



City of Cheyenne

**NEIGHBORHOOD TRAFFIC  
MANAGEMENT PROGRAM  
2015**



Prepared by the  
Cheyenne Metropolitan Planning Organization





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### **INTRODUCTION**

The continued development of Cheyenne and the growth of Laramie County have increased Cheyenne residents' concerns regarding traffic. Neighbors want to promote safe and pleasant conditions for motorists, bicyclists, pedestrians, and residents on local and collector streets. In response to these issues, the Cheyenne Metropolitan Planning Organization and City Engineer's Office have created a Neighborhood Traffic Management Program (NTMP).

The traffic control measures in this booklet are designed to slow down traffic and discourage through traffic on residential streets, while keeping our neighborhoods accessible to police, fire, ambulance services and the residents of Cheyenne. Many of the controls are appropriate only on local streets and do not work well on arterial or certain collector streets, where through traffic volumes and design speeds are higher.

The most common problems reported on Cheyenne streets relate to speeding vehicles and excessive volumes. As traffic speeds and volumes increase, residents report a decrease in their quality of life. Noise levels increase, neighborhood outdoor life is adversely affected and the safety of the traveling public suffers. In some cases local residents report safety concerns for pedestrians and bicyclists as well, particularly children.

Research has shown a common theme among cities with traffic management programs: There is no silver bullet for solving traffic problems. Each location has its own unique set of problems that must be analyzed to identify solutions. For this reason, Cheyenne has developed an extensive toolbox of traffic management measures for solving traffic problems. Many of the measures are described in this document. However, since not all measures are applicable in all situations, the city is in favor of expanding the existing toolbox as new measures are invented or discovered through research and experience.

### **OBJECTIVES**

The objectives of the Neighborhood Traffic Management Program (NTMP) are derived from the City's desire to ensure overall safety, protect its neighborhoods and improve the quality of life for its residents.

1. Promote safe, reasonable convenient, accessible and pleasant conditions for bicyclists, pedestrians, motorists, and residents on neighborhood streets.
2. Improve neighborhood livability by mitigating the negative impact of vehicular traffic on residential neighborhoods.
3. Encourage citizen involvement in all phases of Neighborhood Traffic Management activities.
4. Make efficient use of City resources by prioritizing and ranking traffic management requests.



## **POLICIES**

The following policies are established as part of the Neighborhood Traffic Management Program (NTMP). Policies 1-5 below apply to both local and collector streets.

1. Emergency and service vehicle access and circulation must be preserved.
  - Traffic calming measures should be designed to accommodate all emergency vehicles and to minimize their impacts on emergency vehicle response times.
  - Traffic calming measures should be limited on primary response routes.
  - The Fire Department and Police Department should be involved in the development of the traffic calming measures in neighborhoods and should approve all proposed plans.
2. NTMP projects should encourage and enhance pedestrian and bicycle mobility and access within and through the neighborhood and also facilitate easy neighborhood access to public transit.
3. The City may employ traffic management and traffic control devices to achieve the NTMP's objectives. Traffic management devices include speed trailers, enhanced or directed enforcement and other non-physical approaches. These devices will typically be tried first. If the non-physical approach does not work, then traffic circles, speed humps/tables, diverters, medians, curb extensions and others could be planned and designed in keeping with sound engineering and planning practices. The City Engineer may direct the installation of traffic control devices (signs, signals, and pavement markings) as needed to accomplish the project objectives.
4. The citizens of the neighborhood and the City Engineer's Office shall follow the procedures outlined in this **Neighborhood Traffic Management Program**. See Implementation Procedure and Plan Approval for the steps involved in the local street process and the collector street process. In addition, see the flow charts in Appendix B and C for a summary of the respective processes.
5. City streets are functionally classified based upon the volume of traffic it serves and most importantly by the connection it makes within the City's transportation system. Streets are classified as either: Principal Arterials, Minor Arterials, Collectors or Local Streets. These classifications are mapped on the *Urban System and Roadway Functional Classification Map*, published by the Cheyenne Metropolitan Planning Organization. The hierarchy of streets depicted on that map are as follows:



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- a. **Principal Arterial:** Roadways that serve high-speed and high-volume traffic over long distances. Access is highly controlled with a limited number of intersections, medians with infrequent openings, and no direct parcel access. Adjacent, existing and future, land uses shall be served by other network roadways, service roads and inter parcel connections.
- b. **Minor Arterial:** Roadways that currently serve high speed and high volume traffic over medium distances. Access is restricted through prescribed distances between intersections, use of medians, and no or limited direct parcel access.
- c. **Collector:** Roadways that serve as links between local access facilities and arterial facilities over medium-to-long distances, outside of or adjacent to subdivision developments. Collectors are managed to maximize the safe operation of through-movements and to distribute traffic to local access.
- d. **Local:** Roadways that provide direct parcel access and deliver parcel generated trips to the collector network.

Policies 6 and 7 below are additional policies that apply to local streets only:

6. Neighborhood cut-through traffic should be routed to arterial or collector streets as designated in the *Urban System and Roadway Functional Classification Map*, published by the Cheyenne Metropolitan Planning Organization.
7. When mitigating traffic concerns some traffic may reroute from one local service street to another as a result of the NTMP project. The amount of rerouted traffic that is acceptable will be defined on a project-by-project basis by the Cheyenne City Engineer's Office. It will not typically be acceptable to use rerouting as the only mitigation method when implementing a NTMP project.

### **IMPLEMENTATION PROCEDURE & PLAN APPROVAL**

The Neighborhood Traffic Management Program (NTMP) provides a mechanism for neighborhood groups to work with the City to make decisions about how traffic management devices might be used to manage traffic in their neighborhood. This section describes in detail the steps involved in participating in the program for both local streets and collector streets. The process includes everything from the initial application for involvement, to developing a traffic management plan, to installing one or more traffic management devices.



## LOCAL STREETS

(See sample flow chart in Appendix B for summary of the process).

### **1. Application**

A Community Action Request (CAR) application is attached (see Appendix A) to this document. Copies can also be obtained from:

- Cheyenne Metropolitan Planning Organization (MPO)  
<http://www.plancheyenne.org>
- Cheyenne City Engineer Office  
2101 O'Neil Avenue Cheyenne, WY 82001  
<http://www.cheyennecity.org>

To demonstrate neighborhood support and agreement for a traffic management request, a completed Citizen Action Request (CAR) Form must contain signatures from at least ten residents representing a different business or household in the “affected area” where the claimed traffic problem exists. However there may be areas where this rule will not work because of less than ten residents in the affected area. If this is the case then, the NTMP staff will allow the CAR to be presented for review and determination of need.

The City will determine the boundary of the “affected area” to be petitioned and balloted.

The “affected area” may include three sectors:

- 1) The primary point/s involved in the CAR Form.
- 2) Travel routes that directly adjoin the primary point/s.
- 3) Outlying travel routes that lead to/from the primary point/s and/or routes. These routes need to show a potential impact by traffic that may divert as a result of implementation of the measure/s placed at the primary point/s. These outlying travel routes will then be referred to as the “area of concern”.

The City will create and provide a map of the “affected area” and “area of concern”. The City will also create a list of all property owners addresses within these areas. This list will be used for notification of any implementation measures, of any public meetings and other necessary communication. This information may also be sent to the Cheyenne Police Department traffic unit and the Cheyenne Fire Department assistant fire chief for their information and review.

Completed applications should be submitted to the City Engineer's Office.



**2. Eligibility and Priority**

Traffic management requests will be reviewed on receipt to determine eligibility and priority. Traffic management plans will be developed on a priority basis.

