

Transportation Master Plan

young people's use and views of transportation in Boulder



During the 2013-14 academic year, Growing Up Boulder (GUB) worked with children and youth to assess current transportation usage as well as desirable options for transportation planning. To accomplish this, GUB worked with:

- 52 3rd graders at Whittier International Elementary School
- 25 middle school students from Youth Services Initiative of Parks and Recreation
- 18 Casey Middle School students
- 16 11th graders in a Boulder High School Advancement via Individual Determinism (AVID) class
- 10 University of Colorado undergraduates, graduate students, and visiting masters students.

In addition, GUB discussed transportation issues with young people during the Valmont City Park concept plan update and the North Boulder sub-Community Plan. Below is a summary of GUB's findings.

Current Transportation Usage

- More than half of elementary students in the Whittier neighborhood use active transport to get to school
- For these same Whittier students, more than half of after-school and weekend trips also were via active transport
- Higher levels of density in the Whittier neighborhood boundaries was negatively associated with active transport
- For middle and high school students, the further the distance to school, the less likely they are to use active transport; more boys bike than girls; middle school students are closer and therefore walk more than high school students
- When public housing sites are better integrated into the city, young residents can use more active transport. Many youth lived too far from their destinations to bike or walk.



Transportation & Urban Design

- Traffic safety is a major concern of Boulder young people
- Factors that would increase perceptions of safety include better: signage for both drivers and pedestrians; bus stop placement and design; wider and clearer separation of paths from traffic; separation of bikes and pedestrians on paths; separation of cars and pedestrian access to mixed use spaces
- Youth view sidewalks as multi-modal spaces for biking, walking, skating. This reflects a desire for greater separation between active transport modes and cars.
- Young people appreciate and want to see more art and green spaces mixed into multi-modal transportation areas, bike lanes, and bus stops.



All images by Boulder youth

Elementary School Methods & Findings

Methods

- 52 Whittier International Elementary students in 3rd grade
- Drawings of homes, destinations, and modes of transport to school, after school and on weekends.

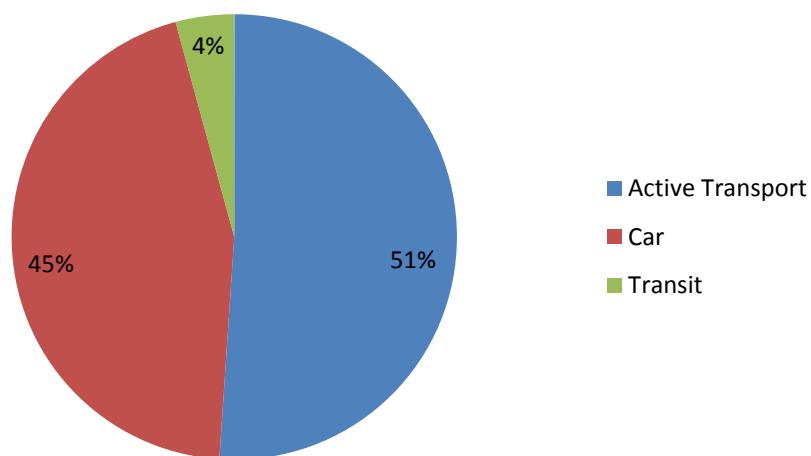
Findings

- A little more than half of students use active transport to school, after-school or weekend activities.
- Students living in higher density areas within this neighborhood used active transport less often.
- Active transport after school was most commonly to a park or friends
- Active transport on the weekend was the most frequent mode for in-town trips

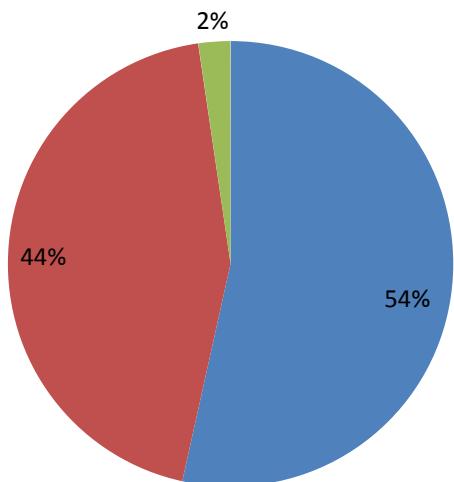
Table 1. Elementary Students' Modes of Transportation to School, After-School Activities, and Weekend Activities

Sustainability Score	Transportation Modes		
	School (N=47)	After-School (N=43)	Weekend (N=41)
High (Active Transport)	54% (n=26)	56% (n=24)	56% (n=23)
Medium (Bus or carpool)	27% (n=13)	5% (n=2)	2% (n=1)
Low (Car ride)	29% (n=14)	49% (n=21)	46% (n=19)

