



Neighborhood Traffic Calming
A Guide for the City of Minneapolis

An application, evaluation, and procedural guide for the City of Minneapolis Department of Public Works to determine priorities among eligible city-owned streets for neighborhood traffic calming.

April 2024 | Version 3



#### WHAT IS TRAFFIC CALMING?

"Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users". Source: Traffic Calming: State of the Practice (ITE/FHWA, 1999)

#### WHAT IS THE GOAL OF THIS NEIGHBORHOOD TRAFFIC CALMING?

Access to livable, efficient, and pleasant streets is the overall goal.



Minneapolis Public Works seeks to make street changes that support slower and safer traffic speeds and/or discourage cut-through traffic on our urban neighborhood streets<sup>1</sup>.

Minneapolis Public Works is committed to adding more traffic calming across the city in support of the City's updated speed limits and Vision Zero traffic safety goals. Traffic calming and traffic improvements are also aligned and informed by other city policies and plans

such as the Transportation Action Plan<sup>2</sup>, Street Design Guide<sup>1</sup>, Complete Streets Policy<sup>3</sup>, and Vision Zero Action Plan<sup>4</sup>.

Key objectives for safety, fairness, equity, transparency and efficiency are presented in Appendix C.

## **HOW TO REQUEST TRAFFIC CALMING**

Traffic calming requests are managed through an application process. The demand for traffic calming exceeds the resources and ability to construct traffic calming, so Public Works will use this process to consider and prioritize community requests for traffic calming and other traffic

<sup>&</sup>lt;sup>1</sup>https://sdg.minneapolismn.gov/

<sup>&</sup>lt;sup>2</sup> http://go.minneapolismn.gov/

<sup>&</sup>lt;sup>3</sup> https://www2.minneapolismn.gov/government/departments/public-works/tpp/complete-streets-policy/

<sup>&</sup>lt;sup>4</sup>https://www.minneapolismn.gov/government/programs-initiatives/visionzero/



safety improvements with a data-driven and transparent process. This process is outlined in this document and further details are described in the appendices.

### STREETS ELIGIBLE FOR THIS TRAFFIC CALMING PROCESS

Most urban neighborhood (local residential) streets in Minneapolis are eligible for traffic calming through this process. Eligible streets are identified on the map in Appendix A, which is also available on the city website.

Streets that are *not* eligible for traffic calming through this process include:

- Streets identified as <u>High Injury Streets</u> are not eligible for this process. These are
  busier streets with the most severe and fatal traffic crashes and the City is prioritizing
  them for safety improvements through the Vision Zero program. You can share traffic
  safety concerns related to High Injury Streets <u>here</u>.
- Streets that are Municipal State Aid (MSA) funded are not currently eligible for this process. These streets are often busier, but more importantly, have resources available for improvements that most urban neighborhood streets do not.
- Streets that are owned by other agencies such as Minnesota Department of Transportation, Hennepin County, Minneapolis Park and Recreation Board, University of Minnesota, or privately owned streets are not eligible through this City-led process because these streets are not owned/controlled by the City.
- Streets under active construction, or issues on adjacent streets resulting from a
  construction project, are not eligible for this process. These issues should go directly to
  the construction Project Manager. See link for projects and contact information.\_
  https://www.minneapolismn.gov/government/projects/
- Streets that have projects planned in the next 3 years. See link for information on upcoming projects.
   <a href="https://cityoflakes.maps.arcgis.com/apps/MapSeries/index.html?appid=8dd7c24b19cc42ecb87bf763654ca3f5">https://cityoflakes.maps.arcgis.com/apps/MapSeries/index.html?appid=8dd7c24b19cc42ecb87bf763654ca3f5</a>
- Streets that are in the 5-Year Young Pavement areas. See link for information on the 5-Year Young Pavement locations.
  - https://www2.minneapolismn.gov/business-services/licenses-permits-inspections/streets-sidewalks-utility/water-utility-permits/5-year-young-pavement-map/



#### ANNUAL TRAFFIC CALMING PROCESS

The annual traffic calming process is illustrated below and described on the following pages.

Application	<ul> <li>Due August 1<sup>st</sup></li> <li>Steps 1</li> </ul>
Screening & Preliminary Scoring	<ul><li>August</li><li>Steps 2-3</li></ul>
Data Collection &  Design Recommendation	<ul><li>September-January</li><li>Steps 4-5</li></ul>
Final Scoring & Final Design	<ul><li>February-May</li><li>Steps 6-7</li></ul>
Implementation	<ul><li>June-October</li><li>Step 8</li></ul>

The Traffic Calming Process flowchart on page 7 presents the detailed 8 steps that will allow the applicant and neighborhood to understand and follow along with their request.

# **APPLICATION (DUE AUGUST 1<sup>ST</sup>)**

Applications can be submitted at any time; however **August 1**<sup>st</sup> is the deadline for consideration for the following year. Step 1 can also be seen in the process flowchart on page 7.

