SAFE ROUTES FOR YOUTH
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Westwood Neighborhood
Denver, CO

Executive Summary

Master of Urban and Regional Planning
COLLEGE OF ARCHITECTURE AND PLANNING
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Executive Summary

Problem

Westwood is a diverse, low-income neighborhood in Denver, with approximately 17,000 residents. Westwood's population is 79 percent Latino, and 23 percent of them do not speak English. The Piton Foundation rated Westwood as Denver's second most-vulnerable neighborhood in terms of being prepared to help children thrive (Urban Land Institute, 2013). The neighborhood's concentration of elementary students living within a mile of their school is the highest in the city (City of Denver, 2016a) and a large percentage that population walk or bike to school. However, one of the most pressing problems for this community is mobility safety, both for pedestrians and bicyclists. Community members and organizations such as Westwood Unidos have identified mobility safety between schools and parks as a problem to address with this project.

Objective

Westwood Unidos has as a goal to provide the youth of the neighborhood with safe access to newly improved amenities like parks. Currently, access is limited by the lack of information and knowledge about the safest routes to move around between schools and parks. With the help of the community of Westwood, including kids and their families, the main objective of this project is to identify safe routes between schools and parks and map them.

Background research

For this research project, I considered the multiple bodies of work that focus on the intersection of safety and youth transportation by bicycle or walking in low-income neighborhoods. Road safety is one of the most significant problems worldwide. Road traffic crashes kill 1.2 million people each year and injure millions more, particularly in low-income and middle-income communities (World Health Organization, 2007). Additionally, transportation safety issues affect not only children's school travels but also their overall physical activities (Zhu & Lee, 2008). Lack of physical activity is among the major leading causes of chronic illnesses from childhood to adulthood (Hoffman et al., 2014). Several benefits can come from more pedestrian and bike-friendly environments; Walking to school is an affordable and environmentally clean mode of transportation that may increase physical activity and reduce obesity (Cooper et al., 2005).

Methodology

The main goal of this research is to find the safest routes in the neighborhood and to represent these in user-friendly maps. This project used a two-pronged methodology. A

community engagement mapping assessment with parents and their kids; and spatial analysis mapping using available mobility data from the City of Denver, Denver Regional Council of Governments (DRCOG), US Census, and the survey by the people for bikes. Using several data sources that account for the multiple variables that make walkability and bicycle ridership safer. The end result of this project are maps for each schools along with a single map for the entire neighborhood that shows the safest route for the community.
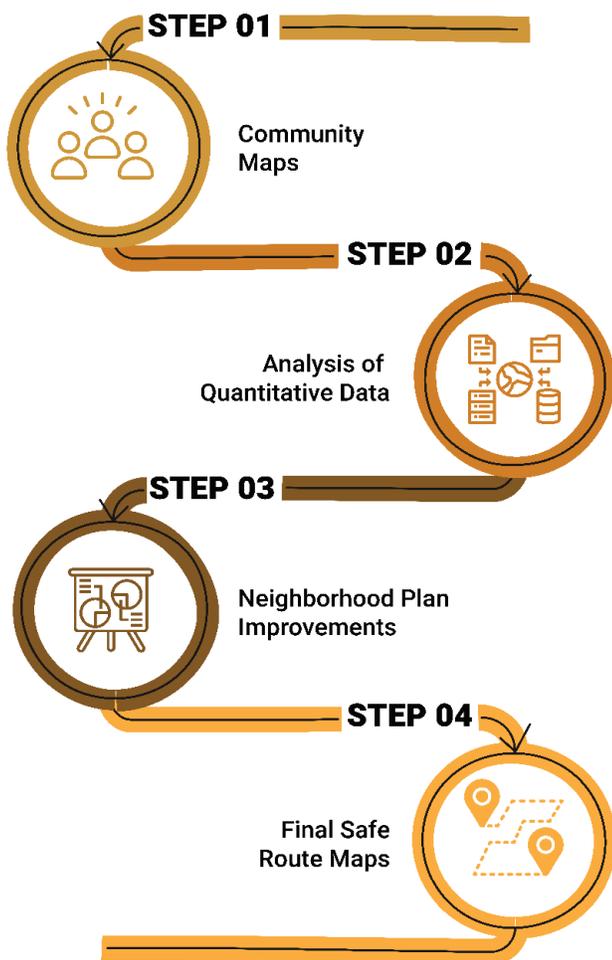
Existing conditions

Westwood is a culturally rich neighborhood, with a community that has proven to be resilient despite its many challenges, including a lack of neighborhood amenities, unsafe pedestrian environment, and a higher rate of poverty and crime than Denver as a whole. Westwood used to be a neglected neighborhood, with few amenities accessible to residents compared to other parts of Denver. However, Westwood Unidos has helped push the process of improving existing parks and developing of new parks and green spaces.

