Repurposing Central Ave:

A Multimodal Urban Cyclist Corridor

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Current Situation | The Cycling Revolution

For scoring purposes, the factors taken into account were based on bike infrastructure (Bike Lanes, Trails, etc..), topography, city population, and number of cyclists. The 24 scored cities below show a representation of the data.

For a full list of all 300 cities bike score ratings visit https://docs.google.com/spreadsheets/d/1id8qUFlnJRyVRll3qLu9LHwGxX4fpxcfwAHhLoM/pub?output=html
Current Situation | The Cycling Revolution City Innovations

Boulder, CO 86        Minneapolis, MN 79        Fort Collins, CO 78        Ann Arbor, MI 76        Eugene, OR 75        Tempe, AZ 75

- Bike Lanes
- Multiuse Paths
- Bike Share Programs
- Bike Trails
- Sharrow Multiuse Lanes
- Education Programs
Project Proposal

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What infrastructural bike improvements can be implemented to increase the number of cyclists in the area of downtown Minneapolis?
Theoretical –
Create a safe multimodal environment that encourages bicycling as a safe and convenient means of transportation in downtown Minneapolis for all segmented cyclist groups.

Improve the safety of non-motorized transportation by increasing the number of cyclists using bike facilities offered throughout the city, a theory called safety in numbers.

Reduce conflicts between public transportation, motorists, cyclists, and pedestrians by implementing treatments applicable to a street and/or intersection.

Physical –
Develop a bike boulevard supporting current on-street and off-street bike facilities, as well as form a bridge connection over the Mississippi River to the Minneapolis business district.

Develop a low-stress bicycle route that connects important destinations in the city and promotes safe travel in and between city neighborhoods into downtown Minneapolis.

Provide wayfinding maps and well-designed transitions at intersections along MN State Highway 65 to current on-street bike facilities.

Social –
Promoting air quality benefits, fossil fuel savings, and public health benefits from physical activity in Minneapolis, MN.

Encourage bicycling as a low-impact exercise for sedentary people to become physically active to improve chronic health conditions.

- Obesity
- Diabetes
- High blood pressure
- Stroke
- Heart Disease
Minneapolis Cycling
Current Situation

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Minneapolis Cycling Current Situation | Contributing Factor Crash Rates

**Bicyclist | Contributing Factor Crash Rates**
- Disregarding a Control Device 13%
- Cyclist Inattentive 5%
- Non-Motorists Error 5%
- Improper Lane Use 9%
- Failure to Use Headlights 1.8%
- Other 9.7%
- 43% No Clear Factor

**Motorist | Contributing Factor Crash Rates**
- 38% No Clear Factor
- Disregarding a Control Device 5%
- Improper Lane Use 5.5%
- Driver Inattentive 9%
- Other 7.6%
- Human Error 1%
- Vision Obstructed 2%
- 32% Failure to Yield Right-of-Way
- 13.5% Failure to Yield Right-of-Way
- Other 9.7%
Minneapolis Cycling Current Situation | Pre-Crash Maneuver Rates

**Bicyclist** | Pre-Crash Maneuver Rates

- Against Traffic 15%
- Slowing, Stopping, or Starting in Traffic 2%
- Making Left Turn 3%
- Making Right Turn 1%
- Other 3%
- 46% Across Roadway

**Motorist** | Pre-Crash Maneuver Rates

- 42% Following Roadway
- Starting in Traffic 7%
- Making Right Turn 16%
- Making Left Turn 19%
- Other 8%
- Parked Legally 3%
- Making Right Turn on Red 5%
- Slowing, Stopping, or Starting in Traffic 2%
- Making Left Turn 3%
- With Traffic 30%
- Other 3%
Site Location Process

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Site Location Process | Corridor Crash Rates in Minneapolis

- 100 - 200 Crashes
- 50 - 99 Crashes
- 20 - 49 Crashes
Site Location Process | Intersection Crash Rates in Minneapolis

- 1 - 3 Crashes
- 4 - 6 Crashes
- 7 - 9 Crashes
- 10 - 20 Crashes
Site Location Process | Proximity to Bike Lanes and Trails
Site Location Process | Downtown Minneapolis Bus Routes
Proposed Solution

Repurposing Central Ave: A Multimodal Urban Cyclist Corridor
Proposed Solution | Master Plan

**COMPLETE STREET**

Proposed road connection

**BRIDGE CROSSING** across the Mississippi River for non-motorized vehicles

Deck overlook capturing historical views of Nicollet Island and the Mill City river front

**PEDESTRIAN MALL**

Statue

Curb bump out

Deck overlook towards St. Anthony Falls

Overhead arch
Proposed Solution | Planting Zones
Proposed Solution Master Plan, Pedestrian Mall Site Plan Location
Proposed Solution: Pedestrian Mall Design Process

Ways Through Intersection

Bump Out

Bump Out Idea

Bike Positioning
Proposed Solution | Pedestrian Mall Site Plan

Refuge Island

Island Statue

Restaurant outdoor sidewalk seating

Bike Rack

Store Front Zone

Square Bench Seating

Potential Future Park

Community Bench Seating

Continuous Right Turn

Scale 1" - 20'
Proposed Solution | Pedestrian Mall Perspective
Proposed Solution | Pedestrian Mall Details

Community Bench Seating 10’ x 4’

Square Bench Seating 5’ x 5’
Proposed Solution | Master Plan, Bridge Crossing Site Plan Location
Proposed Solution | Bridge Crossing Design Process

Proposed Bridge Section

| 4'  | 11' | 4'  | 4'  | 4'  | 4'  | 4'  | 22' Varies |

Median  One-Way Bus Lane  Median  Bike Lanes  Median  Bike Lanes  Sidewalk

Proposed Site Plan
Proposed Solution | Bridge Crossing Section

- 4'
- 16'
- 26'-86'
- 4''
- 10'
- 18'
- 60'
- Varies
Proposed Solution | Bridge Crossing Perspective
Proposed Solution | Bridge Crossing Details

Overhead Arches for Canopy

Sidewalk Exposure Bench Seating

Bench Height
18”

13’
Proposed Solution | Master Plan, Complete Street Site Plan Location
**Proposed Solution | Complete Street Design Process**
Proposed Solution | Complete Street Site Plan

- Public Parking Zones
- Grassland Median Plantings
- Two-Lane, One-way Street
- Bike Rack
- Bus Stop Zone
- Storefront Zone
- Four-Lane, Two-way Bike Lanes

Scale 1" - 20'
Proposed Solution | Complete Street Section

- 8' 10' 10' 8'
- 17' 36'
- 90'
- 17'
- 16'
- 4' 4' 4' 4' 4'
Proposed Solution | Complete Street Perspective
Safety is a moving target as conditions are constantly changing. Minneapolis has been heading in the right direction with continual improvements towards non-motorized transportation. The steps the city has taken have been on the smaller scale to effectively, in the short term, reduce incident rates and encourage the public use. To continue the cycling revolution improvements must be made at a larger scale in redeveloping and/or repurposing the city’s infrastructure to encourage further non-motorized transportation use. This draws the need for physically separated bike facilities that accommodate the cyclist’s safety and convenience needs. The solution proposed will increase the public’s use of non-motorized transportation as cycling would be perceived as a healthy, safe, and practicable transportation option into downtown Minneapolis.