#### WHO CAN APPLY?

Any community member in Minneapolis can apply for neighborhood traffic calming. Community members include residents, property owners, business owners, neighborhood and business organizations.

## **HOW TO APPLY?**

The traffic calming application is available on the <u>city website</u> and in Appendix B of this document. The application is used to identify the location of the request and the specific traffic concerns. The application can be completed by any community member and should take less than 30 minutes.

The applicant can submit the application to Public Works through the <u>online form</u>, by sending it to

<u>Traffic.Calming@minneapolismn.gov</u>, or by mailing to:





Traffic & Parking Services 300 Border Ave N Minneapolis, MN 55405

## Additional application items to note:

- The application does not ask the applicant to select a traffic calming treatment because that will be determined by Public Works through a technical evaluation.
- This traffic calming process is not for requesting stop signs, alley speed bumps, nor speed display trailers. Please make these requests by calling 311 (or 612.673.3000).
- No funding is required from the applicants and/or the neighborhood. This traffic calming process is annually funded by the Minneapolis Department of Public Works.
- No data gathering is required from the applicants and/or the neighborhood. Public Works will collect data as appropriate in later steps.

## **SCREENING & SCORING (AUGUST)**

Public Works will screen then score the traffic calming applications based primarily on two criteria: Traffic Conditions and Community Context. Other factors may be taken into consideration, such as recent and future street improvements. Steps 2-3 can also be seen in the process flowchart on page 7. More on criteria and other factors can be found in Appendix E.



Public Works will perform an Initial Screening of all applications to check that the location meets a minimum threshold that identifies a need for traffic calming.

Scores will be applied to applications that pass the initial screening.

Applications that receive high scores will move to the Data Collection & Design Recommendation phase and be considered for implementation the following year.

Funding availability will determine how many applications continue to the next

phase. After screening, Public Works will contact each applicant to let them know the status of their application. Applications which pass the initial screening but are not selected for implementation in their first year will be reconsidered in the following second year. If the application is not selected the second year, the applicant will need to resubmit the application in year three for it to continue to be considered. If a location is selected for a traffic calming



treatment or has had other traffic safety measures installed, applications for the same location will not be considered for five years following installation.

## DATA COLLECTION & DESIGN RECOMMENDATION (SEPTEMBER – JANUARY)

For the applications that score the highest, Public Works will host a community meeting to get more input from the neighborhood on their traffic safety concerns. The neighborhood organization and applicant will be asked to help promote the meeting. At this point the neighborhood will be asked to provide support for the application, to move forward to the data collection phase.

Public Works will collect traffic data, finalize the evaluation of the location and develop recommended traffic calming improvements. Recommended improvements will generally come from the traffic calming toolbox in Appendix F of this guide. Steps 4-5 can also be seen in the process flowchart on page 7.

## FINAL SELECTION & FINAL DESIGN (FEBRUARY - MAY)

Public Works will apply the data collected in the previous steps to establish priority, and tentative implementation timeline for each application.

Public Works will communicate the proposed treatments to the neighborhood and get feedback on the recommended traffic calming improvements and implementation timelines. Often there is more than one treatment that could be successful, and neighborhoods will have input on which of the recommended treatments will be installed.

If there is community support for the recommended traffic calming improvement, Public Works will work to finalize designs and implement within 6-12 months. Project timelines will be prioritized based on the scoring outlined in Appendix E of this guide and the availability of construction crews.

If there is not community support for the recommended improvement, Public Works may not implement the traffic calming or may decide to adjust the recommendation based on feedback. Public Works may also suggest implementing a pilot project as a test so that it can be removed or adjusted.

Steps 6-7 can also be seen in the process flowchart on page 7.





## IMPLEMENTATION (JUNE – OCTOBER)

Prior to installation, Public Works will communicate with the applicant and people who participated in community meetings on the timeline and details for traffic calming implementation. After installation, Public Works will monitor installations and may adjust if deemed necessary.

Some treatments (for example bollard bump outs) may be implemented with low-cost materials. The life of treatments implemented with low-cost materials is about five years — at which time Public Works may determine whether to reinstall the traffic calming treatment with low cost materials, install the treatment with permanent materials (for example concrete), or re-evaluate the treatment.

If the installation is a pilot, Public Works will clearly communicate how long the pilot will be in place, how community members can share feedback on the pilot, and future steps for evaluation.

Step 8 can also be seen in the process flowchart on page 7.

# TRAFFIC CALMING PROCESS

PPLICATION

SCREENING & PRELIMINARY SCORING

DESIGN RECOMMENDATION

# STEP 1:

Community member or neighborhood organization submits application to Public Works.

#### STEP 2:

Public Works completes initial screening of all applications received citywide.

Application meets minimum screening threshold.

#### STEP 3:

Public Works conducts scoring for remaining applications.

Application ranked among top locations based on score.

### STEP 4:

Public Works holds community meeting to get more input and support from the neighborhood on their traffic safety concerns.

