site prepared foods are allowed but in a TO-GO only fashion
- Avoid touching your eyes, nose, and mouth without cleaning your hands first. Hand-washing/sanitization stations are placed around the markets for your convenience

Suggestions for after shopping:

- Wash all produce thoroughly before using or storing
- Disinfect all packaged items before using or storing
- Wash your reusable bags for next trip

#### SPECIAL EVENTS/FARMER'S MARKETS COVID-19 - MARICOPA COUNTY PERMITS

For updates on Coronavirus (COVID-19), please visit the Maricopa County Department of Public Health.

Mass Gatherings - Statement from Public Health

Farmers' Markets Recommended Guidance (ADHS)

Special Events Recommended Guidance (CDC)

The Governor's orders can affect our issuance of the permits for Special Events so we recommend checking with the Governor's office for specific questions regarding the size of the event. They can be contacted at 602-542-4331 Call: 602-542-4331.

Special Events and Farmers' Markets have a special niche here in Maricopa County.

Special Events include fairs, festivals, promotional events, large sporting events (e.g. Fiesta Bowl, Waste Management Open, etc.), and other similar types of Department approved events.

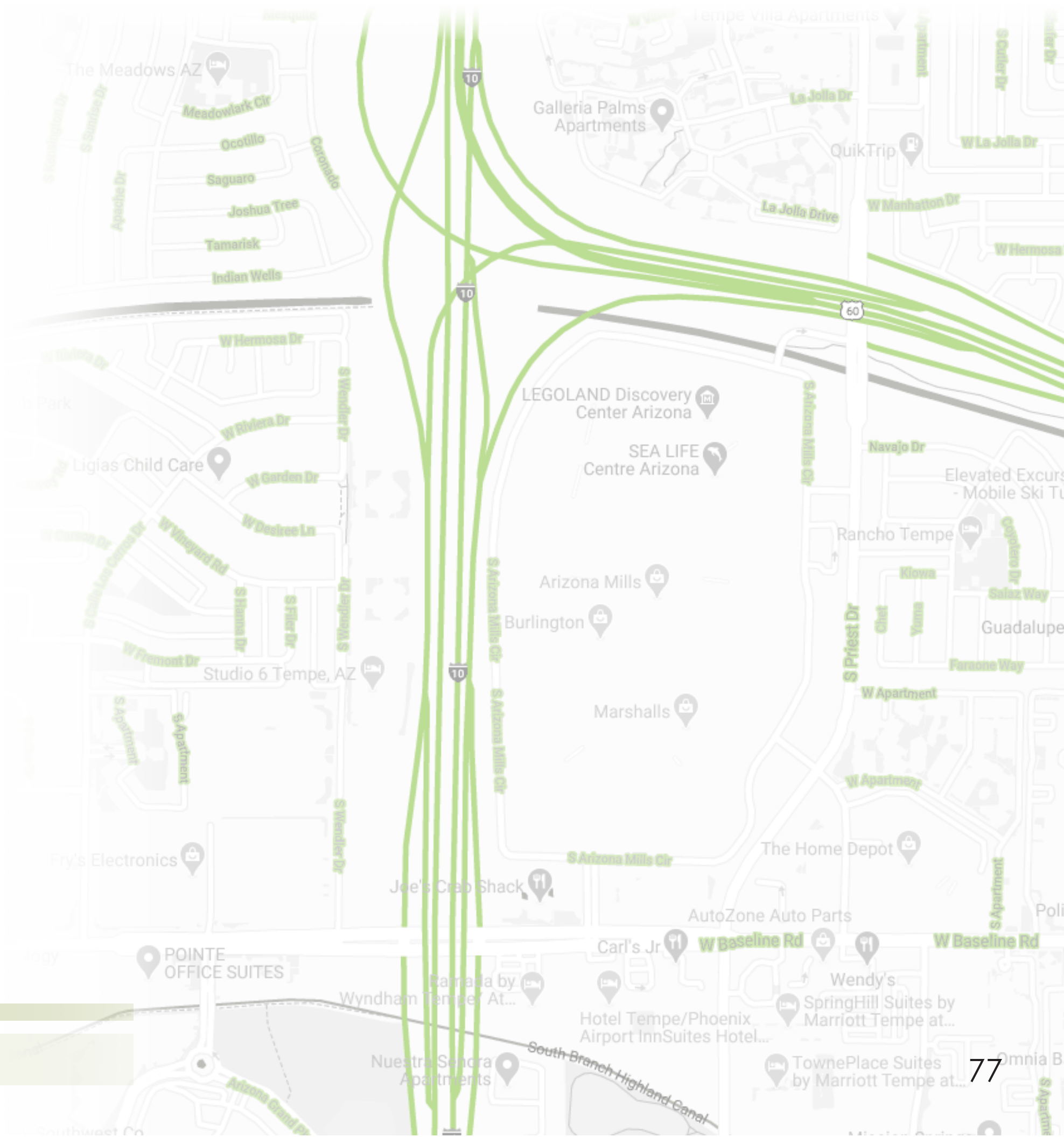
Mobile Food Establishments and Food Caterers are approved to operate at these venues provided they are operating within the allowances of the permits issued.

If a business operates beyond what their annual permit allows for at a Special Event, a Temporary or Seasonal Permit will need to be obtained from the Department. Please note: Temporary or Seasonal permits are not issued for Farmers' Markets.

If liquor will be served at the event, please visit Liquor Licenses & Permits for more information.

# SITE ANALYSIS

- Arizona Mills is located in Tempe, Arizona. Phoenix is the sixth-largest city in the U.S. with a population of over 1.6 million.
- The Arizona Mills center is located in the greater Phoenix area which includes the cities of Chandler, Glendale, Scottsdale, and Tempe. The greater Phoenix area spans over 2,000 square miles.
- The City of Tempe has large company headquarters such as State Farm and Carvana. Greater Phoenix is the corporate headquarters for six Fortune 500 companies: Freeport-McMoRan, Avnet, Republic Services, Insight Enterprises, On Semiconductor, and Magellan Health.
- There are 33 hotels within a five-mile radius of the property. The city of Tempe has 48 hotels and 6,051 total guest rooms.
- The property is only two miles from Tempe Diablo Stadium, one of 10 Spring Training stadiums in the Phoenix metro area. Each year, thousands of baseball fans visit the city to support their favorite teams during Spring Training.
- Phoenix is one of the few U.S. cities with franchises in all four major professional sports leagues: Phoenix Suns (NBA), Arizona Diamondbacks (MLB), Arizona Cardinals (NFL), and Arizona Coyotes (NHL).



## TEMPE, ARIZONA

**LOCALITY:** Tempe

**COUNTRY:** United States (US)

**LATITUDE :** 33.389126

**LONGITUDE :** -111.930573

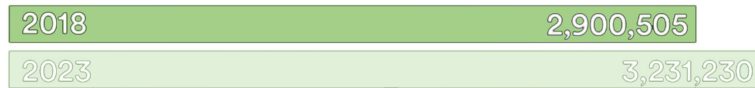
**TIMEZONE :** America/Phoenix UTC -07:00