Whittier After School Modes



Whittier Weekend Modes



Middle & High School Methods & Findings

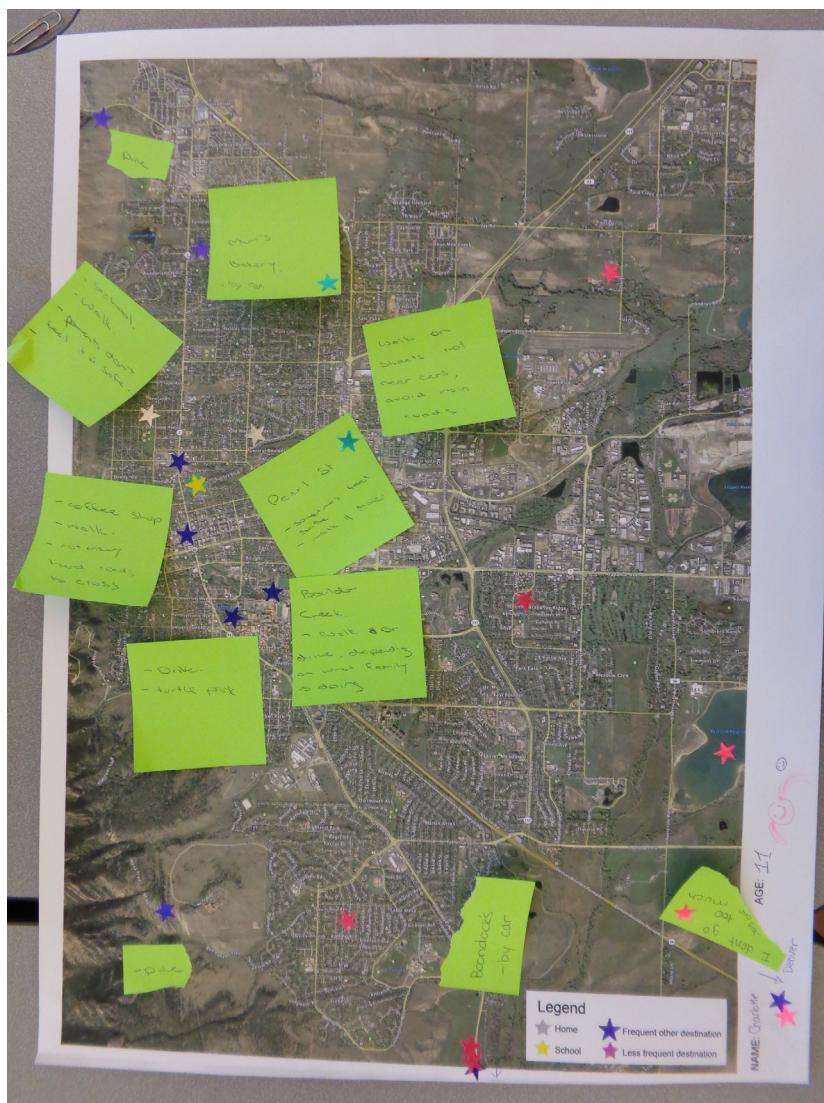
Methods

- 16 Boulder High School AVID students in 11th grade
 - 24 Youth Services Initiative middle school youth
 - 18 Casey Middle School students
 - Annotated mapping, interactive presentations, and walk audits

Overall Findings

- The closer the destination, the more likely youth are to use active transport
 - Boys bike more than girls in this age range
 - Middle school students live closer to school and use active transport more often than high school students

- Many low-income and Latino youth live far from the city center. Most preferred destinations are in the city center. Access is difficult for them.
 - Youth who live in centralized, affordable housing are better able to have transportation options than those who live on the edges of the city. This especially impacts lower income youth.



Map Annotations

- Students were asked to locate their home on the map, and then to draw and annotate the places they go, with whom they travel, and how they travel to each destination.
 - Travel mode differs based on distance to school , with kids living closer to school being more active ($p= .000$, $r= -.68$)
 - Travel mode differs based on arterial roads to cross, with arterial roads creating barriers, ($p= .001$, Cramer's $V = .55$)
 - Travel mode differs based on gender, with boys biking more and girls being driven more ($p= .023$, Cramer's $V= .44$)
 - High schoolers live further from school than middle schoolers ($p= .002$, $r = -.52$)