## STEP 5:

Public Works completes technical evaluation and identifies recommended traffic calming treatments.

## STEP 6:

Public Works will use the data collected in the previous phase to establish a final priority and tentative implementation timeline for each application.

# **STEP 7:**

Public Works communicates with community the recommended traffic calming treatment, and implementation timeline and steps.

Neighborhood supports recommended traffic calming treatment.

# STEP 8:

PublicWorks implements recommended traffic calming treatment.

#### Implementation Notes:

Public Works may determine that a pilot installation is needed based on the scope and type of treatments.

After installation, Public Works will confirm that the treatment is working as intended and may make adjustments to the installation if needed.

Application does not meet minimum screening threshold.
Application does not move forward. Traffic calming treatment is not installed.

Minneapolis

Application is not ranked among top locations based on score.

Public Works will consider the application the following year. If the application is not selected the second year, the application must be resubmitted to be considered in future years.

Neighborhood does not like or does not support recommended traffic calming treatment. Application does not move forward. Traffic calming treatment is not installed.

# Legend:

Action by applicant

Community Meeting

Action by Public Works



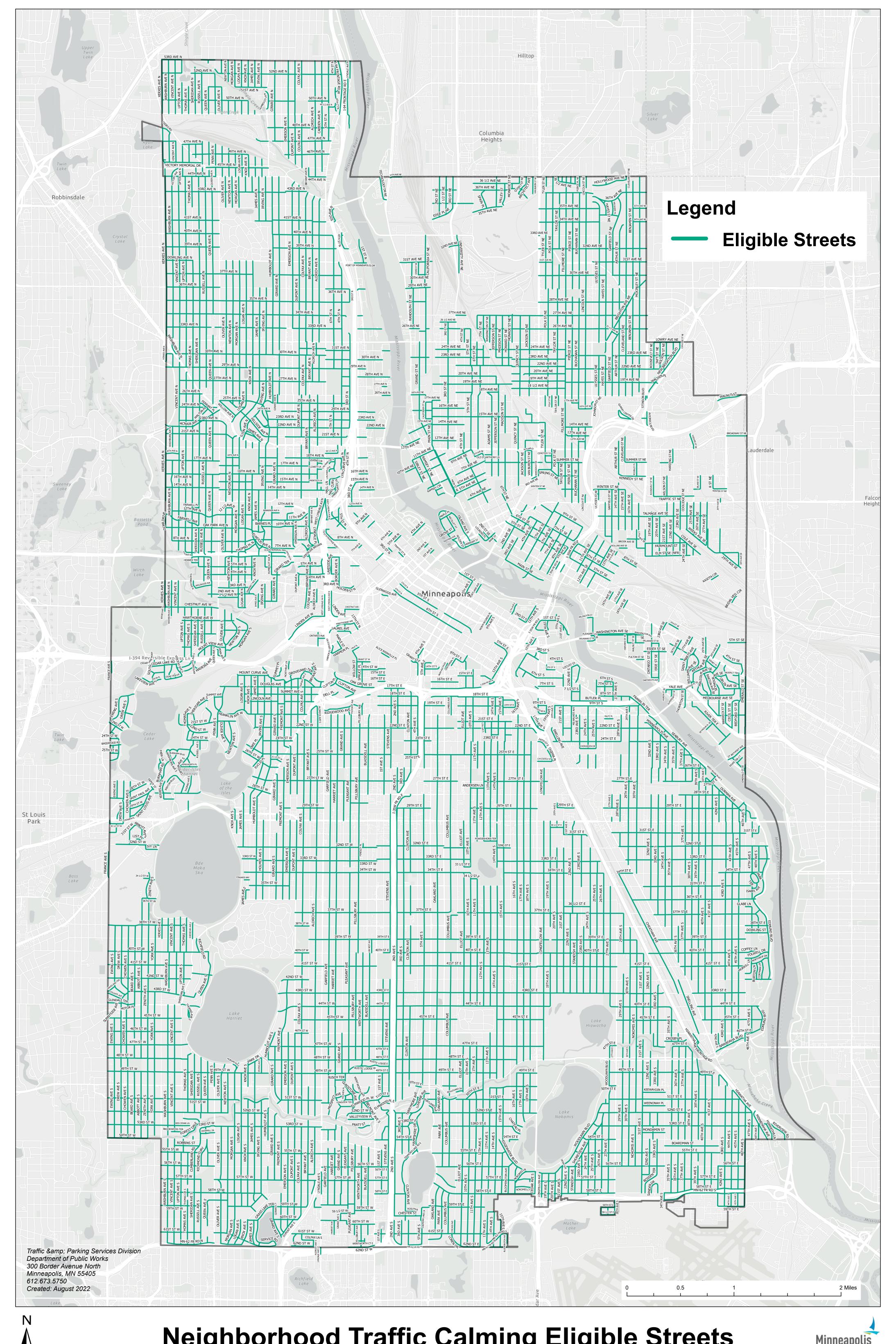
# Appendix Table of Contents

APPENDIX A: STREETS ELIGIBLE FOR TRAFFIC CALMING	A-1
APPENDIX B: APPLICATION	B-1
APPENDIX C: GOAL & OBJECTIVES OF THIS PROCESS	C-1
APPENDIX D: NEIGHBORHOOD GUIDANCE	D-1
APPENDIX E: SCREENING & SCORING	
Transportation Criteria	E-4
Community Criteria	E-7
APPENDIX F: TRAFFIC CALMING TOOLBOX	F-1
Traffic Calming Treatments	F-2
Street Pavement Markings	F-2
Speed Hump	F-3
Raised Pedestrian Crossing	F-4
Median Refuge Island	F-5
Mid-Block Median Island	F-6
Curb Extension	F-7
Pinch Point	F-8
Traffic Circle	F-9
One-Way Street	F-10
Two-Way Street	F-11
Additional Supporting Strategies	F-12
Speed Display Trailer or Speed Display Sign	F-12
On-Street Parking	F-13
Yard Signs	F-13
Marked Crosswalk	F-14
Crosswalk Pedestrian Paddle	F-14
Speed Limit Sign	F-15
Alley Speed Rump	F-16



# APPENDIX A: STREETS ELIGIBLE FOR TRAFFIC CALMING

Map on next page or link to online map available <u>here</u>.





**APPENDIX B: APPLICATION** 



# **Traffic Calming Application** Minneapolis Please use this form to request traffic calming for your street. Note that neighborhood support is required prior to the data collection phase. **Contact Information** Name: Phone: Address: Email: **Request Location** Please identify the location of your concerns. No more than two streets should be included on one application. □ Intersection or Street Block/Blocks □ Intersection or Street Block/Blocks **Traffic Concerns** Where is your traffic concern located? O At an intersection O Between intersections Both Indicate and prioritize the issues you hope to address through traffic calming. Most important Less important Vehicle speeds Drivers not yielding to pedestrians Traffic volumes or cut-through traffic Crashes Difficult to bike Other (describe below)



4.	What times of the day or days of the week do these problems occur?
5.	What additional factors do you think should be considered in the evaluation? For example, any unique conditions or circumstances.
6.	Other information regarding your concern. Please attach photos, sketches, or other supporting information about the problem.
