

Neighborhood Speed Management Program Guidelines

Program Overview

The city’s Neighborhood Speed Management Program (NSMP) is an integrated approach that applies a combination of education, enforcement, evaluation, and engineering improvements to mitigate the negative effects of speeding traffic on neighborhood streets.

The city’s original traffic calming program, the “Neighborhood Traffic Mitigation Program (NTMP),” was developed in 1994 and provided education, enforcement, and engineering improvements to neighborhood streets in Boulder. Funding for the engineering component of the NTMP was eliminated in 2003 due to budgetary constraints. The City of Boulder has since drafted new program guidelines, rebranded the program as the NSMP, revised the original process, and renewed funds for the engineering components of the program. Applications for the new NSMP were accepted in the fall of 2017, with new projects beginning design, public engagement, and implementation in 2018.

Education, Enforcement, Engineering and Evaluation

The NSMP utilizes multiple methods to change speeding behavior through measures that include education, enforcement, engineering, and evaluation. Some of the NSMP elements are site specific, used to address speeding issues at a specific location; this is most notably true for engineering and enforcement methods. Others, especially education-related strategies, are applicable to many locations throughout the city. Because engineering treatments have the potential to directly affect vehicle speed (using delay-inducing devices like speed humps), engineering methods are known to be the most effective method of reducing speeds.

All applicants to the NSMP are eligible to receive education and enforcement options. Education tools include deployment of the speed trailer on the program street, use of the radar speed gun, yard signs and guidance for self-facilitated meetings. Enforcement tools include the deployment of the photo radar vehicle on the program street. Enforcement also includes the deployment of traditional police speed enforcement as resources allow.

All streets receiving engineering treatments are evaluated prior to– and following– project construction. This procedure helps the city understand the effectiveness of traffic calming measures and informs future program decisions. Transportation Division staff will publish annual progress reports on implemented NSMP projects and project outcomes regarding effects on vehicular speeds, traffic diversion, and community satisfaction.

Transportation Advisory Board

The Transportation Advisory Board (TAB) advises City Council, Planning Board and city staff on community transportation issues. One of TAB’s responsibilities, as stated in the Boulder Revised Code, is to “work with individual citizens, neighborhood groups and transportation staff to develop and recommend criteria by which to guide neighborhood traffic mitigation projects.” TAB has been– and remains– an important resource in the development and administration of the NSMP. TAB hosted the community engagement efforts and process that served to inform the design of the NSMP and has a key role in helping staff administer the NSMP process, described below.

Traffic Calming Defined

Traffic calming, as defined through the NSMP, is a method of implementing physical traffic engineering devices to slow motorized vehicle speeds to a safe level for that street. Traffic calming can have other impacts, including improving street conditions for people walking and riding bicycles. The City of Boulder will consider all traffic calming methods as potential treatment options but will select a method that best

suits the specific conditions of the project site. Traffic control devices like traffic signals and stop signs are not typically included in traffic calming projects; therefore, stop controls will be determined separately from the NSMP process.

Use of Traffic Calming Devices Outside of the Context of the NSMP

Occasionally, raised crossings and other pedestrian crossing improvements are installed as part of non-NSMP projects. As with the NSMP, Transportation Division staff involve the police and fire departments in the design phase of non-NSMP projects to gain agreement on the use of traffic calming devices. While the NSMP focuses on residential, collector or local streets, speeding on arterial roadways will be a key consideration of other city projects such as a corridor studies.

Critical Emergency Response Route (CERR)

The fire department, coordinating with the Transportation Division, designates routes that are essential for emergency response access throughout the city. The NSMP has the potential to impact emergency response because traffic calming measures that are effective in slowing vehicles will have a similar effect on emergency response vehicles. NSMP projects that are proposed on CERRs undergo special consideration through this program. A map of CERRs in the City of Boulder is included as [Attachment A](#).

