



City of Flagstaff

Residential Traffic Management Guide

2/1/23

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Introduction

The City of Flagstaff recognizes that excessive speeding and vehicle volumes are potential safety and quality of life concerns in residential neighborhoods. The purpose of this guide is to provide a resource for citizens who feel their streets have issues that could be solved through traffic calming. According to the Federal Highway Administration and the Institute of Transportation Engineers, the purpose of traffic calming is:

“-To support the livability and vitality of residential and commercial areas through improvements in non-motorist safety, mobility, and comfort. These objectives are typically achieved by reducing vehicle speeds or volumes on a single street or a street network. Traffic calming measures consist of horizontal, vertical, lane narrowing, roadside, and other features that use self-enforcing physical or psycho-perception means to produce desired effects.”

Policies

1. The City will consider safety, efficacy, and vulnerable modes of travel when developing traffic calming measures.
2. Projects will be handled on a first come first serve basis, with the exception of locations with a history of crashes.
3. Projects will be completed based on the availability of the annual budget. If the budget is exhausted, the project will be moved to the next fiscal year.
4. The most cost-effective mitigation method will be chosen and tested before resorting to more expensive options.
5. Stop signs will not be used as speed control. Unwarranted stop signs reduce motorist compliance and are ineffective in reducing motorist speeds long term. Stop signs will be installed only when warranted based on an engineering study that considers vehicle volumes, sight distance, and crash data of the intersection.
6. Lowering the value on speed limit signs alone will not be considered for traffic calming as it has little to no effect on driving speeds [2].
7. Landscaping for traffic calming measures will be the responsibility of the neighborhood. Landscaping must conform with the City of Flagstaff's Landscaping Standards for Right-of-Way (13-18).
8. Traffic calming measures that potentially cause unintended safety and quality of life issues on adjacent roadways will be carefully considered.
9. This guide will be limited to residential, commercial local, and minor collector roadways only.
10. All designs will be reviewed by the fire department and public works.
11. If an apartment complex is present, the property owner of the apartment complex will vote on behalf of the tenants.
12. Any appeals made to City Council regarding decisions made by the Transportation Commission must be made within 10 days of the decision made.

Process

In order to request traffic calming on your street, please follow the steps below. A flow chart of this process can be found in Appendix A. It should be noted that addressing traffic calming issues is a time intensive process that requires careful data collection and analysis.

1) Site Visit

- Staff meets with requestor to understand the issues on the roadway and provide the speed radar gun if desired. Staff may include police department representatives when appropriate for targeted speed enforcement.

2) File Traffic Study Request Form

- If the requestor is interested in having traffic speeds and volumes collected, they will need to file a Traffic Study Request Form. This form can be found at in Appendix B. The form requires **5 signatures of support** from neighbors in the affected area to be considered for a traffic study.
- Only persons 18 years of age and older who are property owners or residents of the neighborhood may sign. Only one signature per property.
- Request form will not be accepted until a site visit has been completed.

3) Data Collection & Thresholds Checked

- Traffic data will be collected, and the results will be inputted into the impact score sheet to determine if the concerned roadway meets the minimum threshold for consideration of traffic calming. The traffic impact score sheet can be seen below in Table 1. Traffic data collection may need to be delayed depending on the season and if school is out of session.
- If minimum thresholds are not met, the **project will end**. Nonqualifying projects can be requested again in **12 months**.

Table 1: Traffic Impact Score Sheet

PRIMARY FACTORS			
Category	Description	Value	Points
SPEED	85th Percentile Speed:		
	Plus 5 points for 85th percentile speeds > 5 mph over posted limit	0 mph	0
	Plus 3 points for every mph above that.		0
	Score (Max 35 points)		0
	Excessive Speeds:		
	Plus 1 point for every percent of traffic traveling > 5 mph and ≤ 10 mph above the speed limit	0%	0
	Plus 2 points for every percent of traffic traveling > 10 mph above the speed limit	0%	0
	Excessive Speeds Score (Max 35 Points)		0
Speed Score (Higher of 85th Percentile Speed or Excessive Speeds)			0
VOLUME	Excessive Volume (vpd = Vehicles Per Day)		
	Residential Local: Plus 1 point for every 50 vpd above 200 vpd	0 vpd	0
	Commercial Local: Plus 1 point for every 500 vpd above 1,000 vpd		0
	Minor Collector: Plus 1 point for every 200 vpd above 2,000 vpd		0
	Excessive Volume Score (Max 25 points)		0
Volume Score			0
PRIMARY SCORE (min 20 points)			0
CONTRIBUTING FACTORS			
Category	Description	Value	Points
LOCATION	Plus 2 points for Pedestrian Generators within 1/4 th mile ex: Library, Community Center, School, Park, Apartment Complex w/out direct access to street. Max 10 pts.		0
	Plus 3 points for transit stop within zone		0
	Plus 3 points for bike route, bike lane, or 1/8 th mile from FUTS Access		0
	Plus 4 points for absence of continuous sidewalk on at least one side of the street		0
	Plus 5 points for adjacent parallel arterial/major collector within 2 blocks		0
	Plus 5 points for an elementary school within 1/8 th mile.		0
DENSITY	Housing density of abutting land. Number of dwellings with frontage and access on the street per 330 ft.		
	Plus 2 points for low density (less than or equal to 10 dwellings)		0
	Plus 5 points for medium density (11 to 20 dwellings)		
	Plus 10 points for high density (more than 20 dwellings)		
TOTAL (max 100 points, min 30 points)			

