

# Lake Drive(s) Me Crazy

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## The Problem

- 1) Lack of pedestrian paths along Lake Dr. on the northern end of campus.** Walkers and joggers from Calvin and the surrounding neighborhoods are forced to run either in the road or along a narrow strip of grass on the southern edge of Lake Dr. This is dangerous and uncomfortable for pedestrians.
- 2) Lack of bicycle paths along Lake Dr. on the northern end of campus.** There are not marked bicycle lanes that separate auto traffic from bicyclists. Those biking to or from East Grand Rapids, Eastown, or the surrounding neighborhoods are forced to ride in the road with traffic. This is also dangerous and uncomfortable. GVMC and GR Planning Department. have proposed bike paths along Lake Dr. but it will likely take a little pressure from the community to get the paths built.
- 3) Excessive speed of vehicles along Lake Dr. near Calvin.** A recent *East Grand Rapids Cadence* article pointed out that neighbors along Lake Dr. near Calvin and the East Beltline are very concerned with the excessive speeds of vehicles. The speed limit changes from 35 mph to 25 mph in this area; a recent speed summary reported, "64.5% of vehicles sampled were driving in excess of 35 mph." The speeds of vehicles are likely related to the roads' extremely large lanes (approx. 21') which are much wider than freeway lanes. The road is wide enough for four lanes of traffic, but only has markings for two lanes. We believe drivers will subconsciously drive as fast as the road design allows them; you can not design a road for 70 mph and expect cars to go 25 mph!
- 4) Ecological and Social Concerns of wide roads.** Lake Dr. is excessively wide, covering a large amount of earth with pavement that prevents the percolation of rainwater into the soil below. Instead of being retained onsite, water is carried to surrounding streams which leads to erosion and water pollution. Wide roads also have a significant social impact as they divide up residential areas with large spaces that are usually unfriendly to pedestrian life. An auto-dominated landscape prohibits the social connections that are key to communal life. Danish architect, Jan Gehl, recently said that Grand Rapids has twice as much pavement as it needs. We agree.



## Propositions

After considering 8 criteria (traffic calming, pedestrian/cyclist safety, connectivity/accessibility, aesthetics, impact, permeability, maintenance, and cost), we have come up with three proposals for improving Lake Drive along the northern edge of campus. Improvements to the site are constrained by the grading and many obstacles directly outside of the current paved roadway (see pictures). Therefore, considerations given in this report are limited improvements that could be made within the existing roadway. *Each of these proposals would be a significant improvement over existing conditions.* NOTE: For each proposal we feel that a crosswalks near Woodshire Ave and Calvin are necessary to connect the existing sidewalks, the Reeds Lake pedestrian/bike loop, and surrounding homes with Calvin.

### BUFFERED BIKE PATHS

This proposal would add bike lanes on the northern and southern edges of Lake Drive. The bike paths would connect to a the proposed bike path along Lake (GVMC) that will extend from downtown to East Paris. We also propose a 3-4' buffer of hatched lines between auto and bike lanes in order to narrow auto lanes and clearly separate auto traffic from bicycle traffic.

### MULTI-USE PATH

This proposal would narrow Lake Dr to 20' from Woodshire Ave to just before (approx. 350 ft) the East Beltline where it would widen to its original width. The remaining 22' would consist of a 10' vegetative buffer with street trees and a 12' multi-use path with designated bike and pedestrian lanes. West of Woodshire and East of Calvin, the path would revert back into on-road bike lanes (as proposed GVMC) and connect to the existing sidewalk infrastructure (via crosswalks).

### SIDEWALK + BIKE LANES

This proposal would narrow Lake Dr to 30' from Woodshire Ave to just before the East Beltline where it would widen to its original width. The road would feature 5' bike lanes on each side with 1' white lines separating the bike lanes from the 9' traffic lanes. The remaining 12' would consist of a 8' vegetative buffer with street trees and a 4' sidewalk for pedestrian use.

## Support

### BUFFERED BIKE PATHS

- This is the cheapest of the 3 solutions as it only involves painting lines on the road and does not involve narrowing the roadway itself (curbs, catch-basins, etc). Thus, it is also low impact.
- Has a minor traffic calming effect, since it narrows the lane widths.
- Bike lanes are wide enough to prevent debris from building up.
- Maintenance would be minimal as plowing/street cleaning would largely remain unchanged.