**REGION 1:** Arizona

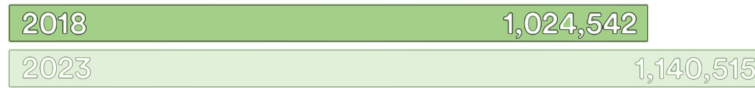
**REGION 2:** Maricopa

**ELEVATION :** 937 meters / 3074.15 feet

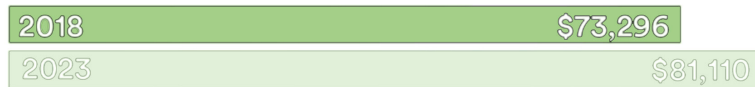
### POPULATION AND ECONOMICS



TRADE AREA POPULATION



TRADE AREA HOUSEHOLDS



AVERAGE ANNUAL HOUSEHOLD INCOME

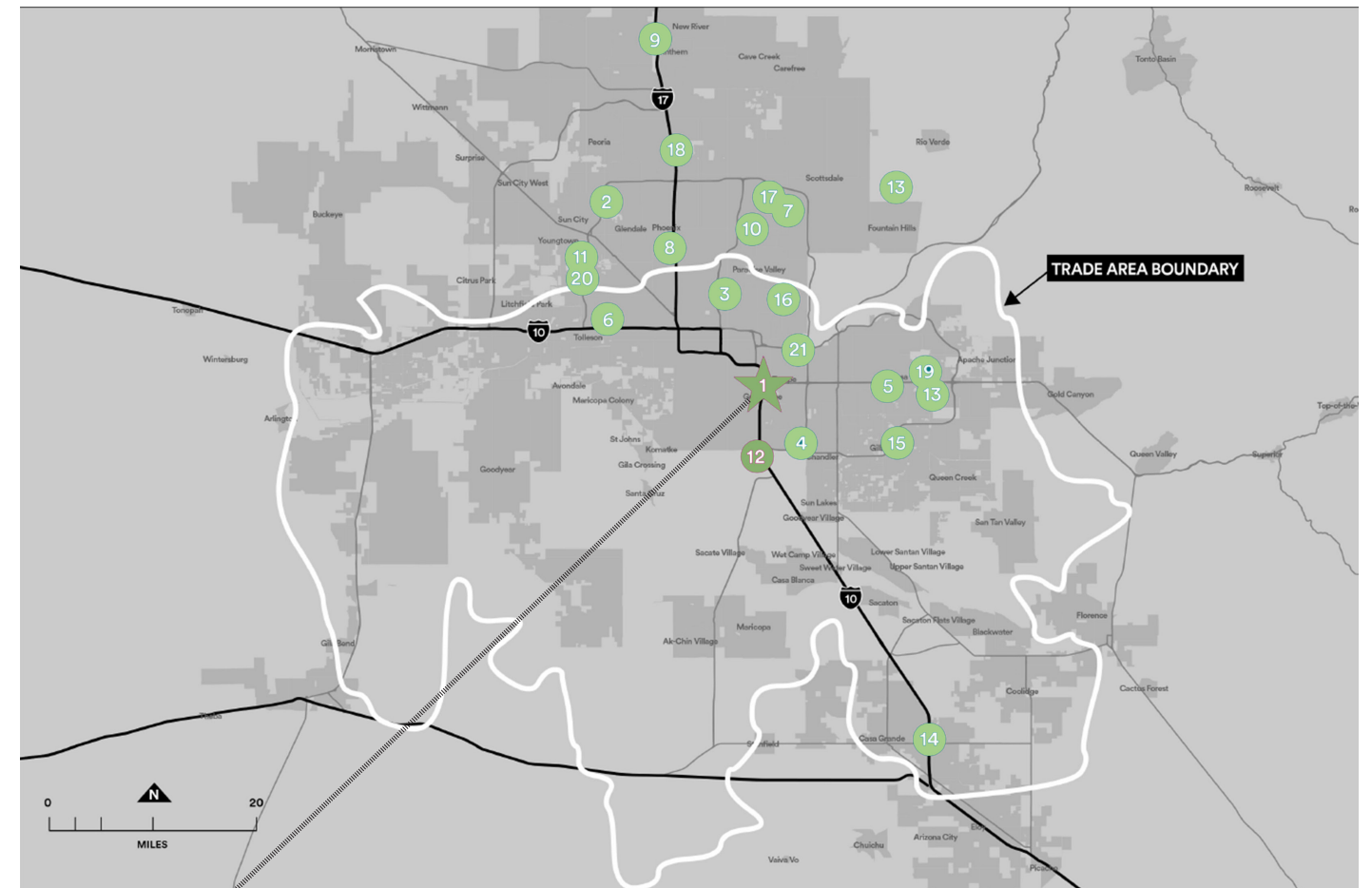


DAYTIME WORKFORCE POPULATION



MEDIAN HOME VALUE

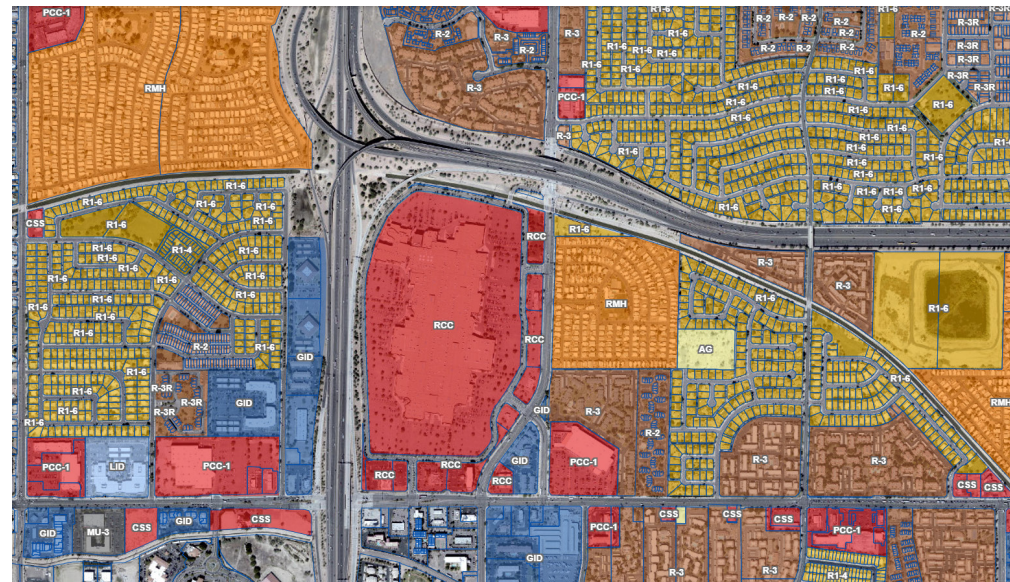
### TRADE AREA AND SURROUNDING CENTERS



- 1** ARIZONA MILLS MALL
- 2** ARROWHEAD TOWNE CENTER
- 3** BILTMORE FASHION PARK
- 4** CHANDLER FASHION CENTER
- 5** DANA PARK VILLAGE SQUARE
- 6** DESERT SKY MALL
- 7** METROCENTER
- 8** KIERLAND COMMONS
- 9** OUTLETS AT ANTHEM
- 10** PARADISE VALLEY MALL
- 11** PARK WEST
- 12** PHOENIX PREMIUM OUTLETS
- 13** POWER SQUARE MALL
- 14** PROMENADE CASA GRANDE
- 15** SANTAN VILLAGE
- 16** SCOTTSDALE FASHION SQUARE
- 17** SCOTTSDALE QUARTER
- 18** THE SHOPS AT NORTERRA
- 19** SUPERSTITION SPRINGS CENTER
- 20** TANGER OUTLETS WESTGATE
- 21** TEMPE MARKETPLACE



# SITE ZONING



Parcels



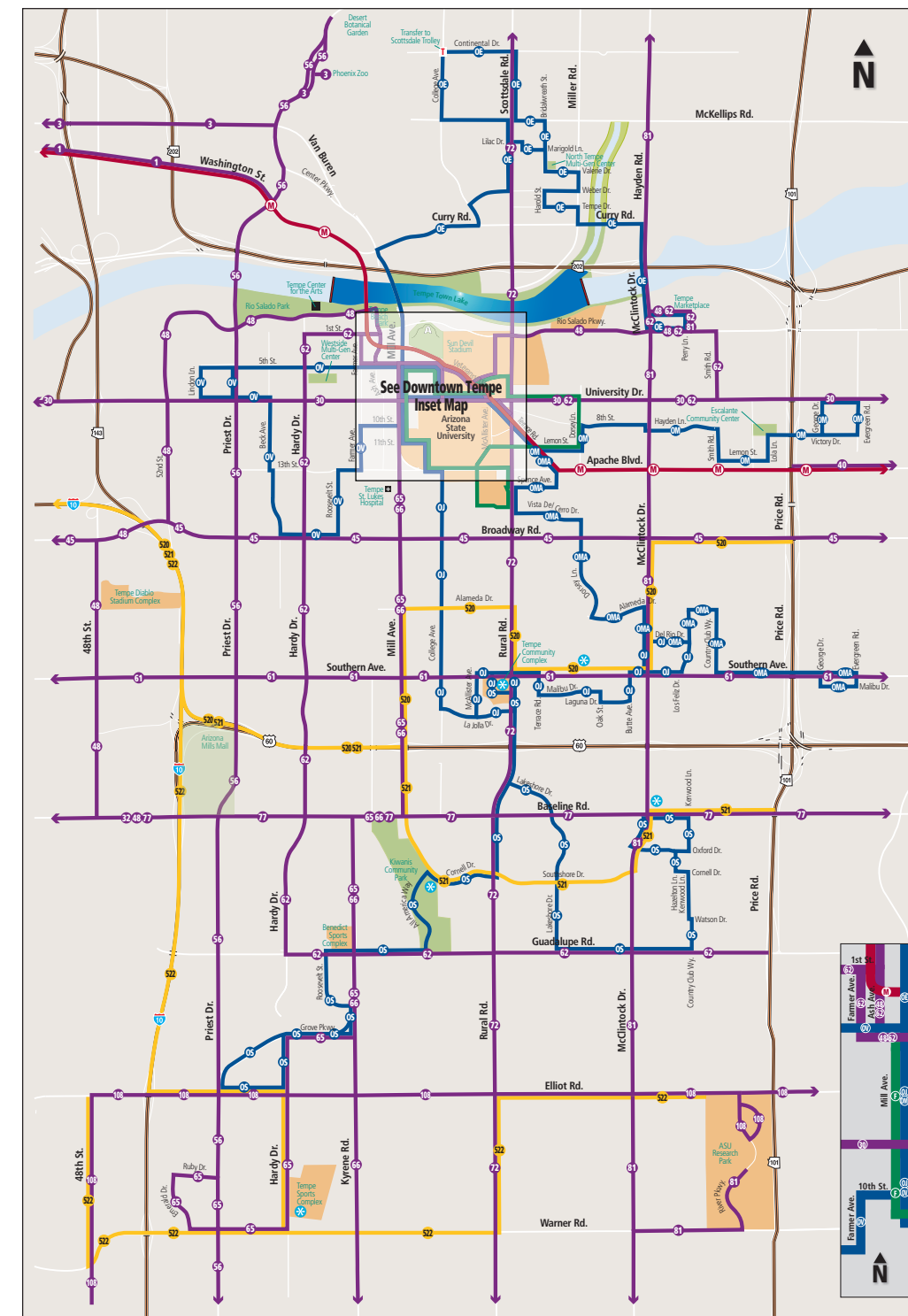
## Zoning District

- Light Industrial District (LID)
- General Industrial District (GID)
- Heavy Industrial District (HID)
- City Center (CC)
- Mixed Use Med (MU-2)
- Mixed Use Med-High (MU-3)
- Mixed Use High (MU-4)
- Mixed Use Educational (MU-ED)
- Commercial Shopping and Services (CSS)
- Planned Commercial Center Neighborhood (PCC-1)
- Planned Commercial Center General (PCC-2)
- Regional Commercial Center (RCC)
- Residential/Office (RO)

- Agricultural (AG)
- Single-Family Residential (R1-15)
- Single-Family Residential (R1-10)
- Single-Family Residential (R1-8)
- Single-Family Residential (R1-7)
- Single-Family Residential (R1-6)
- Single-Family Residential (R1-5)
- Single-Family Residential (R1-4)
- Single-Family Residential Planned Area Dev (R1-PAD)
- Multi-Family Residential (R-2)
- Multi-Family Residential Restricted (R-3R)
- Multi-Family Residential Limited (R-3)
- Multi-Family Residential General (R-4)
- Multi-Family Residential High (R-5)
- Mobile Home Residence (RMH)
- Trailer Park (TP)

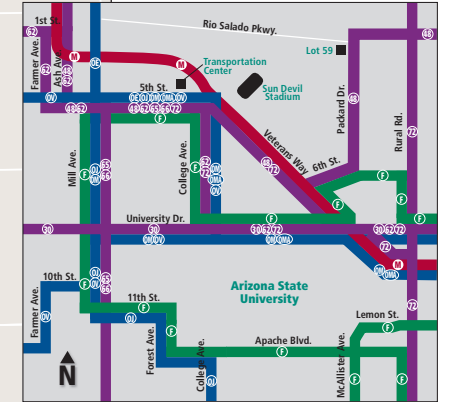
# PUBLIC TRANSPORTATION

## TEMPE TRANSIT MAP



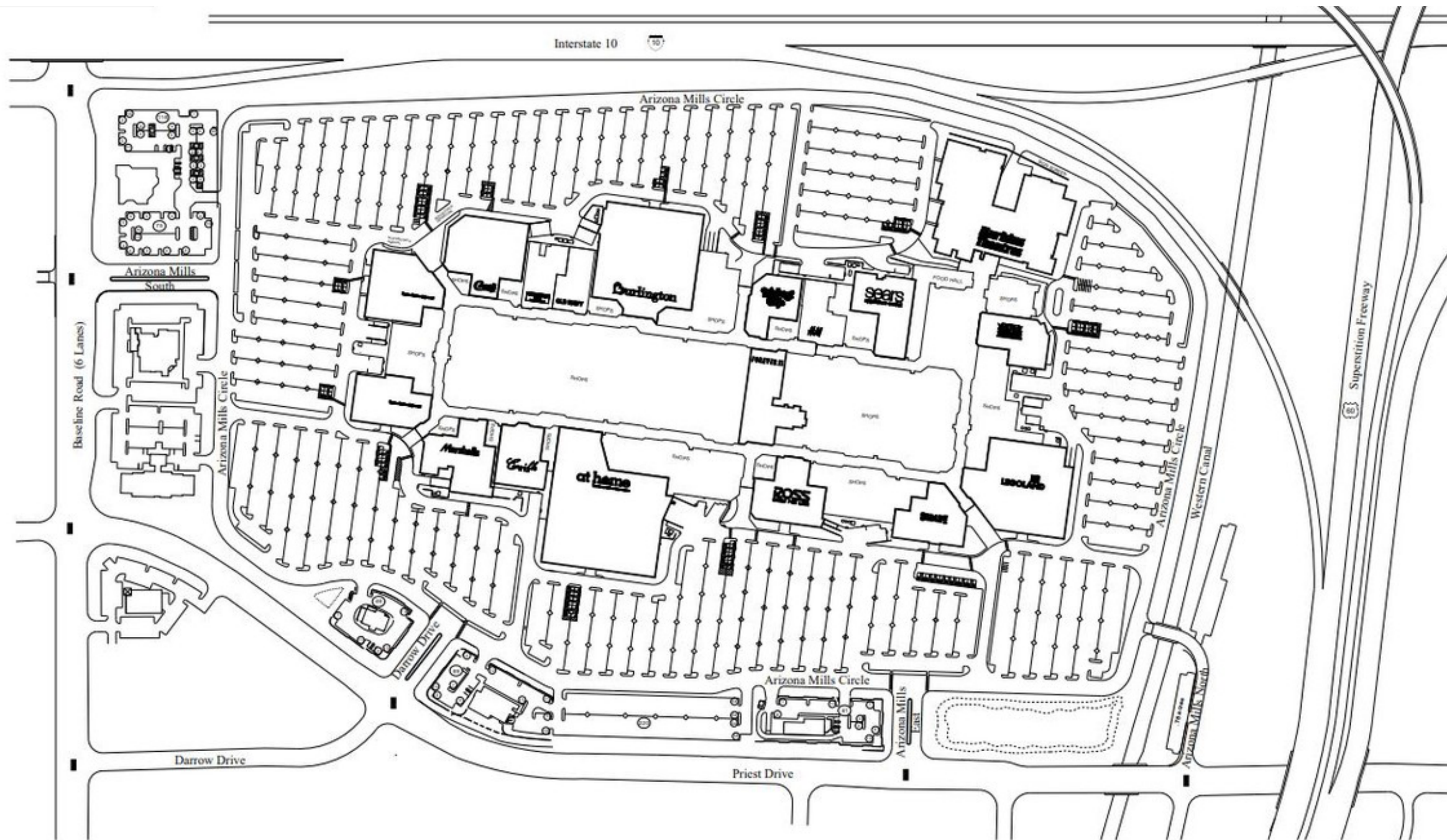
- Legend**
- Fixed Route/Rutas de Autobus**
    - Washington
    - Van Buren
    - University
    - 32nd Street
    - Main
    - Broadway
    - 48th Street/Rio Salado
    - Priest
    - Southern
    - Hardy/Guadalupe
    - Mill/Kyrene
    - Mill/Kyrene
    - Scottsdale/Rural
    - Baseline
    - Hayden/McClintock
    - Elliot
  - Orbit (Neighborhood Circulators)/ Rutas del Minibus Orbit**
    - Orbit Earth
    - Orbit Jupiter
    - Orbit Mars
    - Orbit Mercury
    - Orbit Saturn
    - Orbit Venus
  - FLASH (Free Local Area Shuttle)**
    - FLASH
  - METRO Light Rail Rutas del tranvia METRO Light Rail**
    - METRO Stops:
      - Priest Drive/Washington Street
      - Center Parkway/Washington Street
      - Mill Avenue/Third Street
      - Veterans Way/College Avenue
      - University Drive/Rural Road
      - Dorsey Lane/Apache Boulevard\*
      - McClintock Drive/Apache Boulevard\*
      - Smith-Martin/Apache Boulevard\*
      - Price-101 Freeway/Apache Boulevard\*
      - Sycamore/Main\*
  - Express Routes/Rutas de Autobus Express**
    - Tempe Express
    - Tempe Express
    - Tempe Express
  - Park-and-Ride**
    - Park-and-Ride

