City of Madison Traffic Calming Program (TCP)
Traffic Calming Subcommittee (TCS)
Project charter, workplan, and timeline
Draft 10/19/2020, V2

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Charter

Purpose

TCS is to "produce a report that identifies opportunities to improve outcomes and processes related to: traffic calming, safety enhancements, and pedestrian and bicycle system enhancements in the City of Madison (including, but not limited to, the Neighborhood Traffic Management Program and the Pedestrian/Bicycle Enhancement Program), with a goal of equitable distribution of resources that improves safety and encourages increased walking and biking across the city."[1]

- A City of Madison Traffic Calming Program with the following purposes:
  - Primary:
    - Increase bike/ped use (mode shift)
    - Enhance bike/ped access and accommodations
  - Secondary:
    - Reduce speeding
    - Traffic calming
    - Safe access to transit
    - Safety enhancements(?)
  - Overarching
    - Equitable distribution of resources

- **Goals**
  - Outcomes focused
    - Is safer
    - Encourages walking, bicycling, transit
    - Provides safe access to transit
  - Equitable

Commented [BBE-D1]: Bill: Divide into primary and secondary purposes?
Primary: increase bike ped use, traffic calming,
Secondary: safe access to transit, reduce speeding

Commented [BBE-D2]: Should this instead be elsewhere? Quite a bit of discussion on this. Suggested elsewhere in doc; noted in comments.

Commented [BBE-D3]: What does this (safety enhancements) mean specifically?

Commented [BBE-D4]: Maybe this isn't a goal but is a desired outcome – what is the right place for this?

[1] TPPB approved 2/3/20 (item E.2. Leg File #59390); TC approved 2/12/20 (item F.4. Leg File 59446). *See Appendix A.*

        - All ages & abilities
        - All areas of the city
        - All kinds of roadways (local, collector, arterial)
    - Good public process/access
        - Accessible
        - Transparent
        - Inclusive
        - Issue reporting (how issues are reported)
        - How residents can advocate for selection
        - Outreach & engagement
    - Efficient
        - Good use of time for staff, commissioners, alders, residents, etc
        - Looks at area/corridor intervention rather than street by street
        - Cost-effective

- **Program elements**
    - Standardized, repeatable, and defensible process
    - Requests/getting issues into the program
    - Creative & flexible: all options on the table
    - Evaluating requests/determining solutions/interventions
    - Prioritizing recommended interventions
    - Public input
    - Decision making
    - Implementation
    - Evaluate effectiveness of individual interventions (include resident feedback/satisfaction, level of engagement)
    - Assessment/review/make changes of program
    - Funding
    - Transition from existing programs (bike ped enhancements & traffic calming) *See Appendix B.*
    - Implementation (balance – feasibility of implementation needs to inform the work)
    - Considers costs *See Appendix C.*
    - Considers funding *See Appendix D.*

- **Desired characteristics**
    - ~~Best~~ Appropriate use of available funding and staff time
    - Keep objectivity, enhance flexibility; stick to process outcomes
    - Maintain progress of existing processes
    - Reasonable implementation timeline
    - Introduction needs to be seamless (to the extent possible) with existing processes and expectations; idea of piloting some new ideas such as zone/area
    - Citizen education on process and treatments, including innovative Tx

- **Issues to consider or address**

- Improving process transparency (create online portal)
- Communication (how do we reach all stakeholders)
- Street by street vs. neighborhood by neighborhood
- Solutions are in boxes (speed humps vs stop signs etc)
- Engineering and TE projects are mostly separate
- Instigated by neighbor complaints almost exclusively
- Role of enforcement?
- Crossing guard program
- Limitations (metro routes, fire routes, arterials)
- Voting by neighbors comes before approval by TC
- Who gets to vote?