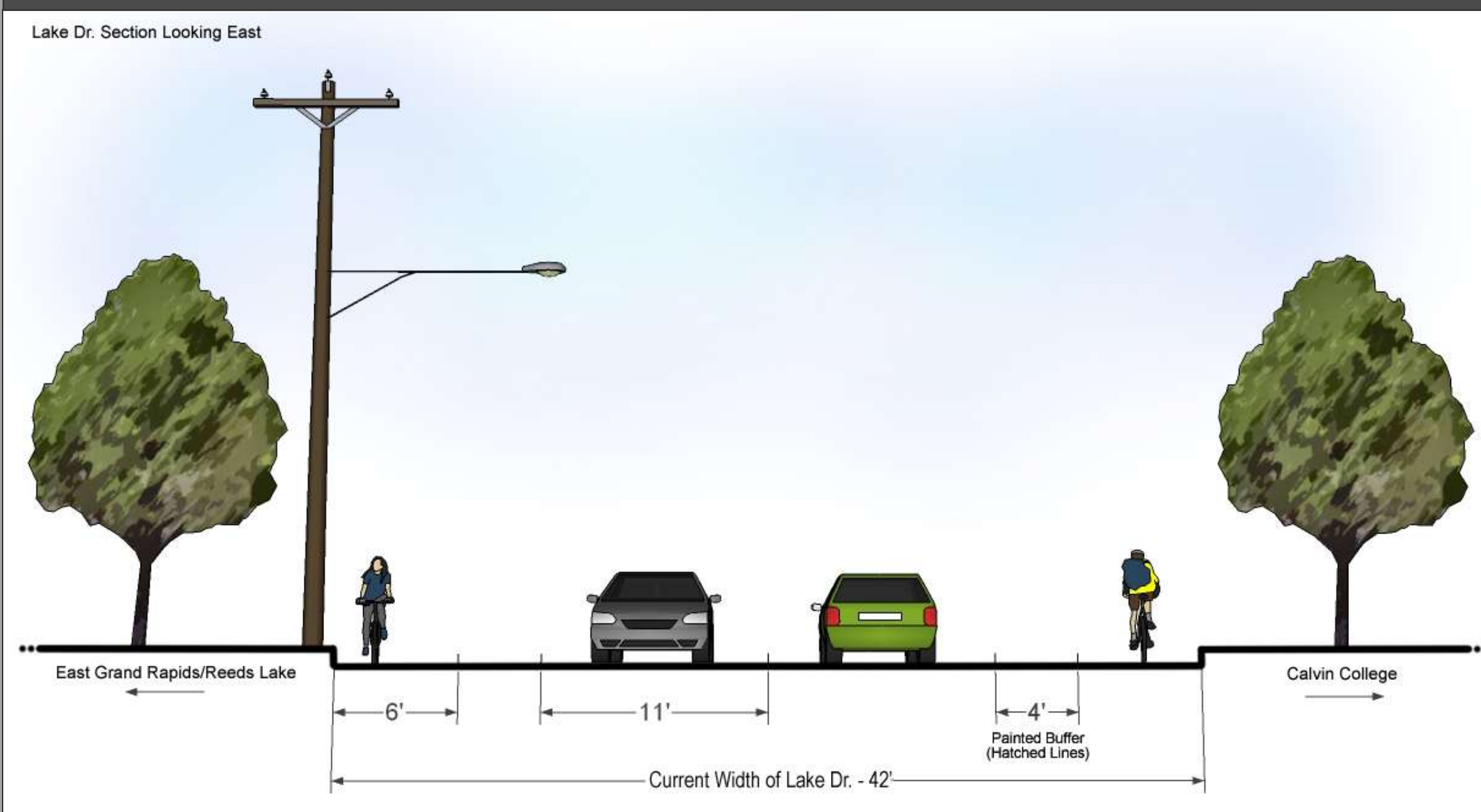
### MULTI-USE PATH

- This solution would likely have the best traffic calming effects since the road is the narrowest and the effective lanes are only 9' wide. Thus, it will feel uncomfortable for the driver to go much over 25.
- The 12' planting strip with street trees and vegetation will make the road comfortable and safe for pedestrians, bikers, and drivers.
- This solution uses less pavement than the others, decreasing impervious surfaces and increasing water retention. This could be improved further through the use of porous asphalt or pervious concrete on the multi-use path.
- The wide, tree-lined path would be a welcoming introduction for those entering or passing by the college. It also would accommodate groups of runners from Calvin or neighboring high schools who run between Calvin and East Grand Rapids.

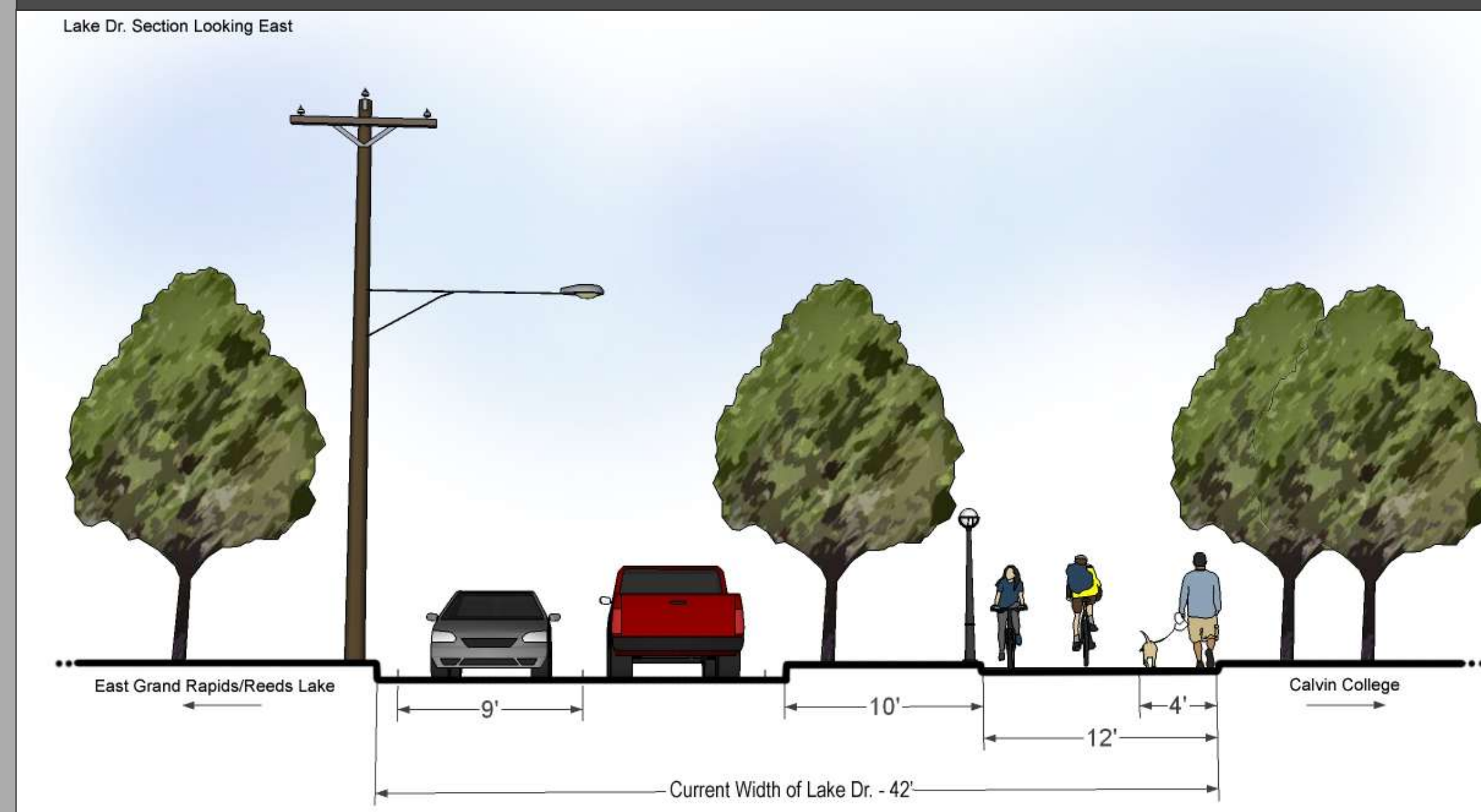
### SIDEWALK + BIKE LANES

- This is solution would likely function the best with the existing sidewalk infrastructure and with the GVMC's proposed bike lanes. With the proposed crosswalks, this solution would provide the most access to areas to the north, east, and west.
- Has a moderate traffic calming effect, since it narrows both the road and the lane widths.
- Separates pedestrians from faster moving bikes and cars with a sidewalk that meets AASHTO standards.
- Slightly decreases the amount of impervious surfaces.
- Planting strip with street trees increases the visual appeal of the street

## Buffered Bike Paths



## Multi-use Path



## Sidewalk + Bike Paths