2014 Transportation Master Plan and Vision Zero

Continuing to improve transportation safety is a primary objective for the City of Boulder. The 2014 Transportation Master Plan affirmed the city's on-going commitment to safety by establishing a new objective: Vision Zero – to reduce collisions for people using all travel modes, with the goal of achieving zero serious injuries and fatalities resulting from traffic collisions. This objective reflects a national and worldwide approach to innovate and use a data driven, interdisciplinary approach to improve safety for people using all forms of transportation.

The purpose of the NSMP is to address speeding traffic on residential streets to improve the quality of life in Boulder's neighborhoods by slowing speeding traffic, which will likely lower the severity and occurrence of crashes. The program is one method by which the city is actively working to achieve its safety objectives. While the direct safety benefits of implementing traffic calming through the NSMP are not measured, the perceived safety benefits of the NSMP can positively impact neighborhood livability and mobility for all people using the street.

Simple and Complex Projects

Through the NSMP process, potential project locations are categorized as "simple" or "complex". Project categorization allows the program to evaluate a range of project types and specifically prioritize those locations that have an evident need and a relatively low cost. Simple projects are defined as those that are expected to have a localized impact on reducing speeds, address speeding issues on one short segment of a non-CERR street, be completed at a lower cost (less than or around \$15,000 per project), and have little effect on traffic diversion. If through the community engagement process, the "simple" project parameters change, the project will be re-categorized as a "complex" project. Complex projects may include impacts to neighboring streets or other travel modes or be located on designated CERR streets and will require a higher level of internal and external coordination.

Program Goals and Policies

Goals of the NSMP:

- Enhance neighborhood livability by reducing speeding traffic
- Involve neighborhood residents in addressing neighborhood-identified speeding issues
- Use clear evidence and a documented process to support the prioritization of neighborhood traffic calming activities and identify impacts of such activities (i.e., impacts to traffic diversion)
- Effectively address the public safety interests of emergency responders
- Strive toward zero injury and fatal accidents, reflecting the overall city transportation and environmental policies and values with emphasis in Toward Vision Zero and the Transportation Master Plan
- Implement speed management strategies in coordination with other City of Boulder planning priorities when possible

Policies of the NSMP:

NSMP policies are guidelines by which the program is conducted. The following policies provide a basic framework for neighborhood speed management in the City of Boulder:

- NSMP projects may only be initiated for streets within the City of Boulder.
- While it is possible for a NSMP project to be initiated by a non-resident of a neighborhood, the process will favor feedback and participation from the people living in the neighborhood where the project will occur.
- Any residential street, which is classified as a Local or Collector roadway, may be considered for traffic calming through this program. (The city's street classification map is included as [Attachment B](#)).
- Each NSMP project will include logical project boundaries that will address the issue of displacement/diversion as a result of a NSMP project. This may include expanding a project area to include streets impacted by future projects.
- The program will seek to balance the goals of efficient emergency response and reduction of speeding traffic.
- The goal of the NSMP is to reduce speeding traffic and not to address other transportation issues such as high crash locations, noise mitigation, traffic signal operations or other transportation issues apart from speeding. NSMP project elements may provide additional transportation benefits beyond a reduction in speeding, where those project elements are part of a comprehensive approach to speed reduction and neighborhood improvement.
- Implementation of the NSMP will be in accordance with the procedures set forward in this document, in keeping with sound engineering practices, and within the limits of available resources.
- With input from the community and the TAB, the City may modify and update policies and processes of the NSMP to adapt to the changing needs of the community.

NSMP Process

Neighborhood speed management for the City of Boulder is carried out in a series of steps beginning with an individual completing an online registration form. See the NSMP Process Details (p. 4), chart (p 10), and schedule (p. 11) for specifics of the NSMP process.

Application Retention Option

All applications have the option to be retained in the program for a period of two-years. Applications that are not prioritized for engineering treatments in a given year, are eligible for re-enrollment in the program at the data collection step of the process, in the following program year. Re-enrolled applications will not be required to collect petition signatures in a subsequent year. After the second year of re-enrollment, applicants must verify their petitions are still valid and/or collect new signatures if a petition does not meet the qualifying threshold.

