

MAPLE RIDGE GREAT STREETS

SPRING 2021

OUUDS

The University of Oklahoma Urban Design Studio



TABLE OF CONTENTS

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TABLE OF CONTENTS

- PROJECT OVEVIEW.....1
- NEIGHBORHOOD ANALYSIS.....2
- URBANX-RAYS.....3
- STREET ANALYSIS.....5
 - SOUTH BOSTON AVENUE.....5
 - SOUTH CINCINNATI AVENUE.....6
 - WOODWARD BOULEVARD.....7
 - MADSON AVENUE.....8
 - EAST 18th STREET & EAST 21th STREET.....9
 - EAST 26th STREET & SOUTH HAZEL BOULEVARD.....10
- COMMUNITY ENGAGEMENT.....11
 - DESIGN PROPOSALS.....18
 - PROPOSED DESIGN AREAS.....18
 - INTERSECTION AT WOODWARD AND 24th PLACE.....19
 - CONNECTIVITY: 28th STREET - COMMUNITY GARDEN.....20
 - TRAFFIC CALMING: CINCINNATI AVENUE.....22
 - SIDEWALK: 31st STREET & RIVERSIDE SCRAMBLE.....23
 - CONNECTIVITY: 26th STREET.....23
 - EAST 21st STREET & MIDLAND VALLEY TRAIL CROSSING.....24
 - TRAFFIC CALMING: EAST 21st STREET.....25
 - INTERSECTION: PEORIA AVENUE & E 21st STREET.....26
 - CINCINNATI OVERPASS.....27

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INTRODUCTION

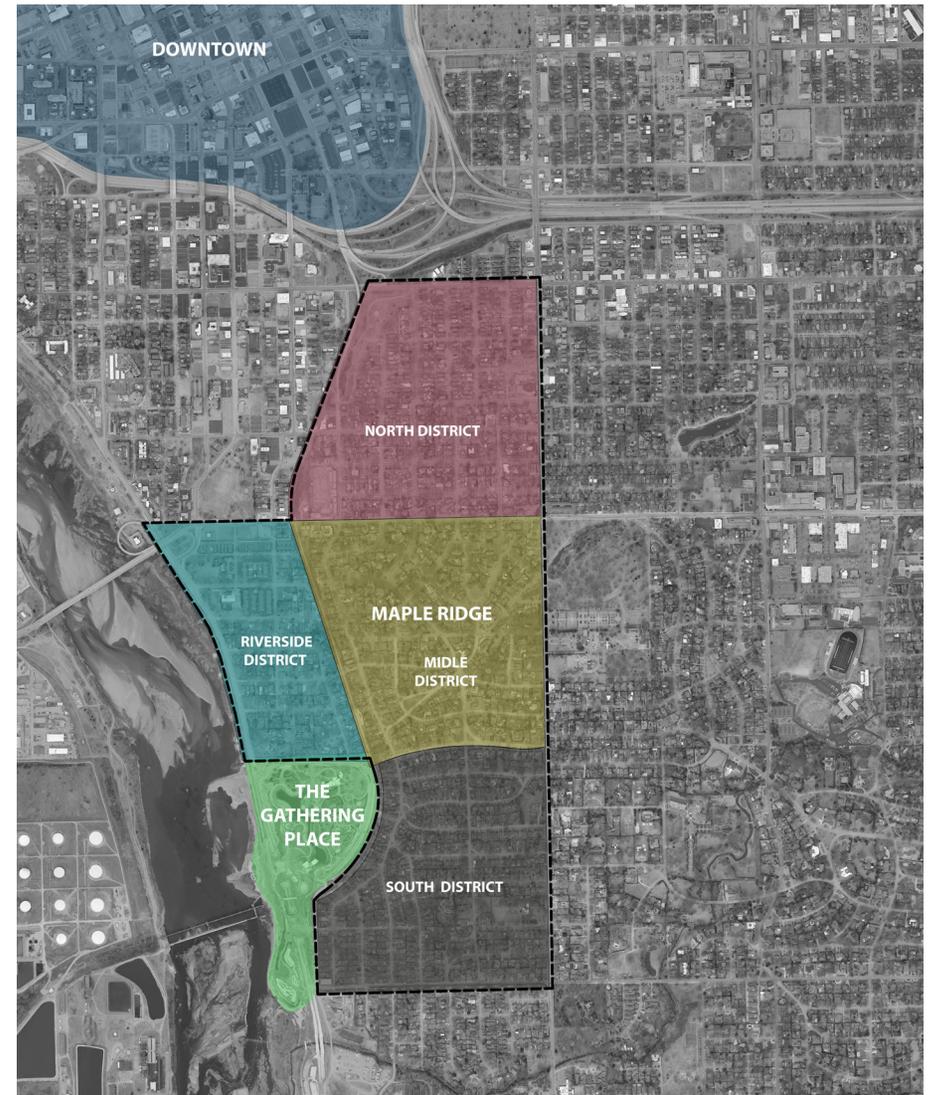
Maple Ridge Great Streets is a community partnership between the Maple Ridge Neighborhood in Tulsa, Oklahoma and the University of Oklahoma Urban Design Studio (OUUDS). OUUDS provides students with an approach for addressing urban design interventions through community based projects. Working solo and in teams, students conduct exploratory research to make educated design decisions regarding the built environment. Projects vary from year to year, allowing students to be exposed to a variety of urban conditions and problems. In Fall 2019, OUUDS started working with the Maple Ridge Neighborhood Association to understand and address issues currently facing the Maple Ridge Neighborhood.

NEIGHBORHOOD CHARACTER & CONCERN

Maple Ridge, which developed during the oil boom, is one of the most desirable neighborhoods in Tulsa due to its historic charm and proximity to the city core. Tree-lined streets and boulevards, planted traffic islands, and robust early 20th century architecture add to its endearing nature. Maple Ridge is comprised of North, Middle, South, and Riverside districts. North Maple Ridge is listed on the National Register of Historic Places and remain protected by historic overlay protection. North Maple Ridge and the Riverside District are built on a grid system, the Middle and South Districts feature long and winding streets. A popular running and biking trail, the Midland Valley Trail, connects the neighborhood to Tulsa's SOBO district, a popular dining and drinking area. On the west side of Maple Ridge lies the Gathering Place, a world-class public park gifted to the city through private funds. Given its proximity to some of the more popular Tulsa attractions, the neighborhood lends itself to a peripatetic community.

The neighborhood faces a few urban issues. Since the construction of Gathering Place, Maple Ridge has experienced unique problems regarding accessibility, traffic flow, and an influx of on-street parking during park events. As the park continues to grow in size and popularity (two phases of the park have not yet been constructed), it is expected that new problems will continue to arise. Additionally, infill development threatens the character of the neighborhood. It is not uncommon for smaller homes to be purchased, torn down, and replaced with large infill houses. More often than not these structures fail to match the surrounding space in style, mass, and character.

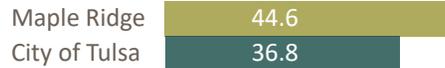
LOCATION



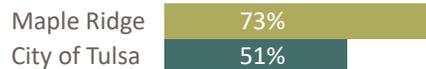
DEMOGRAPHICS

In order to make informed conclusions about Maple Ridge, we must consider the demographic nature of the residents. For the purpose of this project, students focused on age, income, and homeownership to educate themselves about the community they will be working for and proposing some designing solutions. Data was pulled from the U.S. Census website and Maple Ridge results were calculated by averaging the data from Census Tracts 32 and 45. As shown in the following graphs, Maple Ridge's reputation as a desired address is reflected in its demographics.

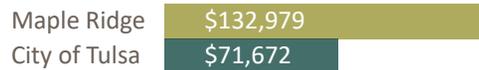
Median Age: 2017



Percentage of Owner-Occupied Households: 2017



Mean Household Incomes: 2017



WALKING TOURS

On a Saturday morning, the students took a walking tour of the neighborhood to get to know its atmosphere. In the casual walk that started along Cincinnati Avenue and ended in walking through the Midland Valley Trail, we discussed the unique features of the neighborhood and took photos of various spatial elements. Later, the students had several individual tours within the neighborhood for further analysis and identified different important elements such as the existence of sidewalks, crosswalk, lighting, landmarks, nodes, edges, and parks.



Pictures taken by students during the walk through the neighborhood.

URBAN X-RAYS & STREET ANALYSIS

The students created urban x-ray maps and conducted a comprehensive analysis of selected streets with the information collected from the walking tours.

The execution of urban x-rays is necessary to understand the neighborhood as a whole. Through the maps, we were able to identify things like the limits of the neighborhood, the types of the streets and nodes, predominance of land-use, connectivity, car traffic. This information collected on maps helped Maple Ridge residents to better understand the neighborhood in which they live, and it was also crucial for understanding and identifying problems in which students would come up with design solutions. Similarly, the street analysis illustrates the existing conditions of the streets. We selected eight street segments of different types, widths, and cardinal directions, covering all the districts of the the neighborhood. Each student would study separate street segments and portrayed their spatial qualities through sketches and photos.



PARKS & GREEN SPACE

On this map you can see all the parks and green spaces of Maple Ridge neighborhood. Maple Ridge is surrounded by Tulsa's finest parks and connected to the region trail system.



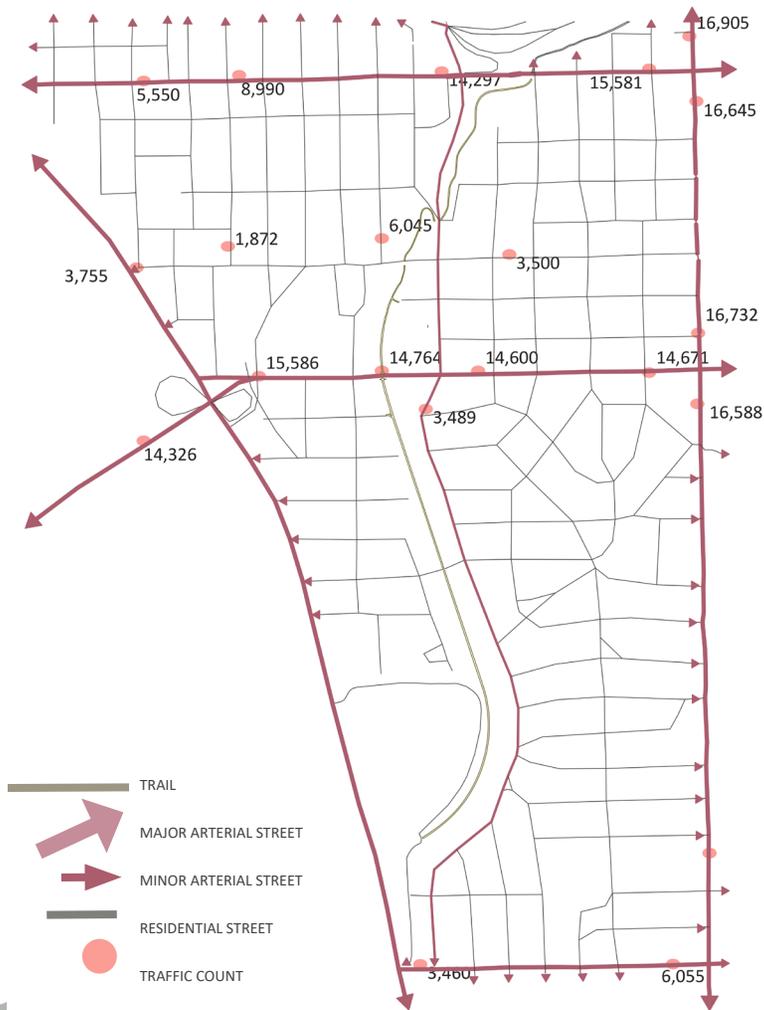
LAND-USE

On the land use map, we can see the footprints and uses of the buildings, which helps to understand how the neighborhood is divided. We are able to identify as residential and commercial areas, and the areas with the highest density and the lowest density.



