

Walkshed Analysis

Software Used: ArcMap 10.8.1

This project creates 0.5 mile walksheds for elementary schools within the Austin Independent School District, using ArcMap's Network Analyst. Since this is for pedestrians, it uses a street layer, where only streets that are not major roads are used for the analysis.

The elementary school with the smallest walkshed is Casey Elementary, with a walkshed of 0.166 sq. miles.

The elementary school with the largest walkshed is Ridgetop Elementary, with a walkshed of 0.483 miles.

The maps are the lines showing the possible walking paths within the walksheds for the two schools.

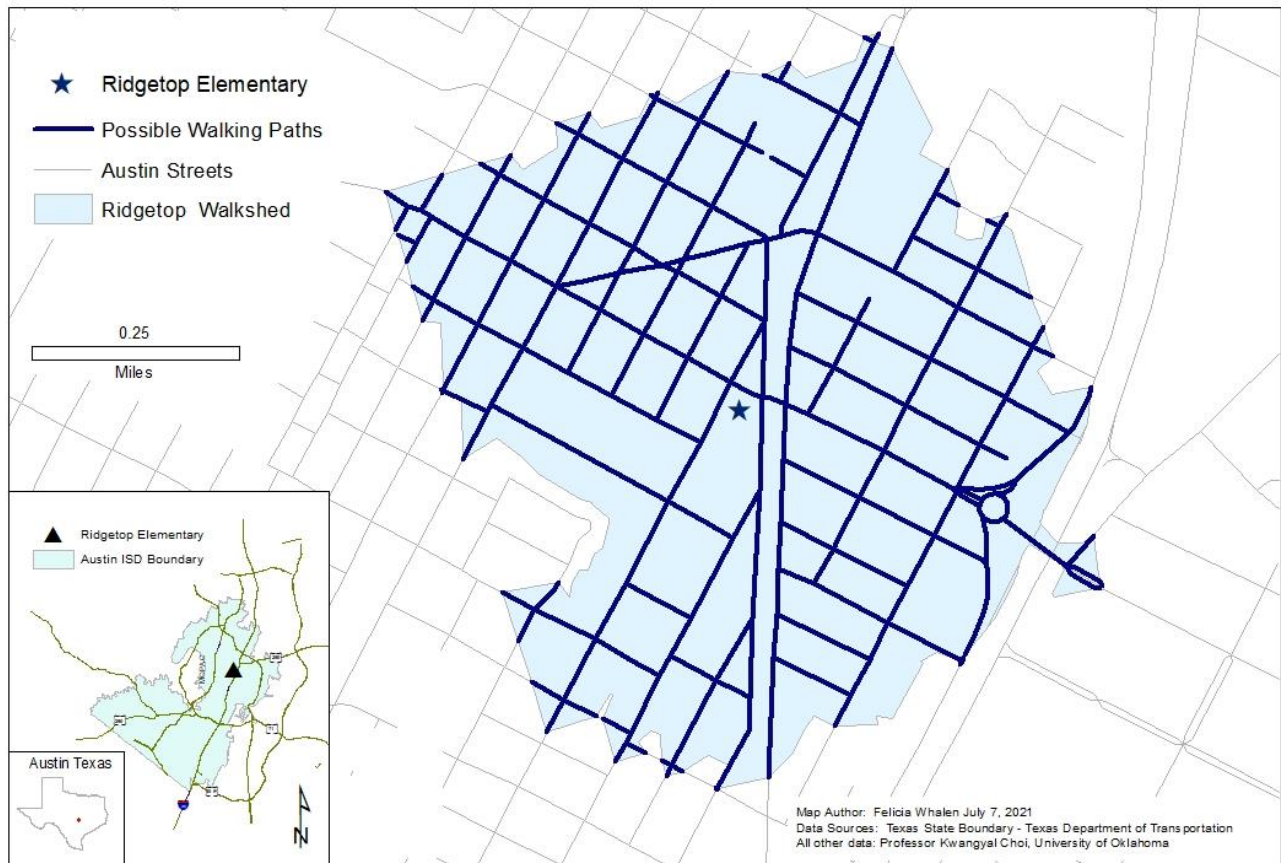
Casey Elementary School, Austin Texas

1/2 Mile Walkshed and Possible Walking Paths



Ridgetop Elementary School, Austin Texas

1/2 Mile Walkshed and Possible Walking Paths



Both maps were created at a 1:9,000 scale, so the sizes can be compared by looking at them. Casey Elementary, which has the smallest walkshed area, has a strange pattern. The school is off to the west side, with the entire walkshed an odd pattern that extends mostly to the east and a little north of the school. The streets are not arranged in a grid; there are loops with cul-de-sac streets coming off of them. There are streets to the West of the school that look like subdivision streets that are not included in the walkshed.

Ridgetop Elementary, which has the largest walkshed area, looks like what would be expected for a walking distance around a school. The school is roughly in the middle, and the walkshed area extends out roughly the same distance around it in mostly an even square pattern. The streets are mostly arranged in a classic city grid pattern.