### Downtown Tempe Inset





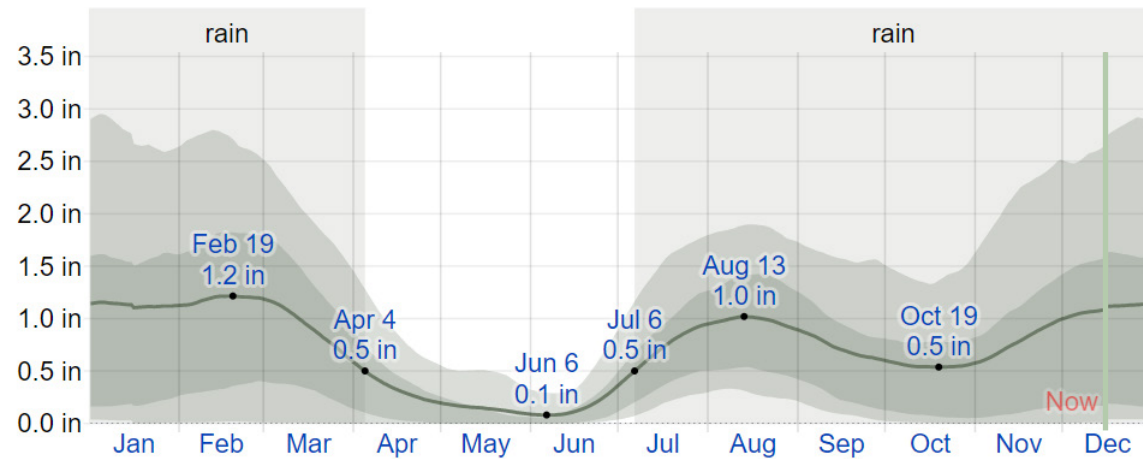
AERIAL OVERVIEW- ARIZONA MILLS MALL



SITE PLAN- ARIZONA MILLS MALL

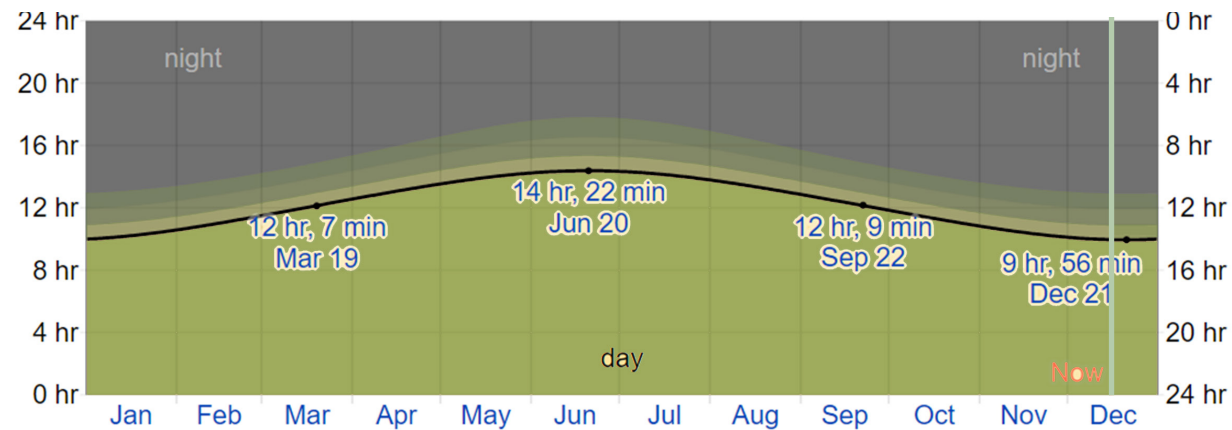
# CLIMATE DATA

## AVERAGE MONTHLY RAINFALL



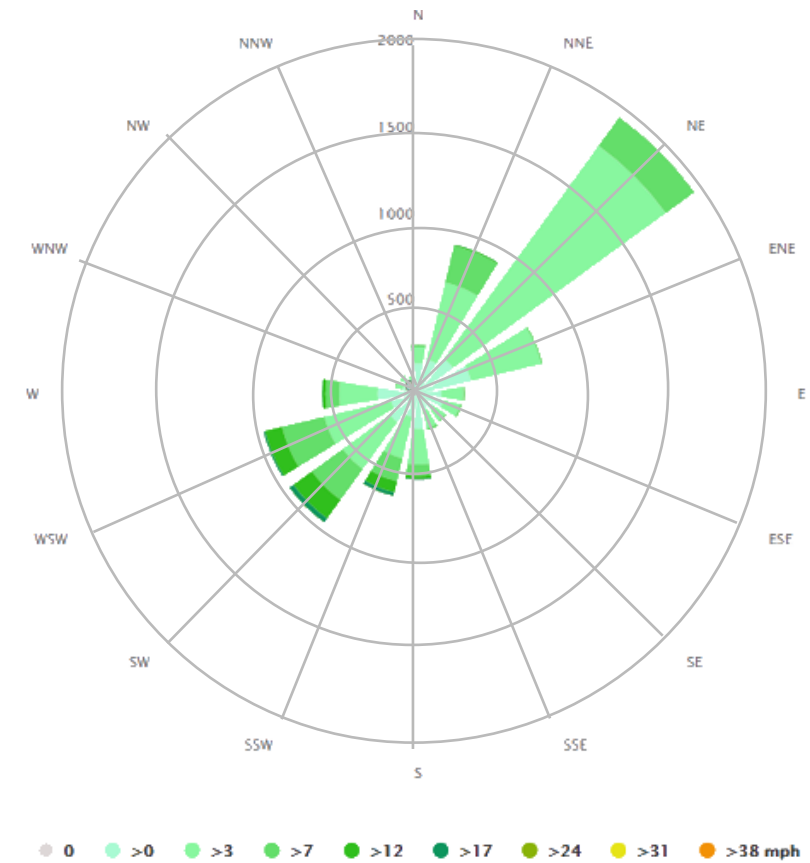
THE AVERAGE RAINFALL (SOLID LINE) ACCUMULATED OVER THE COURSE OF A SLIDING 31 DAY PERIOD CENTERED ON THE DAY IN QUESTION, WITH 25TH TO 75TH AND 10TH TO 90TH PERCENTILE BANDS. THE THIN DOTTED LINE IS THE CORRESPONDING AVERAGE LIQUID EQUIVALENT SNOWFALL.

## HOURS OF DAYLIGHT AND TWILIGHT

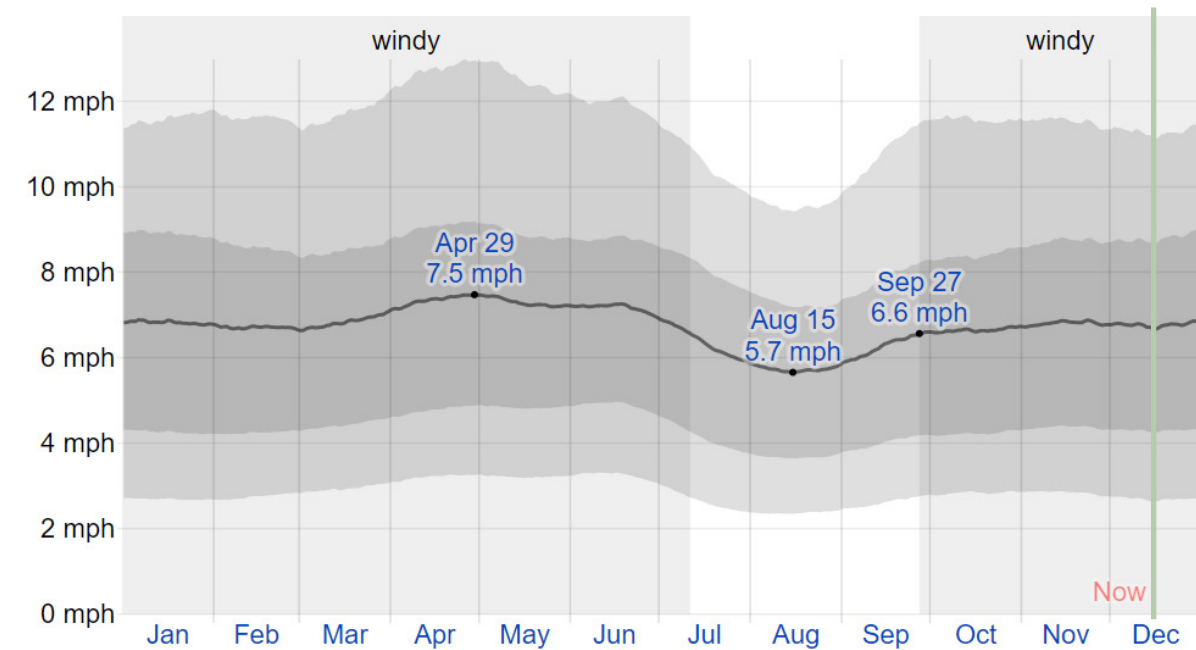


THE NUMBER OF HOURS DURING WHICH THE SUN IS VISIBLE (BLACK LINE). FROM BOTTOM (MOST YELLOW) TO TOP (MOST GRAY), THE COLOR BAND'S INDICATE: FULL DAYLIGHT, TWILIGHT (CIVIL, NAUTICAL, AND ASTRONOMICAL), AND FULL NIGHT.