Community engagement, Mapping Community Safety

The main goal of the community engagement was to gather input from the community on what streets they use to go from their houses to parks and schools around the neighborhood. An important question to solve was whether there were differences between community perceptions of security and the data collected on mobility accidents. I held two community meetings, one with parents and one with youth. I collected a total of 24 community maps. The community maps concentrate on the most used routes; additionally, community members included annotations about why they chose to draw those routes and about which streets and

STEP 01 — Community Maps

STEP 02 — Analysis of Quantitative Data

STEP 03 — Neighborhood Plan Improvements

STEP 04 — Final Safe Route Maps

Figure 1. Project Methodology Process

intersections they believe are not safe. The next step was to identify the routes considered by the community as the safest. The data collected permitted the creation of a final map that represents the most used route for each one of the selected schools to their closest park, a requirement from Westwood Unidos.
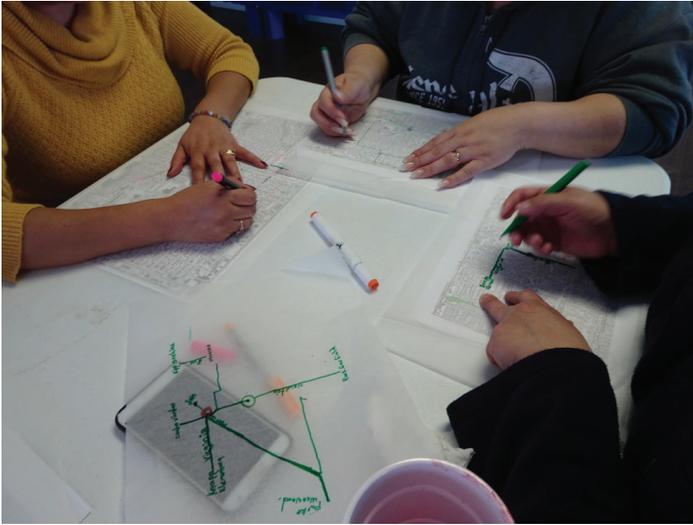

Figure 2. Community Engagement Process

Analysis of quantitative traffic data

The second source of analysis focuses on data on pedestrian and bicyclists' safety of the area. The data comes from the data repositories that relate to traffic safety of the City and County of Denver and the People for Bikes organization. I analyzed the data through a series of maps. Maps included an evaluation of the number and place of accidents with pedestrians and bicyclists, the amount of traffic on main roads using traffic counts, streets that are adequated for bicycles, and finally, the quality of intersections. I later overlaid all findings in these maps to identify the safest streets for residents to walk or bike.

Figure 3. Example of Analysis of Quantitative Data

Projects That Could Affect Mobility

The data from the community workshops and quantitative data created a picture of the most dangerous areas in the neighborhood for pedestrians and bicyclists. Fortunately, the City of Denver is implementing current planning efforts, such as the Morrison Road improvements and the neighborhood plan. Those plans include improvements to the mobility network, I analyzed the impact of such projects on the final routes identified from the analysis. Additionally, the new results serve to identify areas that are not addressed by any of the current plans.