Workplan

1. Determine project goals, desired outcomes
2. Identify key questions, issues, and program elements (e.g. process)
3. Assign report element tasks, determine documentation format
    a. Research other models (see *Traffic Calming Program & Other Related Program Examples* doc)
    b. Research existing programs (see Appendices)
    c. Research key questions and issues
4. Present findings (in writing, review with team at TCS meeting)
5. Determine what works or might work, what doesn't
6. Make recommendations

Timeline

- **3/16/20 – 9/17/20**: develop project goals and desired outcomes; identify key questions and issues
- **9/30/20**: present initial to TC and TPPB
- **10/15/20**: review draft workplan
- **10/29/20**: finalize workplan, review draft documentation template(s)
- **11/12/20 – 12/3/20**: research and document assigned tasks, share drafts
- **12/3/20**: present findings & recommendations, discuss
- **12/17/20**: determine recommendations
- **12/17/20 – 2/5/21**: write & edit report
- **2/8/21**: submit report
- **2/15/21**: report deadline

Questions:

- Public review?
- TPPB & TC review of draft?
- Date to present report – joint mtg?
- Implementation timeline

Transition

How to transition from old to new program

- May selection is likely key to carry out upcoming construction season contracts
- City staff to provide other key timing and key program elements (to carry over to new program)

Report

TCS is to "produce a report that identifies opportunities to improve outcomes and processes related to: traffic calming, safety enhancements, and pedestrian and bicycle system enhancements in the City of Madison (including, but not limited to, the Neighborhood Traffic Management Program and the Pedestrian/Bicycle Enhancement Program), with a goal of equitable distribution of resources that improves safety and encourages increased walking and biking across the city."

Report outline

1. Project overview and exec summary
2. Questions to answer (see *Traffic Calming Questions/Ideas*)
3. Overview of current programs, identification of good things with current programs
4. Options / ideas considered
5. Recommendations
    a. Annual timeline
    b. Opportunities for public involvement
    c. How to ensure application of lens of equality
    d. Funding
    e. Metrics

Report content - concepts

- Focus on creating one mechanism to collect requests for traffic and ped/bike related issues and concerns from multiple sources (residents, alders, staff, neighborhood resource teams)
- Consolidate funding (could still possible determine allocations for safety vs ped/bike enhancement)
- Staff determines if the issue falls under safety or encourages/promotes walking, biking, transit
- Staff Identify comprehensive solutions involving all possible interventions and consider logical boundaries - interventions encompassing multiple blocks or a corridor, not just one block/neighborhood
    - Must consider implications of expanding geographic area (increases cost and decreases number of areas that can be addressed)
- Staff Prioritize projects based on cost/benefit (increase in safety or increase in ped/bike promotion), equity, available funds, and timing (consider future projects)
- TC reviews recommendations and approves or modifies list or recommendations
- Use street reconstruction, resurfacing, path, and sidewalk projects as opportunities for traffic calming and ped/bike enhancements (skinny streets & other interventions as integrated components of the project)
- Increases safe access to transit

Commented [BBE-D5]: Is this the right place to put this?

Traffic Calming Questions/Ideas

1. Why do we want to reduce speeding?
    a. Crash reduction
    b. Crash severity reduction (injury)
    c. Reduce fear of being outside of cars - Encourage/support walking/biking
2. Why do we want to enhance ped/bike access?
    a. Mode shift
    b. Recreational access
    c. Safety
    d. Health & Quality of Life
3. How do we identify streets/routes in need of traffic calming & ped/bike enhancements?
    a. Residents/schools/alders/community organizations
    b. Proactively through routine speed & volume data capture
    c. Proactively through review of crash data
    d. Ped/Bike Network Analysis
    e. Other public engagement/plans (neighborhood and special area plans)
    f. Other (re)construction projects
4. How do we prioritize streets that need calming & ped bike enhancements?
    a. Volume of cars over x speed (better than %)
    b. # of peds/bikes on street
    c. Population and destination density (current and projected)
        i. Schools
        ii. Parks
        iii. Grocery stores
    d. # of injuries
    e. Opportunity to increase walking/biking post-intervention
    f. Importance of segment in ped/bike network
    g. Equity - AAA
    h. Quality of current infrastructure/alternatives
5. What are our options for speed reduction intervention? NACTO
    a. Vertical deflection
        i. Speed humps
        ii. Speed tables
    b. Horizontal deflection
        i. Traffic circles (need to address effectiveness coupled with street width, impact on bike travel)
        ii. chicanes
    c. Street/lane narrowing
        i. Bumpouts/chokers