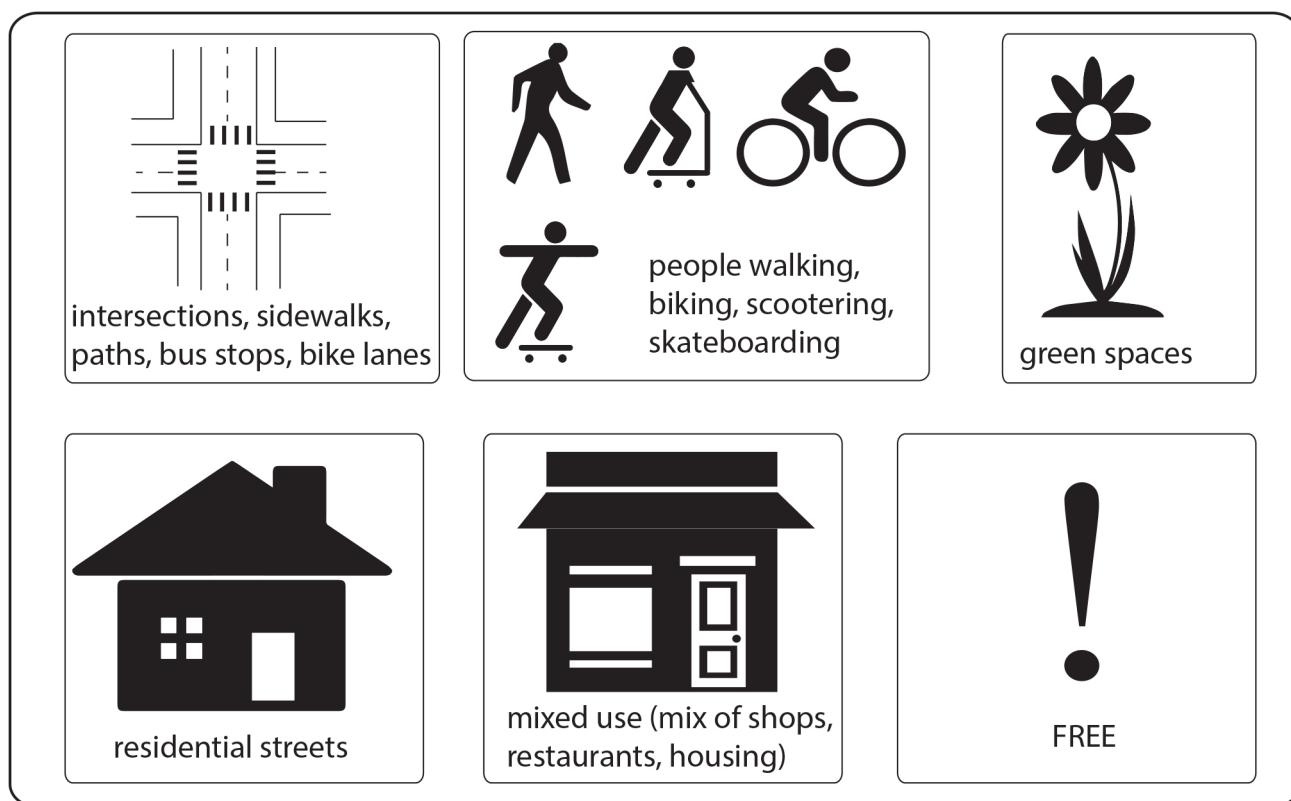
Middle & High School Methods

Interactive Presentations

- Slides used a visual preference method showing mixed use and residential neighborhoods; different types of commercial areas; different types of sidewalks, bike paths and intersections. Youth were asked to select their preferences and explain why they preferred one slide over another.

Walk Audits

- Youth worked in pairs to photograph and take notes on specific features in the walk audit. These included: residential and mixe use areas; intersections, sidewalks, bike lanes; green spaces; and people who were using active transport. Youth notes were to reflect what they liked, would change, or have concerns about.



Youth involvement in the TMP update was supported by GUB coordinators Tori Derr and Mara Mintzer; CU PhD student Alessandro Rigolon; visiting master's student Flaminia Martufi; CU ENVD Program's "Designing with Schools" undergraduate students; GO Boulder's Anna Nord and Marni Ratzel; Whittier International Elementary School teachers Cathy Hill, Lisa O'Brien and Tamar van Vliet; Casey Middle School teacher Jackie Esler; BHS AVID teacher Jennifer Douglas-Larsson; and YSI coordinator Alex Zinga.

Middle & High School Findings

Intersections & Signage

- Youth want to see clearer intersection markings with signage for both pedestrians and cars
- Most students wanted safer, more artistic bus stops. Increased lighting, safer bus stops in north Boulder and at many stops along Broadway

Mixed Use Areas

- Youth found the mixed areas unsafe as currently designed. This was true in both the interactive presentation and walk audit.
- The primary safety factor in mixed use areas is where cars and pedestrians must intersect
- Youth feel safe at Pearl Street and 29th Street malls

Sidewalks & Stopping

- Many youth felt safer with grass or vegetative dividers between sidewalks and streets.
- Youth wanted to see wider sidewalks and paths so they can walk with their friends
- Youth liked art, green spaces, and opportunities for personal expression