Sub	mit completed application to Traffic.Calming@minneapolismn.gov or I to:
300	fic & Parking Services Border Ave N neapolis, MN 55405  4/30/24 version 6



## APPENDIX C: GOAL & OBJECTIVES OF THIS PROCESS

Access to livable, efficient, and pleasant streets is the overall goal of this Traffic Calming Process.

The objectives of this process are:

- Supporting more effective safety improvements. Although Public Works cannot
  immediately address each of the thousands of traffic calming requests received
  annually, this process will allow more effective use of limited resources to make
  valuable safety improvements.
- Fairness. A data-driven process will be used to evaluate and prioritize all applications.
- **Equity.** Racial and economic data will be used as part of the evaluation and prioritization of improvements. Additionally, Public Works will work to make the program process accessible to all.
- **Transparency.** Public Works will communicate directly with neighborhoods and requesters on the status of requests, share the details of how requests are evaluated, and be clear about available traffic calming resources.
- **Efficiency.** This process is intended to be as easy as possible for community members, their neighborhood organizations, and city employees that are implementing it.



#### APPENDIX D: NEIGHBORHOOD GUIDANCE

Public Works requires that applications are supported by more than a few people, so the applicant is asked to gather neighborhood support. Prior to traffic calming data collection, Public Works staff will ask applicants to help gather the support of the neighborhood and spread the word of upcoming community meetings, and other ways to provide feedback. The role of the neighborhood in the traffic calming process is to:

- Help gather input so Public Works can better understand the issues that community members want to address with traffic calming
- Affirm that traffic calming treatments make sense for the neighborhood and are supported by more than a few people
- Provide input on the traffic calming treatments recommended by Public Works
- Help schedule and promote the community meetings regarding the application/improvements

Public Works will be responsible for all the data collection and evaluation. The neighborhood will be asked for input at the start of the technical evaluation and after potential traffic calming recommendations have been identified.



#### **APPENDIX E: SCREENING & SCORING**

The City of Minneapolis has developed a set of criteria for prioritizing traffic calming projects that have a traffic safety focus. These criteria are intended to capture the key characteristics of a location.

- Traffic Conditions capture the key traffic characteristics of a location.
  - How many vehicles are using the street?
  - How fast are the vehicles driving?
  - Have there been crashes on the streets?
- **Community Conditions** considers the characteristics of the people that live in the neighborhood.
  - Who are the people that use the street and what are their needs?
    - community demographics
    - proximity to a cultural district
    - vehicle availability
  - Who will use the street in the future?
    - potential users of the street
  - What community attractions like schools and parks are on or near the street?
    - proximity to people generators

Each traffic calming application is evaluated by Public Works using these considerations and prioritized based on its needs. The quantitative criteria were selected based on data that reflected transportation needs and community priorities, as well as data that was readily available and easy to understand.

