

# **Pedestrian Safety & The Green Cincinnati Plan**

City of Cincinnati  
Climate, Environment & Infrastructure Committee  
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Nathan Alley  
Sierra Club & City of Cincinnati Environmental Advisory Council



Sierra Club Ohio is focused on the three “Es” of transportation: (1) protecting the **environment**; (2) growing a sustainable **economy**; and (3) promoting **equity** for all people regardless of demographics such as age or ability and regardless of whether they are walking, riding a bike, bus or train, or are driving.



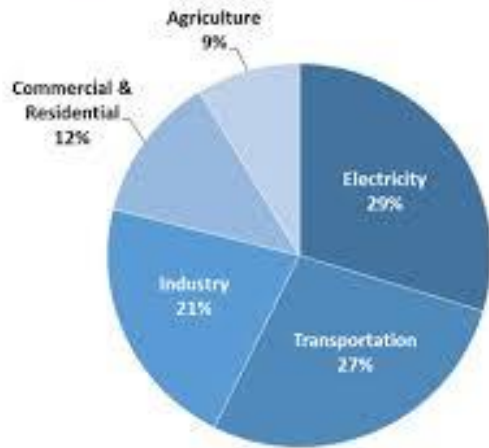
**CLEAN, GREEN**  
**COMMUTE CAMPAIGN**

The Sierra Club's Clean, Green Commute Campaign in Ohio is a project that seeks to improve and enhance public transportation systems, in part by making those transportation systems environmentally sustainable.

Our campaign goal is to reduce VMT (vehicle miles traveled) and our outdated reliance on fossil fuels by improving and promoting ridership on public transportation systems, to make those public transportation systems more sustainable by converting fleets to EVs (electric vehicles) powered by renewable energy, to make transportation systems more accessible to all users, and to ensure that transportation systems are designed, constructed and operated equitably.

# Global Climate Change

Total U.S. Greenhouse Gas Emissions  
by Economic Sector In 2015



The transportation sector accounts for more than **31 percent** of greenhouse gas emissions in both the City of Cincinnati and in Hamilton County.\*

\*2018 Green Cincinnati Plan

# Acute Air Pollution

- Traffic-related pollution increases the risk of **heart disease, birth defects, diabetes, and obesity**.
- It would take **200 trees** to absorb all the carbon dioxide released by the average car each year.
- Taking a bicycle for short trips would save **\$200 million per year** in health care costs in the U.S.
- Air pollution in a parking garage is **10 times worse** than the air outside the building.
- One mile of driving produces the same amount of pollution as **800 cigarettes**.

\*Dr. Chris Curran, Northern Kentucky University, former Chair of the Ohio Chapter Transportation Committee

# Public Safety



# 2018 Green Cincinnati Plan

## **BUILT ENVIRONMENT**

### Goals

- 1) DECREASE HOUSEHOLD ENERGY BURDEN BY 10%.
- 2) MAKE ALL CITY FACILITIES, FLEETS, AND OPERATIONS NET CARBON NEUTRAL BY 2035.
- 3) INCREASE THE PERCENTAGE OF CITY STREETS MEETING COMPLETE STREETS REQUIREMENTS BY 1% EACH YEAR (CENTER-LANE MILES).



The goal of a “**Complete Streets**” approach is to ensure that streets are safe for all individuals, support all modes of transportation, and connect diverse economic, cultural, and environmental land uses. The Department of Transportation and Engineering (DOTE) has adopted “Complete Streets” as a guiding principle for infrastructure and recognizes that streets must support pedestrians, bicyclists, and public transportation passengers of all ages and abilities, as well as trucks and automobiles.

## Recommendations . . . .

### 5. Incorporate complete street principles in all new roadway and rehabilitation projects.

“Complete streets” are defined as streets that can be used by everyone. By providing sidewalks, bike lanes, and travel lanes that accommodate buses, residents will be more inclined to use alternate modes of transportation to get to and from their destinations.

An important benefit of complete streets is safety. Complete streets provide the safest place for bikers to ride, walkers to walk, and cars and busses to drive without sacrificing the safety of any one of the three. Reducing the cars on the road will have a large impact on the City’s carbon footprint. The increase in alternate, more healthy modes of transportation will promote more active lifestyles and encourage residents to burn calories, not carbon.

Complete streets improve equity by providing more methods of transportation for residents of all parts of the city. As bicycle and walking options becoming more available, residents will have access to more resources that were at one point unreachable due to lack of transportation. Special attention will be needed to ensure that complete streets are allocated appropriately to all neighborhoods. Besides the improvement of access, complete streets help reduce carbon emissions and provide a healthy alternative to driving cars.

There are some locations where a complete street design is difficult or expensive due to space limitations or existing patterns of development. Any decision not to incorporate complete-street principles will require approval.

Development of Complete Streets is considered to be a more holistic approach to transit infrastructure, designed for all users, not just vehicular travel. According to a line item analysis of complete streets, sidewalk construction adds an average 3% and bike lanes add around 5% to the overall project budget. These can be offset by creative allocation of space and as a result, materials. . . . Total cost reduction is a definite possibility in some cases.