CONNECTIVITY

In the connectivity map we identify the types of streets that are part of the neighborhood. With this map, we were able to classify the streets, analyze the traffic counts to check the level of traffic in the neighborhood.



LEGIBILITY ANALYSIS

The Legibility Analysis map is a map that helps understand the neighborhood. With this map it was able to identify the districts of the neighborhood, the main paths, landmarks, edges and nodes.



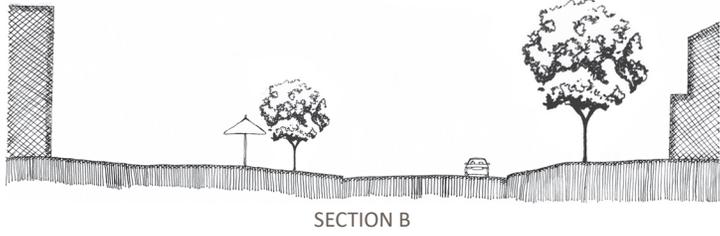
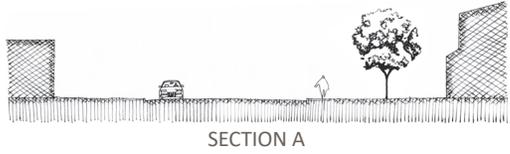
STREET ANALYSIS

SOUTH BOSTON AVENUE

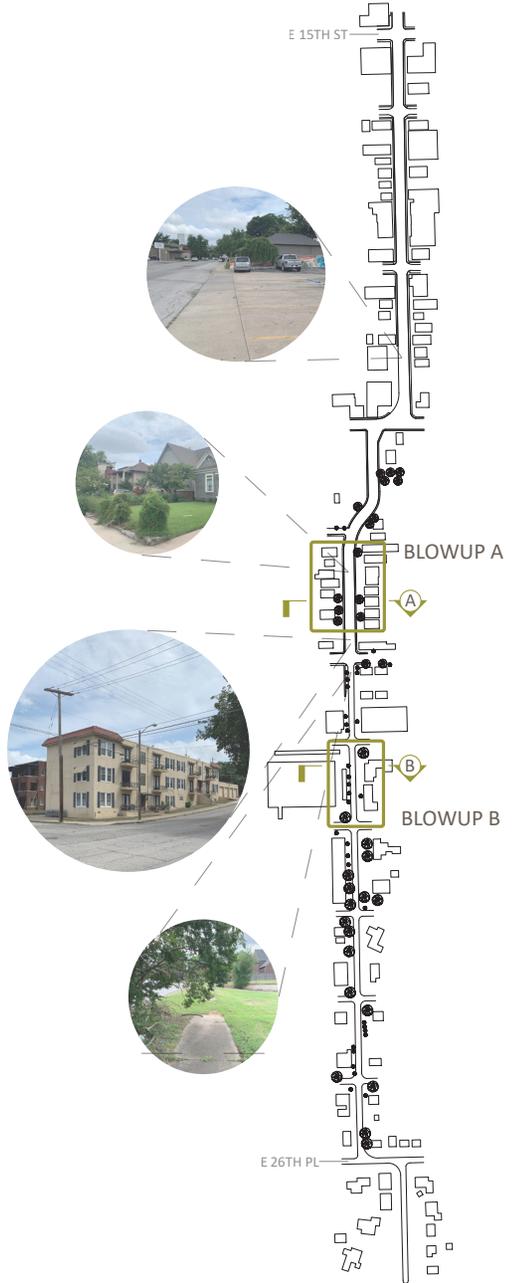
STREET OVERVIEW

- Residential and commercial street
- High vehicular traffic
- Sidewalks present until 21st street
- Lack of crosswalks, stoplights, and crossing signals
- Near the Midland Valley and River East Trail
- No street furniture

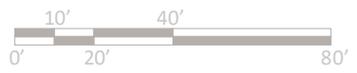
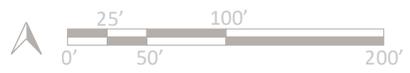
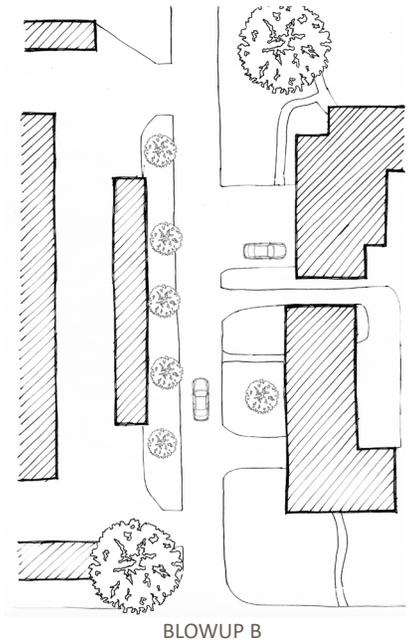
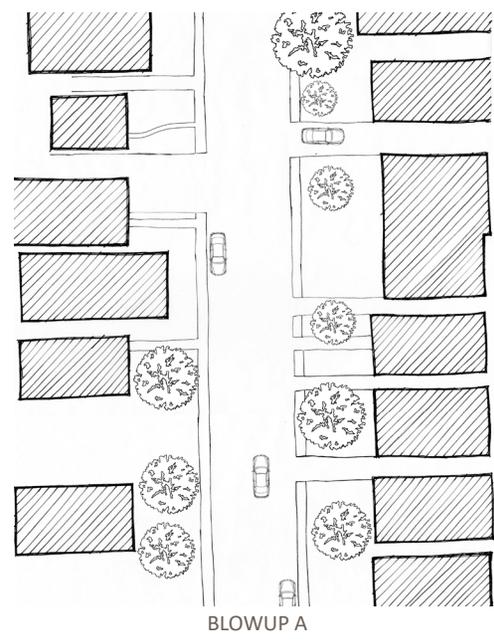
SECTIONS



PLAN



BLOWUP PLANS

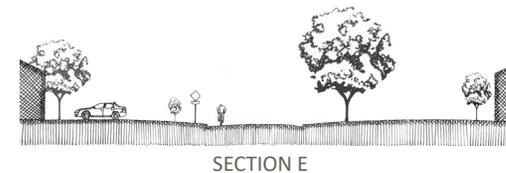
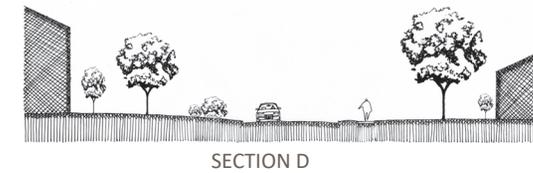
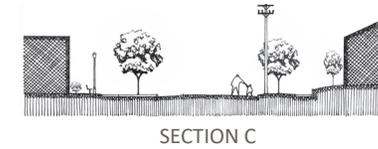


SOUTH CINCINNATI AVENUE

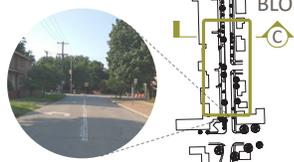
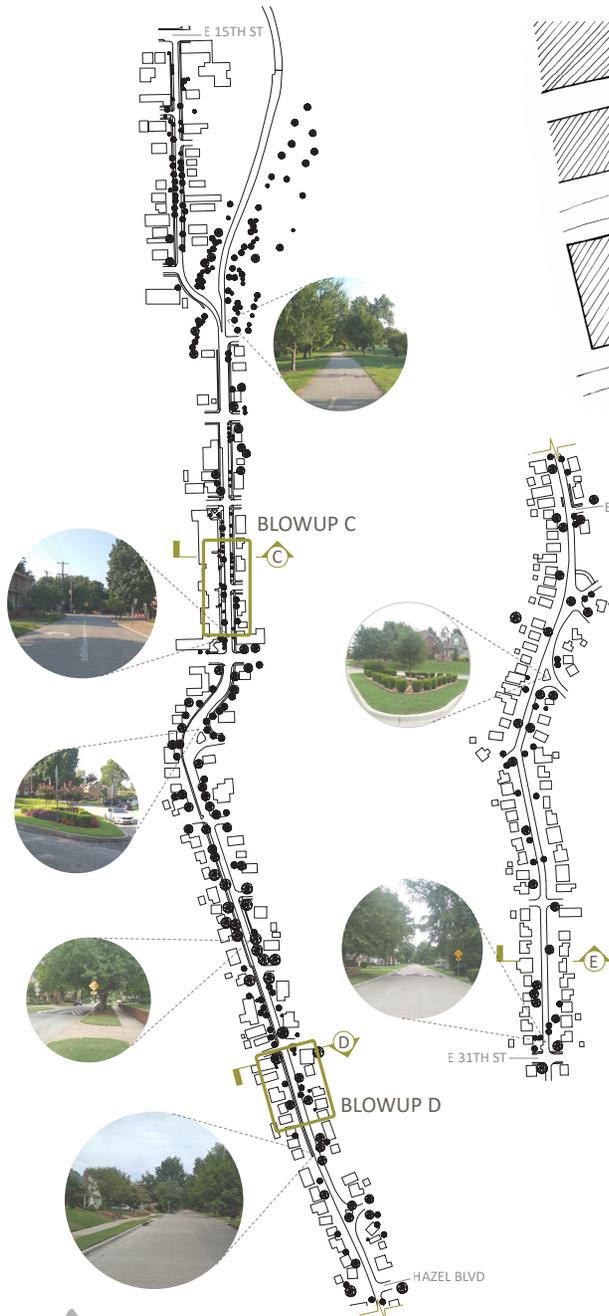
STREET OVERVIEW

- Residential and commercial street
- Heavy vehicular traffic
- Lots of speed humps
- Limited sidewalk accessibility
- No signage for crosswalks
- No stoplights at intersections

