Chapter 1: Background

1.1 History of Transportation Planning in Cuyahoga County

Cuyahoga County covers 458 square miles of land area and encompasses 59 cities, villages and townships. Since the County’s establishment in the early 1800s, transportation has played an important role in its development. Europeans settled along the shores of Lake Erie at the mouth of the Cuyahoga River because of the benefits of water access. With the construction of the Ohio and Erie Canal and the railroad system, greater Cleveland became a major industrial region by the early 20th century. By 1920, Cleveland was the fifth largest city in the nation, with over 943,000 people living in Cuyahoga County.

As new forms of transportation evolved, the transportation network in the county adapted: sixteen-foot wide sidewalks were constructed along Superior Avenue in 1832, horse-drawn street railways were built in the 1850s, and accommodations were made for electric street cars and bicycles in the late 1800s. Yet, it was the introduction of the automobile in the 20th century that has had the most profound and lasting effect on the development patterns in our communities.

Transportation planning for the regional highway system began in the 1930s at a time when the population of Cleveland (and Cuyahoga County) was growing rapidly. Over the years, spurred on by federal funding, we continued to plan for and construct a county roadway network built primarily for automobiles, with the expectation that the population in the county would continue to expand. By 1970, the outward migration of residents from Cleveland to the suburbs and from Cuyahoga County to surrounding counties was well underway, and the highway system provided easy vehicular access throughout the region.

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1 Willis E. Sibley, Cleveland State University” The Encyclopedia of Cleveland History- Streets
However, in recent years there has been an increasing awareness of the need to make changes to our roadway network. In fact, a number of local initiatives have already been undertaken to create a more robust multi-modal transportation system. For example:

- Northern Ohio Areawide Coordinating Agency (NOACA), the area’s Metropolitan Planning Organization (MPO), has adopted a Regional Bike Plan that identifies a Regional Priority Bikeway Network, and its long range transportation plan states that the agency “works to make all roads safe for all modes of transportation”.

- The Greater Cleveland Regional Transit Authority (RTA) adopted a Transit 2025 Long-Range Plan that envisions a sustainable, balanced transportation system for Greater Cleveland, with public transit playing a vital role in that system.

- The Cleveland Metroparks (Metroparks), which started as an organization to preserve natural areas and oversee park areas has, over time, built an extensive all-purpose trail system within and connecting various reservations. As part of its strategic planning, the Metroparks has identified the extension of its trail network into communities as one of its priorities so that cyclists and pedestrians can access the trail system without needing a car, not only for recreational purposes but also for commuting to other destinations beyond the Metroparks.

- The City of Broadview Heights passed a Bike Path ordinance in October 2008, providing that bike paths be installed on various streets in the City.

The City of Cleveland passed a Complete and Green Streets ordinance in September 2011 which requires implementation of sustainable policies and guidelines in all construction projects within the public right-of-way. Likewise, individual communities in Cuyahoga County have begun to incorporate various elements of complete streets in their transportation plans. The following list highlights some of the recent studies that relate to complete streets concerns:

**Multi-Modal Connectivity Studies:**

- Downtown Euclid Transportation for Livable Communities Initiative (TLCI) – Transportation and Redevelopment Plan (*Euclid*)
- Great Northern Multi-Modal Transportation Plan (*North Olmsted*)
- Citywide Bike Plan (*Westlake*)
- University-Circle-Cleveland Heights Missing Links Study (*Cleveland Heights*)

**Greenway and Connection Plans:**

- Warner Road/ Garfield Boulevard Connector and Trailhead Study (*Garfield Heights*)
- Big Creek – Greenway Trail Alignment and Neighborhood Connector Plan (*Parma and Brooklyn*)
- Lakewood Bicycling Priorities Report 2014

*East Side Greenway (East Cleveland, Cleveland Heights, Shaker Heights, Beachwood, Pepper Pike, University Heights, Richmond Heights, Highland Heights, Mayfield Heights, Mayfield Village, Euclid, ...*
South Euclid, Lyndhurst, Bratenahl, Orange Village and Warrensville Heights and eastern portions of Cleveland.) Streetscape Plans:

- Cedar-Fairmount Transportation and Streetscape Plan (Cleveland Heights)
- Lorain Road Streetscape Improvements (Fairview Park)
- Strategic Plan Report – Richmond Road Corridor Transportation Study (Warrensville Heights)
- Lee Road Traffic Study and Corridor Plan (Shaker Heights)

Transit-Oriented Development studies:

- RTA Transit-Oriented Development (TOD) Best Practices
- Warrensville/ Van Aken - Intermodal Transit Center Program Plan (Shaker Heights)

1.2 Defining Complete Streets

Over the years, there have been some efforts to improve safety for all users of the road, such as traffic calming, livable streets and routine accommodation policies. Since the 1990s, large-scale multi-modal transportation planning has been undertaken to provide a more complete network for transit, trails, and paths. The concept of complete streets is the next logical step: it advances the goals for complete networks by providing a framework for communities to develop more detailed, context sensitive solutions for streets at the local and even neighborhood level.

Planning and building complete streets encourages rethinking street designs so that the entire public street right-of-way is utilized. From a user standpoint, this means improving conditions for pedestrians, cyclists, and transit riders as well as for vehicular drivers. At the same time, many elements of complete streets can help improve environmental sustainability because they also function as stormwater management techniques. A comprehensive, more complete view of the potential of the space within the right-of-way encourages planners and engineers to rethink the public right-of-way as public space.

Complete streets incorporate a wide range of options to consider including:

- Landscape enhancements,
- Sidewalk and pedestrian-scaled streetscape enhancements,
- Bicycle infrastructure improvements,
- Crosswalk improvements,
- Improved signage and lighting, and
- Bus circulation options.

In other words, complete streets are roadways that are designed and operated with two primary goals:

- To safely and comfortably accommodate multiple users of all ages and abilities, including cyclists, pedestrians, transit riders, elderly, delivery and service personnel, and emergency responders; and
• **To accommodate and slow stormwater runoff as part of a comprehensive stormwater management system.**

Cuyahoga County is a very diverse region with several different types of communities that offer residents a wide array of choices in terms of community character. As complete streets are not a one-size fits all solution, there is ample opportunity for each community to define what a complete street means to them. Some communities might want to invest in their pedestrian network while others might want to be the next gold-level bicycle friendly community, or a transit hub. No matter what emphasis or focus a community decides to pursue, there are a variety of strategies to choose from to create a vibrant and bustling environment for citizens.

<table>
<thead>
<tr>
<th>National organizations providing expertise on complete streets:</th>
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<tr>
<td><strong>The Pedestrian and Bicycle Information Center</strong> provides free webinars on transportation and livable communities related topics. Free webinars are available online: <a href="http://www.pedbikeinfo.org/training/webinars.cfm">http://www.pedbikeinfo.org/training/webinars.cfm</a></td>
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<tr>
<td><strong>Smart Growth America and National Complete Streets Coalition</strong> provide extensive information and best practices from throughout the U.S. on complete streets benefits, policies and implementation issues. See <a href="http://www.smartgrowthamerica.org/complete-streets/">http://www.smartgrowthamerica.org/complete-streets/</a></td>
</tr>
<tr>
<td><strong>American Association of Pedestrian and Bicycle Professionals</strong> conducts regular webinars on pedestrian and bicycle design issues. Some of them are available free online: <a href="http://www.apbp.org/events/">http://www.apbp.org/events/</a></td>
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<tr>
<td><strong>The Federal Highway Administration – Pedestrian and Bicycle Safety Section</strong> makes available a variety of guidelines and tools regarding pedestrian and cyclists safety: <a href="http://safety.fhwa.dot.gov/ped_bike/">http://safety.fhwa.dot.gov/ped_bike/</a></td>
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### 1.2.1 Designing Complete Streets

Embracing complete streets concepts means that planning for roadway improvements will naturally be more comprehensive in scope, taking into consideration ways to maximize the use of the public right-of-way. This section highlights some of the factors to consider when designing multi-functional roads.