Looking at satellite imagery of the area shows why the patterns are the way they are. Casey Elementary (Figure 1) shows that there is a large field of some kind, possibly a flood retention area to the immediate west of the school. There is a road that looks like a major road to the south, which means there is no walking access from that direction. The area that looks like a subdivision to the west of the field has no road access to the school other than the major road, so it is not included in the walkshed. There are what looks like railroad tracks to the west of that subdivision, which is another reason the walkshed didn't extend that far. Ridgetop Elementary (Figure 2) shows what was guessed from looking at the walkshed map. The school is surrounded by a neighborhood built on classic square city blocks. The only odd thing from looking at the imagery, is that there appears to be a major road that cuts through the walkshed, which would make it hard to cross. It is possible that the road type designation in the roads shapefile has not been updated to reflect any road improvements, it could be an error, or maybe there is a pedestrian bridge or something that would make crossing it safe.

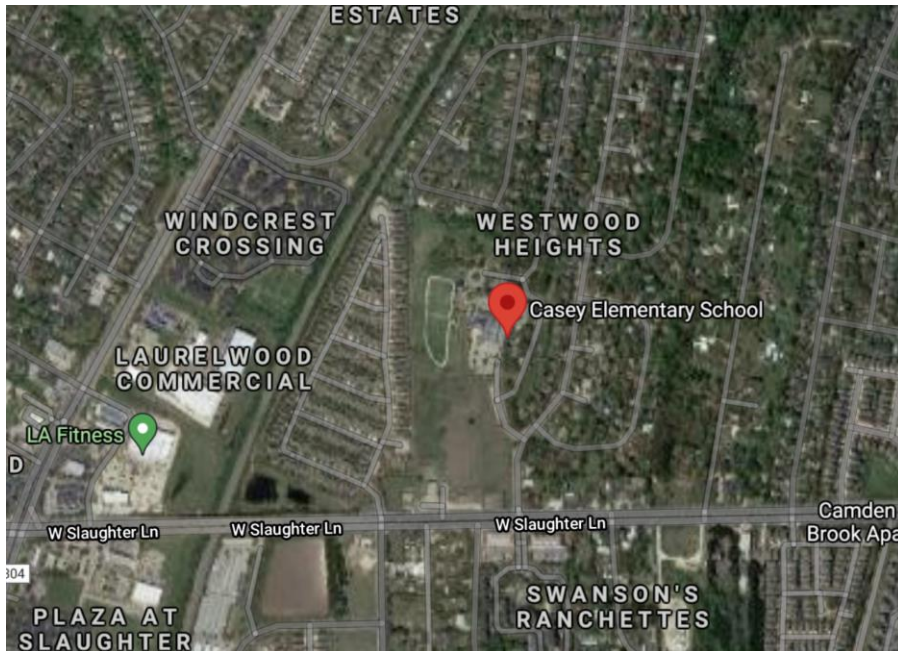


Figure 1 Casey Elementary School, Austin, TX (image: Google Maps)

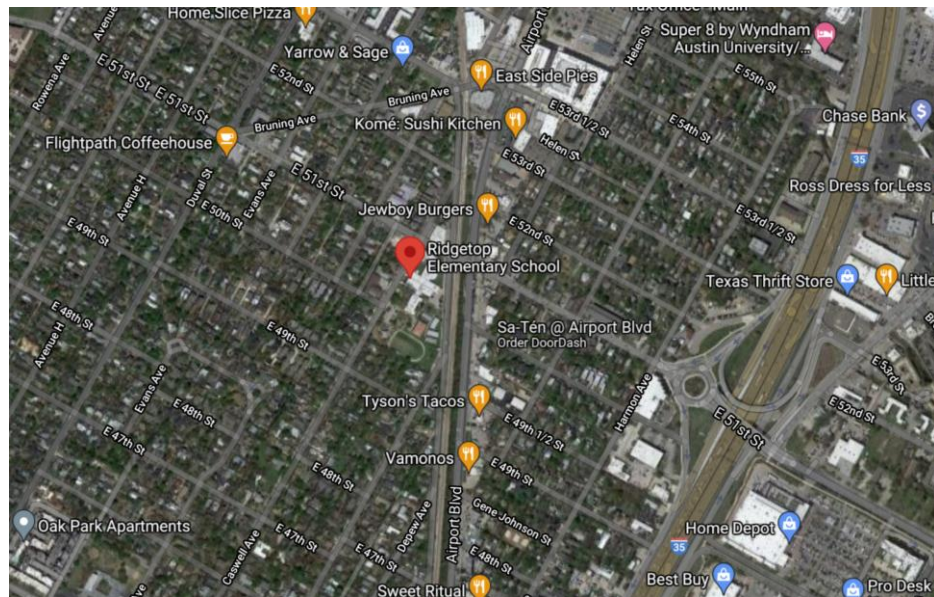


Figure 2 Ridgetop Elementary School, Austin, TX (image: Google Maps)