4) Public Meeting, Mitigation Strategy Selected

- At the next available Transportation Commission meeting, staff will present a trial solution to the traffic issues based on the feedback received from the site visit. The requestor and the residents from the affected area will be invited to see the design.

5) Trial Implementation and Staff Evaluation

- The proposed solution will be installed in a temporary fashion. Traffic data will be gathered once the traffic patterns have stabilized to understand how the mitigation strategy has affected speeds and volumes. The trial traffic calming measure will need to be kept in place for a minimum of six months and include a winter season to ensure it will perform during winter conditions.
- The design will be adjusted and retested if desired affects are not realized. The project may not continue until desired affects are achieved through a temporary design.
- Staff will communicate with the requestor and interested residents on the evaluation and progress of the trial.

6) Neighborhood Approval

- Staff will work with the requestor to establish boundaries of the affected area. Typically, the boundary will be limited from intersection to intersection of the affected roadway, with a recommended max of 35 properties.
- Staff will mail postcards to the affected area detailing an online survey to approve the traffic calming solution. 65% of the properties in the affected area must approve of the traffic calming, and 100% of properties immediately adjacent to the traffic calming must also approve.
- Tenants or property owners may vote, but only one vote is accepted per address. If a tenant and a property owner have different views, the property owners vote will be the accepted vote.
- For apartment complexes, the property owner will vote on behalf of the tenants.
- 2 months are allocated for the traffic calming to be approved. If it is not approved in 2 months, the project will end.
- If approval requirements are not met, a modified request can be submitted in 12 months.

7) Transportation Commission Evaluation

- The results of the neighborhood approval process and the trial implementation will be presented at the next available Transportation Commission meeting. Based on the results of the trial and feedback from the neighborhood, the Transportation Commission will decide if the temporary traffic calming measures will be installed permanently.
- Depending on budget, the chosen mitigation will be constructed permanently if approved. If budget is unavailable, the project will be moved to the next fiscal year.

Engineering Toolbox

Traffic calming measures can range from radar feedback signs to neighborhood traffic circles; each project will require careful consideration to determine the most appropriate solution. The cost information outlined below in Table 2 was provided by the [Federal Highway Administration \(FHWA\) Traffic Calming Guide](#) in Module 3. The large variance in cost estimates is due to variations in size, scale, landscaping, drainage, and utility access that is dependent on each of the project's requirements. Please reference the [FHWA Traffic Calming ePrimer](#) for further details on potential traffic calming measures.