**Designing for Pedestrians** – Walking is the most basic mode of transportation. Every trip starts and ends by walking. Walking is also a great form of exercise. Yet, pedestrians are the most vulnerable users of the streets. For instance, “40% of pedestrian fatalities occur where there is no available crosswalk”².

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²Ernst, Michelle and Lilly Shoup.(2009). Dangerous by Design.Transportation for America and the Surface Transportation Policy Partnership.
Complete streets provide an approach to design roadways with the safety of all users in mind. Pedestrian islands, curb extensions, and pedestrian traffic light signalization can greatly enhance the safety of pedestrians, including elderly, and disabled. Designing for pedestrians means that roadways have adequate and safe sidewalks and crosswalks within interesting and pleasant environments that encourage people to choose to walk between destinations rather than drive.

**Designing for Cyclists** – Cycling is an environmentally friendly, low-cost mode of transportation and can be a great activity for all ages if roads are designed for bicycle safety and there is a regional network of bike-friendly streets. Bike lanes and all-purpose trails that connect homes to destinations such as parks or libraries as well as job centers have the potential to greatly improve the quality of life and recreational opportunities within the region.

**Designing for Transit Riders** – Elements of complete streets become very important in connecting residential neighborhoods to transit stops and job centers. Complete streets include transit improvements that enhance the rider’s experience such as adding bus shelters, increasing safety and security at stops and on vehicles, as well as improving intersection timing to decrease bus travel times.

**Designing for Hydrology** – Streets not only move people and vehicles, but are also conduits for stormwater runoff. Rain water moves quickly along smooth, paved surfaces, which can contribute to negative environmental impacts like polluted runoff, sedimentation, and bank erosion. Landscaping and other natural features that are used to provide screening and buffering for pedestrians and cyclists can be designed as cost-effective green infrastructure that retains and treats – or even eliminates – runoff at the source.

**Designing for Sustainability and the Environment** – Reducing pavement width and introducing additional landscaping can have positive impacts on air quality as trees function as carbon sinks, as well as on stormwater management as more water can be kept and filtered on-site. Designed in the correct way, bioswales reduce the footprint of intersections, protect the pedestrian and bicycle realm and provide habitat for neighborhood wildlife.

**1.3 Benefits of Complete Streets**

There are numerous documented benefits of designing multi-functional streets that meet the needs of all users and many of them reach far beyond mere improvements to the transportation system. For example, providing a well-connected, safe roadway network that helps reduce our reliance on cars can have economic, social and environmental benefits. Indeed, maximizing our use of the existing public right-of-way also makes good financial sense in that it helps leverage scarce public resources.
1.3.1 Economic Benefit

Studies conducted by the Urban Land Institute (ULI) indicate a growing trend among ‘Generation Y’, ‘Millennials’, and ‘Baby Boomers’ to move to more walkable and urbanized areas,³ and the desire for more transportation options is one of the four top reasons cited. Recent development trends in Downtown Cleveland and University Circle and the continued strength of inner-ring suburbs such as Cleveland Heights, Lakewood and Shaker Heights confirm the national trends on a local scale. This trend has important implications for economic development strategies of communities. As Richard Florida notes in “The Rise of the Creative Class”, companies are competing globally for a talented young workforce that prefers living in a walkable setting.⁴ That means companies are choosing locations based on the quality of life a place can provide for their workforce.