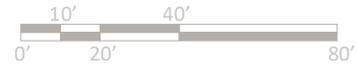
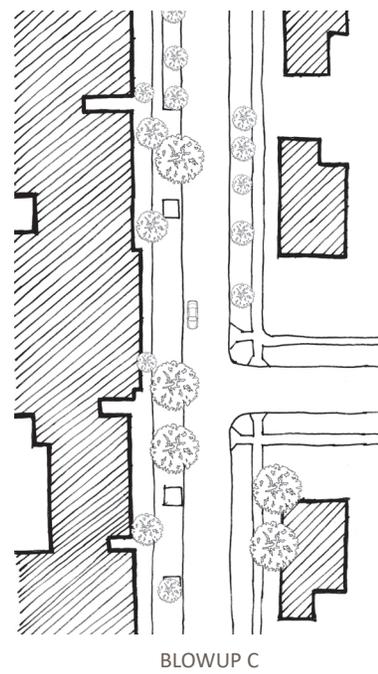
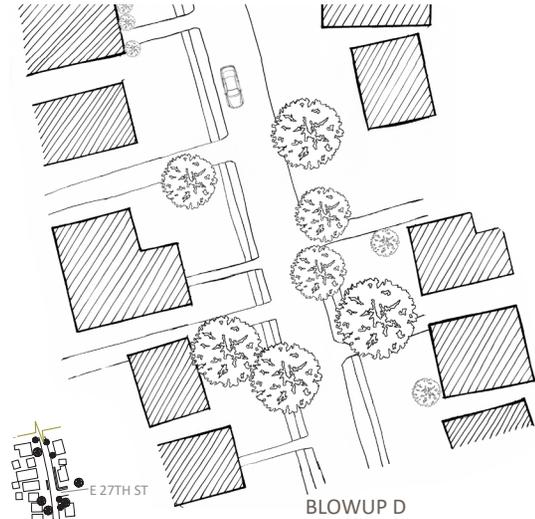
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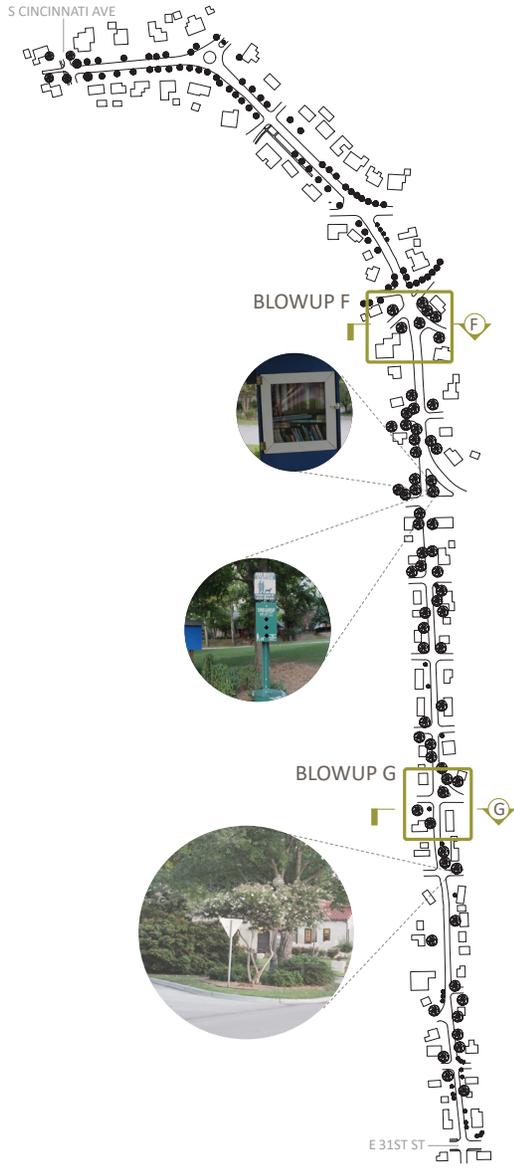
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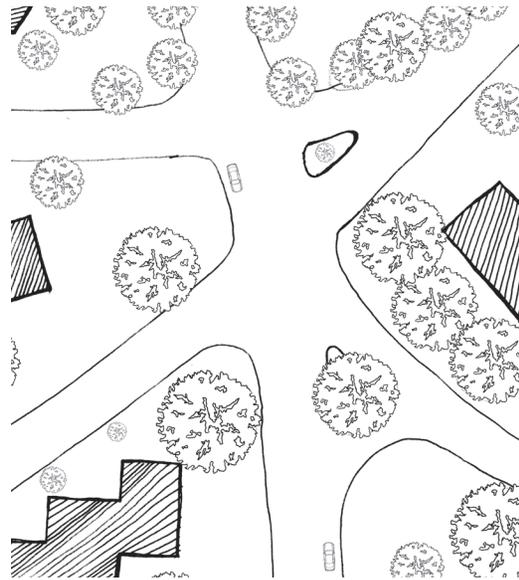
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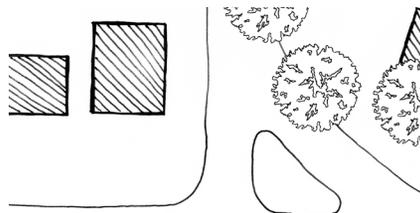
PLAN



BLOWUP PLANS



BLOWUP F



BLOWUP G

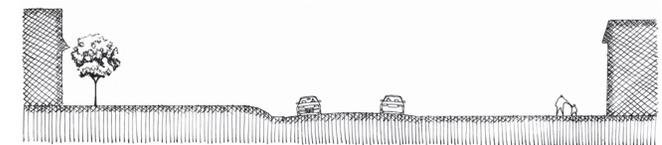
STREET ANALYSIS

WOODWARD BOULEVARD

STREET OVERVIEW

- Residential Street
- Low vehicular traffic mixed with pedestrian and cyclists
- Little curbside parking
- No sidewalks
- Very little street lighting
- Some tree coverage

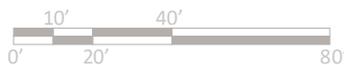
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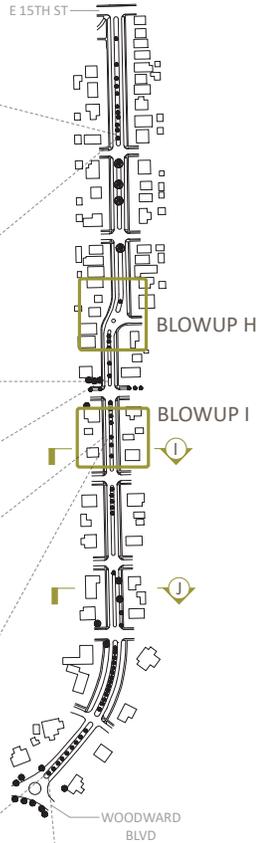
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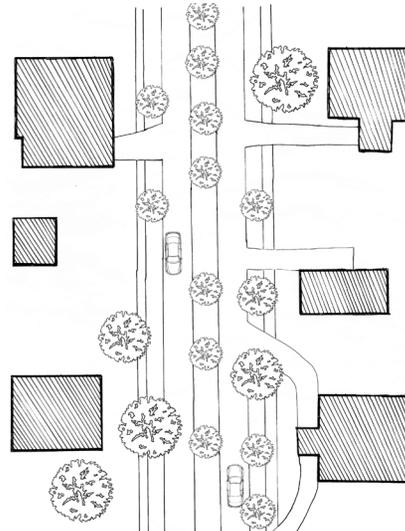
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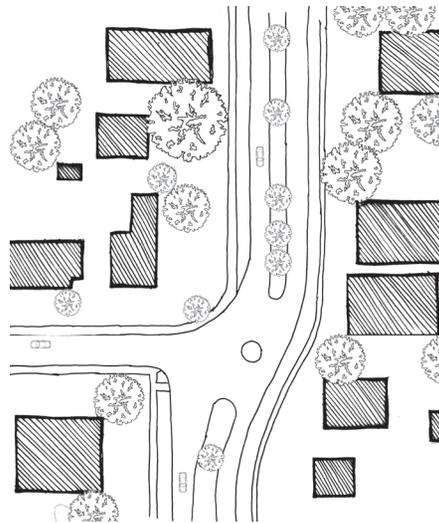
PLAN



BLOWUP PLANS



BLOWUP I



BLOWUP H

MADISON AVENUE

STREET OVERVIEW

- Residential Street
- Lots of curbside parking
- Planted median as traffic calmer
- Some sidewalk accessibility
- No street lighting

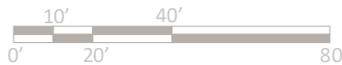
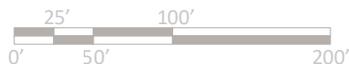
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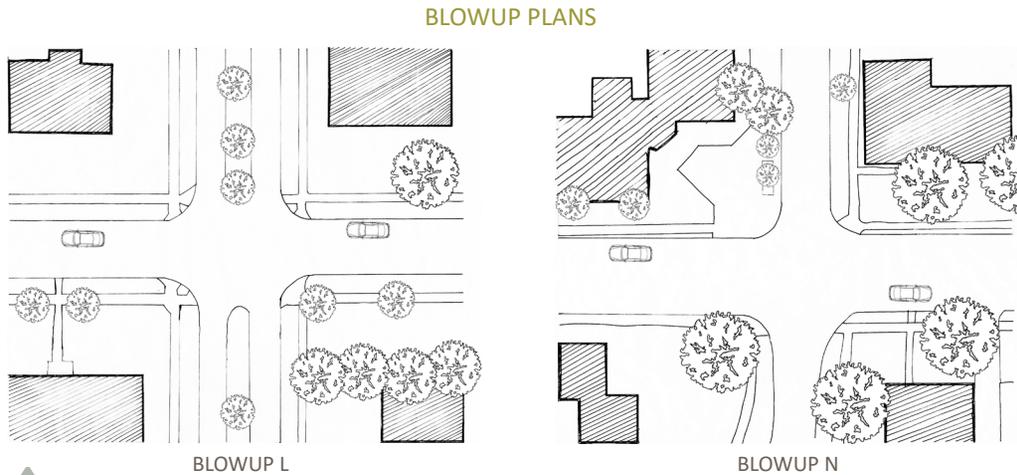
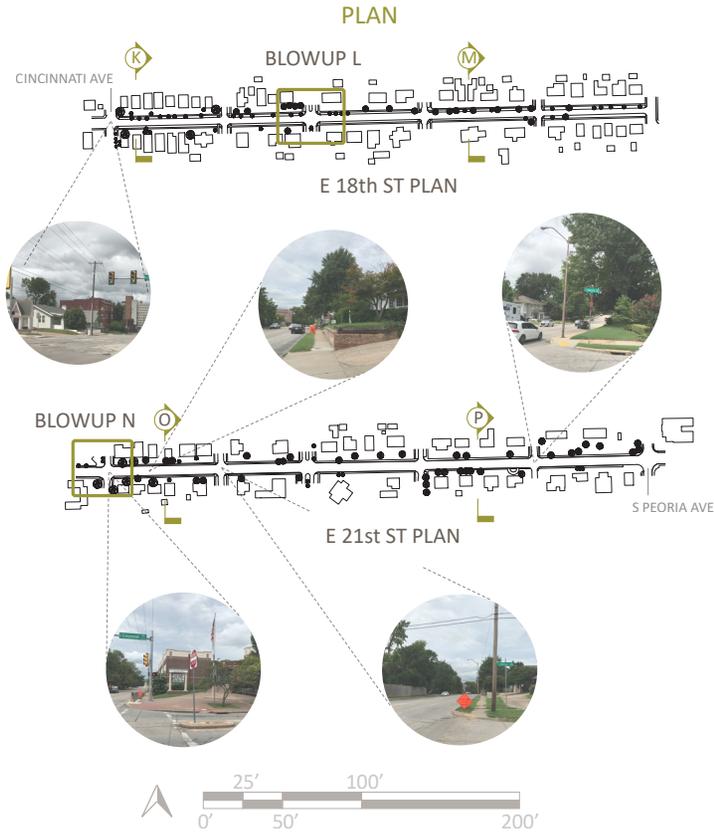


SECTION I



SECTION J





EAST 18TH STREET & EAST 21ST STREET

STREET OVERVIEW

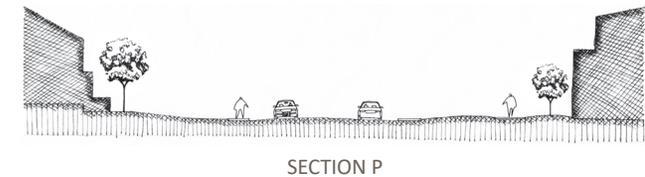
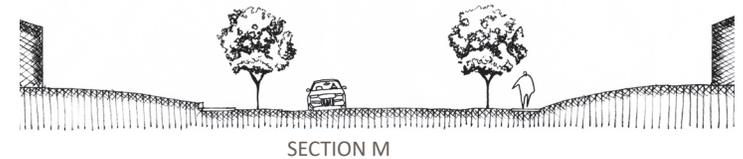
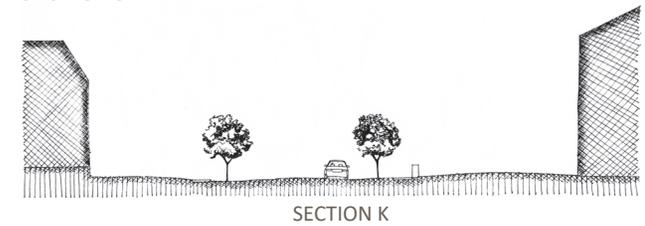
18TH STREET