        ii. Median/median island
        iii. Bike lanes
        iv. Width
        v. Yield street
    d. Signs & paint
        i. A lot of options
    e. Lane deflection
    f. Speed boards
    g. Enforcement
    h. Diverters & stop signs
    i. Speed limit reduction
    j. Pavement texture
    k. Fringe (vegetation)
    l. Trees
6. What are our non-speed reduction ped/bike enhancements?
    a. Street crossing supports
        i. Crosswalks
        ii. RRFB
        iii. Other signage
    b. Pedestrian separation (sidewalks)
    c. bike separation (buffered and protected bike lanes & low-stress network)
    d. Closing gaps in ped and bike networks
    e. Wayfinding
7. What are the obstacles/competing priorities?
    a. MV throughput
    b. MV parking
    c. Metro
    d. Fire/EMS
    e. $
8. Should we do street by street or focus on neighborhoods?
9. How much $ should we spend on this each year?
    a. How much for speed reduction vs. other ped/bike improvements?
    b. Accomplish some with reconstruction projects, some with small scale engineering projects, some with markings/signage/temp. curb/bollards
10. Public Process
    a. Input
    b. Information sharing
    c. postcards/voting?
    d. Equity
11. Role of staff

a. Data collection/analysis
b. Recommend interventions
c. Receiving requests
d. Follow up with outcomes to requesters
e. Maintain website with current info
f. Outreach
g. Review adopted plans

12. Role of TC
    a. Approve projects based on data & staff & public input
    b. Balance competing interests
13. Timing (once per year vs ongoing)
    a. Selection
    b. construction
14. Temporary projects
15. Metrics
    a. What is our goal for speed reduction?
        i. % improvement or below a certain threshold post intervention?
    b. How do we measure effectiveness?
    c. How do we ensure our interventions/investments are equitably distributed in the city?
16. How do we solve the Swanton Road/Walter Street problem? (very high speeding issue, but on a bus route)

	Ranking for 2020 NTMP Program	% Over PSL+5	Candidate Street	AWT	# vehicles over 35	# vehicles over 40	# vehicles over 45
1	2	34%	Swanton Rd	6,532	378	59	14
2	1	24%	Walter St	4,325	159	16	3

APPENDIX A

Resolution by Joint Transportation Commission ("TC") and Transportation Policy and Planning Board ("TPPB") to create a Traffic Calming Subcommittee

Authority: The TPPB and TC jointly create the Traffic Calming Subcommittee pursuant to Sec. 33.01(4)(e), Madison General Ordinances.

Purpose: The Traffic Calming Subcommittee ("TCS") shall be responsible for developing and issuing a final report to be presented to the Transportation Commission (TC) and the Transportation Policy and Planning Board (TPPB) that identifies opportunities to improve outcomes and processes related to: traffic calming, safety enhancements, and pedestrian and bicycle system enhancements in the City of Madison (including, but not limited to, the Neighborhood Traffic Management Program and the Pedestrian/Bicycle Enhancement Program), with a goal of equitable distribution of resources that improves safety and encourages increased walking and biking across the city.

Members: The Subcommittee shall consist of 5 members and 2 alternates. 2 of the members shall be from the TC, 2 of the members shall be from the TPPB, and at least 1 member shall be a joint TC/TPPB member. The 2 alternates may be from either the TC or the TPPB. TC members shall be appointed by the Chair of the TC and TPPB members shall be appointed by the chair of the TPPB. Alternates shall be designated and participate as provided in Sec. 33.01(5)(f), Madison General Ordinances.

Staff: The Subcommittee shall be staffed by the Traffic Engineering Division, led by Yang Tao.

Duties: The TCS shall create a Final Report as described in the Purpose section above. The Final Report is due to the TC and TPPB no later than October 15, 2020, unless otherwise extended by both the TC and TPPB.

The TCS is encouraged to regularly update the TC and TPPB on its progress and to provide the TC and TPPB with draft reports, if available, leading up to the issuance of the Final Report.

Dissolution: The Subcommittee shall automatically dissolve upon acceptance the Final Report by the TC and TPPB.