Benefits include safer, more accessible streets. A project along a major arterial in Seattle, Aurora Avenue, decreased vehicular crashes 21%. Another in Seattle, Stone Way North, reduced speeding 75%, increased bike traffic 35% and collisions fell across the board, including an 80% reduction in pedestrian-involved collisions . The state of Washington also found that rehabilitating highways to be 'complete' saved an average of \$9 million per project and the City of Nashville, seeing these results, has consistently devoted 60% of its transportation budget to walking, biking and transit infrastructure, yielding similar results . Bottom line analysis in Vermont showed complete streets yields business and community growth, added property value, and job creation. Revenue attributed to these streets extrapolated at a per capita rate to the scale of Cincinnati yields can help us estimate an increase of \$38.7 million in revenue due to the construction of these streets.

# Complete Streets Policy Ordinance

## Transportation

### Goals

- 1) DECREASE THE CONSUMPTION OF FOSSIL FUELS, INCLUDING GAS, DIESEL, AND NATURAL GAS BY 20%.
- 2) INCREASE THE PASSENGER MILES TRAVELLED VIA PUBLIC TRANSIT BY 25% by 2035.
- 3) DOUBLE LANE MILES OF BIKE INFRASTRUCTURE.

## Recommendations

1. Prepare for the adoption of autonomous vehicles, starting with a pilot project.
2. Encourage the use of electric vehicles through City programs that incentivize EV ownership and infrastructure.
3. Pursue car sharing service in Cincinnati as an equitable mobility solution.
4. Green the Fleet: Improve the fuel efficiency of the City's Fleet.
5. Encourage corporate sponsorship of transit passes and infrastructure to encourage employee bus and bikeshare ridership.
6. Improve neighborhood walkability, by improving sidewalk connectivity and pedestrian safety, especially in low-income neighborhoods.
7. Police enforcement & legislative support for bike & pedestrian safety.
8. Enhance public transit and increase transit funding.
9. Increase connectivity and cohesion within multimodal transportation options.
10. Create a transit link between Downtown and Uptown.
11. Implement and update 2010 Cincinnati Bike Plan and Cincinnati Riding or Walking Network (CROWN) Plan.

## 6. Improve neighborhood walkability, by improving sidewalk connectivity and pedestrian safety, especially in low-income neighborhoods.

Walkability is important for maintaining a healthy and stable community. Walking is a healthy, affordable and environmentally friendly way to get around the neighborhood. The City will work to improve sidewalks and other pedestrian infrastructure in need of repairs and build new sidewalks, especially in low income neighborhoods. Sidewalks are important to every member of the community as they connect residents with local stores, access to transportation (bus stops especially), jobs, schools, parks, etc.

The City will seek a new way to fund and build adequate sidewalk infrastructure. Currently, property owners are expected to bear the costs of sidewalks, whether or not they are willing and able to. The City should fund repairs and new sidewalks because the sidewalk is public infrastructure, just like the road. The cost of sidewalks should come from a new revenue sources specifically earmarked for sidewalks.

Like roads, street trees, water pipes, sewers, and streetlights, public infrastructure should not be the responsibility of private land owners.

Intersections, including traffic signal settings, curb cuts, and crosswalks, are important elements of a neighborhood's walkability. Efforts to improve walkability will focus on intersections in addition to sidewalks.

For low income residents, sidewalks and walkable intersections are important because many do not own cars and rely on the public transit system. Sidewalks not only provide residents with safe paths throughout their own neighborhoods, but also improves access to different modes of transportation. Access to transportation opens the door for new job opportunities for disenfranchised residents. Neighborhood walkability creates opportunities and strengthens the sense of community for Cincinnati residents. The City will improve and expand its sidewalk network and walkable intersections.



Cincinnati currently has 1700 miles of improved sidewalk valued at over \$215 million [1]. This boils down to \$126,000 in value attributed to each mile. Cincinnati Sidewalk Safety reports that the average cost to produce a mile of sidewalk runs around ±\$130,000; it is important to bear in mind also that \$1 in preventive maintenance can save \$6-\$10 down the road. Sidewalks enhance the resale value of property, sometimes adding as much as 15x their cost to the property's sale price. According to AARP, retail property with a WalkScore rating of 80-100 were 54% more valuable than retail property with a walk score <20. Increases in desirability, reduction in crime and improvements in community health can all be tied to greater sidewalk infrastructure. Individuals living in low-income and racial/ethnic minority communities experience disproportionate access to environmental features that support physical activity. Pedestrian Safety is a major component of walkability. Between fiscal year 2016-2017 there was an 11% spike in pedestrian fatalities. More specific data can inform us that the pedestrian crash risk for crossing the arterial without a median was 6.48 times higher than for crossing the arterial with a median. Pedestrian crashes account for 12% of traffic fatalities annually-75% of these are not at intersections. Providing raised medians or pedestrian refuge areas at pedestrian crossings at marked crosswalks has demonstrated a 46 % reduction in pedestrian crashes. At unmarked crosswalk locations, pedestrian crashes have been reduced by 39% with the same development. The average cost of a pedestrian fatality in a motor vehicle incident is just under \$5 million (adjusted to present value). Raised medians alone have been found to reduce motor vehicle crashes by 15 percent, improve travel time reliability, provide space for landscaping within the right-of-way (which can be utilized to reduce urban heat island effects), and can be less expensive to build and maintain than paved medians.

# Together, we can make Cincinnati safer and more sustainable.

For more information, or to get involved, contact [nathan.alley@sierraclub.org](mailto:nathan.alley@sierraclub.org).