## WIND ROSE DIAGRAM:

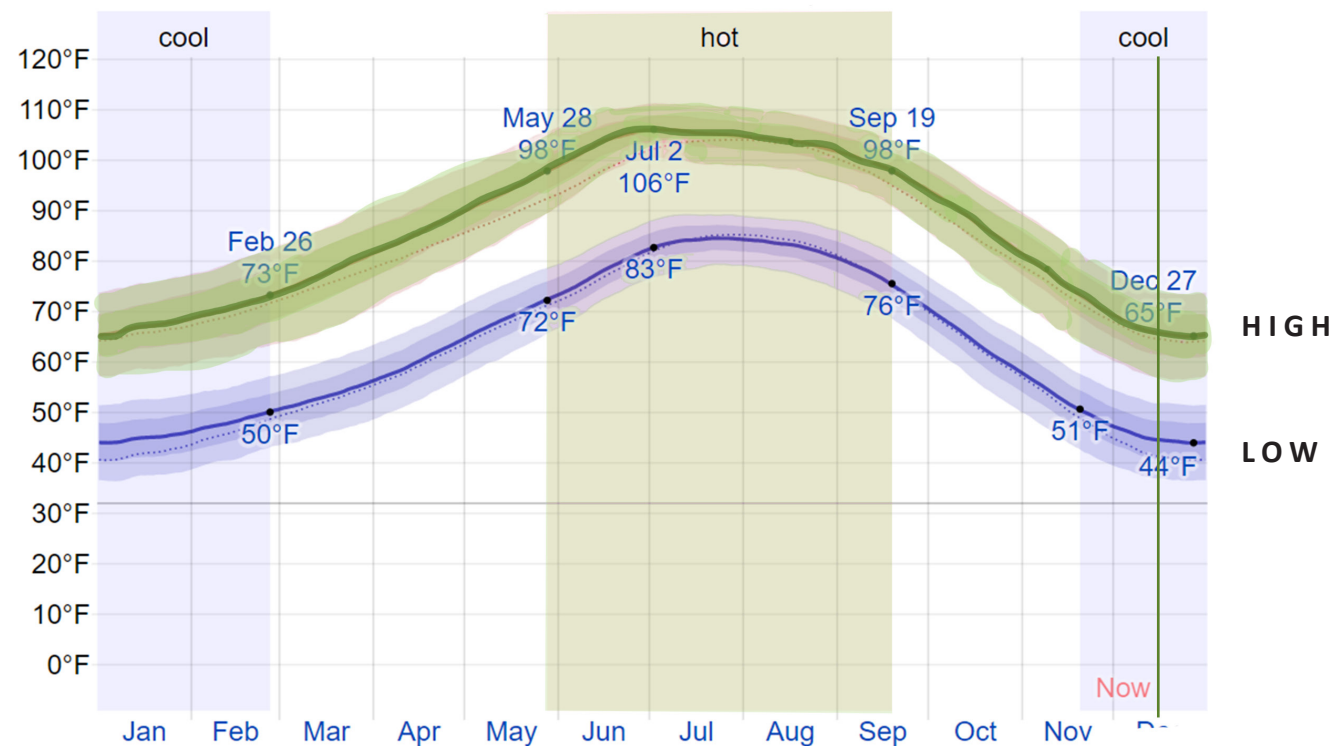


## AVERAGE WIND SPEED



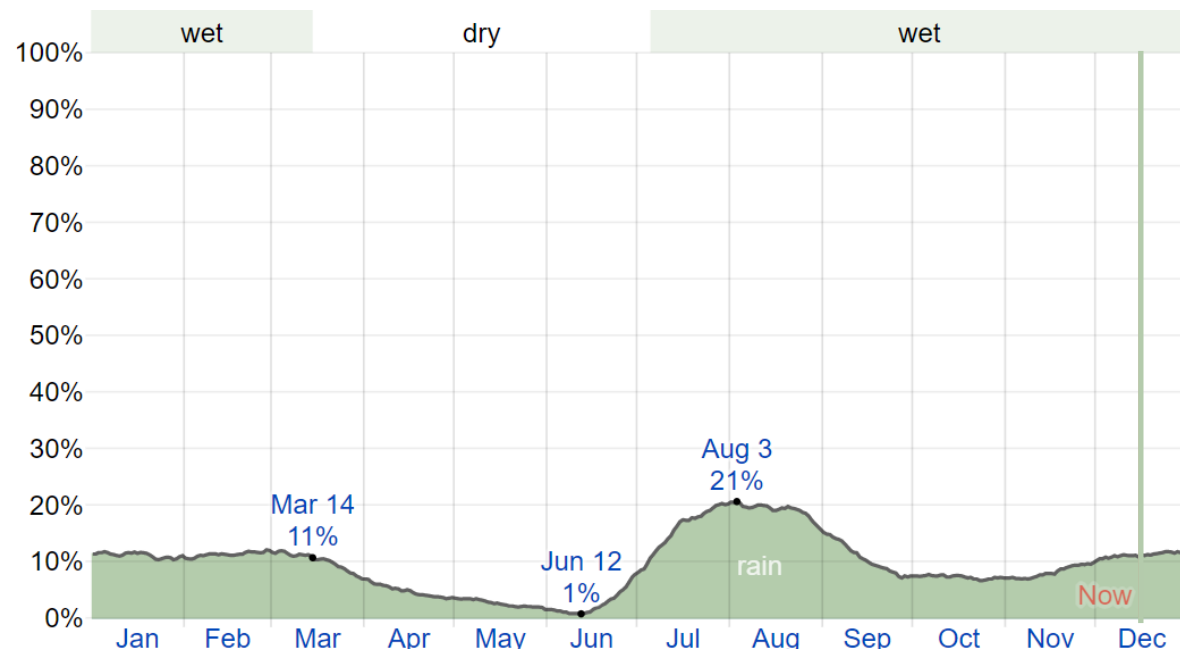
THE AVERAGE OF MEAN HOURLY WIND SPEEDS (DARK GRAY LINE), WITH 25TH TO 75TH AND 10TH AND 90TH PERCENTILE BANDS.

### AVERAGE MONTHLY HIGH AND LOW TEMPERATURES



THE DAILY AVERAGE HIGH (GREEN LINE) AND LOW (BLUE LINE) TEMPERATURE, WITH 25TH TO 75TH AND 10TH TO 90TH PERCENTILE BANDS. THE THIN DOTTED LINES ARE THE CORRESPONDING AVERAGE PERCEIVED TEMPERATURES.

### DAILY CHANCE OF PRECIPITATION



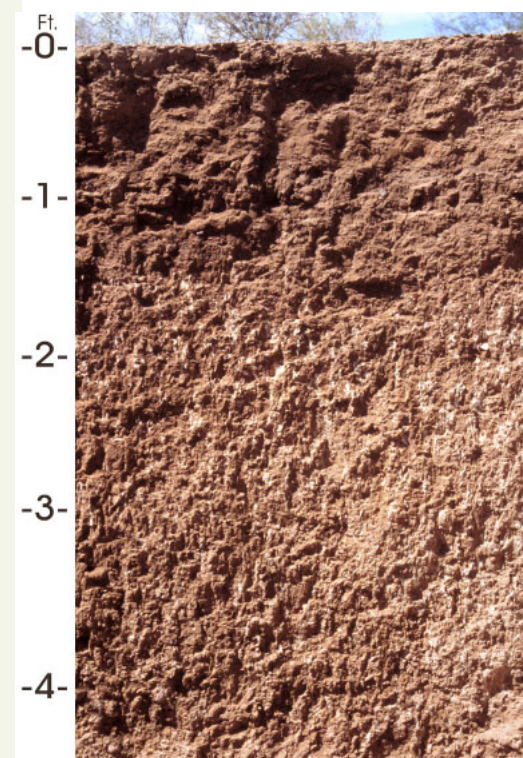
THE PERCENTAGE OF DAYS IN WHICH VARIOUS TYPES OF PRECIPITATION ARE OBSERVED, EXCLUDING TRACE QUANTITIES: RAIN ALONE, SNOW ALONE, AND MIXED (BOTH RAIN AND SNOW FELL IN THE SAME DAY).

# SOIL STUDY

## ARIZONA STATE SOIL-CASA GRANDE



CASA GRANDE SOIL PROFILE



Surface layer: light brown, saline-sodic fine sandy loam

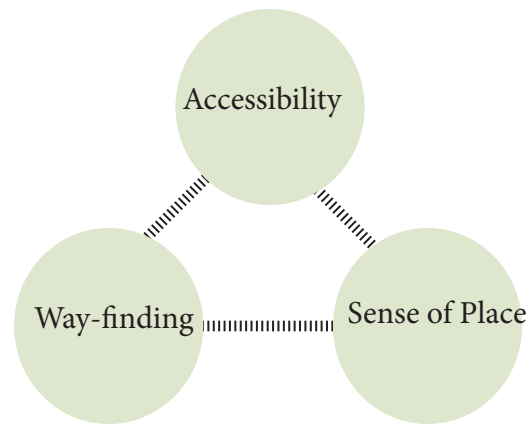
Subsoil-Upper: reddish brown, saline-sodic sandy clay loam

Subsoil-Lower: light reddish brown, saline-sodic clay loam

The Casa Grande soil type was identified in 1936. Casa Grande soil was named after a nearby Casa Grande National Monument, which was constructed nearly 1,000 years ago. The words Casa Grande mean "Big House." The monument was constructed by the Hohokam Indians. This soil has been used to raise cotton, grain, and vegetables as it is a very productive soil. The Indians used irrigation to remove excess salts from the soil.

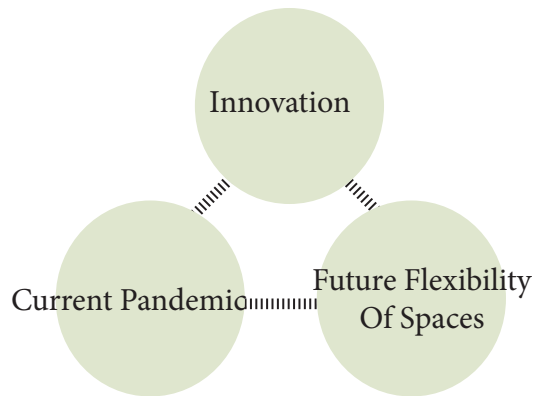
- Consists of very deep, well-drained, saline-sodic soils on fan terraces and relict basin floors.
- Formed in alluvium derived from granite, rhyolite, andesite, quartzite, and some limestone and basalt.
- Slopes generally are 0 to 5 percent.
- Hot and arid climate.
- Casa Grande soils have a known distribution of

# GOALS

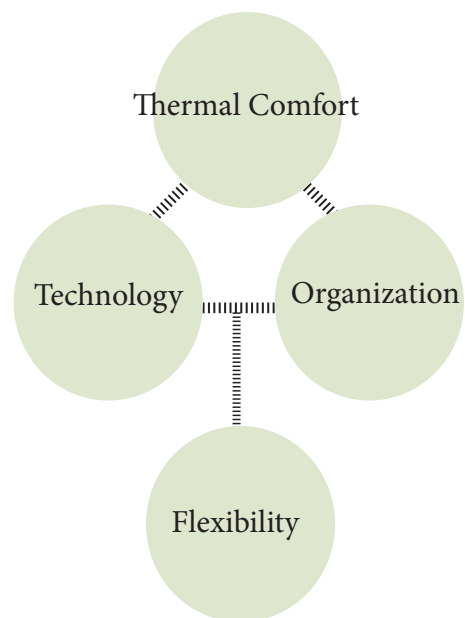


Key Ideas: How can the site be designed effectively to draw in users to the site while providing guests with comfort and a sense of place.

- Space to heal
- Reducing anxiety
- Community Space



Key Ideas: How can designers provide spaces that are flexible where users can react appropriately while still being able to engage with others effectively?



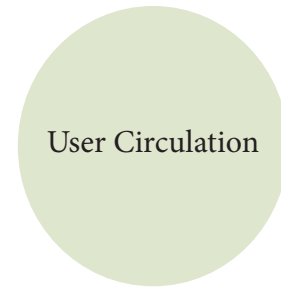
Key Ideas: How is building technology a part of the overall big idea?

Key Ideas: How flexible is the space to adapt to pandemic scenarios during and after the pandemic?



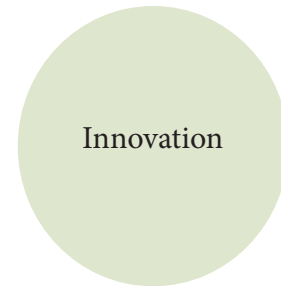
## 1. REDESIGN THE EXISTING STRUCTURE AND GIVE BACK WHAT THE MODERN DAY MALL TOOK AWAY

Arizona Mills has the opportunity for growth and an ability to give back to the community in a way it hasn't before. As of now, many stores are in locations that don't make them easily accessible to potential shoppers. This can be easily fixed with small design changes that promote walk-ability and give users easy accessibility to their favorite stores.



## 2. RESTORE COMMUNITY LIFE AT THE SITE

A mall should be a space where groups of people are able to come together and enjoy life. This urban structure is so large, that it almost leaves the space lifeless because there is so much empty circulation space. In order to address this issue, I would like to devote main circulation spaces that are large enough to promote social distancing, but give users a sense of place while in the space. Continuing to bring diverse typologies into the mall will allow many different user groups to enjoy the site.



## 3. IDENTIFY WHAT ARCHITECTURAL ELEMENTS SET APART SUCCESSFUL MALLS FROM THE UNSUCCESSFUL

During my research, I would like to analyze and investigate how successful and unsuccessful malls are spatially organized and what design decisions were made when redesigning these expansive structures. It is also crucial to develop an idea of what spaces are being utilized the most and redesign them with the communities wants and needs in mind.



## 4. MAKE NECESSARY DESIGN CHANGES THAT PROMOTE SOCIAL DISTANCING AND ALLOW USERS TO FEEL SAFE DURING THE MIDST OF A PANDEMIC

A pandemic is something that hasn't happened to our country in many years, however, pandemics are unpredictable and this is something that architects need to be prepared for. How will this ongoing crisis affect buildings designs in the future? What will architects need to address moving forward?



## 5. IDENTIFY AND IMPLEMENT NEW TYPES OF TECHNOLOGY INTO THE DESIGN TO HELP SLOW THE SPREAD OF DISEASE

Technology is always continuing to develop and progress. Technology is playing a huge role in the pandemic, and I would like to implement systems into my design that will help to control the spread of the outbreak, and prevent potential infected customers and workers from entering the building.

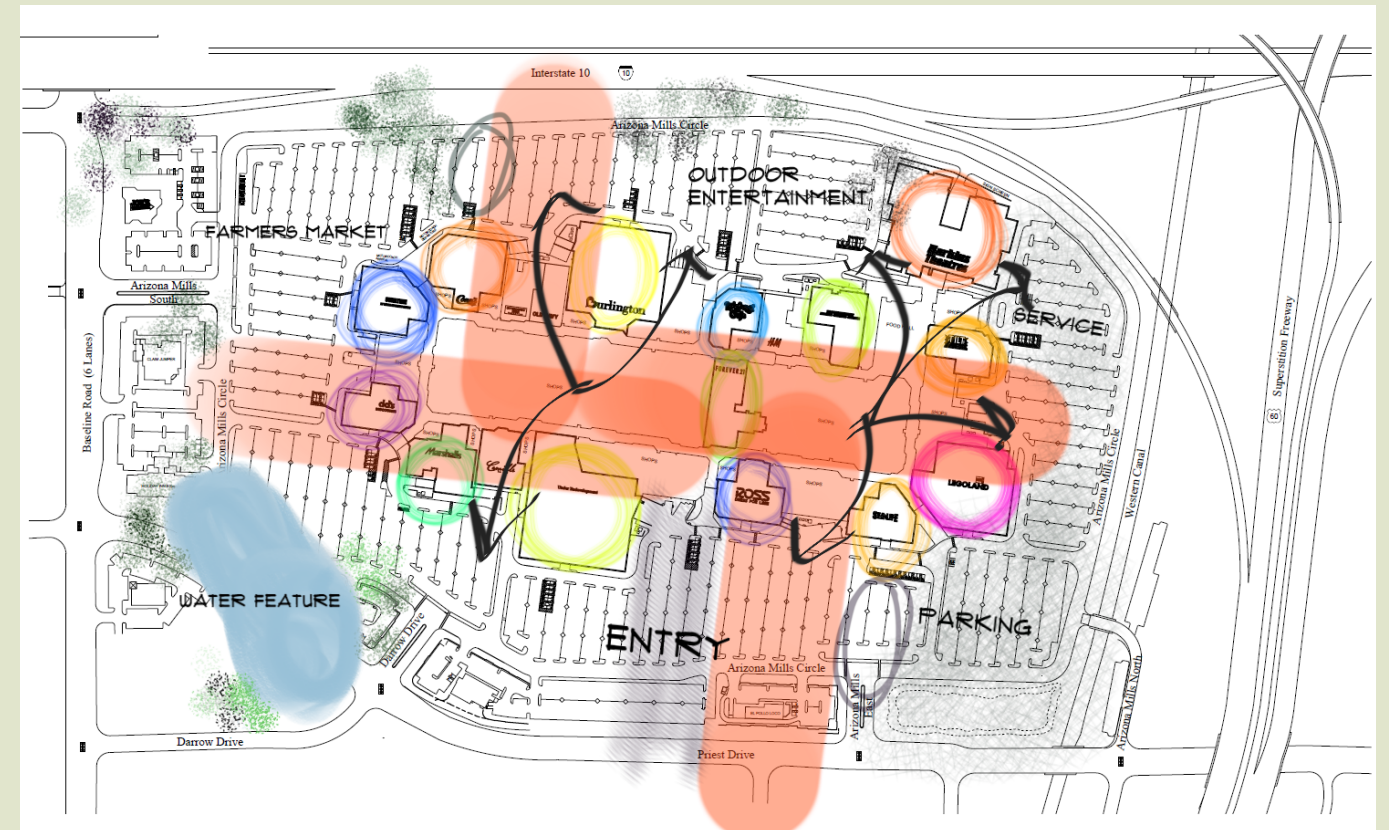
# ANGULAR SCHEME



## MY GOALS:

- Improve a network of streets linking to north and south as well as east to west.
- Create more open spaces for people to eat, drink, socialize and accommodate more outdoor events.
- Reduce parking size capacities as there are currently many unused spaces.
- Encourage more public transportation to the site.
- Create more building blocks to add more character to the site.
- Enhance views to downtown Tempe.
- Provide leisure facilities along with other and new existing retailers.

# PINWHEEL SCHEME



## MY GOALS:

- Improve the linkage network of north to south as well as east to west; and create enclosed views from the north and south by setting up landmark building entries to enhance the character of the street.
- Create more open streets that disperse with varied sizes of squares to allow greater potential of accommodating different urban activities.
- Pedestrianize all routes within the area with fine landscaping and furniture.
- Increase urban blocks that are comparable to existing blocks in size to establish the character for the area.
- Enhance the view to the surrounding areas as well as reduce noise.
- Promote leisure activities within and around area.
- Encourage commercial and residential uses on site.

# PLAZA SCHEME



## MY GOALS:

- Improve the linkage network of north to south as well as east to west; and create enclosed views from the north and south by setting up landmark building to enhance the character of the street.
- Pedestrianize all routes within the area with fine landscaping treatment.
- Create urban blocks that involving local grid pattern.
- Enhance the views to the city of Tempe
- Encourage commercial and residential uses on upper floors and carefully allocate the spaces on proper locations.

### PERMEABILITY

- CREATING EASY WALK-THROUGH ROUTES
- INTEGRATING WITH ADJOINING URBAN FABRIC
- MAIN WALKWAYS SHOULD ALWAYS BE OPEN TO THE PUBLIC

### SAFETY

- PROVIDING CERTAIN AMOUNTS OF NIGHT TIME ACTIVITY
- PROVIDING BRIGHT LIGHTING ON MAIN CIRCULATION SPACES
- KEEPING GUEST SOCIALLY DISTANCED AND SPACES FLEXIBLE FOR LIFE POST PANDEMIC

### ACCESSABILITY

- INCLUDING MULTIPLE CHOICES OF TRANSPORT WHERE POSSIBLE
- INTEGRATING VEHICLE MOVEMENT BUT CALMING DISTURBANCE TO PEDESTRIANS
- PROVIDING SUFFICIENT CAR PARKING BUT CLEVERLY INSERTING INTO NON VISIBLE PLACES

### VITALITY

- CREATING CONTINUOUS ACTIVE FRONTAGES THAT ENLIVEN THE STREETS
- MIXING RETAILING AND CATERING ACTIVITIES
- ENCOURAGING OUTDOOR SEATING AND KIOSKS

### DIVERSITY

- PROVIDING A MIX OF USES E.G. RETAIL, CATERING, RESIDENTIAL, COMMERCIAL, CULTURAL AND CIVIC USES
- STRENGTHENING RICHNESS OF PHYSICAL ELEMENTS E.G. ARCHITECTURE, STREET SCAPES, AND FURNITURE

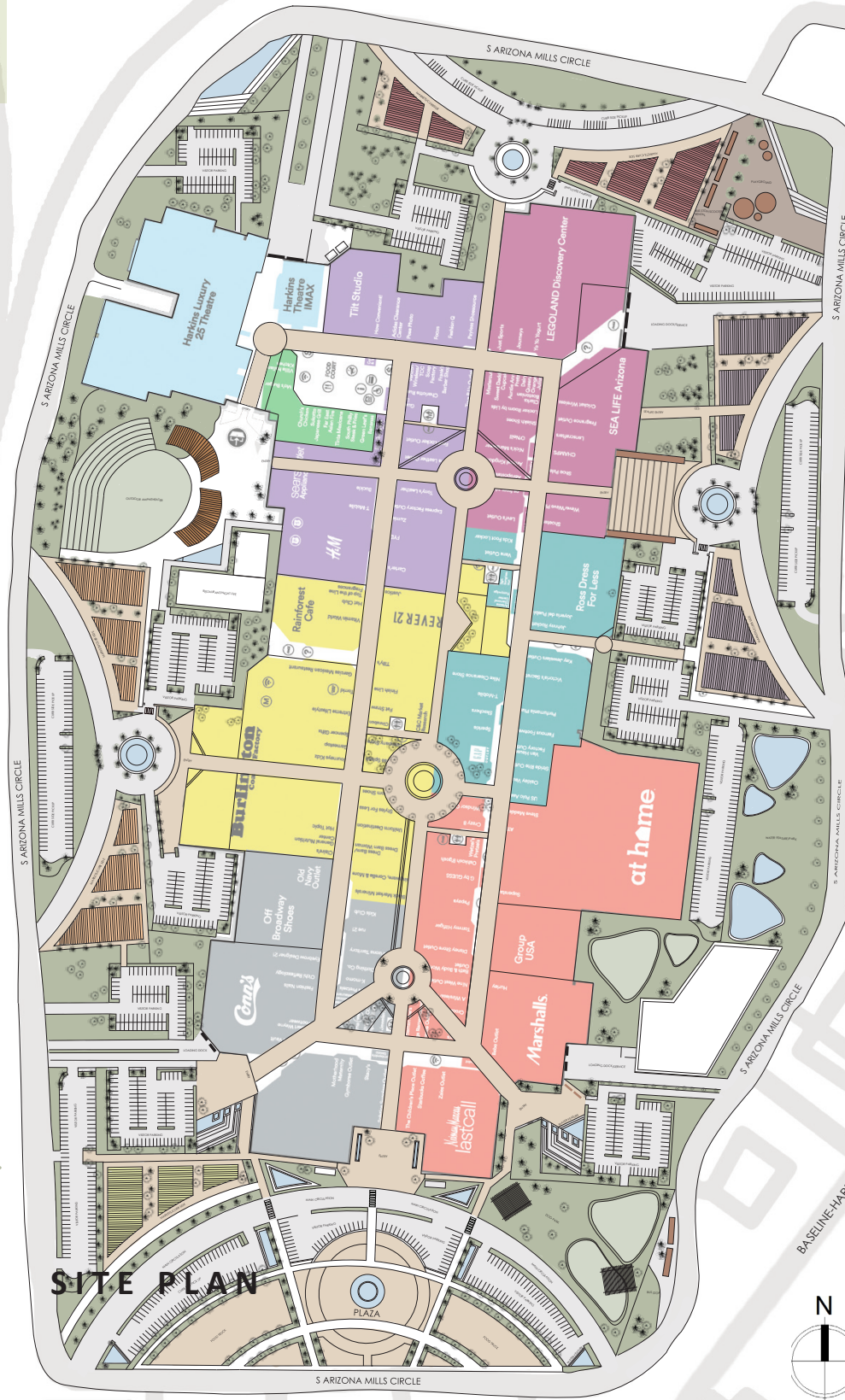
### CHARACTERISTICS

- ADOPTING APPROPRIATE ARCHITECTURAL DESIGN THAT CAN LAST LONG TERM
- DESIGNING QUALITY PUBLIC REALM THAT ALSO CORRESPONDS TO LOCAL TOWN-SCAPE

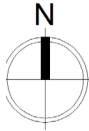




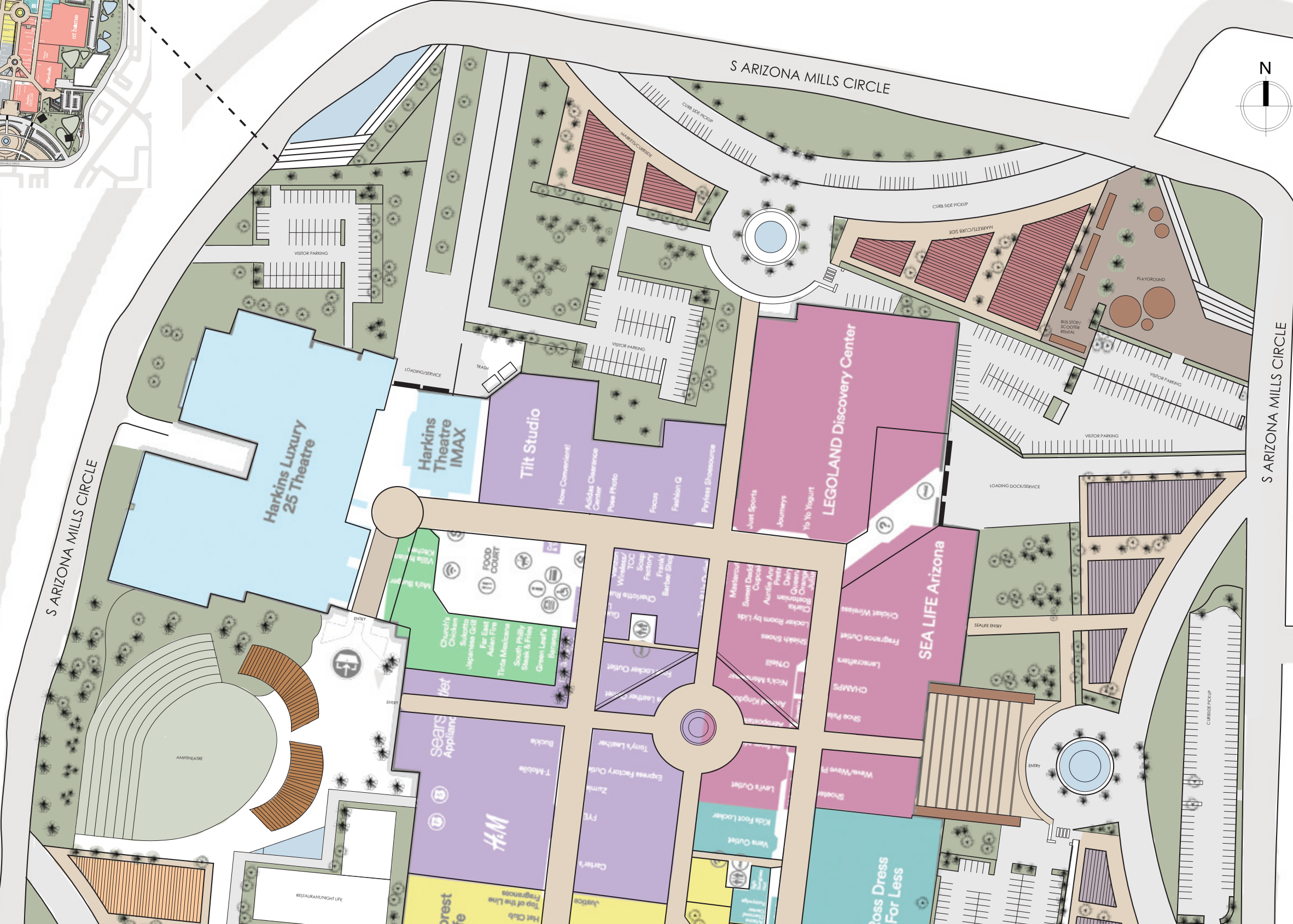
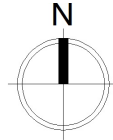
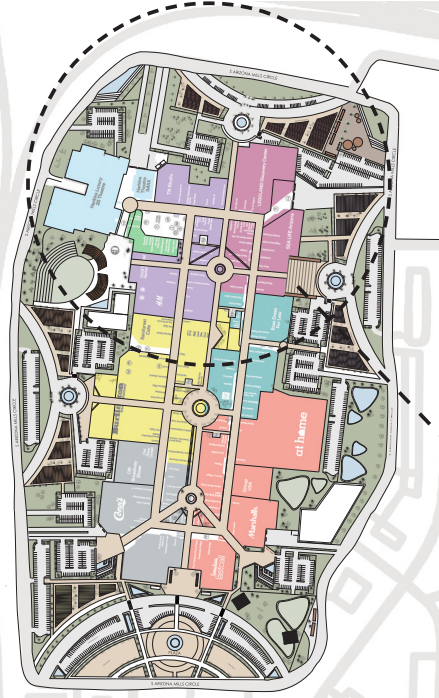
# SITE PLAN

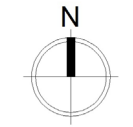
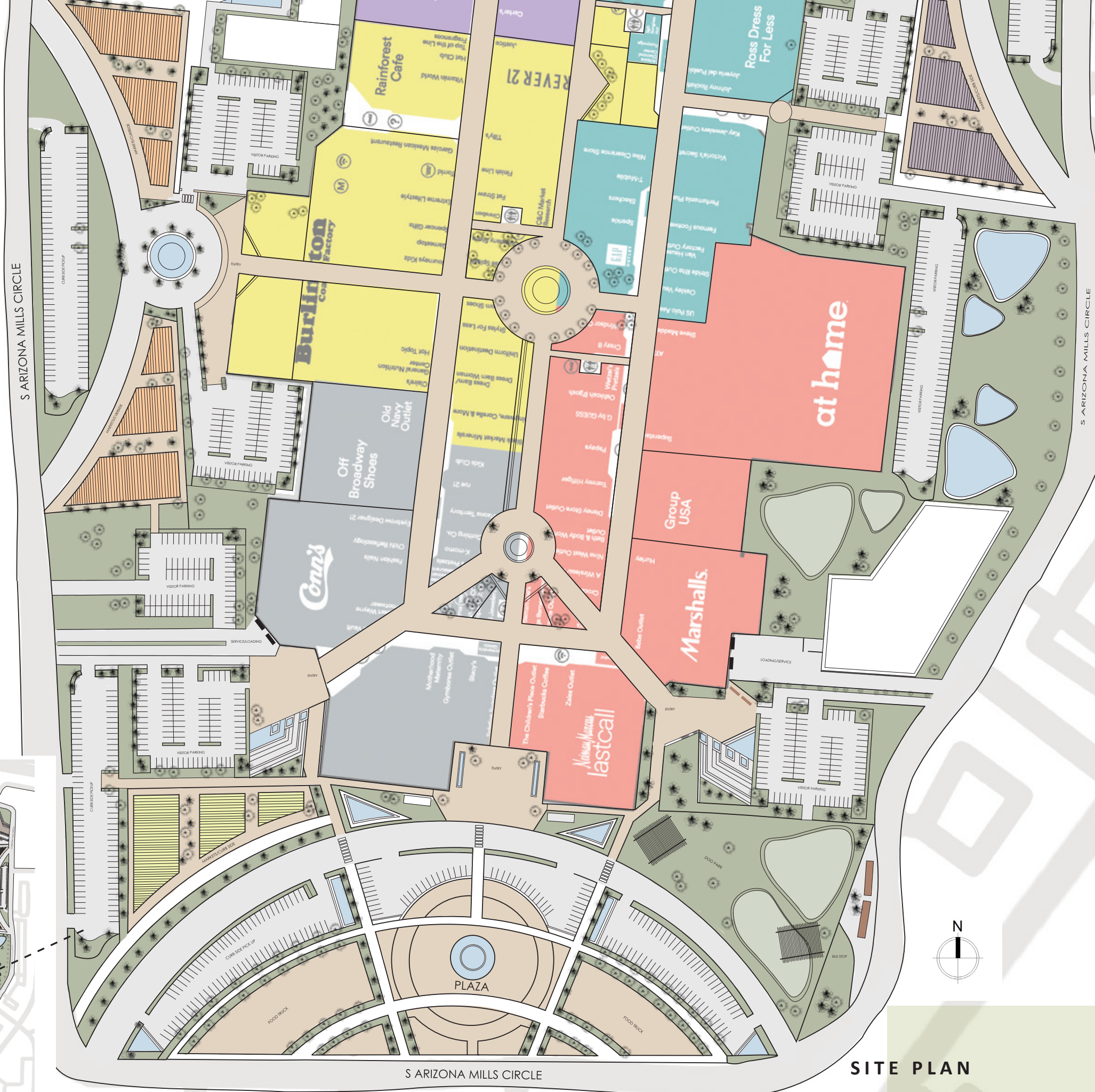
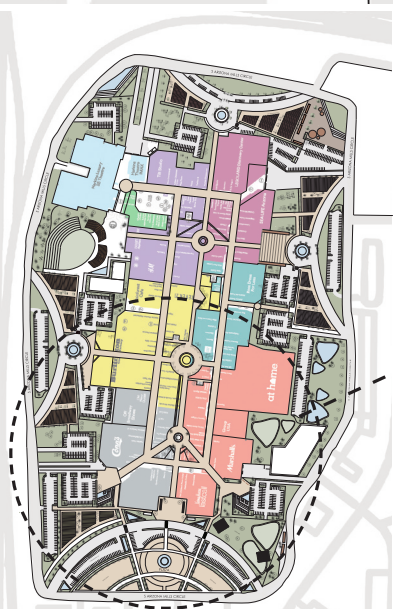


# SITE PLAN

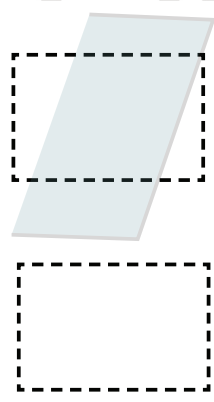
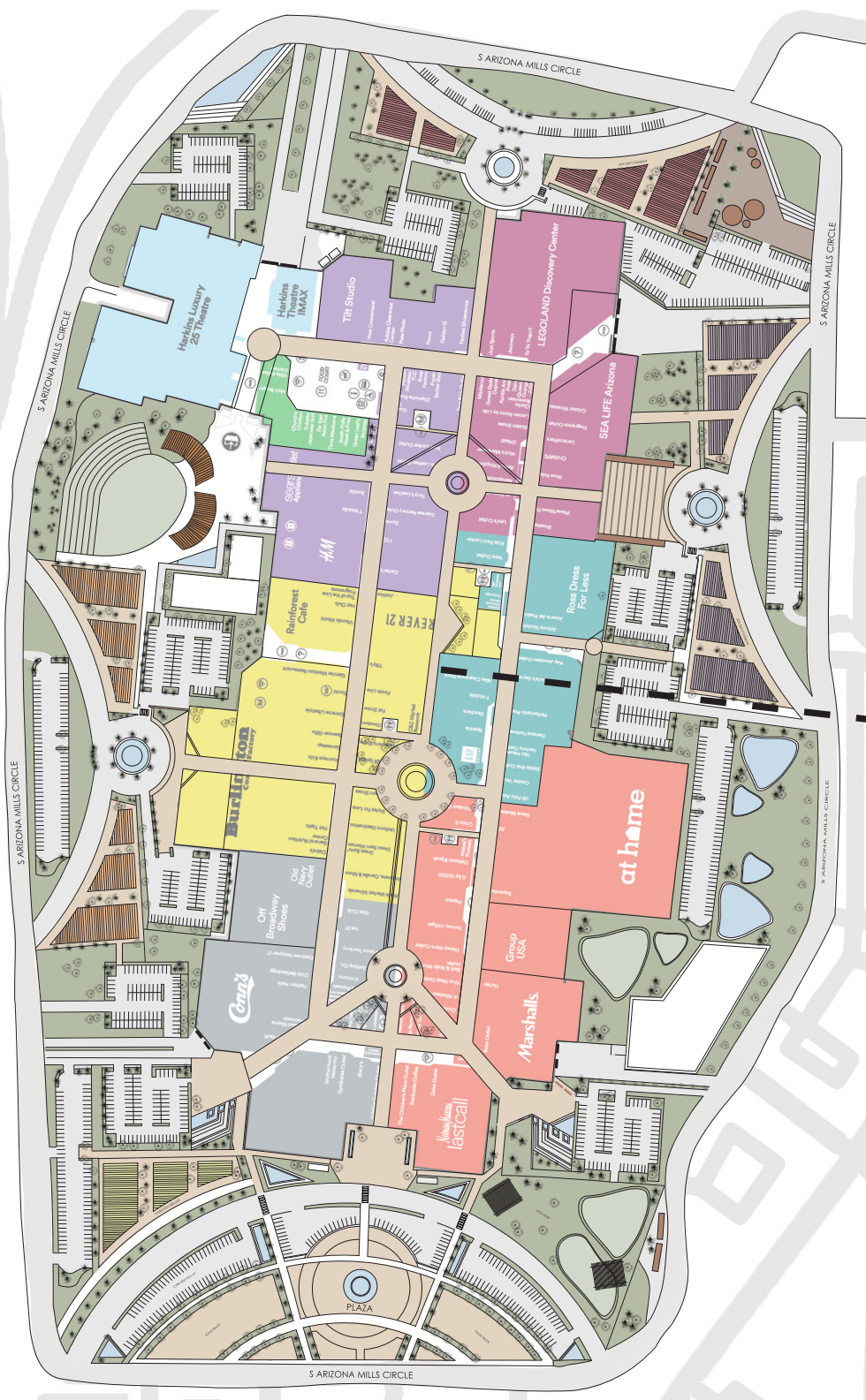