Engineering Device Replacement and Removal

Existing traffic calming engineering treatments, or treatments constructed through the NSMP, will be re-constructed by the city during regular street maintenance. Engineering treatments that are constructed through the NSMP are not eligible for removal for a period of three years following project construction unless the city determines there to be a safety or maintenance issue as a result of the NSMP project. If a neighborhood desires to have a NSMP treatment removed after the three-year grace period, the applicant must follow the regular NSMP process including gathering of signatures and attending a public hearing with the TAB. If removed at the request of a neighborhood, the neighborhood is responsible for providing 100% of the funds for treatment removal.

Funding

NSMP project design and construction will be funded entirely through the program's budget. The City commits to build NSMP projects to a good level of quality. If a neighborhood desires to enhance the design beyond this level, the neighborhood is responsible for the difference in construction costs.

NSMP Process Details

1. Online Registration

A. Registration period

- City opens a program registration period by activating a form online and posting hard copies at several city locations.
- Individuals submit an online or hardcopy application form. Information fields on the form include contact information, location, and description of traffic issue.
- All applicants will receive an education packet that includes information about a self-facilitated meeting instructions and enforcement options

B. Project eligibility review

- The program coordinator reviews each form for completeness and eligibility based on program goals and policies.
- For eligible applicants, staff sends a petition template, program education materials, and the date for a TAB public hearing for project prioritization.

2. Enrollment/Data Collection

A. Signature gathering

- The applicant must collect signatures from either 20 neighbors or 30 percent of households on the same block (including a side of the street adjacent to where traffic calming is desired, or households on at least one entire street block adjacent to an intersection where traffic calming is desired).
- The applicant submits the petition to the city, which initiates data collection by staff.

B. Scoping and data collection

- If an applicant submits a viable petition, the program coordinator develops a scope for the project and defines a project area.
- The program coordinator facilitates the collection of project data to establish project criteria score. (Data collection and scoring methods are discussed in detail below). Data collected include:
 - CERR or non-CERR designation
 - Five most recent years of historic speed-related crashes in project area
 - Motor vehicle speeds collected on block for seven days

- Traffic volume data collected on block for seven days
- A determination of the presence of activity generators (schools, congregate care facilities, transit stops, parks, crosswalks, etc.) within one block of the location
- Lack of or type of sidewalks in project area
- Lack of or type of bicycle facility in project area
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- The program coordinator develops a project criteria score based on analysis of project data and screens projects that are below the speeding threshold. A speeding threshold is defined as the 85th percentile of vehicles traveling at speeds of greater than three (3) miles per hour (m.p.h.) above the posted speed limit or greater for one day of the designated observation period.
- The program coordinator sends correspondence with education and enforcement program options to applicants that registered for the program and did not meet speeding threshold minimum.
- The program coordinator categorizes projects passing the minimum speeding threshold as simple or complex.
- The program coordinator releases a scoring and ranking report to all applicants and posts it online.

3. Neighborhood Notification and Prioritization

A. Preliminary selection of priority projects

- TAB is presented with the ranked list of projects and a recommendation from staff that identifies which projects to move forward for neighborhood notification.
- TAB provides a recommendation to staff.
- Staff develops the final neighborhood notification list of priority projects.

B. Neighborhood notification of priority projects

- All households within the scoped project area for projects that are in the priority programming list receive a mailing with a notification of the interest to install traffic calming and a date for the TAB public hearing.
- Street signs are posted within the project area with TAB hearing notification.

C. TAB information packet and prioritization

- TAB is provided with an annual program briefing, which includes a summary of submitted registration forms, completed petitions, project cost estimates, and project criteria scores for all registered projects for that program cycle and a staff recommendation for a prioritized list of projects.