- Other Factors: In addition to the quantitative analysis, there are qualitative considerations in evaluating the traffic calming applications.
  - Are there future planned improvements on the street? Traffic calming and safety treatments may best be implemented through an upcoming street reconstruction or safety improvement project.
  - Is there an existing or planned on-street bicycle facility planned for the street? Streets where people on bikes are expected regularly may have a higher need for traffic calming.
  - Do other agencies or utilities have projects that should be coordinated with this work? Coordinating projects can result in a better design for the street.
  - Are traffic calming treatments likely to reduce speeding, risky driving behaviors, and/or cut-through traffic at the location? Public Works uses engineering judgment to determine how to best address the concerns.



The scoring for all traffic calming applications is summarized in **Table E-1** and **Table E-2**. Each criterion and its scoring are described in more details on the following pages. Public Works will reevaluate the criteria and scoring annually and make adjustments as needed.

- **Initial Screening** is used by Public Works to check that the location meets a minimum threshold that identifies a need for traffic calming.
  - The minimum threshold is 24 points in the Transportation category. Most streets in Minneapolis will meet this threshold, but streets with low traffic and little or no history of crashes in the last 5 years will not.
  - Applications that have a transportation score lower than the minimum threshold would not move to the next step in the technical evaluation.
- Scoring is used by Public Works to prioritize all the remaining applications. The applications with the highest scores move to the next step in the process. Public Works will only move forward as many applications as can potentially be funded in the following year. The exact number of applications that move forward will depend on available resources but is anticipated to be about 10 or 20 per year.
- **Final Selection** is completed by Public Works to prioritize the implementation timeline for the top-scoring applications. Additional data about the number and speed of vehicles on the street are collected as part of this step.



Table E-1. Initial Screening (Transportation Only) and Scoring

Category	Criteria	What is Measured	Maximum Number of Points
Transportation	Traffic Conditions	Traffic Volume	48
	Safety	Crashes (5 years)	24
	Transportation Subtotal		72
Community	Equity	Non-White Majority	12
		Low Income Population	16
		Vehicle Availability	8
		Cultural Districts	8
		Potential Users	6
	People	Proximity to Schools,	8
	Generators	Parks, Libraries, LRT or BRT	
		stations	
	Community Subtotal		58
TOTAL			130



# **Transportation Criteria**

These criteria consider the traffic and safety characteristics of the street.

## Traffic Volume

- What is measured: The number of vehicles driving on a street per day.
- Data source: On busier streets, Public Works routinely counts traffic volumes, and these existing counts will be used. On other, a software tool that uses a sampling of smart devices is used to estimate traffic volumes for the scoring. For the final selection, Public Works would complete traffic counts on the local streets.

Criteria		Points Awarded
Collector/ Arterial	AADT > 5,000 vehicles/day (vpd)	48 points
	3,000 vpd < AADT ≤ 5,000 vpd	36 points
	1,000 vdp < AADT ≤ 3,000 vpd	24 points
	AADT <u>&lt;</u> 1,000 vpd	12 points
Local	Volume ≥ 1,200	48 points
	800 <u>&lt;</u> Volume < 1,200	32 points
	400 <u>&lt;</u> Volume < 800	16 points
	Volume < 400	0 points



# **Traffic Speed**

- What is measured: The amount of speeding vehicles on the street. Additional performance measures such as: 85<sup>th</sup> percentile speed (the speed below which 85% of vehicles are traveling) and 10 mph Pace (the 10 mph range that contains the greatest number of vehicles) are used to help determine the extent of speeding issues.
- Data source: Public Works would measure vehicle speeds as part of the final selection process.



# Crashes

- What is measured: The total number of crashes in the past 5 years.
- Data source: Minnesota Department of Transportation (MnDOT) Crash Mapping Analysis Tool (CMAT2). This tool is to be used by traffic safety professionals only.

Criteria		Points Awarded
Collector/ Arterial	Crashes > 5/intersection or 2/block	24 points
	Crashes > 2/intersection or 1/block	12 points
	Crashes > 1/intersection or 1/block	6 points
Local	Crashes > 2/intersection or 2/block	24 points
	Crashes > 1/intersection or 1/block	12 points



# **Community Criteria**

These criteria consider the characteristics of the people that live in the neighborhood.

## Non-White Majority

- What is measured: The percentage of residents that identify as a minority.
- Data source: Block group level estimates from the U.S. Census Bureau, American Community Survey 5 Year Estimate. This criterion combines both race and ethnicity: the percent persons of color is calculated as the number of non-white people plus the number of white Hispanics divided by the total population.
- The scoring of this criteria is the same as for the <u>20 Year Streets Funding Plan</u>, which is used to guide street project prioritization in the city's Capital Improvement Program.