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³ (Ewing & Bartholomew, 2013)
⁴ (Florida, 2002)
Investing in alternative modes of transportation can have a positive impact on the local economy. On average a typical household spends nearly 20% of its income on transportation expenses\(^5\). If households were able to reduce their transportation costs by opting for lower cost options such as walking, biking and taking transit, they would have more disposable income to spend locally. Studies show that adding pedestrian and bicycle amenities along local streets typically leads to increased pedestrian and bicycle traffic, which can result in increased sales at local businesses. For instance, a 2013 report by New York City’s DOT found that in Brooklyn, “tax receipts show that retail sales in stores adjacent to a new plaza increased 172% in the three years after the plaza was implemented, over twice the growth seen in other parts of the same area.”\(^6\)

### 1.3.2 Active Living

As obesity, heart disease, and diabetes rates are increasing throughout the nation, the health community increasingly advocates for a shift to more active lifestyles to prevent certain diseases\(^7\). Looking at Cuyahoga County, the numbers are alarming. The 2013 County Health Rankings ranked Cuyahoga County 67 out of 88 Ohio counties for health outcomes\(^8\):

- As of 2011, according to the Centers for Disease Control and Prevention (CDC), 38.9% of adults in Cuyahoga County were overweight and 25.7% were obese (CDC, 2011).
- As of 2011, 31.7% of adults in the county have been told they have high cholesterol.
- Cuyahoga County is experiencing a trend where chronic diseases and heart disease, cancer, chronic lower respiratory disease, stroke, unintentional injuries and Alzheimer’s disease are the leading causes of death in the county (Ohio Department of Health (ODH), 2010).

The built environment typically does not foster an active lifestyle. Investing in complete streets can help to combat these trends. Studies show that in countries where people are more likely to walk, bike, or take transit on a regular basis there are lower incidences of obesity.

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\(^5\) (National Complete Streets Coalition, 2013a)  
\(^6\) (City of New York Department of Transportation, 2013, p. 125)  
\(^7\) (Safe Routes to School National Partnership, 2012)  
One of the key concepts of complete streets is improving the roadway environment in ways that make it easy for people to choose to walk or bike as part of their daily routine. This does not seem to be a far-fetched idea when one considers that 40% of all trips are less than two miles which is equal to a 40 minute walk or 10 minute bike ride.

In fact, over 800,000 residents of Cuyahoga County live within a half mile (about a 10 minute walk) to two types of frequent destinations: parks and/or local retail districts, as illustrated in figures 4 and 5. This data highlights potential opportunities within those half mile radii to incorporate more complete streets elements.

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9 Countries where people are more likely to walk, bike, or take transit have significantly lower rates of obesity than countries where people are less likely to use these modes. (Pucher, 2009)
Figure 4: People living within a half-mile (10 minute walk) of a park

Figure 5: People living within a half-mile (10 minute walk) of a retail district
1.3.3 Safety

Safety is one of the primary reasons people chose to drive for short trips (less than two miles). As noted earlier, many pedestrian fatalities occur where there is no crosswalk. As complete streets are designed with the safety of all users in mind, enhancements can greatly enhance the safety of pedestrians, including elderly and the disabled, as well as cyclists and transit riders.

An article published in the Journal of Physical Activity and Health identified a strong correlation between bikeway miles added and a reduction in crash and fatality rates in Portland\textsuperscript{10}. Between 1991 and 2006 crash rates dropped roughly 50% as more bike lanes were added\textsuperscript{11}. Another study for Orlando, Florida, found that “restriping Edgewater Drive from 4 lanes to 2 travel lanes, a center turn lane, and bicycle lanes reduced the frequency of crashes involving injuries from every nine days to once every 30 days while the number of people walking and bicycling rose 23% and 30% respectively.”\textsuperscript{12} This study shows that injuries have been reduced by investment in infrastructure.

1.3.4 Environment and Sustainability

As more and more people choose to walk, bike and take transit instead of driving, there will be a measurable positive impact on the environment. Indeed, water and air quality are impacted by the travel decisions of individuals.

Air quality is a special concern in Cuyahoga County. In 2008, United States Environmental Protection Agency (EPA) designated Cuyahoga County as a marginal nonattainment area for the 8-hour ozone standard\textsuperscript{13}. Motor vehicle emissions directly impact the air quality in the region\textsuperscript{14}. Shorter car trips pollute more per mile because 60% of the pollution created by automobile emissions happens in the first few minutes of operation, before pollution control devices can work effectively\textsuperscript{15}. Therefore, reducing the number of short trips taken by car will have a great effect on reducing air pollution.