- TAB is provided with project prioritization options generated by city staff (including the high-priority simple and complex projects) for their consideration and recommendation. TAB has the option to recommend that staff revise the staff-provided prioritization list.
- TAB holds a public hearing to hear additional support or concern from the public.
- TAB provides a recommendation to staff on a list of projects (both simple and complex) to begin the design process in the coming year.
- Staff considers TAB's recommendation to finalize or modify the priority project list for the program in the upcoming year.
- A final prioritized list of projects to be worked on in the upcoming year is published on the city's NSMP website, and the program coordinator informs the respective applicants.
- Projects that are not prioritized are automatically enrolled in the program the following year and are not required to re-gather petitions. These projects will be automatically re-evaluated starting with program step 2-B.

4s. Project Development – Simple

A. Neighborhood forum

- The program coordinator sends the internal program project team (fire, police and other internal staff) information about prioritized simple projects.
- The neighborhood is invited to a forum for all simple projects where neighbors can provide input on traffic issues and proposed design concepts and cost estimates.
- The program coordinator works with internal staff and the program project team to revise designs based on community forum input.

B. Recommendation at TAB

- TAB is provided with a staff recommendation for each project and with information from the community forum and is asked to make a recommendation about whether to proceed with each project.
- Staff notifies neighborhoods of the final project design and implementation timeline.

4c. Project Development – Complex

A. Internal coordination meeting

- The program coordinator organizes an internal meeting to discuss project issues, potential impacts and proposed program actions for each complex project. This meeting includes relevant city departments and work groups, including police, fire, maintenance and utilities, as well as other agencies and organizations, as appropriate.

B. Neighborhood meeting series

- Staff hosts a neighborhood meeting series for each complex project to develop design options for engineering treatments:
 - Meeting #1 – Discuss traffic issues and potential design concepts
 - Meeting #2 – Present and collect input on design options
 - Meeting #3 – Provide a staff recommendation at a neighborhood forum. The revised design presented in meeting #3 is posted online. A neighborhood questionnaire is made available to everyone in the project boundary to collect input on Staff recommendation.
- The program coordinator posts information about meetings, project questionnaire and input gained from the neighborhood on the NSMP webpage.

C. Recommendation at TAB

- TAB is provided with the staff-recommended design and information from the community outreach. During the public hearing, TAB is asked to make a recommendation to council.

D. City Council Call-up

- Staff provides City Council with project information, preferred alternative, and TAB recommendation in an information packet. City Council is asked to consider project construction as an informational Call-up item.
- Staff notifies neighborhoods of the final project design and implementation timeline.

5. Data Evaluation and Progress Reports

A. Post-Implementation Data Collection

- City collects speed and volume data after NSMP project implementation for both simple and complex projects.
- From collected data, speed and volume impacts will be compared to data collected before implementation to gauge the success of NSMP projects.
- Simple projects will only assess speed and volume data.
- Complex projects may also include before and after bicycle and pedestrian counts, emergency response times, and speed and volume data on adjacent roadways, to be determined on a case by case basis.

B. Progress Reports

- The program coordinator will conduct a survey of NSMP neighborhoods to gather feedback on implemented NSMP projects, the program, and overall community satisfaction.
- City staff will publish an annual NSMP progress report detailing an overview of implemented projects, including before and after data collection and project impacts, community feedback and satisfaction, and goals for the upcoming year.

Data Collection and Scoring Process

The data collection and scoring process occurs for every registered project that meets the program policies described above.

NSMP Data Collection Method

Speed and Volume Data:

- For each application location, the City of Boulder will collect seven days of speed and volume data (days of the week selected for collection may vary depending on the situation).
- The volume will be the average of the three consecutive days with the highest volumes of speeding vehicles, but the speed data will be three distinct data points.
- Speeding vehicles will be counted as all vehicles observed traveling one m.p.h. or more over the speed limit.
- The 85th percentile speed will be captured for each of the three days with the highest volumes and the highest 85th percentile speed will be used in the analysis.
- If the 85th percentile speed is not at least three or more m.p.h. higher than the speed limit for at least one of these days, the application is only eligible for education and enforcement through the program.
- The speed and volume score will be a cross-product of the difference between the 85th percentile speed and the speed limit and the average volume of speeding vehicles over a three-day period.