Criteria	Points Awarded
Street in area with ≥50% of residents being persons of color	12 points
Street in area with ≥30% to <50% of residents being persons of color	4 points
Street in area with <30% of residents being persons of color	0 points



# Low Income Population

- What is measured: Percentage of residents with family income less than 185% of the federal poverty threshold. In 2024, 185% of the federal poverty threshold is \$57,720 for a family of four or \$27,861 for an individual living alone.
- Data source: HHS Poverty Guidelines for 2024 from the U.S. Department of Health and Human Services; Block group level estimates from the U.S. Census Bureau, American Community Survey 5 Year Estimate.
- The scoring of this criteria is the same as for the 20 Year Streets Funding Plan, which is used to guide street project prioritization in the city's Capital Improvement Program.

Criteria	Points Awarded
Street in area with ≥40% of residents having family income <185% of the federal poverty threshold	16 points
Street in area with ≥30% to <40% of residents having family income <185% of the federal poverty threshold	5 points
Street in area with <30% of residents having family income <185% of the federal poverty threshold	0 points
Street ≤600 ft away from people generator	6 points
Street 600 ft to 1,200 ft away from people generator	4 points
Street > 1,200 ft away from people generator	0 points



# Vehicle Availability

- What is measured: Number of household vehicles per resident over age 16 (census block group).
- Data source: Block group level estimates from the U.S. Census Bureau, American Community Survey 5 Year Estimate.
- The scoring of this criteria is the same as for the <u>20 Year Streets Funding Plan</u>, which is used to guide street project prioritization in the city's Capital Improvement Program.

Criteria	Points Awarded
Street in area with vehicle availability of <0.50 household vehicles per driver-age resident	8 points
Street in area with vehicle availability of 0.51-0.75 household vehicles per driverage resident	4 points
Street in area with vehicle availability of ≥0.76 household vehicles per driver-age resident	0 points
Street ≤600 ft away from people generator	6 points
Street 600 ft to 1,200 ft away from people generator	4 points
Street > 1,200 ft away from people generator	0 points



## **Potential Users**

- What is measured: Population density (residents per acre).
- Data source: Block group level estimates from the U.S. Census Bureau, American Community Survey 5 Year Estimate.
- The scoring of this criteria is the same as for the <u>20 Year Streets Funding Plan</u>, which is used to guide street project prioritization in the city's Capital Improvement Program.

Criteria	Points Awarded
Street in area with >20 housing units per acre	6 points
Street in area with 10.1-20 housing units per acre	4 points
Street in area with 5.1-10 housing units per acre	2 points
Street in area with 0-5 housing units per acre	0 points

# Proximity to People Generators

- What is measured: How close the street is to people generators such as schools, parks, libraries, and light rail or bus rapid transit stations.
- Data source: MapIT Minneapolis

Criteria	Points Awarded
Street directly adjacent to people generator	8 points
Street ≤600 ft away from people generator	6 points
Street 600 ft to 1,200 ft away from people generator	4 points
Street > 1,200 ft away from people generator	0 points



# **Cultural Districts**

- What is measured: How close the street is to city-designated cultural districts.
- Data source: Minneapolis Cultural Districts Maps.
- Scoring of this criterion may be adjusted in the future to be consistent with the <u>20 Year</u> Streets Funding Plan.

Criteria	Points Awarded
Street within cultural district	8 points
Street 600 ft to 1,200 ft away from cultural district	4 points
Street > 1,200 ft away from cultural district	0 points



#### APPENDIX F: TRAFFIC CALMING TOOLBOX

Minneapolis uses different treatments to reduce speeding, risky driving and/or cut-through traffic. This section provides an overview of the different kinds of traffic calming treatments available. Public Works will select treatments based on the needs and context of a particular street. When possible, proven low-cost/ high-impact treatments will be applied first. The specific devices presented in this toolbox may change as Public Works continues to research new ideas from other cities and test new solutions where appropriate.

The treatments included in this toolbox may be used individually or a combination of several may be recommended. The cost of each traffic calming treatment has been categorized using the following tiers:

Low cost: Less than \$2,000

Medium cost: \$2,000 up to \$10,000
High cost: \$10,000 up to \$25,000
Very High cost: More than \$25,000

The costs above reflect the initial implementation cost. Traffic calming treatments also may have ongoing maintenance costs. In some cases, community members may take on maintenance responsibilities such as landscaping.



# TRAFFIC CALMING TREATMENTS

# **Street Pavement Markings**

Pavement markings can be used to narrow traffic lanes. The intent is to reduce the comfort level of the driver, which typically results in lower speeds. This traffic calming treatment is most applicable on streets where the driving lanes are.