Access to clean water is critical for human health, biodiversity and environmental health. Complete streets provide opportunities to include bioswales that slow and store stormwater while serving as a buffer for pedestrians or cyclists. Including stormwater and landscaping features can enhance water quality on a regional scale. Better stormwater management means less combined-sewer overflow (CSO) which may result in better water quality in Lake Erie which would enhance the lake’s recreational value as a tourist attraction.

\textsuperscript{10}(Gotschi, 2011) \\
\textsuperscript{11}http://www.railstotrails.org/resources/images/whatwedo/trailadvocacy/atfa/28.gif \\
Used “Parameters for the HEAT for Cycling calculation. The Health Economic Assessment Tool for Cycling can be downloaded here: www.euro.who.int/HEAT.” (p. S. 56) \\
\textsuperscript{12}(Rosales, 2013) \\
\textsuperscript{13}(NOACA, 2013b) \\
\textsuperscript{14}(Pedestrian and Bicycle Information Center) \\
\textsuperscript{15}(Pedestrian and Bicycle Information Center, 2013)
1.3.5 Quality of life

As we travel about our communities, we may overlook the need for easier access until we experience an injury or have to travel with someone who uses a wheel-chair or has vision loss. For some people the simple act of getting to a destination often becomes an obstacle course. Many people have reduced abilities through birth, accident, or aging. In fact, in 2012, 14% of residents in Cuyahoga County were disabled, and 15.9% were over the age of 65. As our population ages, many may begin to experience mobility problems. In addition, 13% of households in Cuyahoga County do not own a car. Thus there are a considerable number of people living in Cuyahoga County who might not have the choice to drive a car.

At the same time, there is a growing trend away from driving among the millennial generation, which includes people born between 1982 and 2004. According to the National Household Travel Survey, from 2001 to 2009, the annual number of vehicle-miles traveled by young people (16 to 34-year-olds) decreased from 10,300 miles to 7,900 miles per capita—a drop of 23%. Increasingly young people are choosing not to drive, and instead have increased their use of public transit, biking, and walking.

Complete streets increase independence and mobility for elderly, people with disabilities, and people who prefer alternative modes of transportation. Designing complete streets can improve the quality of life for a number of residents in a community.

For further information on benefits of complete streets:

- **The Pedestrian and Bicycle Information Center**: Provides informational fact sheets on the various benefits of a complete streets network, including health, economic, environmental, and social benefits. Also available are factsheets on safe practices for pedestrians and cyclists as well as crash statistics. All are available at: [http://www.pedbikeinfo.org/data/factsheet.cfm](http://www.pedbikeinfo.org/data/factsheet.cfm)

- **Smart Growth America and National Complete Streets Coalition**: [http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets/](http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets/)


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16 2012 American Community Survey 1-Year Estimates
18 (Frontier Group, 2012)
1.4 Challenges of Complete Streets Planning

As the communities in Cuyahoga County are very diverse the challenges to implement complete streets may vary. The following concerns may apply more to some communities than others.

1.4.1 Right-of-way Concerns

A common concern in built-out communities relates to the available right-of-way. For the most part, bicycle and pedestrian infrastructure is currently treated as an addendum to existing facilities leading many to believe that complete streets require purchasing additional right-of-way. However, complete streets elements often can be accommodated within the existing right-of-way. A complete streets approach encourages decision makers, planners, and engineers to re-examine the use of the public right-of-way by addressing transportation issues through either demand-side or supply-side strategies. While demand-side strategies focus on reducing the demand for car use through land use and zoning, supply-side strategies focus on increasing the capacity of the transportation system by encouraging different modes of transportation. Figure 6 shows that moving 40 people in a car need significantly more space than moving 40 people on one bus or on bikes: therefore, replacing car trips with bicycle or transit trips can have a tremendous positive impact on congestion, use of space, and money. In fact, NOACA’s Connection 2035+ Long Range Plan recommends implementing bicycle, transit, and pedestrian improvements as one strategy for congestion management19. As the road network in the Cuyahoga County was built for thousands of more people than we currently have, many streets currently operate under capacity. For instance, a four lane road with 15,000 Average Daily Traffic (ADT) would be a candidate for a road diet.