APPENDIX B

Existing timelines for City of Madison's traffic calming program and ped/bike enhancement program

Ped Bike Enhancement Program Timeline

- Ongoing: Collect Concerns/Requests (after February 1 projects are considered for following year's program)
- January-February – Staff Review
- February-March – Score Proposed Projects
- April -- Announce Projects & Prepare Bid Documents, Begin Design Work, Etc

Neighborhood Traffic Management Program

Purposes

1. Respond to complaints
2. Select projects

Timeline

- April thru end of October--collect speed data on streets for which we received complaints/requests for traffic calming
- November/December—finalize rankings and project list
- January/February—take project list to Transportation Commission for approval
- February/March—prepare and mail resident surveys. Allow four weeks for residents to return surveys
- April/May—take final projects approved by residents to Board of Public Works and Common Council for final approval
- May—Put contract out to bid, select contractor
- End of May/early June—Preconstruction meeting with contractor
- June thru October—Contractor constructs projects (school areas completed by Labor Day).

This is an ideal timeline which allows for flexibility in case the projects are need to go back to TC, BPW, or CC multiple times. If a new program does not require a formal resident survey, that would also allow more flexibility as that process takes quite a bit of time.

Additionally, the contractor could start later in the year, but we would ideally stick to this schedule to make sure the contractor has enough time to get all school areas completed by the start of school. As an example, our 2020 contract was delayed later than we would have liked. The contractor did not start work until August 3 and would have not been able to complete all school-area projects by the start of school. Of course, it became a non-issue due to COVID and all virtual classes. Also, an earlier bid should theoretically mean more competition among contractors and a lower bid price.

APPENDIX C

Traffic Calming Cost Information

1. Average Costs for Example Improvements

- Rectangular Rapid Flash Beacon (RRFB) $20,000
- Driver Speed Feedback Board $20,000
- Continental Crosswalk & Ped Signs - 2 Lane Street $5,000
- New Midblock Crosswalk - Simple $15,000
- Speed limit Reduction –Signage $1,500
- Green Marking for Bike Crossing $11,000 ($25/sqft)
- Pedestrian Island $8,000
- Curb Extension Varies depending on storm sewer inlets. $5,000 to $50,000
- Traffic Circle $8,000
- Speed Hump $7,000
- Bus Pad $2,000
- Sidewalk - Simple Street, Done with reconstruct $40 per linear foot
- Sidewalk - Simple Street, Infill $75 per linear foot
- Sidewalk - Complicated Grades/Stormwater, Infill $275 per linear foot
- Painted Bike Lane – One Block, Both Sides 600’ of two lines = $2,400 ($2/ft)

APPENDIX D

Funding

List of City of Madison sources for bicycle, pedestrian, transit improvements and maintenance. Unless noted, these sources cannot be used strictly to funding B/P/T improvements or maintenance.

Section 1: Overview of Existing Capital Budget Programs

Insert short overview/list

Section 2: Draft 2021 Capital Budget –Engineering and Traffic Engineering
(Links at bottom for additional information)

Engineering Capital Budget Programs

1. Neighborhood Traffic Management & Pedestrian Improvement Program - $350,000
   - Improvements for traffic and pedestrian safety on local streets to reduce traffic speeds and improve pedestrian safety
2. Pedestrian Bicycle Enhancements - $243,000
   - Improvements to improve safety and convenience for people walking and biking and increase mode share of non-motorized transportation
3. Safe Routes to School - $100,000
   - Improvements in school area to increase safety and convenience for children walking and biking and decrease conflict between all modes
4. Bikeways Program - $650,000
   - Resurfacing paths
   - Bicycle-related improvements such as small gaps in network, path lighting, funding to start larger Capital path projects
5. Sidewalk Program - $3,200,000
   - Repair defective sidewalks and provide consistent maintenance to ensure safe conditions and reduce chance of injury. Each year 2-3 aldermanic districts are the focus for repairs.
   - Small stand-alone sidewalk infill projects where there are gaps in the sidewalk network
   - Concrete bus pad additions
   - Repair and replacement of tree grates
6. Safe Routes Grants - $100,000
   - Grant program for property owners to provide 50% of an owner's sidewalk assessment for new installations to assist residents. Includes projects that

install sidewalk adjacent to an existing street where the right of way was annexed prior to 1981 or where the properties were developed prior to be annexed to the City. The project must also be allocated in an area where the frontage is at least 70% single family or two-family dwelling units.