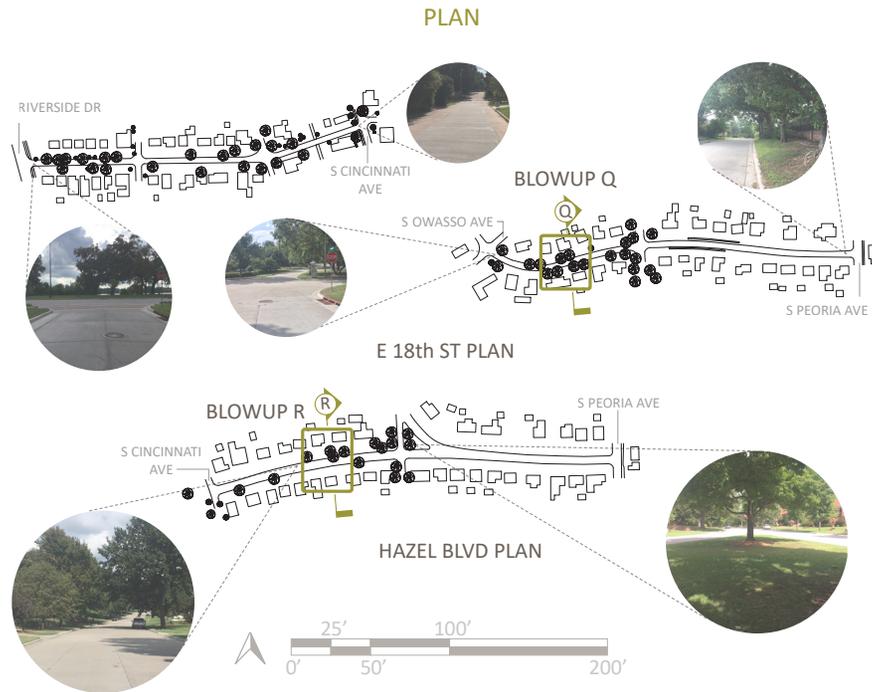
- Residential Street
- Low vehicular traffic
- Some curbside parking
- No street lighting
- Little accessibility
- no crosswalks or signals
- Lots of trees

21ST STREET

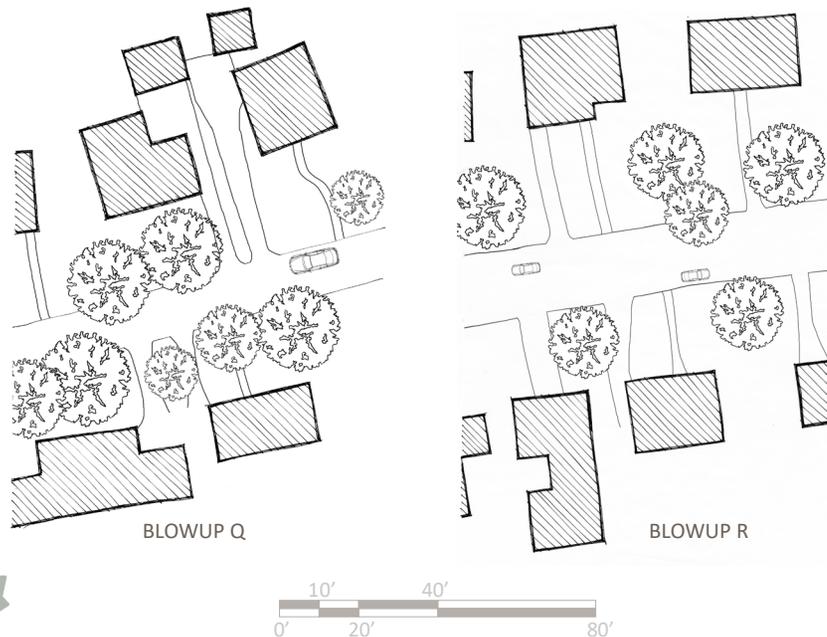
- Residential Street
- High vehicular traffic
- No curbside parking
- Little accessibility
- No crosswalk or signals
- Lots of trees

SECTIONS





BLOWUP PLANS



EAST 26TH STREET & HAZEL BOULEVARD

STREET OVERVIEW

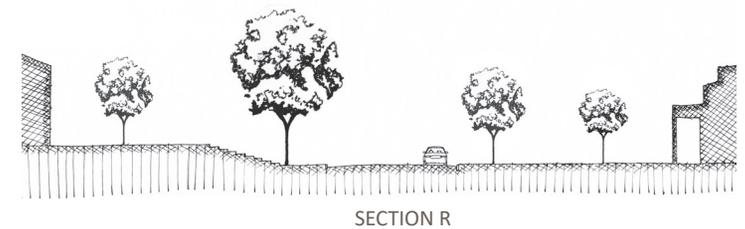
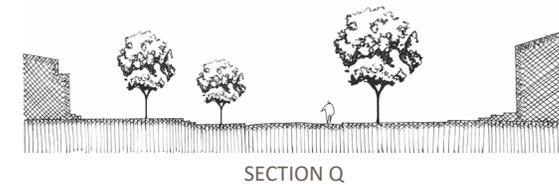
26TH STREET

- Lots of curbside parking
- Near the Midland Valley Trail and Gathering Place
- Tree Coverage in some areas where curbside parking is present
- Some speed humps
- Poor street conditions in some areas

HAZEL BOULEVARD

- Residential Street
- Little curbside parking
- No sidewalks
- No crosswalks
- Little curbside parking
- Lots of tree coverage

SECTIONS



MEETING WITH THE NEIGHBORHOOD ASSOCIATION

On September 9, 2019, five Maple Ridge Neighborhood Association members visited the Urban Design Studio to meet the students. They stated the problem issues and requirements of the neighborhood. Each of the students presented their individual street analysis. The group talked about creating an app or website for all residents to post pictures of problem areas in the neighborhood. The presentation slides, which contains additional analysis to the preceding 'Street Analysis' section of this book, can be found at **Appendix A**.

PHOTOVOICE

To collect feedback from residents, OUUDS students choose to do a Photovoice. Photovoice is a method of inquiry that uses visual documentation to capture and understand the concerns, lived experiences, or opinions of a particular group. Residents of Maple Ridge were asked to capture images of urban elements they would like to see preserved, added, removed, or kept-out of their neighborhood. and share it with the research team. Elements were defined as any element of the built or physical environment. The students used Google Forms as a platform to collect responses. In total 31 photos were submitted by the residents, along with their locations and brief descriptions.

MAPLE RIDGE HOLIDAY PARTY

Students from the Urban Design Studio shared their research at a community engagement event that coincided with the Maple Ridge Holiday Party on December 8, 2019. Over 200 neighbors attended the event and discussed their ideas with the students. At the party, residents were asked to rank the photos collected from photovoice as to whether they agree, disagree, or remain neutral about the results. Their feedback is summarized in the next pages.



Residents present at the Holiday Party observing student presentations and discussing the findings



Residents giving their feedback on Post-it notes and Photovoice

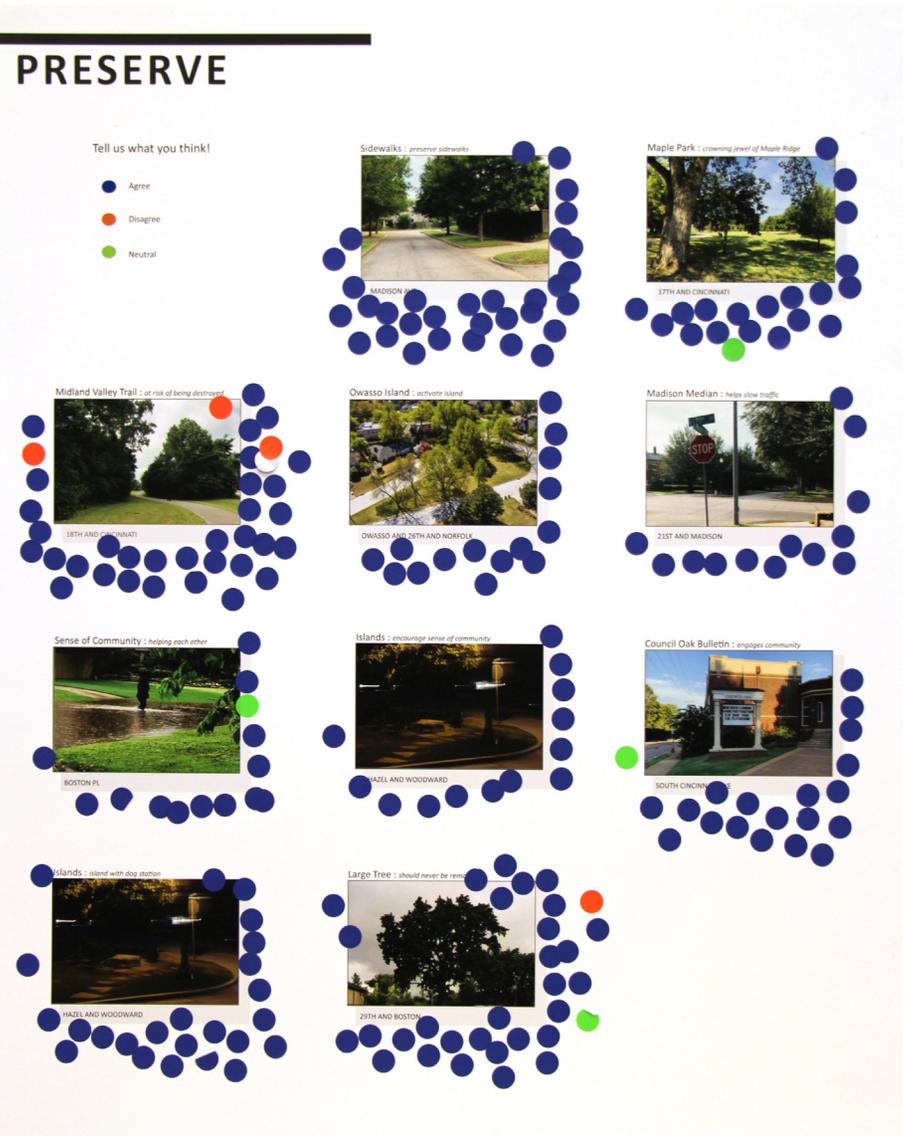


PHOTOVOICE FEEDBACK

Preserve: There were 10 suggestions to preserve elements in the neighborhood and the responding neighbors at the party agreed with all of those; namely, the Midland Valley Trail, Maple Park, sidewalks and medians of Madison Avenue, the community message board at the Council Oak School, the Hazel and Woodward island with a dog station, activities of Owasso Island, and the large tree at 29th and Boston Ave. People also valued the sense of community in the neighborhood and would like see it preserved.