Findings of Mobility And Safety: Final Maps

By combining the three data sets (community preferences, quantitative analysis, and proposals to improve mobility), I was able to create a concluding map for each school, showing the
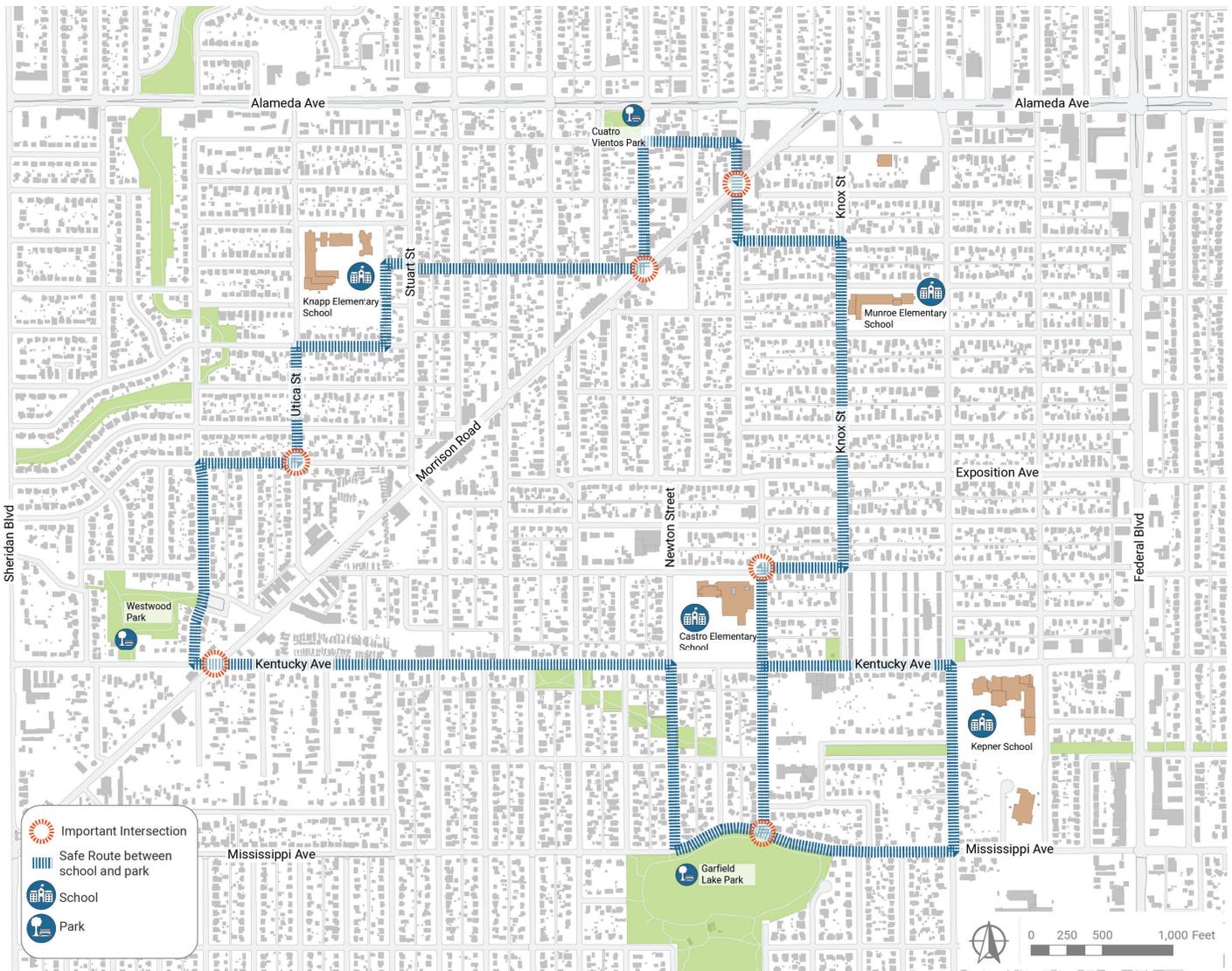
Figure 4. *Safe Route to Schools and Parks*

safest routes for kids to go to their closest park. The next step was to combine the individual school maps, merging and linking the safe paths created a final safe route map for the entire neighborhood, showing the safest routes from the three schools to its parks in Westwood. The final map is going to be distributed by the client to the Westwood community in Spanish and English to inform them about the more accessible and safe routes. Finally, I evaluated the infrastructure in the selected route and

created a map that shows the areas that, even though are consider the safest, still need interventions to improve their quality.

Recommendations for Interventions

After identifying the best routes between schools and parks, and the areas where improvement is needed, it is crucial to identify strategies to improve pedestrian mobility that are appropriate for the needs of this area. The goal here is to

create a set of possible projects that could be implemented by the community, the city of Denver, or a combination of stakeholders. I identified two scales of interventions. The first one I call engineering infrastructure; these include infrastructure interventions such as bike lanes and sidewalks, in addition to wayfinding signage that helps guide residents get from the schools to the parks using the most appropriate routes. The second set of interventions I call grassroots interventions. These are projects that the community can implement themselves to improve mobility safety, an example of this is tactical urbanism.

Conclusion

Walkability and safety are essential for communities where residents do not have access to private cars or public transit and where walking is the only option for getting around. Westwood is one of these cases. A project like this one that identifies and provides recommendations to increase safety for walking and biking can be instrumental for the community to improve walkability and bicycle ridership. The findings of the mobility analysis identified the best routes that I then represented on a map that is going to be distributed among parents and kids, which was the main goal of the project.

Pedestrian safety is not a unique problem to the Westwood neighborhood. Many other communities suffer from a lack of safe infrastructure for pedestrians and bicyclists, both in the City of Denver and the United States. Citywide safe mapping efforts could help increase walkability and bicycle ridership among youth, and therefore, help to reduce not only safety but also health problems related to a lack of physical activity.

Figure 5. Example of Tactical Urbanism in Medellin, Colombia | Source Asphalt Pro Magazine