With this in mind, a complete streets approach emphasizes redesign of the existing corridor and its ROW rather than purchasing additional ROW. This Toolkit explores a wide range of tools that communities can use to refurbish existing streets and their right-of-ways to accommodate various modes of travel. Complete streets policies do not recommend a one-size fits all approach but rather allow communities to create a transportation network tailored to their residents’ needs. Every community will make different decisions on which modes to prioritize on certain corridors. An example of several different configurations for an 80-foot wide corridor can be found in Chapter 2.2, with further detailed section drawings for street types and design features found in Chapters 3 and 4.

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19 (NOACA, 2013a, p. 33ff)
1.4.2 Connectivity

Most residents cross municipal boundaries every day as they travel for work, shopping, and entertainment. For the most part, people drive along major roadway corridors, such as Euclid, Detroit, Mayfield, Warrensville Center, Brook Park, Richmond, State, Ridge, Pleasant Valley, and Royalton Roads, to move seamlessly from one community to another without even realizing it because our street network is well connected. However, this is not always true for cyclists, and to some extent pedestrians and transit riders.

The concept of complete streets promotes connectivity in terms of a completed network for all major pedestrian, bicycle, and transit routes. A complete streets approach recommends that gaps for each travel mode be closed to make it easier to choose these alternative travel options. For example, there are instances where bike lanes begin in one community, but disappear at the border of an adjacent community, only to resume again in the following one. This gap in the bicycle network could be reasonably addressed through various complete streets treatments, but would not necessarily need to be addressed in the same way for each segment of the corridor. Not every community has to use the same treatment. If one community is committed to becoming a gold level bicycle friendly community, it might want to install protected bike lanes, whereas a community with other priorities might opt to install shared lane markings, commonly called sharrows, instead. Although the type of treatment might vary, the presence of a seamless network should not.

Connectivity also has to do with prioritization of transportation corridors for various travel modes. Communities might want to collaborate in the identification of these priority corridors that lead to destinations of regional significance (regional shopping centers, Metroparks, hospitals, office clusters, etc…). Several resources exist to help communities in this prioritization. NOACA’s Regional Bike Plan provides detailed information on a per-corridor basis, including locations with high crash rates, and identifies a regional priority bikeway network for Cuyahoga County.\(^\text{21}\) The Cleveland Metroparks

\(^{20}\)(Bennett, 2010)

\(^{21}\)(NOACA, 2013a, pp. 35-39, and 56-65)
Reservation Concept Plans\textsuperscript{22} provide a valuable resource for communities with regards to needed neighborhood connections to access the Metroparks extensive trail system. Additionally, RTA’s Transit 2025 Plan provides maps that illustrate locations where several “key long-term transportation projects” such as future transit centers, park-ride lots and transit system expansions are targeted.\textsuperscript{23}

### 1.4.3 Cost Concerns

A common concern is that adding infrastructure for pedestrians, bicycles, or transit riders would be very costly. In past years, projects aimed at improving multi-modal transportation at the street level have focused on pedestrian and cyclist amenities \textit{separately} from the rest of the street, which has contributed to the perception that improvements are very costly or difficult to fund. However, if pedestrians, cyclists and transit riders are routinely and strategically accommodated in all street projects, communities can actually save costs by both reducing infrastructure and stress on infrastructures and in externalities such as improved community health.\textsuperscript{24}

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\textbf{Comparing Costs for Pedestrian, Bicycle and Transit Facilities}

There are different ways of measuring costs and benefits of complete streets. A variety of examples illustrate that the needed investment in car traffic and infrastructure is much larger than the investment in other modes of transportation.

What will $30 million buy you in 2013?\textsuperscript{25}

- One mile of street widening
- 600 miles of striped bike lanes
- 300 miles of buffered bike lanes
- 100 miles of sidewalk
- 20 miles of physically separated bicycle tracks
- 1.5 miles of bus rapid transit (RTA)

Comparing one mile of street widening to 600 miles of bike lane or 100 miles of sidewalk illustrates the much higher impact of investing in complete streets amenities.

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\textsuperscript{22} (Cleveland Metroparks, 2012)
\textsuperscript{23} (Greater Cleveland Transit Authority, 2004, pp. 73-76)
\textsuperscript{24} (National Complete Streets Coalition, 2013f)
\textsuperscript{25} (Flusche, Sullivan, Wyatt, & Nuttle, 2013)
Health Care Savings

“Research examining the health benefits of bicycling and walking point to the same conclusion: investments in active transportation pay enormous dividends. The literature suggests the largest share of benefits comes from the well-being and health outcomes associated with being physically active.”

- Lincoln, Nebraska: Every $1 spent on bicycle and pedestrian trails (including construction, maintenance, equipment, and travel) yields $2.94 in direct medical benefits.
- Portland, Oregon: Every $1 invested in bicycling yields $3.40 in health care cost savings. When the statistical value of lives is considered, as is done for the evaluation of highway safety improvement projects, every $1 invested yields nearly $100 in benefits.
- Kansas City: Every dollar invested in bicycle and pedestrian projects yields $11.80 in benefits, the greatest portion of which is the perceived health and recreation value of those biking and walking.
- A summary of several studies in the U.S. and Europe found that every dollar invested in bicycle networks yields at least $4 to $5 in benefits, mostly related to health and safety.

For further details on costs of complete streets:


National Complete Streets Coalition.


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26 (American Planning Association California Chapter; Walk San Diego, 2012)
27 (Wang, Macera, Scudder-Soucie, Schmid, Pratt, & Buchner, 2005)
28 (Gotschi, 2011)
29 (Mid-America Regional Council, 2009)
30 (Salensminde, 2004)
As shown in the figure 7, complete streets projects do not necessarily need to be more expensive but can in fact save money and leverage funds more efficiently. New pavement is comparably more expansive than pedestrian features. See Chapter 5.5 for more detailed recommendations for funding.

Figure 7: 2013 Cost Estimates on Complete Street Elements
1.4.4 Projects that are “too far down the road”

Complete streets features can be considered a disruption or costly addition rather than a beneficial component for all residents. Choosing a complete streets approach can prevent the exclusion of a bike lane, sidewalk or better transit facilities because the project is already “too far down the road”. As illustrated in figure 8, by the time projects are in the final engineering and design phase, engineers and planners have been working on the project many years.

Projects that are currently in the preliminary engineering phase will most likely not turn into a last minute complete streets project. However, there are opportunities to include complete streets elements on every project, including ones already in the design phase. Additions like bike lanes, crosswalks, modified signal timing, and pedestrian signage can improve a street for all users with little cost and minor design change. For future road projects, starting to include complete streets in the planning phase can help reduce change order costs and prevent frustrations for everyone involved in the project.31 “Complete streets policies frequently do not trigger any additional spending: they require more careful planning of existing transportation projects. This means safety improvements can be incorporated into existing projects instead of seeking separate funding sources.”32 In fact, there may even be opportunities for project cost savings. For instance, Lee County, FL, re-examined its 2035 Long Range Transportation plan and determined potential savings of $58.5 million for five road widening projects by using a complete streets approach.

Adopting a complete streets policy can be a first step for a community to start rethinking its transportation network. Even if some recent projects are already “too far down the road”, communities may want to consider how complete streets aspects can be included in street projects. Considering complete streets elements early on in the planning process opens up a broader variety of funding options, and can help to create stronger communities as well as better connections in the region.

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31 (National Complete Streets Coalition, 2013f)  
32 (National Complete Streets Coalition, 2013g)