Table 2: Traffic Calming Examples and Costs

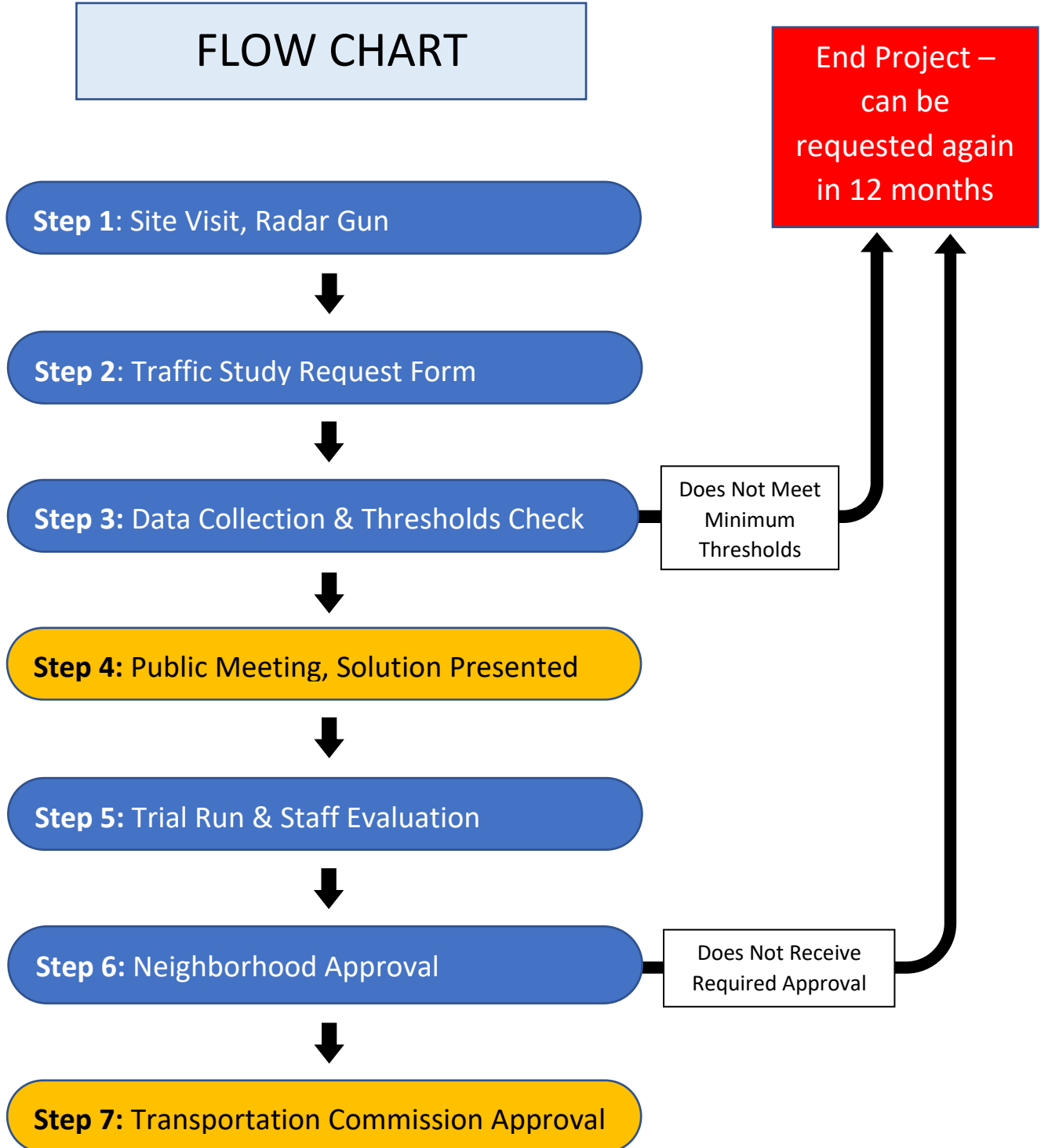
Traffic Calming Measure	Typical Cost			Comments
	Low (<\$6k)	Medium (\$6K-\$15K)	High (>\$15)	
Horizontal Deflection				
Chicane		Medium		
Traffic Circle		Medium		
Mini Roundabout		Medium	High	Typical range between \$15,000 and \$60,000
Roundabout			High	Typical range between \$150,000 and \$2 million
Vertical Deflection				
Speed Hump	Low			
Raised Crosswalk		Medium		
Raised Intersection			High	Wide range for typical cost – between \$15,000 and \$60,000
Street Width Reduction				
Road Diet	Low			
Median Island		Medium	High	Typical cost can range between \$15,000 and \$55,000
Bulb Outs		Medium	High	Typical cost ranges between \$8,000 and \$12,000; drainage work increase to \$40,000
Routing Restriction				
Half Closure	Low	Medium	High	Drainage modification can increase the price to \$40,000
Median Barrier	Low	Medium	High	Typical cost can range between \$1,500 and \$20,000, depending on length and width of barrier

References

1. Federal Highway Administration. *Traffic Calming ePrimer*. Website. 2022. Available: <https://highways.dot.gov/safety/speed-management/traffic-calming-eprimer>
2. City of Boulder. *20 is Plenty*. Report. 2022. Available: [Safe Streets Report | City of Boulder \(bouldercolorado.gov\)](https://www.bouldercolorado.gov/transportation/safe-streets-report)

Appendix A: Flow Chart

FLOW CHART



Appendix B: Traffic Study Request Form

Traffic Study Request Form

Name: _____ Phone: _____ Address: _____

Email: _____ Date: _____

Area of Concern:

A site visit must be completed before this form will be accepted. To request a site visit, please contact the City of Flagstaff Transportation Engineering Department. If a site visit has been completed, what concerns have you identified at the above location?

In order to be considered for a traffic study, please provide **5 signatures** from your neighbors to show there is interest in investigating traffic mitigation. Only persons 18 years of age and older who are property owners or residents of the neighborhood may sign. Only one signature per property.

Printed Name	Address	Email	Date	Signature

Thank you for taking the time to fill out the Citizen Action Request Form. After completing the form, please scan, mail, or deliver to:

david.lemcke@flagstaffaz.gov

*Traffic Engineer
Flagstaff City Hall
211 West Aspen Street
Flagstaff, AZ 86001*



STAFF USE ONLY - Date Received: