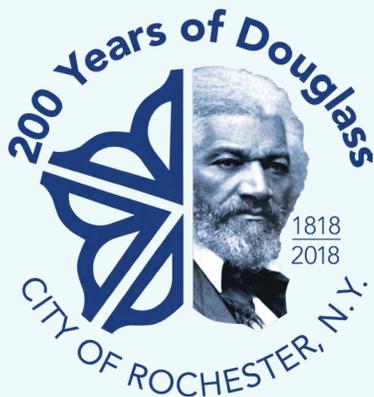


PRIORITY PROJECTS

ROCHESTER COMPREHENSIVE
ACCESS AND MOBILITY PLAN



HIGHLAND
PLANNING



EXPAND THE DEDICATED BICYCLE NETWORK

Bikeable City

OVERVIEW

The Bikeable City Report described a priority project to upgrade shared lane markings to dedicated bike lanes or protected bike lanes. Additionally gaps in the existing on-street dedicated bicycle network should be connected, starting where the fewest miles of new facility would provide the most continuous connectivity.

A methodology was presented in the report that forecasted likely bicycle trips using current vehicle trips under five miles in length. These trips were aggregated in travel flows and rated by volume in order to prioritize dedicated bicycle facility investment.

Maps created in the report, when overlaid with existing and approved bike lanes and cycle tracks, help to identify facility investment priorities.

INTEGRATION

Upgrading the on-street network is a critical component of creating a network for cyclists of all ages and abilities. Low-stress bicycle networks are proven to increase cycling adoption in cities worldwide.

ROC The Riverway

Priority connections may be better achieved through the use of trails and connectors.

Elmwood Avenue Cycle Track

Announced in 2014, the City will construct a physically separated cycle track between Wilson Boulevard and Mt. Hope Avenue, an identified secondary priority link.



Union Street Cycle Track
Source: Arian Horbovetz

EXPAND THE DEDICATED BICYCLE NETWORK

Bikeable City

SELECTION

The diagram below displays the location of existing and planned bike lanes, protected facilities, and existing shared lane markings.

The first set of high impact network improvements would be upgrading sharrows to dedicated lanes in locations that would link existing portions of the network. This may require curb relocation to achieve the desired roadway width. Highest priority upgrades should occur at:

- Driving Park between Dewey and Lake
- Monroe/Chestnut between Broad and Priem Streets
- Broad Street between Clinton and Union
- Broad Street between Main and Allen

A second set of high impact network improvements would fill in short gaps between existing facilities. Highest priority implementations should occur at the following locations:

- St. Paul Street between Upper Falls and the Inner Loop
- Dewey Avenue between Flower City Park and Knickerbocker Avenue
- Lyell Avenue between Oak and Sherman, Glide and Belknap

Planned facility locations that do not overlap highest or secondary priority implementation locations should be reconsidered in favor of other highest priority upgrades.

IMPLEMENTATION



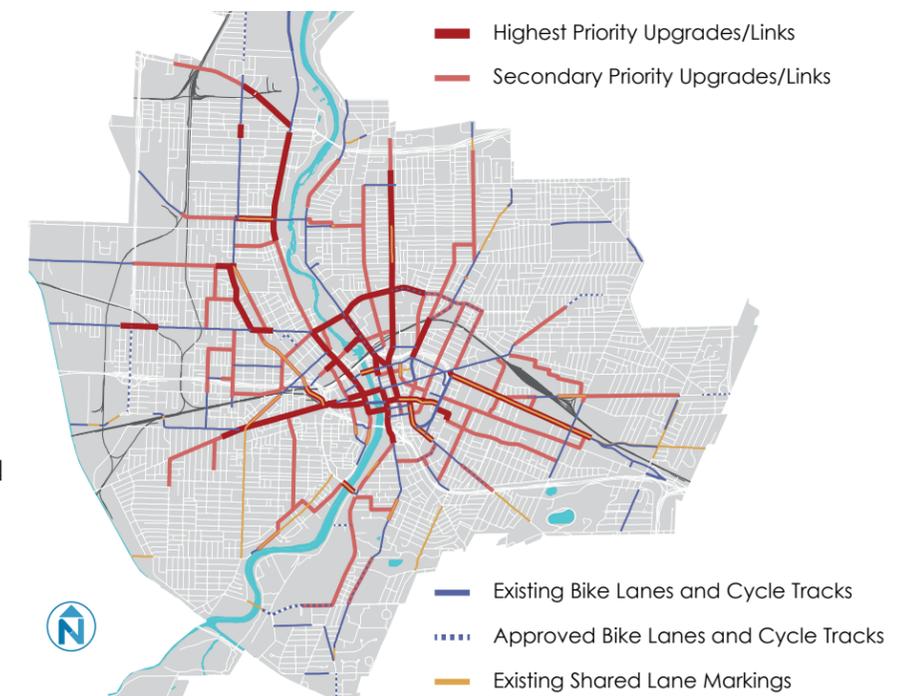
Facility implementation costs may be relatively low when implemented in conjunction with planned roadway resurfacing projects or targeted restriping, but high when requiring curb relocation.



Dedicated bicycle facilities may not be an option for high-traffic corridors. Cycle tracks may require land acquisition and/or easements.



Further study, selection, and implementation would be an ongoing short-to-medium-term (1-5 years) project.



ESTABLISH A CITYWIDE MODE SHIFT POLICY

Transportation Demand Management

OVERVIEW

The TDM Focus Area Report noted how a citywide single occupancy vehicle trip reduction policy, as well as area-specific plans, could be useful to provide clear guidance to areas experiencing constrained parking resources or those anticipating development. Focus Group and Public Meeting refinement of this concept yielded support for a policy that may offer incentives for building on bus lines or in walkable areas or may institute requirements that reduce the amount of car traffic development creates.

Policy initiatives would be overseen by a mobility coordinator who would also administer City pedestrian and cycling programs.

INTEGRATION

Regional Efforts

A citywide TDM policy would build on a proposed feasibility study for forming a regional Transportation Management Association (TMA). This organization would be focused on connecting low-income residents with currently inaccessible job opportunities.

City Programs

The City currently struggles with the visibility of active transportation initiatives such as *bikeROCHESTER* and *Rochester Walks!* A mobility coordinator can restart these initiatives through a managed, programmatic approach.

MOVING CARS



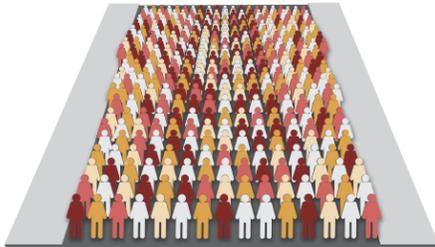
27.8 people
typical per block

MOVING TRANSIT



240 people
maximum per block

MOVING PEOPLE



1,000 people
maximum per block

Sources: *Evaluating Transportation Land Use Impacts*, Victoria Transport Policy Institute (2018). National Household Travel Survey, FHWA (2017). City Block assumed 40' curb to curb and 300' long.

ESTABLISH A CITYWIDE MODE SHIFT POLICY

Transportation Demand Management

POLICY OPTIONS

A citywide mode shift policy that aims to reduce per-capita vehicle trips requires support to be measurable and enforceable.

A revision of the municipal zoning code that promotes increased density as well as transit-oriented and mixed-use development supports TDM policy from the built environment side of the equation. Other zoning code updates could include revising parking requirements to include parking maximums and remove statutory caps on shared parking agreements where appropriate. These changes may be able to be linked to any traffic mitigation requirements already found in the code.

Additional policy levers for directing development site selection and thus, reducing car trips include licensing and tax incentives.

IMPLEMENTATION



TDM policies are very low-cost compared to other transportation projects and offer relatively cost-effective solutions versus additional investments in vehicle parking.



However, implementation still requires at least an initial investment in staffing. Additionally, policies must not conflict with other City programs.



Adding a TDM coordinator and developing a comprehensive trip reduction policy can be a short-term project, accomplished within one year.

TDM POLICY BENEFITS

Larger Pool of Workers

Transportation options that connect to employment centers and the regional transit system help employers recruit and retain employees from across the City and region.



Faster Freight

Rochester's economy is dependent on an efficient transportation system that moves freight quickly and reliably. Investing in mobility options reduces congestion, allowing freight to arrive on schedule.



Saves Employers Money

Structured parking costs between \$25,000 and \$40,000 per parking space, plus operations and maintenance costs. By comparison, employers can encourage alternative commutes by supporting a last mile shuttle to seamlessly connect their employees to the job site.



Healthier Workers



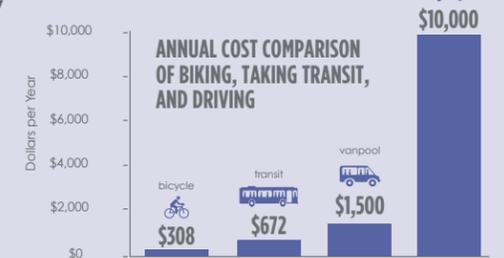
Employees that lead an active lifestyle take up to six fewer sick days from work per year.



Transit users walk an average of 19 minutes to and from transit stops each day.

Saves Employees Money

On average, Americans spend more than \$10,000 per year owning and operating a personal vehicle. By comparison, a full price annual adult transit pass costs under \$700.



EAST/WEST PRIMARY MULTI-USE TRAIL ROUTE

Walkable/Bikeable City

OVERVIEW

The focus group convened to evaluate the Bikeable City report suggested a study to determine the optimal routing of an east-west shared-use trail to complement currently emphasized north-south infrastructure. The new trail should be a link comparable to the Genesee Riverway or El Camino Trails.

No natural features exist that span the City from East to West. A new off-street facility may take the form of a cycle track parallel to a sidewalk in places, and/or make use of existing and proposed bicycle boulevards in order to assemble an east-west low-stress cycling and pedestrian network spine.

INTEGRATION

An east-west shared-use trail would build on and integrate with the following projects:

ROC The Riverway

Any east-trail will require use of existing or proposed new Riverway Trail connections and/or bridges to cross the Genesee River.

JOSANA Rail to Trail

Conversion of the right-of-way parallel to Lyell Avenue between Oak and Hague Streets could represent a significant first link in an east-west active transportation corridor.

East Avenue Road Diet

Restriping street space to calm traffic and provide bicycle space has proven to be a success. The City can make permanent these improvements while reserving space for protected bicycle facilities.



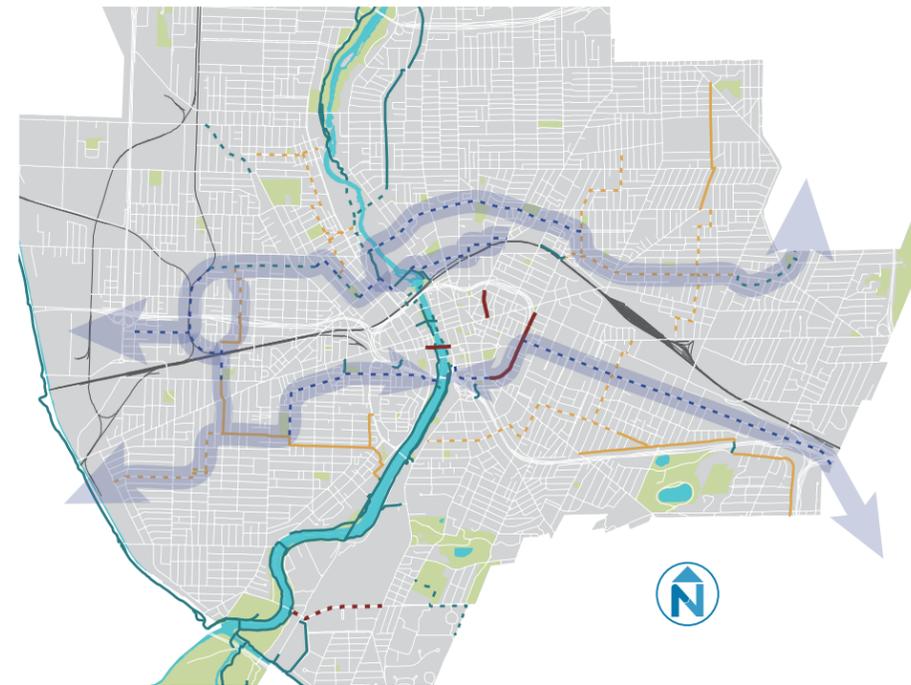
Source: Discover El Camino

EAST/WEST PRIMARY MULTI-USE TRAIL ROUTE

Walkable/Bikeable City

ALTERNATIVES

Three example alternatives for a primary east-west bicycle trail have been explored. All would require some travel along roadway corridors. Certain City corridors, such as East Avenue and Upper Falls Boulevard, can accommodate cycle tracks to create long stretches of the potential corridor. Lands immediately adjacent to railroad corridors represent another, but highly unlikely, option for long, uninterrupted trail segments. In other locations, while unprotected, the City's existing and proposed bicycle boulevards are the best low-stress option. The proposed bicycle boulevard on Garson Avenue could act as a significant eastern portion of the route. Difficulty remains connecting corridors through Downtown.



IMPLEMENTATION



Costs associated with a new trail are high due to facility construction costs as well as land acquisition factors.



Trails along active railroad rights-of-way require extensive negotiations. An alternative may exist on city-owned property immediately adjacent to the rail corridor (Eg. Ward Street Ext. to Ormond).



Selection and implementation requires a long-term (5-10 years) effort. Short-term initial actions include performing a formal planning study.

MODIFY STREET DESIGN STANDARDS

Walkable/Bikeable City

OVERVIEW

Stakeholders groups focused on active transportation modes requested that design speeds of reconstructed streets not exceed their posted speed. Principles cited include that speed plays a critical role the severity of collisions between motor vehicles and other street users.

On many connecting corridors in Rochester, narrower travel lanes and the presence of highly visible facilities for other modes would help to promote slower driving speeds. According to the NACTO Urban Street Design Guide, lane widths of 10 feet are appropriate in urban areas (11 feet where transit is emphasized) and have a positive impact on user safety without impacting traffic operations. This forms the basis for reapportioning the roadway to achieve a lower traffic speed without the use of discrete calming elements that hinder desired uses.

INTEGRATION

New street design standards would build on the following City plans and policies:

Complete Streets Policy

Adopted in 2011, the policy ensures that all future street design efforts will fully consider the needs of pedestrians, bicyclists, transit users and persons with disabilities by requiring review for all street construction projects.

Bicycle Master Plan

The plan's recommendations serve as a framework for the city's future investment in bicycle infrastructure based on implementation effort.



MODIFY STREET DESIGN STANDARDS

Walkable/Bikeable City

EXAMPLE

Joseph Avenue between Clifford Avenue and Avenue D, a corridor similar in context to many others across the City, sees traffic speeds consistently closer to or exceeding free flow speeds for a large part of the day.

Joseph Avenue features on-street parking on each side of the street, protected by curb extensions. Because these spaces are underutilized, they do not adequately perform a traffic calming function. Restricting this parking to a single side of the street frees up roadway width for other purposes.

To properly accommodate transit vehicles and upgrade sharrows to bi-directional dedicated bicycle facilities, 40 feet is required from curb to curb as seen below.

IMPLEMENTATION



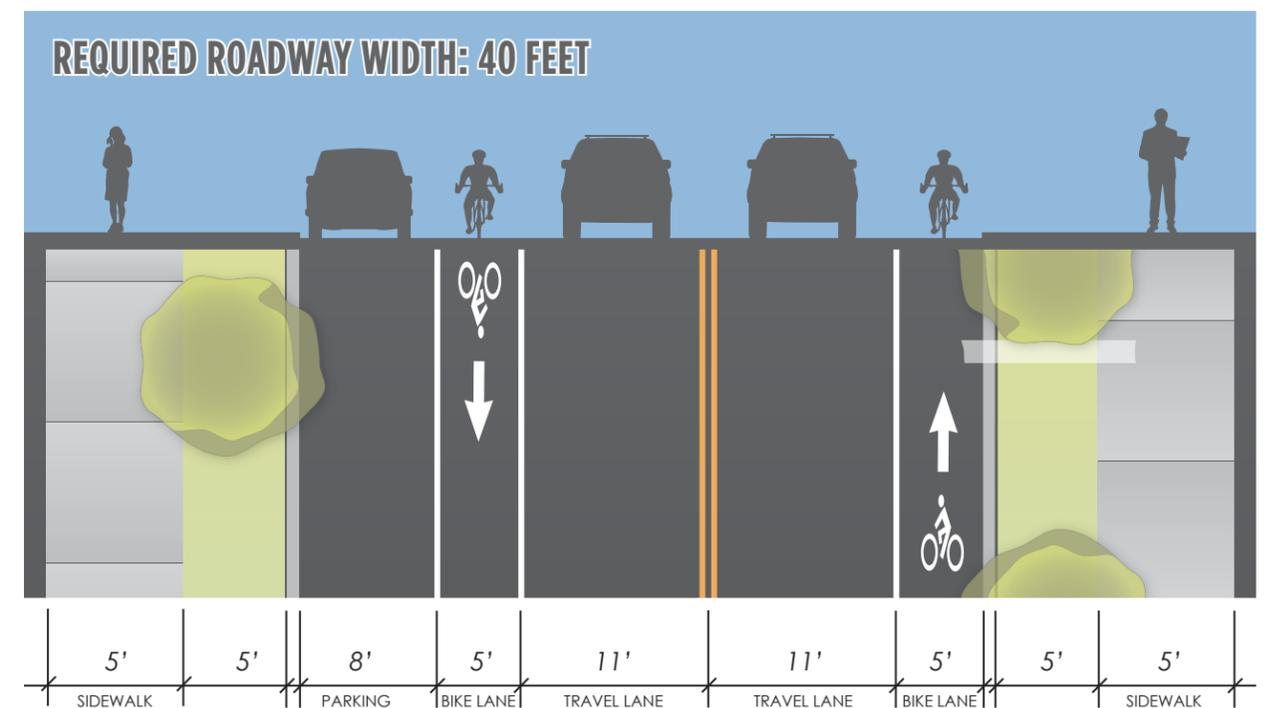
Standards themselves are low cost to implement. Improvement realization and potential higher costs depend on the ability to work within existing hard constraints.



City Architecture & Engineering must allow for review and comment by the Operations Bureau on street design plans.



Adoption of new street design standards can be a short-term project (one year) and can be assisted by the forthcoming Rochester Street Design Guide.

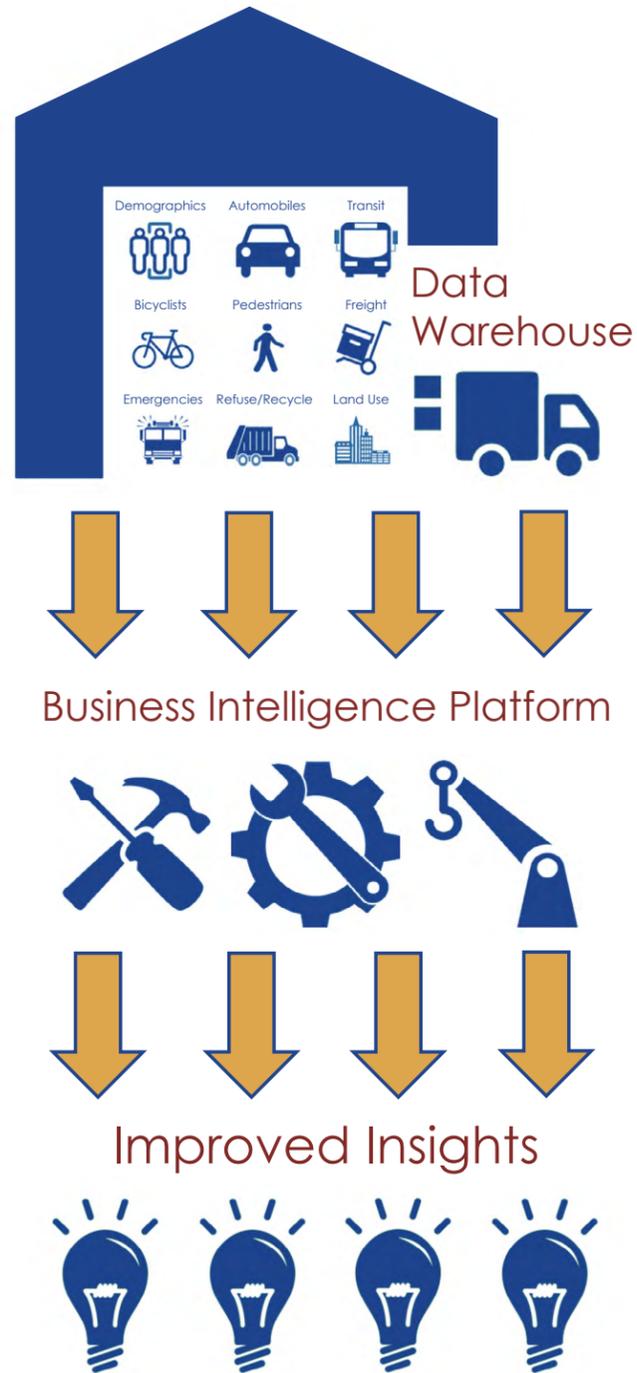


CREATE A TRANSPORTATION DATA WAREHOUSE

Making More Informed Decisions

OVERVIEW

Strong, vibrant cities are built on safe, efficient, and reliable transportation infrastructure and services. Ensuring limited resources are programmed to those projects and programs that provide the greatest benefit relative to cost is essential to enhancing urban mobility. As the amount and types of transportation data continue to rapidly expand, the City should invest in developing a repository of data collected internally and by partner agencies. This data would be easily accessed and its contents manipulated using tools that query the diverse datasets to provide improved insights regarding the needs of residents, businesses, and community institutions. Collectively the repository and the infrastructure and services improvement/introduction methodology is referred to as data warehousing and business intelligence (BI). Beyond data compilation and manipulation, the discipline of data science is constantly evolving. Accordingly, the human element of analyzing the data and preparing it for presentation to decision makers cannot be overlooked.



INTEGRATION

Protected Bicycle Facilities

Bicycle volume counts on City streets and multi-use trails, bikeshare origins and destinations, collisions involving bicyclists, and other data sets can be monitored to prioritize protected bicycle facilities.

City Street Repairs

Better knowledge of where bicycle and pedestrian volumes, transit boardings and alightings, and transportation network company pickups and drop-offs overlap is critical to capital programming and appropriate multimodal street design.

AND BUSINESS INTELLIGENCE PLATFORM

Making More Informed Decisions

POLICY OPTIONS

Developing a transportation data warehouse and BI platform can be part of a larger smart city initiative that includes non-transportation components with strong connections to transportation considerations beyond project and program prioritization. In the case of transportation, this would include dynamic traffic signal timings, optimized refuse collection routes and schedules during extreme weather events, and signal prioritization for transit to improve on-time performance. Changes in performance over time and in real-time can also be monitored with a BI platform, allowing an accelerated feedback loop between decisions and impacts to users of the transportation system. Beyond changes in observed system performance, BI platforms are also capable of recording and organizing public opinion and serving customer relationship management functions.



Street improvement project locations and change in crashes - New York
Source: DataKind

IMPLEMENTATION

Data compilation costs vary from free for public sector data sources that may have lag times of months or years to proprietary providers that offer real-time data via paid subscription services. The costs of BI tools include not only initial development costs but also those for maintenance of data and the City staff or contractor resources to convert the data into meaningful insights.

Significant data resources are available from governmental agencies but full coverage of the elements necessary to provide a robust data warehouse and useful BI platform require additional information points. Beyond private sector data providers, the City can also negotiate the provision of datasets from its licensed transportation network companies and bikeshare companies.

The initiation of a transportation data warehouse and BI platform should be a near-term project. Whether the platform is transportation-specific or incorporates other quality of life and economic development considerations, the Mayor's Office of Innovation and Office of Management and Budget and Strategic Initiatives should have an active role to ensure there are adequate resources directed to the appropriate purposes.