# SITE PLAN



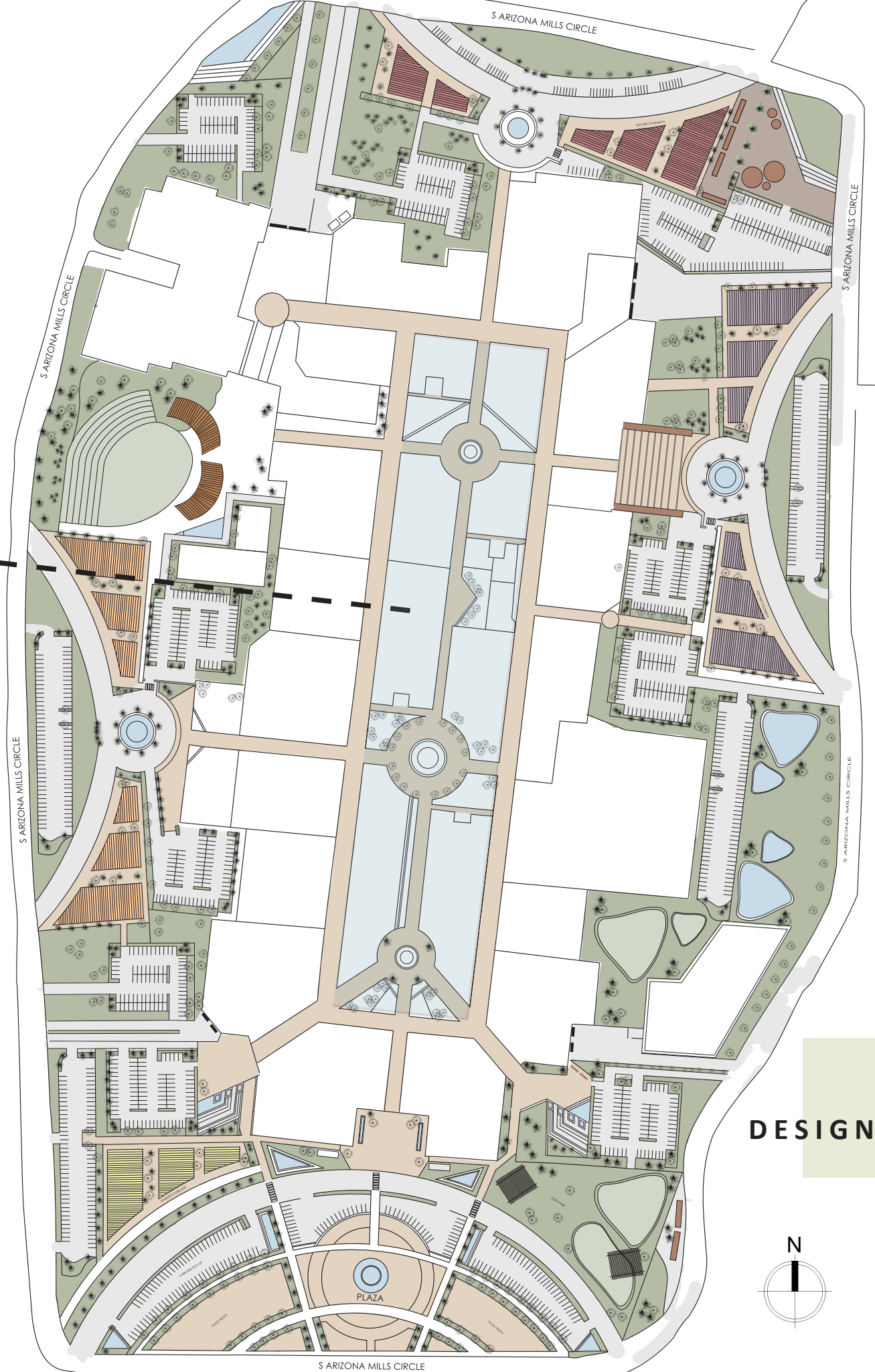


SITE PLAN

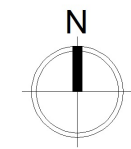


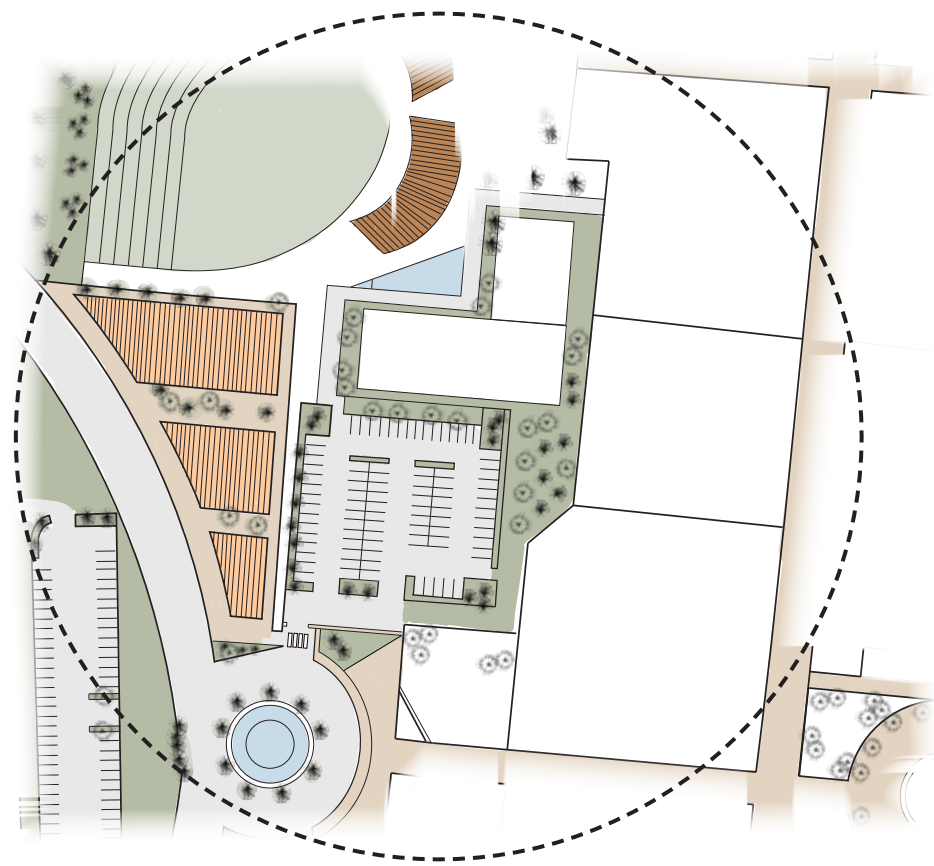
**INDOOR GREEN SPACE + RETAIL**

**ANCHOR STORES/REMODEL**



**DESIGN**





**NIGHT LIFE ELEVATION**



“

“DESIGN THINKING IS CRITICAL TO SO MANY OF THE CHALLENGES AHEAD, AND WE WILL NEED TO BE OPEN TO THE EVOLVING NEEDS OF OUR COMMUNITIES.”

-CHERYL DURST



“

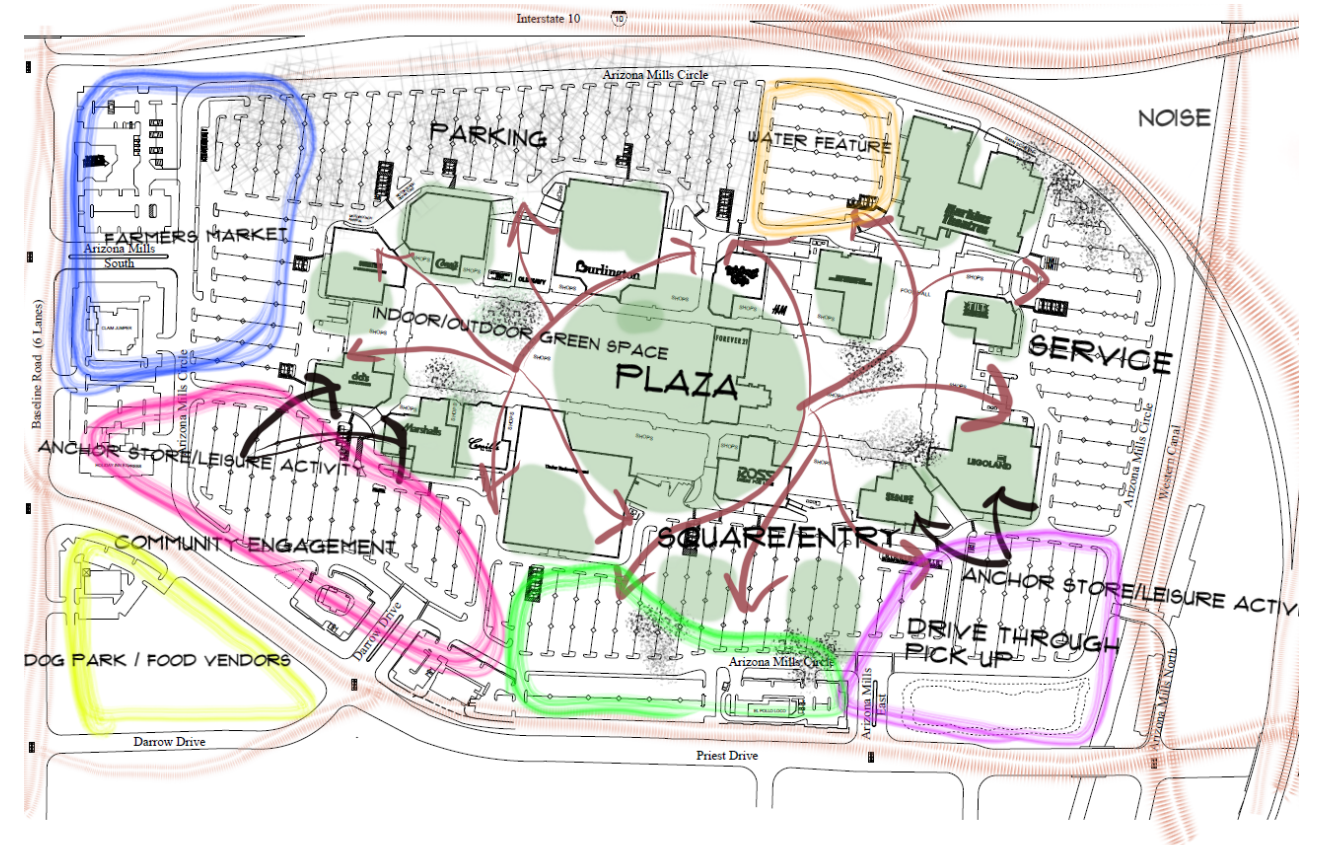
“NEW TYPES OF INTERACTIONS AND COLLABORATIONS ARE ALREADY UNFOLDING. IT'S A REMINDER OF WHAT'S ENDURING- AND THAT BEAUTY, INSPIRATION, AND UPLIFTING EACH OTHER ARE UNIVERSAL HUMAN NEEDS.”

CINDY ALLEN

# DESIGN RESPONSE

# DESIGN DRAWINGS

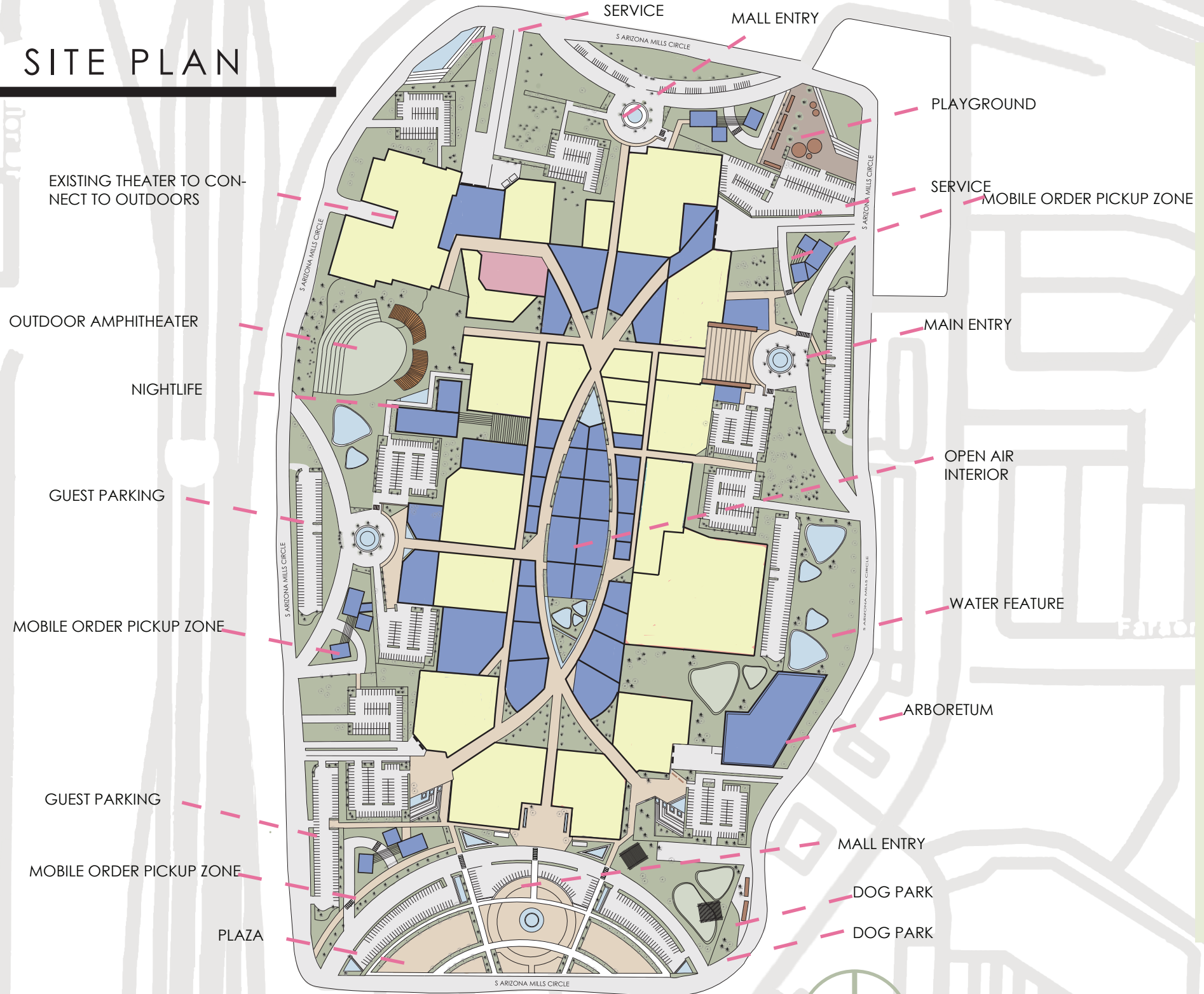
## PLAZA SCHEME



- Improve the linkage network of north to south as well as east to west; and create enclosed views from the north and south by setting up landmark building to enhance the character of the street.
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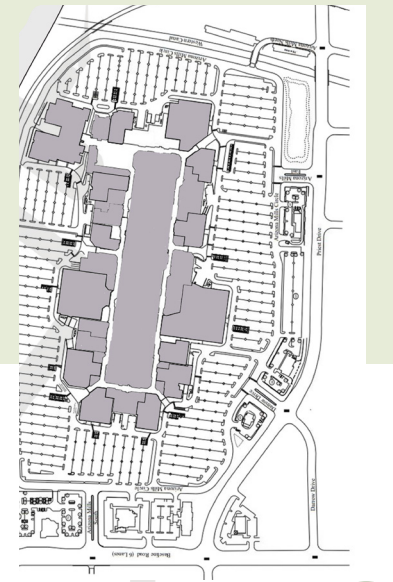
# SITE PLAN



## LEGEND

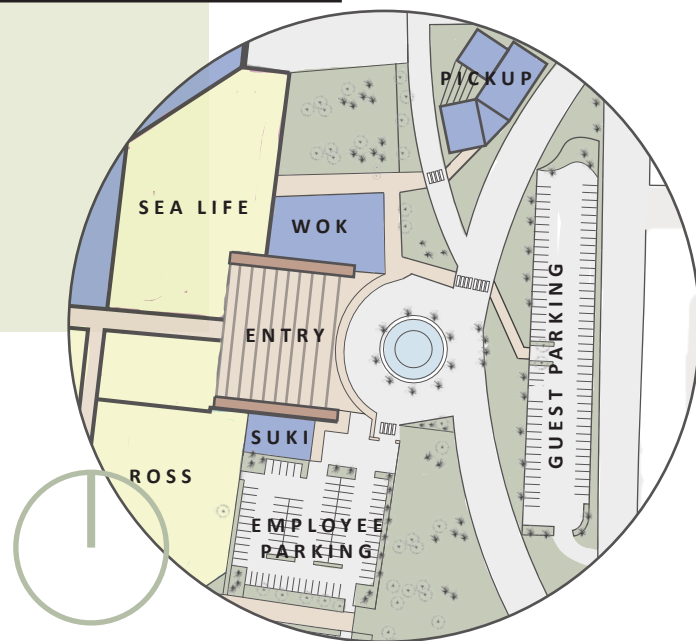
- EXISTING STRUCTURE
- NEWLY PROPOSED MIXED USE SPACE/PICK UP LOCATIONS
- EXISTING FOOD COURT
- SITE CIRCULATION
- OUTDOOR GREEN SPACE
- WATER FEATURE

### EXISTING SITE PLAN

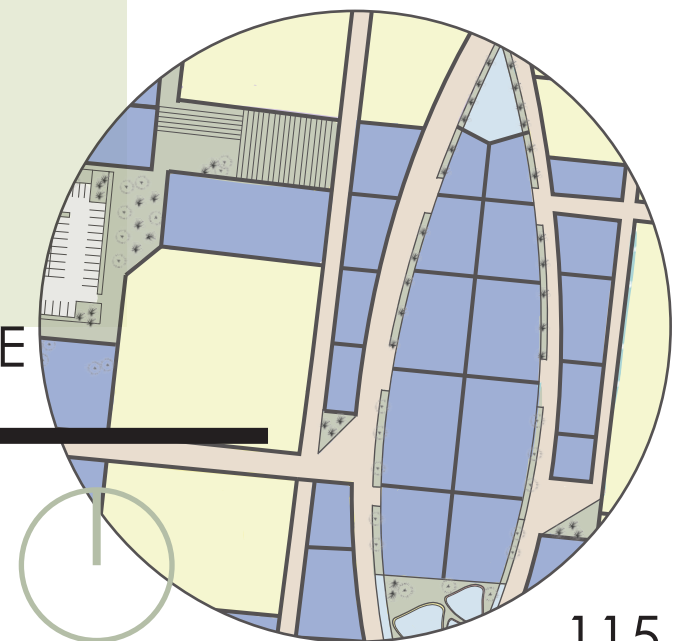




ARIZONA MILLS ENTRY

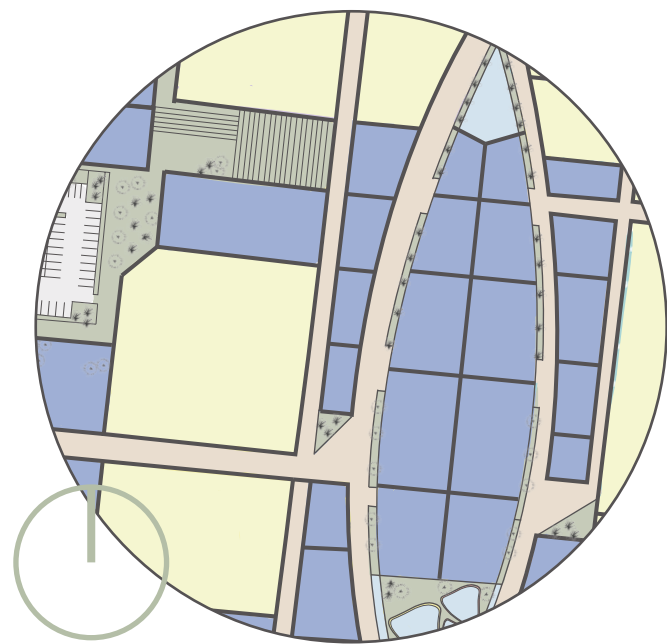


INTERIOR OPEN AIR SHOPPING EXPERIENCE

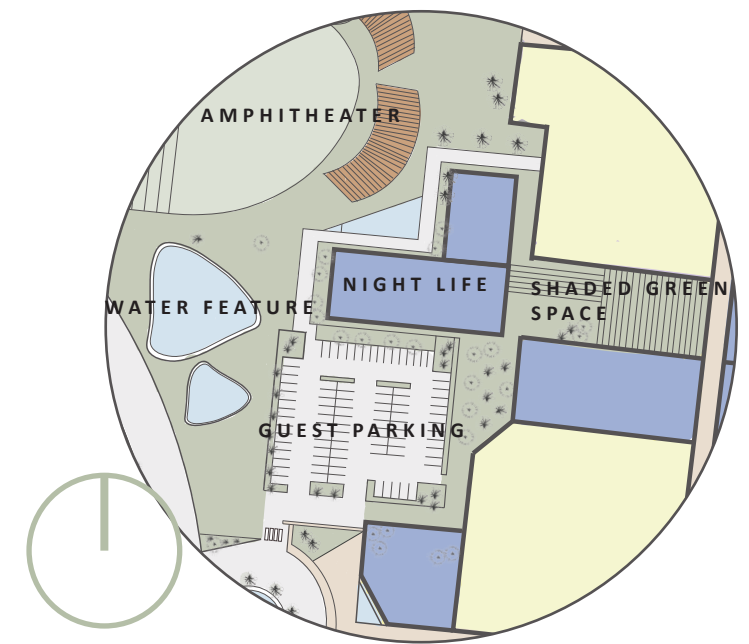




INTERIOR OPEN AIR SECTION



NIGHT LIFE ELEVATION

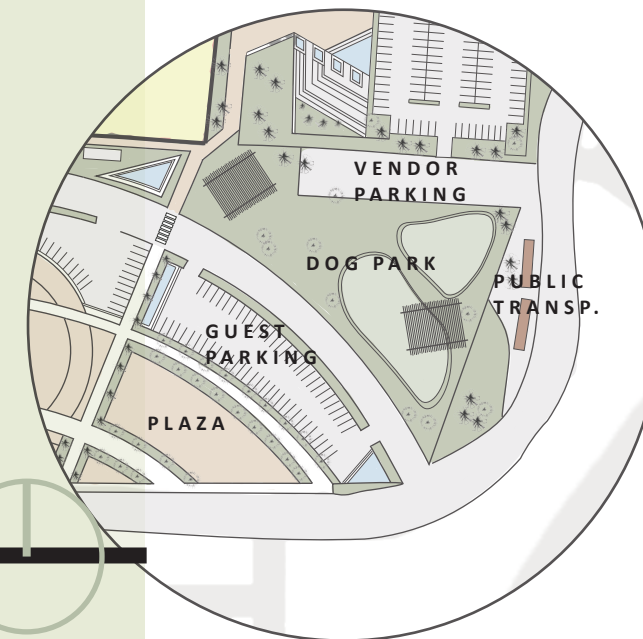
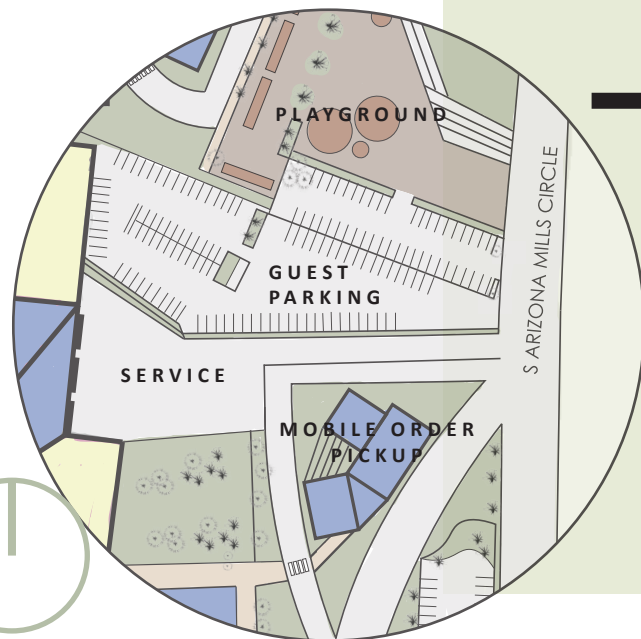




MOBILE ORDER PICKUP

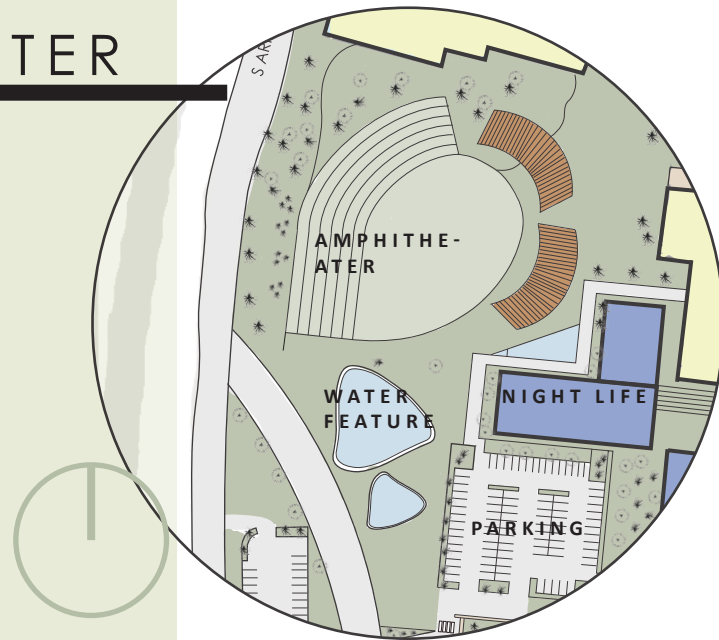


DOG PARK





OUTDOOR AMPHITHEATER



THANK YOU

# MEET ME

PERSONAL IDENTIFICATION



KARLIE MATEJCEK

HOMETOWN: WAHPETON, ND

E-MAIL: K.MATEJCEK@NDSU.EDU

# EXPERIENCE

THESIS APPENDIX PREVIOUS STUDIO EXPERIENCE



**Charlott Greub**

*Assistant Professor  
Architecture*



**2nd Year: Fall 2017**

**|Charlotte Greub|**

- Teahouse
- Boathouse



**Cindy Urness**

*Associate Professor  
Architecture Program Director*



**2nd Year: Spring 2017**

**|Cindy Urness|**

- Single Family Home
- Mixed-Use Apartments



**Ronald Ramsay**

*Associate Professor  
Architecture*



**3rd Year: Fall 2018**

**|Ronald Ramsey|**

- Chapel
- Shaken Barn



**Regin Schwaen**

*Associate Professor  
Architecture*



**3rd Year: Spring 2019**

**|Regin Schwaen|**

- Native American Museum
- Flexible Fabrication Space



**David Crutchfield**

*Associate Professor  
Architecture*



**4th Year: Fall 2019**

**|David Crutchfield|**

- High-Rise



**Amar Hussein**

*Adjunct Faculty  
Architecture*



**4th Year: Spring 2020**

**|Amar Hussein|**

- Marvin House
- Mini Thesis/Water-color Project



**Ronald Ramsay**

*Associate Professor  
Architecture*



**5th Year: Fall 2020**

**|Ronald Ramsey|**

- Agincourt Iowa Addition

# THESIS APPENDIX

## REFERENCE LIST- PHOTOS

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