Crash Data:

- Review crash history - Note any speed-related crashes in the corridor that engineering judgement suggest may have been mitigated by engineering treatments.

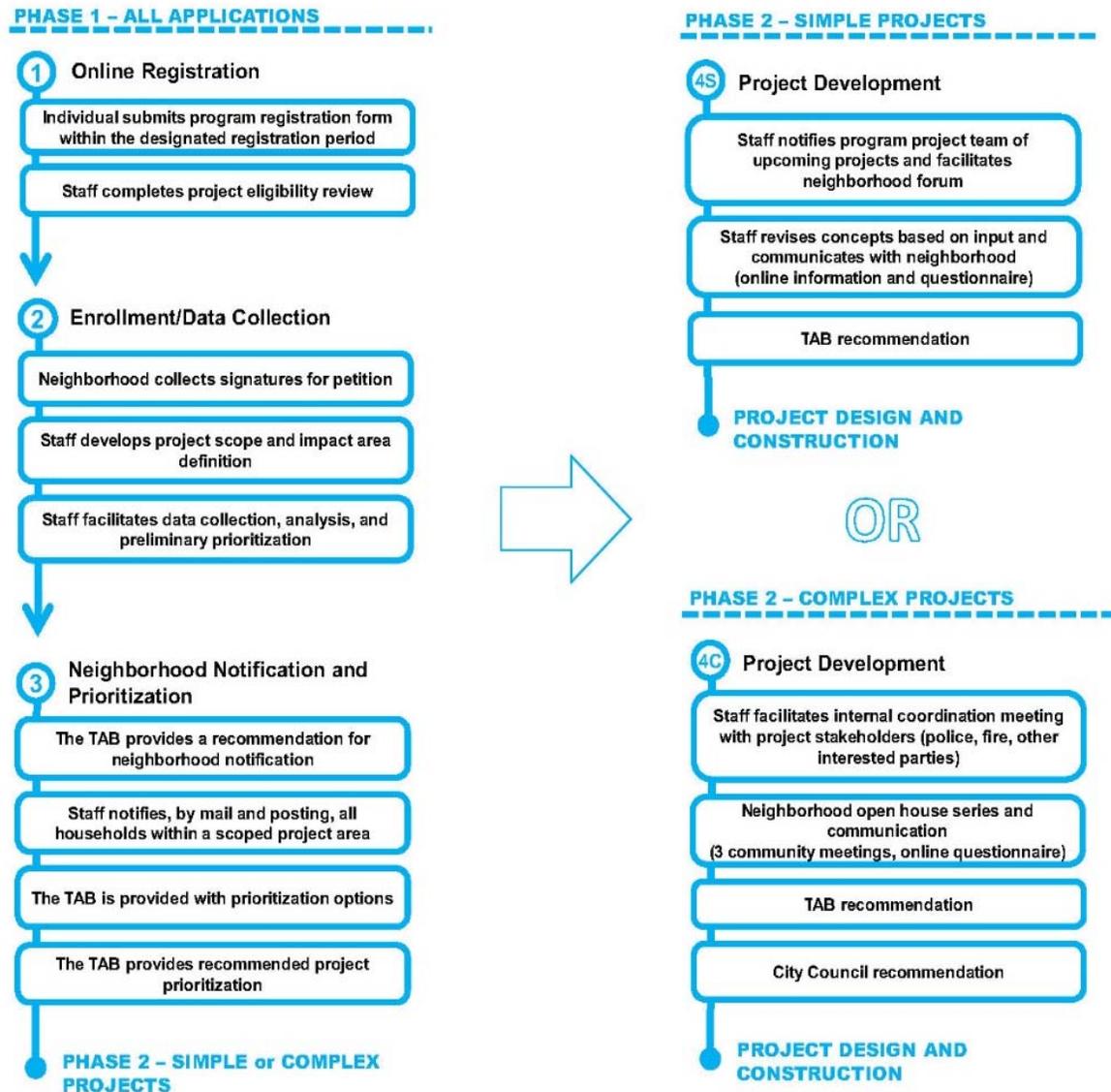
Bicycle/Ped Facilities:

- Differentiate between 1) No sidewalk; 2) Attached sidewalk; 3) Detached sidewalk, and, Motor vehicle volume.
- Differentiate between 1) No bike facilities; 2) Designated bike route; 3) Conventional on-street bike lane; 4) Buffered or protected bike lane.

Criteria	Points allocated
85th Percentile Speed and Speeding Traffic Volume (Average Speeding Vehicles per day)	<p>Three (3) points for each mile per hour the 85th percentile speed is greater than the speed limit. This value will be multiplied by the average number of speeding vehicles per day, then divided by 1000 to prioritize streets with higher average speeding vehicle volumes. Volume data will be rounded to the nearest 100 vehicles per day.</p> $3 \times (85th\ Percentile\ Speed - Speed\ Limit) \times \left(\frac{Avg.\#\ of\ Speeding\ Vehicles\ Per\ Day}{1,000} \right)$
Crashes	Five (5) points for each identified speed related crash in the past five years (No point maximum). Crashes have a 2x multiplier for bicycle and pedestrian crashes. One (1) point added for each reported close call incident.

	<ul style="list-style-type: none"> • No points for detached sidewalks • One (1) point for attached sidewalks • One (1) point for marked crosswalks • Two (2) points for no sidewalks or proposed facility 	<p>Maximum of 4 points</p>
<p>Sidewalks and bike routes</p>	<ul style="list-style-type: none"> • No points for buffered/protected bike lanes, multiuse path, or for no bicycle facility designation • One (1) point for bike lanes • Two (2) points for a designated bike facility, shared use lanes, or proposed facility 	<p>Maximum of 4 points</p>
<p>All sidewalk and bike route scores will have a 2x multiplier for streets with traffic volume equal to, or greater than, 2,000 average speeding vehicles per day</p>		
<p>Activity generators</p>	<p>Projects receive two (2) points for each school, place of worship, park, playground, transit stops, recreation/senior center, or neighborhood commercial area within one block of the project area. (Maximum of 16 points)</p>	