7. Bridge Repair - $250,000
    - Repair, replacement and painting of bridges to maintain a safe condition
8. Pavement Management - $26,381,000
    - Program for street resurfacing and repair, crack sealing and chip sealing on existing streets to extend the life of existing streets
9. Reconstruction Streets - $17,730,000
    - Program to replace deteriorated streets to maintain neighborhood roadways

Traffic Engineering Capital Budget Programs

1. Traffic Safety Infrastructure - $50,000
    - Equipment to test new traffic patterns before permanent installation and support emergency response
2. Vision Zero - $500,000
    - Countermeasures that reduce the severity and frequency of crashes to reach zero deaths or serious injuries by 2030
3. Street Light Installation - $610,000
    - Improvements to outdates street lighting systems
    - Refurbish/repaint old poles, fixtures and other equipment
    - Installation of new streetlights
4. Traffic Safety Infrastructure - $50,000
    - Traffic control devices used in the design for the local share of the State Highway Hazard Elimination Program, signs and traffic safety studies
5. Traffic Signal Installation - $825,000
    - Replacing and modernizing the traffic signal network

Full details at:

- Engineering – Bike and Pedestrian,
- Engineering – Major Streets and
- Traffic Engineering.

APPENDIX E

Ped Bike Enhancement Program Workflow

Requests are received from various sources and in multiple ways. Alders, residents, Report-a-Problem, neighborhood resource teams, staff, crossing guards, principals, and in-person events. One staff person maintains a spreadsheet with all the requests. Staff who get a request from someone respond directly to the person who made the request and then have the staff person add the request to the list we use for our annual review. Each requested improvement is evaluated by the staff team for the best solution and then is ranked using the criteria below.

PROJECT RANKING CRITERIA		
SAFETY	Speed	10 points
	Crashes	10 points
	Fatalities	20 points
OPERATIONS	Access/Demand	10 points
	Connectivity	10 points
	Transit Boarding	10 points
EQUITY	Neighborhood Resource Team Location	10 points
	Minority Percentage	10 points
	Housing Assistance	10 points

Source: https://www.cityofmadison.com/trafficEngineering/PdBkEnhCurrentProj.cfm

APPENDIX F

Neighborhood Traffic Management (Traffic Calming) Program Workflow

The Neighborhood Traffic Management Program (NTMP) is a tool for residents to work with City staff to make decisions about traffic management in their neighborhoods.

The NTMP provides a mechanism for City of Madison Alderpersons, neighborhood groups, and representatives to work with City staff to make decisions about traffic management in their neighborhoods. The NTMP was developed in response to community concerns about neighborhood traffic such as:

- Speeding
- Excessive traffic on local streets
- Driver courtesy
- Traffic safety around schools, such school zone speeding and drop-off/pick up

Neighborhood associations and groups, Alderpersons representing a neighborhood, and neighborhood businesses are eligible to participate. The first step is generally to collect support, in the form of signatures, from neighborhood residents. More information on this step can be found online (https://www.cityofmadison.com/trafficEngineering/documents/HowToApply.pdf). Requestors receive an email acknowledgement (see *sample email 1*).

Sample email 1

Traffic Engineering is looking to what can be done to help manage the speeding situation on *Street X*. We will work with the fire department and Metro Transit on whether speed humps work for their operations. We can also look into potentially other traffic calming measures such as traffic islands through our neighborhood traffic management program. It is a neighborhood driven process and involves neighborhood consensus. Below are the normal steps:

1. The neighbors collect signatures of at least half of the addresses along the relevant street blocks, and send the petition back to us.

2. City performs a traffic study after we receive the petition.

3. City ranks the street compared to all other streets in the city that are being considered for traffic calming.

4. Transportation Commission approves the ranking of traffic calming projects.

5. Top ranking streets will have residents along that street surveyed via mail (March 2021).

6. Streets that have at least a 60% approval of returned surveys will get traffic calming constructed in summer of 2021.

We will evaluate whether *Street X* can fit into the program. If so, we will waive the step 1 petition process due to the current COVID-19 public health emergency, and collect the traffic data.

You can find more detailed information about this program here:
https://www.cityofmadison.com/trafficEngineering/programsTraffic.cfm

Characteristics of a successful NTMP project:

- Continuous involvement of the neighborhood residents
- Emergency services must not be seriously impaired
- Attractive devices and landscaping
- Minimal traffic diversion to other streets

The NTMP manual contains objectives, policies and procedures and can be found online (https://www.cityofmadison.com/trafficEngineering/documents/NTMP-Manual.pdf).

APPENDIX G

Traffic management techniques and traffic calming devices.

Traffic Management Techniques

1. Passive traffic control devices
    - Stop sign
    - Speed limit sign
    - School sign
    - Yield sign
    - Crosswalk

Limitations of passive traffic control devices

- Traffic signs rely on driver cooperation and adherence to laws related to the signs
- Police enforcement is typically needed to ensure effectiveness of signs

2. Active traffic control devices
    - Pedestrian or refuge island
    - Speed humps
    - Traffic circles
    - Full or partial road closures, such as diverters, semi diverters or cul-de-sacs
    - Chicanes

Advantages of active traffic control devices (aka traffic calming devices or active traffic management techniques)

- Police enforcement generally not required
- Removal of excess pavement width
- Eliminates straight appearance of roadway
- Shifts the vehicles' path, causing the driver to devote more attention to driving
- Can visually enhance the street with added greenery

Traffic Calming Devices

Traffic calming is the combination of physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for pedestrians, bikes, or other non-motorized street users.

1. Pedestrian refuge islands (traffic islands): horizontal speed control devices constructed on the centerline of a roadway. They may be raised, or painted, landscaped or concrete.

    Benefits:
    - Reduce width of road
    - Provide refuge for pedestrians
    - Separate vehicle lanes

• Reduce vehicle speeds
• May visually enhance street with landscaping

Parking restrictions required for traffic islands: In most cases, traffic islands will require prohibited parking at all times along the street curb where the island is located, plus about 40 feet.

2. Speed humps: rounded, raised area of pavement, placed at midblock to control vehicle speed. Speed humps are often placed in a series. They are typically 3-3.5 inches in height.

Speed Humps are generally installed on streets where:
• Speed limit is 25 mph or less
• There are fewer than 3000 vehicles per day
• There are two travel lanes that are less than or equal to 32 feet

Observed Speed Hump Impacts Speeds between humps reduced an average of 20-25% and traffic volume is reduced an average of 18%, depending on alternative routes available.

3. Traffic circles: circles of varying diameter formed by curbs. The curbs are partially or wholly mountable to enable large vehicles to turn around the circle. Traffic circles slow down traffic by forcing drivers to slow down to maneuver around them.

Question: Is it legal to go left around a traffic circle?

Answer: If there are no prohibiting signs, then both left and right turns are permissible. If a sign is posted restricting left turns, only right turns around the traffic circle are allowed.

Observed Traffic Circle Impacts Midblock speeds reduced 10%, collisions at intersections reduced an average of 70%, overall collisions reduced 28%.

RESOURCES

Madison in Motion report:
https://www.cityofmadison.com/transportation/studies/madison-in-motion

Traffic calming
toolkit: https://madison.legistar.com/View.ashx?M=F&ID=7787736&GUID=634F9C08-9D12-47EA-95A3-A4973B1FCD3D

NACTO webinar "Fire Trucks and Vision Zero" (2018):
Recording is here: https://nacto.org/event/fire-trucks-and-vision-zero/
For those who prefer written materials, there's a Q&A document:
https://nacto.org/wp-content/uploads/2018/06/5_24_18-Webinar-Questions.pdf

NATCO: Setting Safe Speed Limits on Urban Streets: https://nacto.org/safespeeds/

NTMP projects race and income data (8/6/20)

Traffic Calming Program & Other Related Program Examples (8/6/20)

Research Synthesis for the California Zero Traffic Fatalities Task Force:
https://escholarship.org/uc/item/5hg5m6sm