Figure F-1. Pavement Markings for Traffic Calming

Advantages	Disadvantages
Low cost	May not be as effective as other physical treatments
Delineates parking lane from driving lane	Possible loss of parking
	Pavement markings typically need to be repainted every 1-2 years



# **Speed Hump**

A speed hump is a rounded, raised area of pavement that is designed to slow vehicles down. They are installed midblock and two are typically installed per block. Speed humps are only used on urban neighborhood streets and normally they are not installed on streets that have steep uphill or downhill grades. Warning signs are installed in advance and at the speed humps.

The placement of speed humps needs to consider spacing from other features. The table below shows typical spacing between a speed hump and other street features.

Feature	Minimum Distance from Speed Hump to Feature
Intersections	100 ft
Driveways/Alleys	20 ft
Curves/Hills affecting sight lines	200 ft
Railroad crossing	200 ft



Figure F-2. Speed Hump

Advantages	Disadvantages
Reduces vehicle speeds in the vicinity of the speed hump	May create noise particularly if there are loose items in the vehicle or trailer traveling over the speed hump
Self-enforcing	May result in increased volumes on surrounding streets
Medium cost	May impact emergency response times



# **Raised Pedestrian Crossing**

Raised crosswalks combine a speed hump with a pedestrian or bicycle crossing point. They are used at intersections to slow vehicles down at an intersection and prioritize the pedestrian crossing. Raised crosswalks are only used across urban neighborhood streets and are typically not considered at traffic signals. Drainage challenges may limit the feasibility of a raised crossing. Warning signs are installed in advance and at the raised crosswalk.

Advantages	Disadvantages
Reduces vehicle speeds at the intersection	May create noise if there are loose items in the vehicle or trailer traveling over the speed hump
Prioritizes pedestrian crossing	May result in increased traffic volumes on surrounding streets
Self-enforcing	May impact intersection drainage
Medium to high cost	May impact emergency response times



Figure F-3. Raised Crossing



# **Median Refuge Island**

Median refuge islands are protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings. Crossings of two-way streets are facilitated by allowing bicyclists and pedestrians to navigate only one direction of traffic at a time.



Figure F-4. Median Refuge Island

Advantages	Disadvantages
Shortens crossing distance and improves visibility of pedestrians	Can conflict with on-street bike lanes
Can slow down vehicles at the intersection	Minor reduction in on-street parking
Low cost for bollard installations	High to very high cost for concrete installations
Concrete installations may provide space for additional greening	Concrete installations may impact drainage



# **Mid-block Median Island**

Mid-block median islands are a raised island located along the street centerline that narrows the travel lanes at that location. The visual appearance of narrowed lanes encourages a motorist to slow.



Advantages	Disadvantages
Reduces vehicle speeds in the vicinity of the median island	Can conflict with on-street bike lanes
Self-enforcing	Minor reduction in on-street parking
Low cost for bollard installations	High to very high cost for concrete installations
Concrete installations may provide space for additional greening	Concrete installations may impact drainage



# **Curb Extension**

Curb extensions, also known as bump outs, are an extension of the sidewalk zone or curb line into the street at intersections or mid-block locations. Curb extensions are intended to reduce vehicle speeds, make pedestrians and bicycles more visible at an intersection, and reduce the crossing distance. Typically curb extensions are used on streets that have on-street parking or a shoulder.

Curb extensions can be used on all types of streets. They are typically installed with bollards but may be installed in concrete as part of a street reconstruction, intersection improvement, or other capital project.



Figure F-5. Temporary Curb Extensions



Figure F-6. Permanent Curb Extensions

Advantages	Disadvantages
Shortens crossing distance and improves visibility of pedestrians	Can conflict with on-street bike lanes
Can slow down vehicles at the intersection	Minor reduction in on-street parking
Low cost for bollard installations	High to very high cost for concrete installations
Concrete installations may provide space for additional greening	Concrete installations may impact drainage



# **Pinch Point**

A pinch point is a narrowing of the street at multiple locations along a block, typically two per block. This is done by installing concrete blocks or other barricades on each side of the street to narrow the travel lanes, slowing traffic. Additional signage is installed alerting drivers of the street narrowing.

Advantages	Disadvantages
Reduces vehicle speeds in the vicinity of the pinch point	Temporary treatment that is removed prior to snow plowing operations
Self-enforcing	May result in increased volumes on surrounding streets
Low to Medium cost	May impact emergency response times





Figure F-7. Pinch Points using Concrete Blocks

Figure F-8. Pinch Points using Barricades



## **Traffic Circle**

Traffic circles are used at the intersection of urban neighborhood streets. They reduce vehicle speeds by causing drivers to alter their path

through the intersection and are typically installed without changes to the existing curbs at the intersection.

Traffic circles can be more difficult for trucks to traverse. Public Works will size the traffic circle to maintain emergency vehicle access. They can be installed with bollards but may be installed in concrete as part of a street reconstruction, intersection improvement, or other capital project.



Figure F-9. Concrete Traffic Circle



Figure F-10. Temporary Traffic Circle in Winter



Figure F-11. Landscaped Traffic Circle

Advantages	Disadvantages
Reduces speed at intersection	May be difficult to navigate for larger vehicles.
Can slow down vehicles at the intersection	May result in increased traffic volumes on surrounding streets
Low cost for bollard installations	May impact emergency response times
Concrete installations may provide space for additional greening	High cost for concrete installations
	Concrete installations may impact drainage



# **One-Way Street**

Converting a two-way street to a one-way street is typically used to reduce traffic volume or cut-through traffic. The conversion needs to consider the length of the one-way segment, access to homes and businesses, and whether a pair of one-way streets needs to be created.

Cul-de-sacs or dead-end streets will not be considered as a part of this Traffic Calming process. Additionally, they are not typically implemented in Minneapolis because of the city's goal to maintain and improve the grid street network.



Figure F-12 One-Way Street

Advantages	Disadvantages
Reduces the number of vehicles on the street	May result in increased traffic on adjacent streets due to vehicle circulation
Can increase space for on-street parking on narrow streets	May impact emergency response time
Low to Medium cost	Vehicle access to homes and businesses may be less convenient
	May lead to more speed
	Short on-way segments can be confusing for drivers unfamiliar with the area



**Two-Way Street** 



Figure F-13. Two-Way Street

Converting a one-way to a two-way street is typically used to reduce vehicle speeding and increase access to homes and businesses. The surrounding street network should be considered when proposing changing a one-way operation to a two-way operation.

Advantages	Disadvantages
Reduces vehicle speeds	Increased traffic volume
Provides better access and circulation	Increased cut-through traffic
Low to Medium cost	



## ADDITIONAL SUPPORTING STRATEGIES

The following strategies can be used with the other traffic calming treatments described in this section.

Speed Display Trailer or Speed Display Sign
The speed display trailer is a mobile, speed
monitoring device that displays the posted speed
limit and advises drivers of their current speed. It is
a temporary tool, and the speed display trailer does
not provide speed enforcement capabilities. The
speed display signs have the same capabilities but
are used in areas that trailers cannot be deployed
such as No Parking zones, bike lanes etc. The city
moves the trailers to new locations throughout the
city about once a week, and signs about every two
to four weeks.

To request a speed display trailer on a certain street, please contact 311 or <u>submit a request on</u> <u>the city's website</u>. A traffic calming application does not need to be completed. The speed display trailers



Figure F-14. Speed Display Trailer

and signs are typically used between the months of April and November.



Figure F-15. Speed Display Sign



# **On-Street Parking**

When parked vehicles line the street, they take up space and tend to result in drivers slowing down. It is considered a passive traffic calming treatment.



Figure F-16. On-Street Parking

## **Yard Signs**

Yard signs can be placed on any street to encourage drivers to drive slower. Minneapolis often has "20 is Plenty, Slower is Safer" yard signs available for community members. Please contact 311 or <a href="mailto:visionzero@minneapolismn.gov">visionzero@minneapolismn.gov</a> to see if there are currently yard signs available.



Figure F-17. Yard Sign



## Marked Crosswalk

Pedestrians have the right of way at all legal crossings (all legs of an intersection) unless signs or signals say otherwise. A painted crosswalk at a legal crossing, often with signage placed in advance and next to the crosswalk, can provide more visibility to the crossing. However, research has shown that crosswalks and signs alone do not improve pedestrian safety. The City considers factors such as pedestrian volumes, school routes, the number of traffic lanes, and the intersection control to determine whether a crosswalk should be painted.



Figure F-18. Painted Crosswalk

## Crosswalk Pedestrian Paddle

In limited situations, a crosswalk pedestrian paddle may be used within a crosswalk during specific days and times. The paddle reminds drivers that it is required by law to stop for pedestrians in the crosswalk. They are typically used at a public facility that generates significant pedestrian traffic, such as a school. The paddle is placed, removed, and maintained by the staff of the public facility.

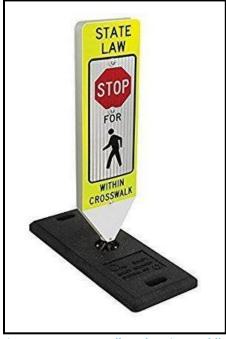


Figure F-19. Crosswalk Pedestrian Paddle



# Speed Limit Sign

Speed limit signs are placed systematically throughout the City to reinforce the maximum speed allowed on that roadway. When the speed limit transitions due to road authority or road type a speed limit sign will be placed to remind motorist of the speed limit change. The current speed limit is 20 mph unless otherwise signed.



Figure F-20. Speed Limit Sign



# **Alley Speed Bump**

Alley speed bumps can be requested when speeding or cut-through traffic is a concern in the alley by calling 311. It is the responsibility of the affected block to pay the cost. Initial installation of the speed bumps is installed by the City of Minneapolis. From there, the affected block is responsible for the removal, storage, and placement of the devices annually.



Figure F-22. Alley Speed Bump



Figure F-21. Sign for Alley Speed Bump