NSMP Process Chart



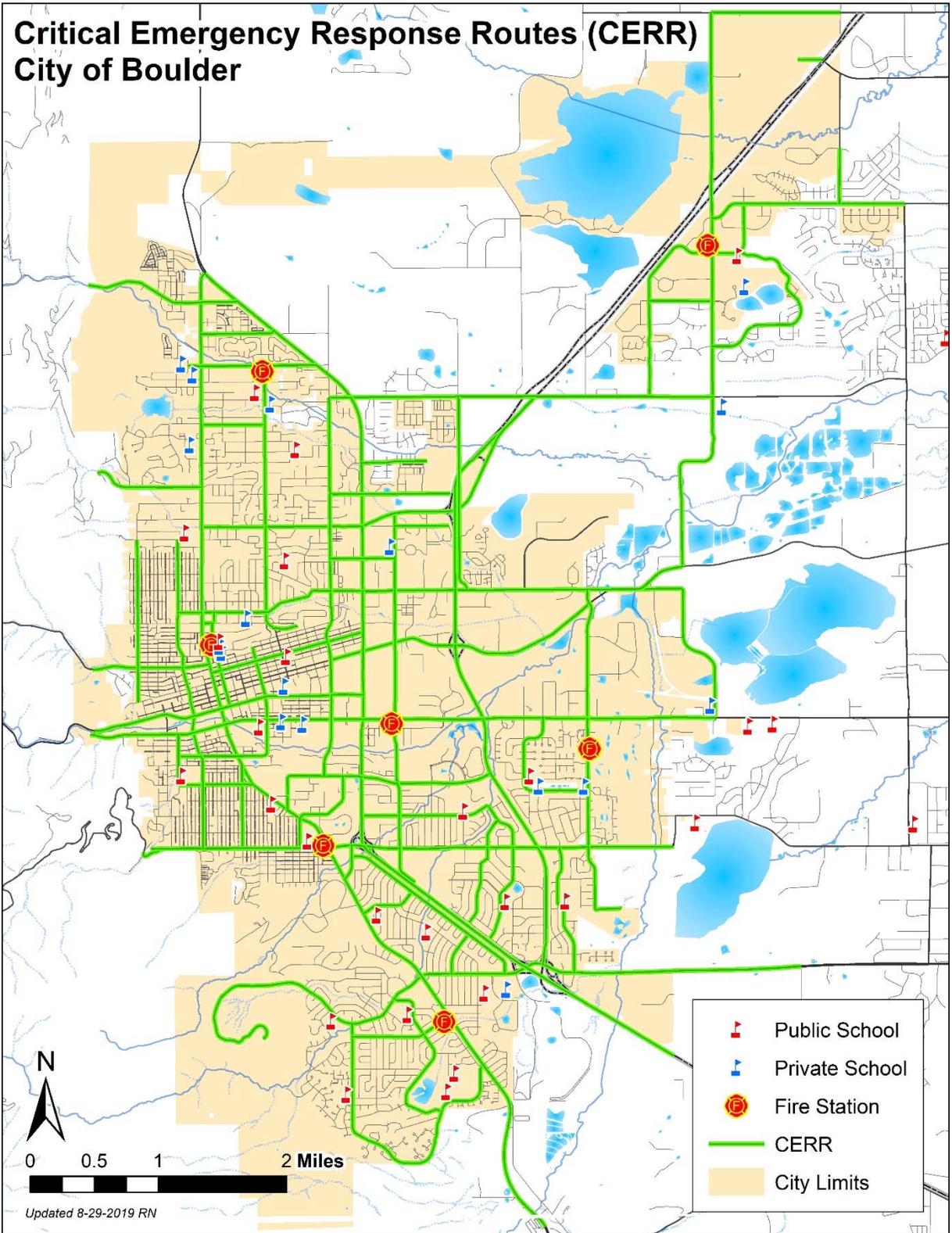
Annual NSMP Cycle

The typical program cycle will occur over the course of two to three years depending on the complexity of the project. Project prioritization occurs every year beginning with the registration period in January and concluding with a TAB meeting in December. In year two, staff works with the neighborhood to design projects and construction begins. For the most complex projects, construction will likely continue into year three.

ID	Program step	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
1-A	Registration period																				
1-B	Project eligibility review																				
2-A	Signature gathering																				
2-B	Scoping and data collection																				
3-A	TAB Briefing																				
3-B	Neighborhood notification																				
3-C	TAB Prioritization meeting																				
														New program cycle							
Design & Implementation in Year(s) Two (Three for complex projects)																					
4s Simple Project Track																					
4s-A	Neighborhood forum																				
4s-B	Recommendation at TAB																				
4s-C	Final Design																				
4s-D	Construction																				
4c Complex Project Track																					
4c-A	Internal coordination																				
4c-B	Neighborhood meeting series																				
4c-C	Recommendation at TAB																				
4c-D	City Council Call-up																				
4c-E	Final Design																				
4c-F	Construction																				

Action taken by neighbor(s)	
Facilitated by Program Coordinator	
TAB recommendation	
Council Call-up	
Contract	

Attachment A. Critical Emergency Response Routes (updated 2019)



Attachment B. City of Boulder Street Classifications