Add: There were 13 suggestions of urban elements to add to the neighborhood and the neighbors agreed with most of them. There were no disagreements with adding amenities at Maple Park; adding beautiful light fixtures; creating an area for people to walk on the Midland Valley Trail at 25th Street; adding design elements to traffic islands at the Norfolk Avenue, 29th Street and Detroit and to the Owasso Island. A recommendation was made to add neighborhood book exchange stands on the islands. Almost everyone was in accord to add cohesive signage in the community, enhance the beauty and safety of sidewalks, and adding sidewalks for runners on South Cincinnati Avenue and 26th Street. There were some mixed reactions too. Two-thirds of the responses reflected that residents liked the idea of adding a decorative fountain on Madison and Woodward. Also, only 60% of the responses reflected that people actually liked the idea of having a direct access to the Gathering Place at 28th Street and South Cincinnati Avenue. However, most of them disagreed with the suggestion of adding a recreational platform for sports like Pickleball and installing play elements for kids on Owasso Island unless there were some measure to slow down the traffic.

Remove/Keep Out: This section of Photovoice got the lowest response but it had the most varied reactions at the Holiday Party. The majority of people agreed that the dead end at Hazel and Cincinnati Avenue is not welcoming in appearance and three neighbors proposed to open it for bike or pedestrian access. They agreed that curbside parking at Madison Avenue should be removed because people often drive on the median. Also, they agreed that the surplus of speed hump signs on Cincinnati Avenue is an eye sore. The presence of a vagrant population was a generally agreed concern. However, everyone disagree that the streetlights at 17th and Cincinnati impedes the privacy of homes. Furthermore, there were disputes over issues like curb design, presence of golf carts in the streets, and the correlation between speed hump and emergency response time.



ADD

Tell us what you think!

- Agree
- Disagree
- Neutral

Maple Park: add park amenities
18TH AND DETROIT

Light Fixtures: add beautiful features
CINCINNATI AND 21ST

Midland Valley Trail: create space for people to walk
26TH STREET

Signage: cohesive design creates community
26TH STREET

Traffic Island: add island design
NORFOLK AVE

Traffic Island: add island design
29TH PLACE AND DETROIT

Owasso Island: add island design
OWASSO AND EAST 21ST

Sidewalks: enhance beauty and safety
CINCINNATI AND 18TH STREET

Traffic Island: add decorative fountain
MAUDSON AND WOODWARD

Owasso Island: recreation for community engagement
OWASSO AND EAST 18TH

Sidewalks: add benches for seniors
20TH AND CINCINNATI AVE AND 20TH

Swinging Place Access: attractive and accessible
18TH AND CINCINNATI

Traffic Islands: add stop elements
HAZEL AND WOODWARD

Handwritten notes:
- "Open THIS 40"
- "Pile and pedestrian access"
- "Add benches, water fountains, and landscaping"
- "Add decorative fountain"

REMOVE/KEEP-OUT

Tell us what you think!

- Agree
- Disagree
- Neutral

Street Light: shines into homes and prevents privacy
17TH AND CINCINNATI

Curbs: curbs should bump into streets
18TH AND MADISON

Speed Hump Signs: surplus of signs is an eye sore
CINCINNATI

Speed Humps: slow down emergency response time
18TH AND DETROIT

Curbside Parking: people drive on median
MAUDSON AVE

Vagrant Community: populations are getting worse
18TH AND CINCINNATI

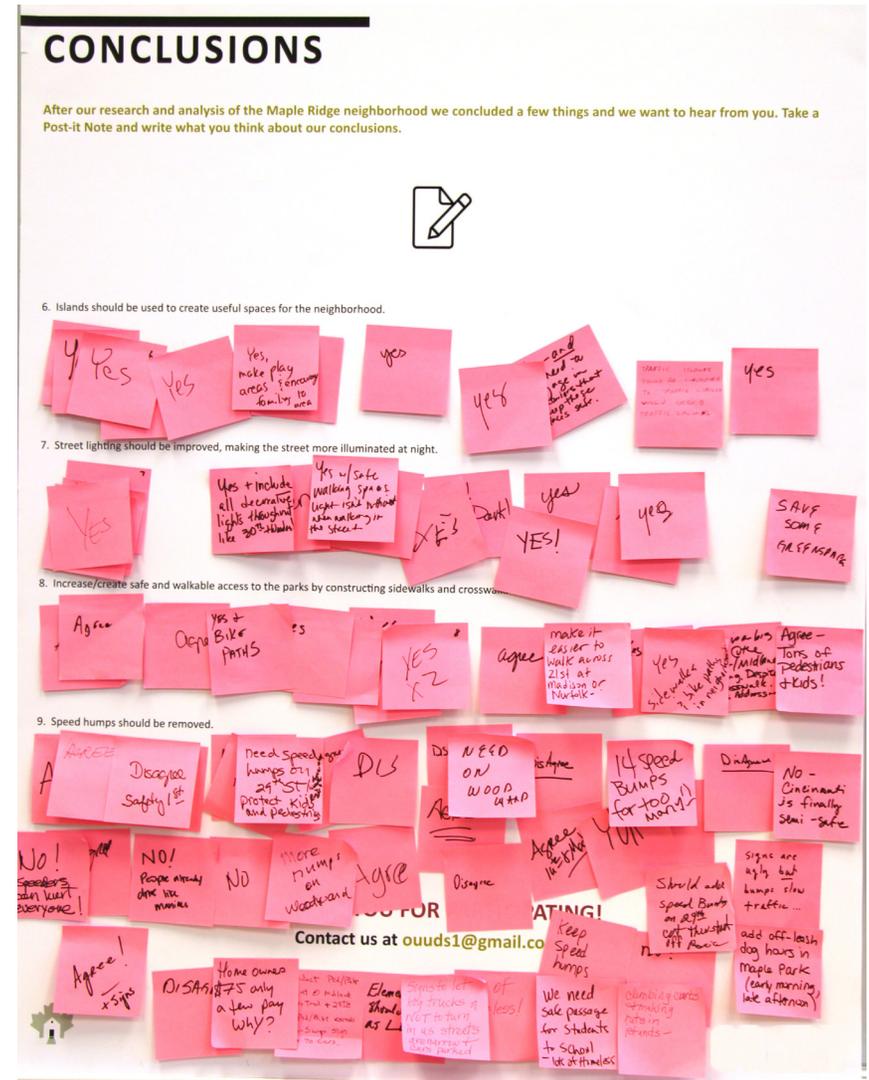
Golf Carts: traffic is a nuisance
ROBINSON PL

Handwritten notes:
- "Remove this 40"
- "Pile and pedestrian access"



6. Conclusion: Island should be used to create useful spaces for the neighborhood.
Feedback: Had 11 agreement and just one disagreement. Some residents suggested turning the traffic island into a traffic circle in order to decrease the traffic speed. Others suggested turning the place into playground areas for children and family.
7. Conclusion: Street lighting should be improved, making the street more illuminated at night.
Feedback: Had 15 agreement that the Maple Ridge needs lighting improvements and 2 disagreements on that.
8. Conclusion: Increase/create safe and walkable access to the parks by constructing sidewalks and crosswalk.
Feedback: Had 17 total responses and they all agreed with the concluding statement, but new ideas to address speed issues at the 21st and Midland Valley Trail crossing and the addition of bike paths were introduced.
9. Conclusion: Speed humps should be removed.
Feedback: This was the most controversial conclusion of all. There was a total of 32 responses with 10 agreements, 19 disagreements, and 4 mixed reviews. Lots of residents made comments proposing the addition of speed humps on busy streets like Woodward Boulevard and 29th Street, while some talked about the safety provided by speed humps and others talked about the nuisance of the signage.

Some other comments were made about issues not discussed in the conclusions and it helped the students understand even more about the needs of the neighborhood.



Picture of the second 'Conclusions' presentation board with the residents' feedback



DESIGN PHASE

The design phase started at the Spring semester. Students complied the feedbacks gathered from the neighbors. They studied some case studies that could serve as a reference for solving the problems raised by the neighbors. They also reviewed existing street design guidelines like Manual on Uniform Traffic Control Devices (MUTCD) and NACTO Urban Street Design Guide. After that, OUUDS hosted a series of collaborative design workshops in an attempt to engage the community in the design process.

DESIGN WORKSHOPS

The students organized three sessions at the Urban Design Studio and between twenty to thirty residents attended each of them. At the first meeting, student shared a list of potential design opportunities based on the data found from the Maple Ridge neighbors (through Photovoice, Stickers and Post-it notes on the Holiday Party, meeting with the neighborhood association). Then residents used a voting procedure to decide which issues the design phase should focus on. Two rounds of voting were conducted for the neighbors to prioritize design opportunities. Each neighbor was given three Post-it notes to vote, and they were allowed to use them according to their will, including the option to put all three votes on one option. Tallies of the first voting round were:

- Sidewalks (10)
- Traffic calming (10)
- Maple Park, add amenities or general (8)
- Bury power lines (8)
- Connectivity with the Gathering Place (26th and 21st St) (7)
- Air quality (6)
- Hazel and Lot at 28th & Cincinnati (4)
- Midland Valley Trail (add pedestrian lane) (4)
- Island design (3)
- Lighting (1)
- Gateway of the neighborhood (0)
- Parking lane (Madison) (0)



Residents listening to students presentation and engaging in discussions at the first design workshop held in the Urban Design Studio, on February 8, 2020.



Residents participating in the first-round voting to decide which issues the design phase should focus on.



After some discussion and a quick vote, Connectivity with the Gathering Place (26th and 21st St) and Hazel and Lot at 28th & Cincinnati were merged together as one option, making the tally 11. Then another round of voting conducted for the top five areas found from the first voting round. Results of the second round are as follows: Connectivity with the Gathering Place (17), Sidewalks (16), Traffic calming (11), Maple Park (10), Bury power lines (5). After a brief discussion, they elected the three priority areas to focus on: **Traffic Calming, Walkability, and Connectivity to the parks, trails, and attractions.**

At the second meeting, students presented some traffic calming solutions to the neighbors (to see the presentation please check **Appendix 1**). Then the neighbors prioritized which locations were the most important to them. And the following nine places were chosen for design explorations:

- 24th Place and Woodward Boulevard
- Midland Valley Trail Crossing at Cincinnati Avenue
- Empty lot at 28th Street
- Cincinnati Avenue & School
- 26th Street & Midland Valley Trail
- 31st Street & Riverside Scramble
- 31st Street & Midland Valley Trail
- 21st Street East

The third meeting the students started the development phase of the drawings together with the residents. The neighbors were fully integrated into the design team and worked in small groups directly on design alternatives by brainstorming creative solutions with the students. After the design work with the residents, the residents presented their solutions to each other and exchanged opinions on the designs and solutions presented.

After the third meeting, we were hit by the COVID-19 pandemic, which made it impossible for the students to continue the meetings with the residents. There were some attempts to continue the meetings via Zoom, but only one resident was present. Therefore, the students decided to build a website so that the design proposals could be shared with the residents of the neighborhood. The website can be found at <http://mapleridgreatstreets.pbworks.com>.



Second-round votes after counting.



A group of residents discussing some design options at the third design workshop on March 7, 2020.



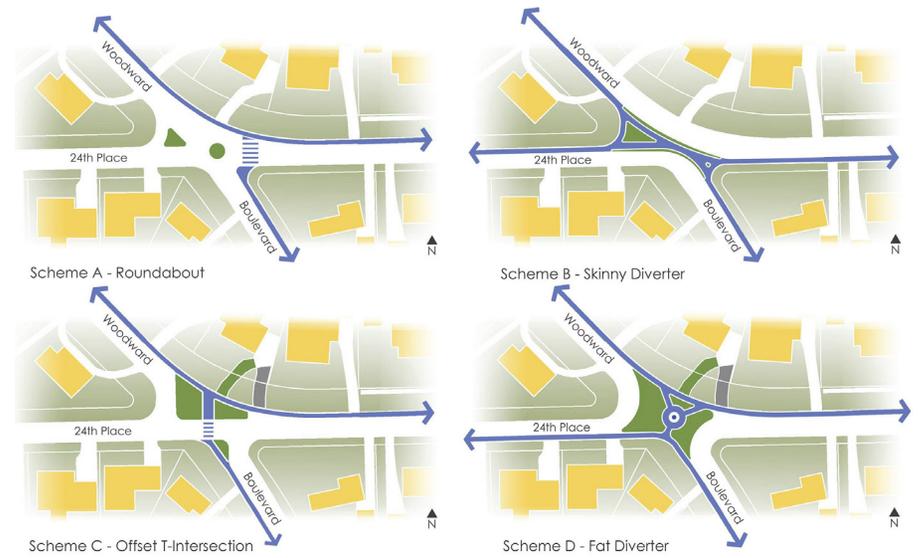
1 2 CINCINNATI AVENUE, WOODWARD BOULEVARD WALKABILITY

The residents identified several issues with the two longest streets in the neighborhood - namely, Cincinnati Avenue and Woodward Boulevard. Many residents use these streets for morning exercise, dog walking, and cycling. There is no sidewalks on Woodward and the south part of Cincinnati, which makes them unsafe for the pedestrians. The width of Woodward also encourages speeding. Furthermore, the residents noted that they experience undesired street parking on Gathering Place event days. The students and the residents came up with the idea of providing an on-street separated walkway through narrowing the travel lanes of the streets. The walkway would be painted and may be separated from traffic with bollards. This aims to provide an inexpensive solution by keeping the existing curbs as they are.

8 INTERSECTION AT WOODWARD AND 24TH PLACE TRAFFIC CALMING

The residents identified the Intersection at Woodward and 24th Place being too wide and a probable cause for speeding inside the neighborhood. The students and the residents came up with four different design schemes to solve the speeding issue: Scheme A: Roundabout, Scheme B: Skinny Diverter, Scheme C: Offset T-intersection, and Scheme D: Fat Diverter. The roundabout and T-intersection basically proposed narrowing the width of the street while the other two schemes added diverters to block the traffic flow in desired directions.

After a discussion and assesment of each of the schemes, the residents decided that the roundabout (Scheme A) would be the most rational solution. It involves narrowing the street width, providing an on-street separated walkway, introducing traffic islands with vertical elements, and adding a stop sign with a crosswalk. The walkway would be painted and separated by bollards. The residents also considered adding a fountain at the traffic island.



Plan views of four proposed schemes for the intersection at Woodward and 24th Place

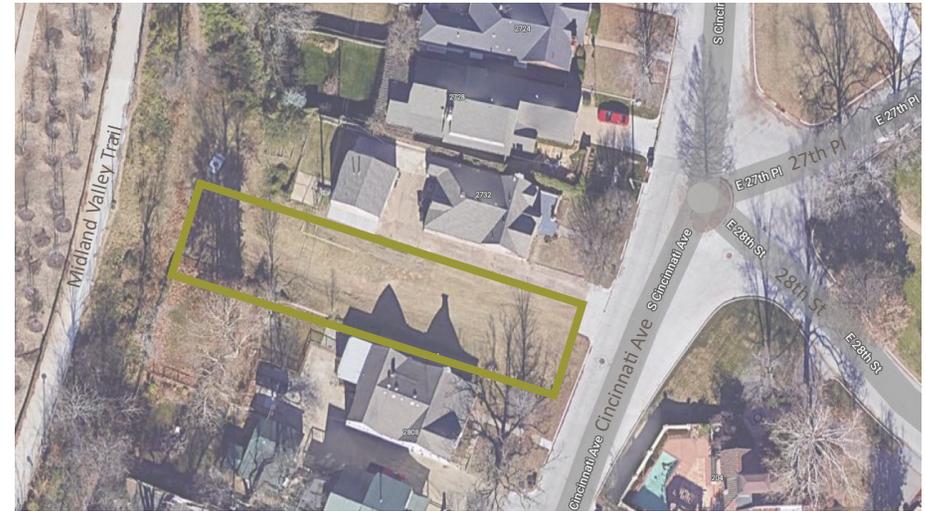


Perspective view of the intersection, Scheme A - Roundabout, with proposed walkway on the streets



**4 COMMUNITY GARDEN AT 28TH STREET
CONNECTIVITY**

In order to increase connectivity between the neighborhood and the The Gathering Place, the neighbors and students came up with the idea of turning an empty lot owned by the City of Tulsa on Cincinnati Avenue (28th Street and Cincinnati) into a new access to the park. In our meetings during the design phase, the concern was raised that this new access would bring more traffic of people and cars to the neighborhood. Looking into that, we realized that we should work with a design focusing on creating a space for the neighborhood, where the neighbors could enjoy and gather and not just a new access to the park. We developed the idea and discussed options. We realized that a community garden would be very welcome in the community. So the final design is a Community Garden for the Maple Ridge Community, where the neighbors can get access to the Gathering Place.



Existing aerial view of the parcel identified for the community garden proposal



Perspective view of the proposed design



The community garden is accessible from the proposed painted walkway on Cincinnati Avenue. The design includes a paved walkway and a set of stairs and ramps to the gathering place. The entrance is marked by a sign board that amplifies that this is a private community garden of the neighborhood, and the plants hides the connection with the Gathering Place. The garden has several raised planting beds along with benches to sit. There are walls on two sides of the garden ensuring the privacy of the adjacent houses.



Entrance of the community garden



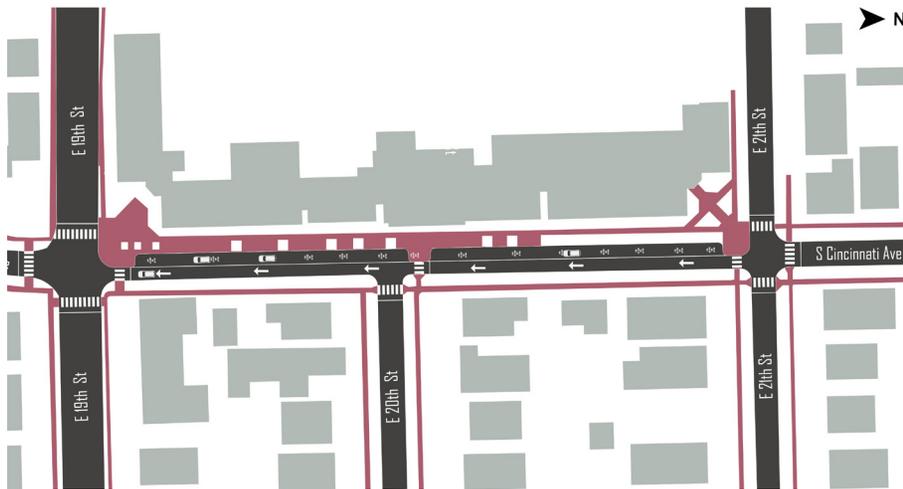
Perspective view of the community garden



9 CINCINNATI AVENUE
TRAFFIC CALMING

After some meetings with the neighbors it was identified that Cincinnati Avenue needed traffic calming. The team proposed to reduce the width of the street at Cincinnati Avenue through the introduction of an on-street walkway. The walkway may be painted and separated from traffic with bollards.

A special intervention was suggested for the street segment in front of the Council Oak Elementary School in order to provide more safety to the students and to the parents at drop-off and pick-up times. The neighbors came up with the idea to make the Cincinnati Avenue just one lane between 19th and 21st Streets in front of the school. The team created multiple designs and after some sketches, we came up with a design for Cincinnati Avenue with one lane for traffic and the other lane we turned into a “pick-up and drop-off” lane. We believe that it will decrease the traffic and also going to make it safer to the students during the pick-up and drop-off time.



Plan of Cincinnati Avenue between 19th and 21st Street.



Perspective view of the intersection at 19th Street and Cincinnati Avenue



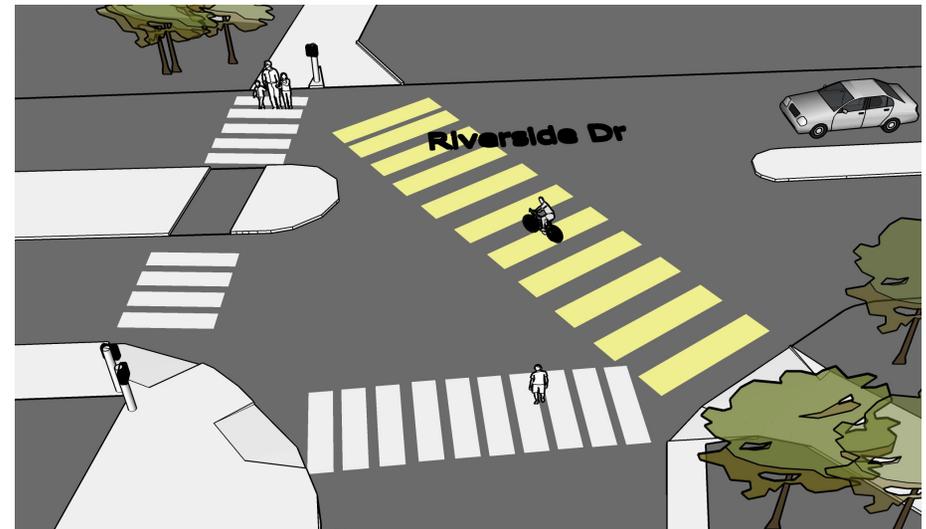
Perspective view of the intersection at 21st Street and Cincinnati Avenue



3 31ST STREET & RIVERSIDE DRIVE SCRAMBLE DESIGN WALKABILITY

The intersection at 31st Street and Riverside is often busy due to the high traffic volume trying to access and exit the park. In our site visits, we noticed there is a significant number of pedestrians waiting for traffic lights to cross the road. Some of them even jaywalk because it takes time to change the traffic light. We proposed a scrambled crossing design to accommodate large amounts of pedestrians.

It is a diagonal crosswalk that connect Skate Park entrance to Gathering Place entrance. To be an efficient scramble crossing it requires ADA compliant ramps, more crossing signals and a new traffic light sequence to maintain a scramble. The team proposed to allow the scramble to happen only during peak times of the Park. The Gathering Place may control the light, tying its use to their event schedule and hours of operation into the traffic sequence would decrease unnecessary scramble time. The residents also thought of adding a Gathering Place shuttle stop and bike lane connections. However, the new construction of the Children's Museum will have a big impact on this intersection, so current ideas may not solve future issues.



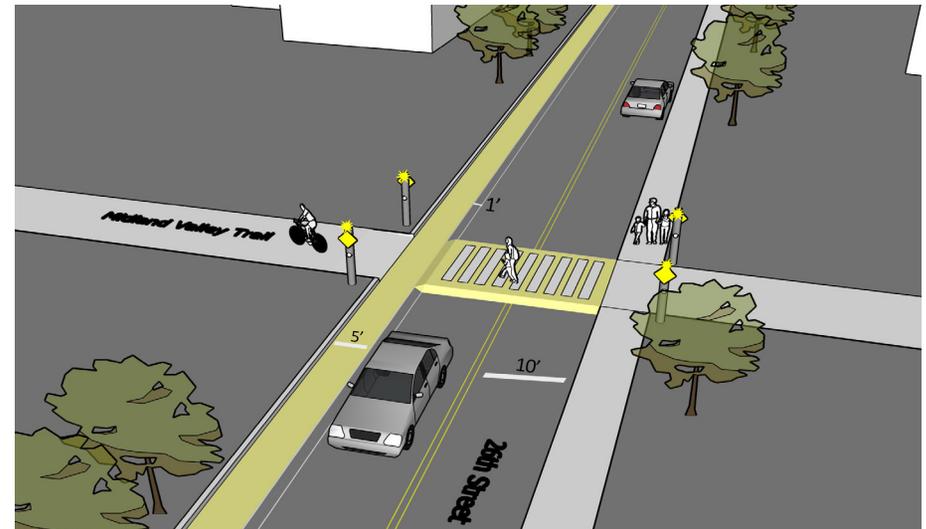
Perspective view of the intersection at 31th Street and Riverside Drive



5 26TH STREET CONNECTIVITY

The 26th Street inside the neighborhood can be utilized to connect the neighborhood with the Midland Valley Trail and the Gathering Place. The team proposed a sidewalk on the north side of the 26th Street, painted bike/pedestrian lane and a buffer in the street on the south side, signage with light beacons and buttons for pedestrians and a raised trail crossing to increase pedestrian safety and visibility for drivers.

Other design options proposed by the Maple Ridge residents were a pedestrian bridge over 26th Street and making the crossing textured using materials like brick, stone.



Perspective view of the intersection at 26th Street and Midland Valley Trail



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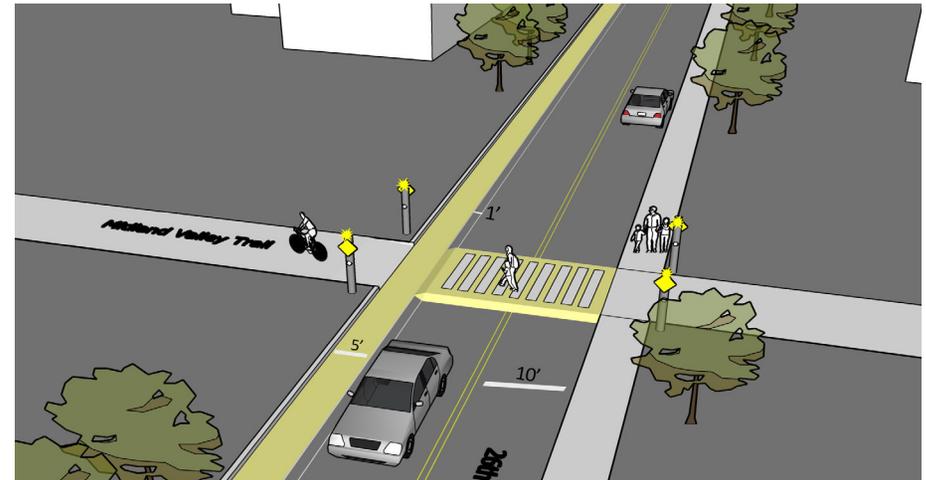


Perspective view of the intersection at 31th Street and Riverside Drive

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Perspective view of the intersection at 26th Street and Midland Valley Trail

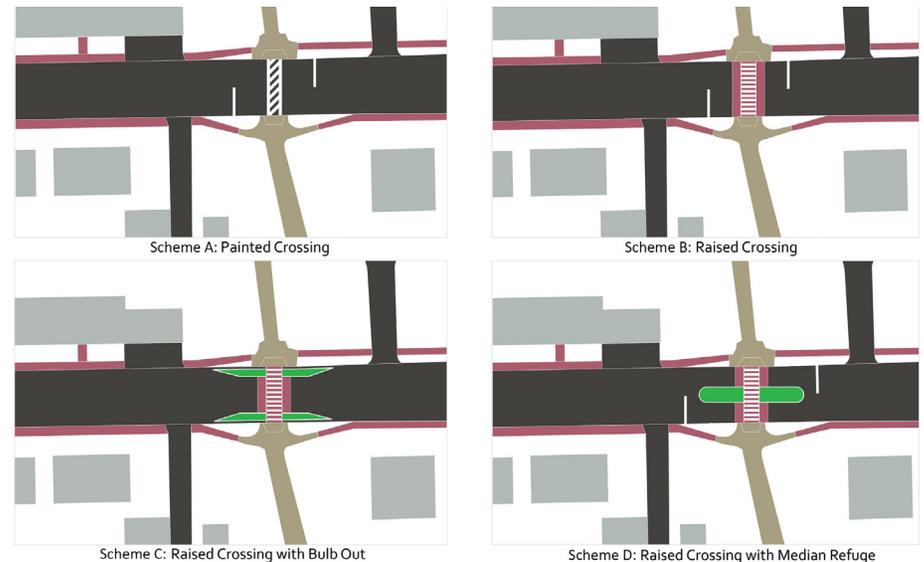


6 21ST STREET & MIDLAND VALLEY TRAIL CROSSING CONNECTIVITY

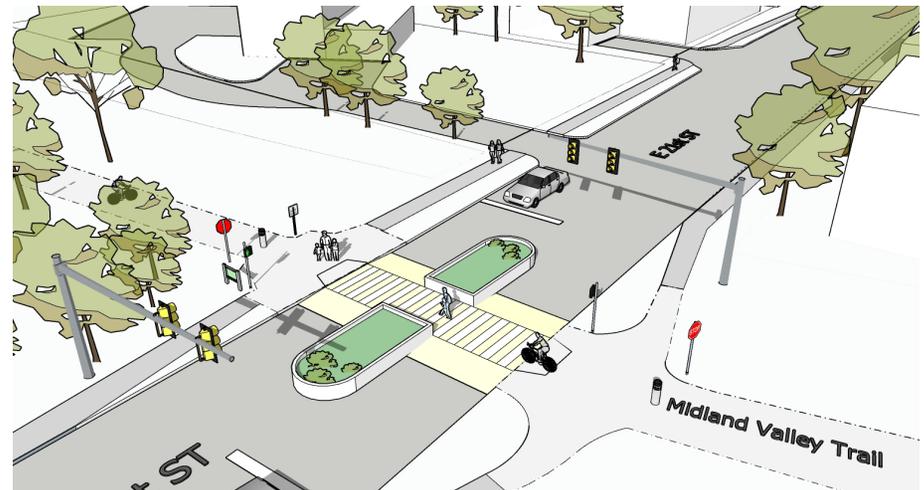
The Midland Valley Trail crossing at the East 21st Street was identified as one of the potential design improvement areas. Currently the crossing has a functioning design, but it can be improved further to increase the safety of pedestrians and bicyclists while crossing the busy arterial street. The team came up with four design options: Scheme A: Re painting the existing crossing and adding a stop bar, Scheme B: Raised Crossing, Scheme C: Raised Crossing with Bulb-out, and Scheme D: Raised crossing with Median Refuge Islands. The neighbors and students had a discussion about these schemes and evaluated their comparative strengths and weaknesses. Neighbors present at that session unanimously selected the ‘Scheme D: Raised Crossing with Median Refuge Islands’ option for this junction. Furthermore, they proposed adding landscaping and signage near trail crossing, and blinking lights in pavement.

A painted, raised crossing provides better visibility and helps reduce vehicular speed. Scheme D provides added safety for the pedestrians and bicyclists when they cross the street. It can also beautify the street having planting on the islands. However, this scheme is comparatively costlier. If the budget is minimal, Scheme B can be implemented first in a phased development and the median refuge islands can be installed later. Both of these schemes would require a change of grade in the sidewalks to readjust the ADA compliant ramps at each ends.

The team also proposed some surrounding improvements, such as repairing adjacent sidewalks that are currently in poor condition, and repositioning some nearby electric poles and streetlights that are currently placed on the middle of sidewalks hampering walkability.



Plan views of four considered schemes for the 21st Street and Midland Valley Trail crossing



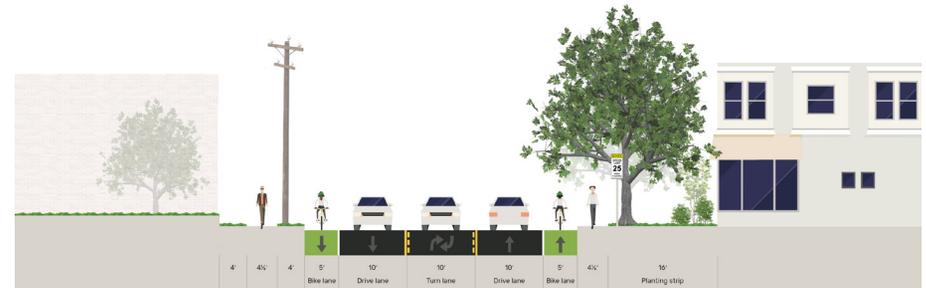
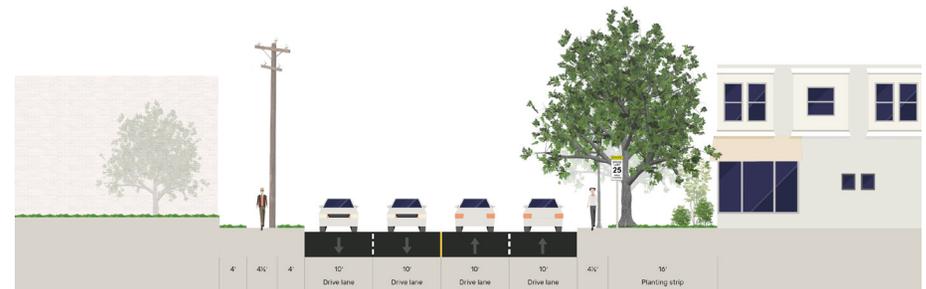
Perspective view of Scheme D: Raised Crossing with Median Refuge Islands



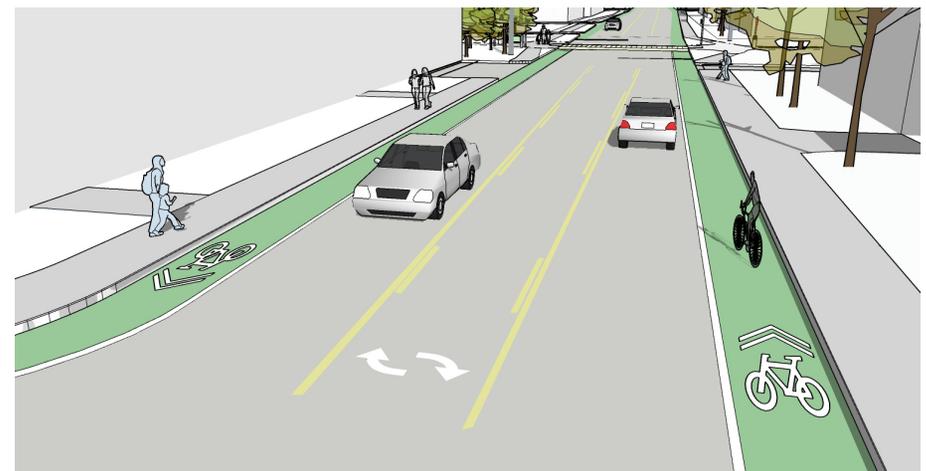
10 21ST STREET
TRAFFIC CALMING

During various phases of data collection from the neighbors, East 21st Street was highlighted as a street within the Maple Ridge neighborhood that needs traffic calming to increase pedestrian safety. Within the neighborhood, 21st Street is a 4-lane street with an approximate width of 40'. The students proposed a road diet, turning it into a 3-lane street with an addition of separate bicycle lanes, from Boulder Avenue to Peoria Avenue.

According to INCOG's estimation, the average annual daily traffic (AADT) count for this section of the street is about 15,000. Which can be well accommodated by a 3-lane street. Furthermore, Tulsa Metropolitan Area Street and Highway Plan classifies this street as an Urban Arterial Street which also supports a 3-lane street design. Reducing a traffic lane on each way will decrease the speed and may encourage some drivers to take alternative routes. The addition of bike lanes will offer a multi modal street scenario. It will also increase connectivity as it will link the Midland Valley Trail to places like the Veterans Park, Woodward Park, Council Oak Elementary School, and Spoke House Bicycles.



Existing (top) and proposed (bottom) section of East 21st Street

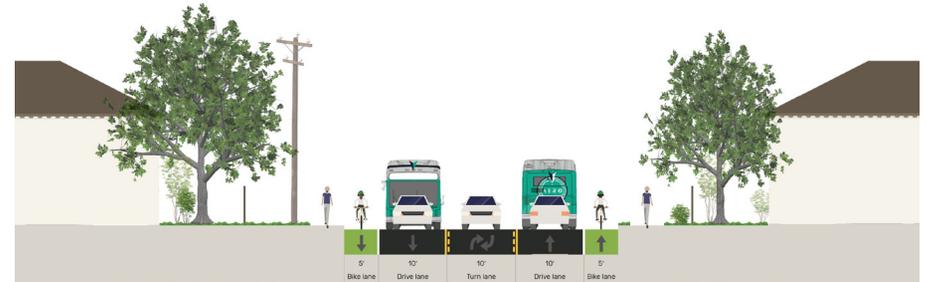
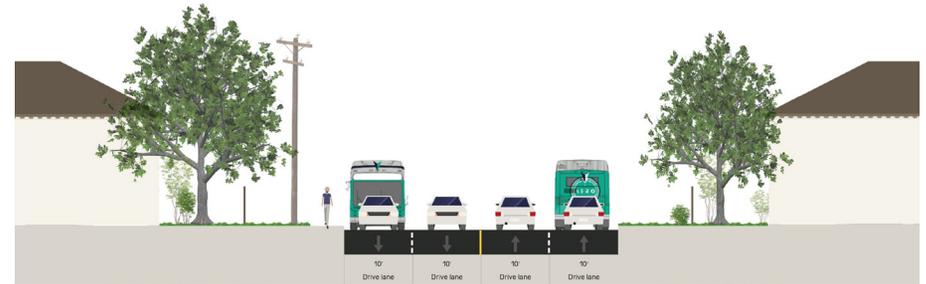


Proposed perspective view of 21st Street



11 INTERSECTION AT PEORIA AVENUE & 21ST STREET
TRAFFIC CALMING, WALKABILITY

The intersection at Peoria Avenue and East 21st Street was identified as a prospective design area because there is no left turn from the west side of 21st Street to Peoria Avenue. At one of the design workshops, residents pointed out this issue and the students were asked to develop a solution for this problem. Students proposed turning both the streets into a 3-lane street having a center left turn lane. This would accompany the proposed road diet for the 21st Street and will also help to reduce the vehicular speed along the neighborhood. The design also includes separate bicycle lanes. Furthermore, the team suggested to place several crosswalks across Peoria Avenue to connect the neighborhood to the Woodward Park.



Existing (top) and proposed (bottom) section of Peoria Avenue



Intersection at Peoria Avenue and East 21st Street

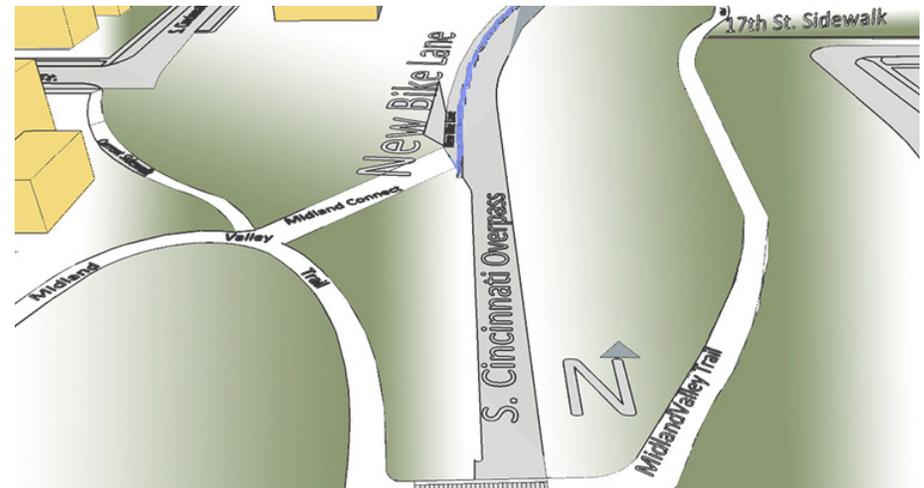


**7 CINCINNATI OVERPASS
CONNECTIVITY**

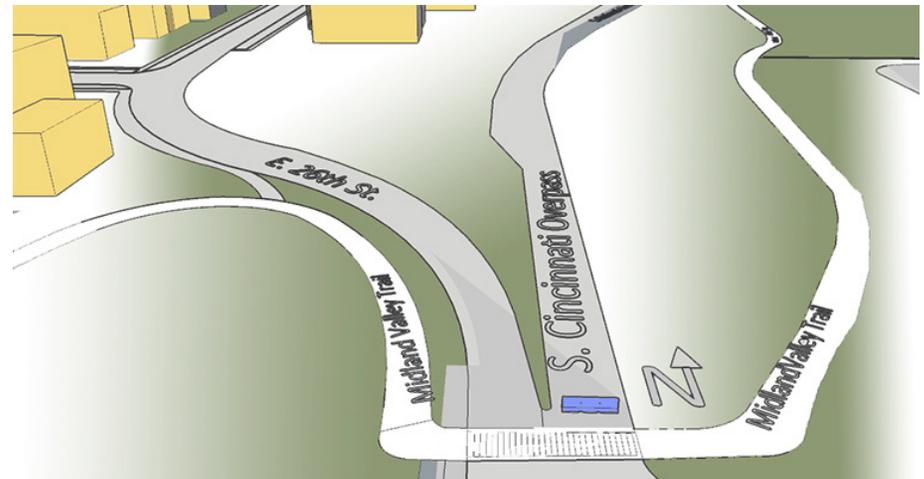
The team identified the Midland Valley Trail crossing at Cincinnati Avenue as a potential design opportunity as the crossing is perceived as unsafe. The crossing, which is near the entrance of the Maple Park, has high speed incoming traffic from the one-way ramp on the Cincinnati Overpass. Although there are multiple signs indicating the crossing, the crossing itself has a low visibility from the overpass. Furthermore, the slope of the overpass ends very close to the crossing and it is dangerous for the pedestrians and cyclists crossing the road.

The students and the residents came up with the idea of making the Cincinnati Overpass only open to bike, pedestrian and scooter traffic, with plan a for incremental beautification. This would make the crossing very safe and restrict the in-flux of traffic within the neighborhood from the downtown.

The team developed two schemes to connect the adjacent sidewalks with the trail. Scheme A would close off East 26th Street. The Midland Valley Trail cuts across where 26th Street used to be, connecting with the new bike lane on Cincinnati Avenue. The new bike lane is separated from traffic by concrete barriers. Sidewalks connect 16th and 17th Street to the trail. Scheme B leaves 26th Street open and connects sidewalks from 16th and 17th Streets directly to the Midland Valley Trail. There is no separated bike lane.



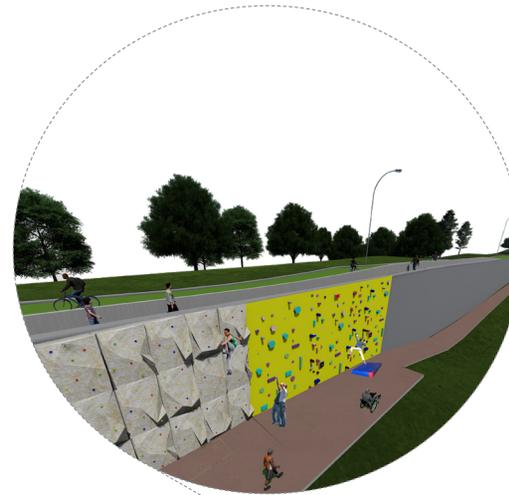
Scheme A: Cincinnati Ramp is only open to bike, pedestrian and scooter traffic. There is a separate bike lane on Cincinnati Ramp. The Midland Valley Trail cuts across where 26th used to be to connect with the new bike lane.



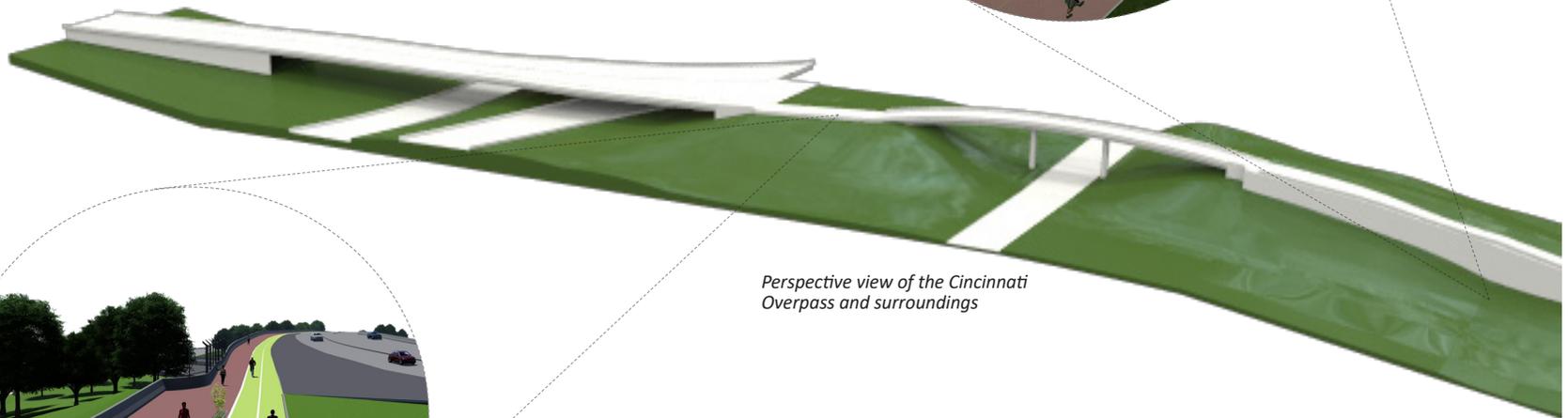
Scheme B: Cincinnati Ramp is only open to bike, pedestrian and scooter traffic. But there is no separated bike lane and the trail is connected with sidewalks from 16th and 17th street.



Besides helping with the traffic calming within the neighborhood, the proposed intervention will serve the whole city. It will make a better connection of the Gathering Place and Downtown Tulsa through the Midland Valley Trail. On the west side of the pass there is piece of underutilized city owned land. This land along with the west wall of the overpass can be developed into a recreational space for the neighborhood, accommodating rock climbing facility on the wall. This space can also provide a ramp for disabled people connecting the trail with 15th Street.



Perspective view of the rock climbing wall and a ramp connecting the space with the Cincinnati Overpass. The ramp also has an access from the Cincinnati Place (not shown in the picture)



Perspective view of the Cincinnati Overpass and surroundings



Perspective view of the proposed bike-ped path. The intervention uses inexpensive solutions like planter boxes and painting on the road surface to separate the bike lanes from the sidewalk. The path is separated by dividers and fences where it meets Cincinnati Avenue on the North.



ABOUT THIS DOCUMENT

This document was created by the University of Oklahoma Urban Design Studio (OUUDS) to share the collaborative endeavor with the Maple Ridge Neighborhood. An earlier version of these contents can be found at this website: mapleridgegreatstreets.pbworks.com. For additional analysis, please see the appendices.

If you have any questions for OUUDS, please reach out to us:

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