Upon receipt of an application, NTMP staff will contact the applicant(s) to discuss the problem, determine project boundaries, and review the NTMP process. NTMP staff will then collect neighborhood traffic data for input into an eligibility and priority formula. The formula is based on traffic volumes, vehicular speeds, crash history, school crossing, presence or lack of sidewalks, and pedestrian generators. The formula produces a numerical score used to determine the request’s eligibility and priority. Applications must have an NTMP formula score of 60 points or greater to be considered eligible for the NTMP. Traffic management plans will be developed for eligible applications in a priority manner based on numerical score. The request(s) with the highest score(s) will be given top priority. Please see chart below for NTMP formula score point assignment.

**NTMP FORMULA SCORE POINT ASSIGNMENT CHART**

Criteria	Points	Basis for Point Assignment
Speed	0 to 40	Extent by which the “operating speed” as defined below exceeds posted speed limit With 4 points assigned for every 1 mph over the limit (Collector) With 3 points assigned for every 1 mph over the limit (Local)
Volume	0 to 20	Average daily traffic volumes 1 point assigned for every 100 vehicles
Crashes	0 to 5	1 point for every crash reported within past 3 years
School Crossings	0 to 10	5 points assigned for each school crossing on the project street
Pedestrian Generators	0 to 15	5 points assigned for each public facility such as parks, community centers, high schools, commercial use, transit service, bike routes, etc.
Pedestrian Facility	0 to 10	5 points assigned if there is no continuous sidewalk on either side of the street 10 points if missing on both sides.
	<b>100</b>	<b>Total Points Possible</b>

- Operating speed is the speed at which drivers are observed operating their vehicles during free flow conditions. The 85<sup>th</sup> percentile of the distribution of observed speeds is the most frequently used measure of the operating speed associated with a particular location or geometric feature.

Each application will be placed into one of the following three categories based on its NTMP formula score:





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- a. **Active Projects** - NTMP staff will work with the neighborhood to create a Traffic Management Plan (Plan) for top priority applications. The Plan may include traffic management measures to address the neighborhood's traffic problems. NTMP staff will work with as many of the highest-priority eligible projects as resources allow. As work on one project is completed, work will begin on the next highest priority Eligible Project.
- b. **Eligible Projects** - Requests in this category meet program eligibility requirements. As work on an Active Project is completed, the highest priority Eligible Project becomes the next Active Project. Project priorities will be continuously updated as new applications are received. While waiting to become an Active Project, Eligible Project neighborhoods may be provided information and guidance on Resident Participation/Education Program and other self help solutions in the NTMP that may help ease neighborhood traffic problems.
- c. **Not Program Eligible** - Requests in this category do not meet program eligibility requirements based on the NTMP formula, i.e. based on the formula the problem identified by the residents is not of sufficient magnitude to be considered eligible for development of a formal plan. However, these neighborhoods will be provided information and guidance. Petitioners may resubmit in the future if they sense their problem has grown or other issues arise. If requests have been submitted within the previous 2 years and conditions have not changed, then the application is not program eligible.

Each applicant will be notified of their request's score, category and priority.

### 3. Traffic Management Plan (Plan) Development

**An initial meeting** will be held with residents, business and property owners and other neighborhood representatives. NTMP staff will also invite the City Council members for the ward. The purpose of the meeting is to seek input on the neighborhood's specific traffic issue(s) to be addressed and to create a Neighborhood Traffic Committee (NTC). The NTC will likely be composed of the applicant, other interested residents, business and property owners and, if possible, a member of the City Council from that ward. The NTC should function as a link between NTMP staff and the neighborhood during the NTMP process.

Using input received from the public meeting and the NTC, NTMP staff will create a draft Plan to address the traffic issue. The Plan may include alternatives for addressing the issue identified. The City traffic engineer will address and complete projects with a cost of less than \$5,000.00 as funding becomes available.



**A second meeting** will be held with the Neighborhood to discuss the proposed Plan or improvements that were completed for less than \$5,000.00. A meeting invitation will be mailed to residents in the project area, business and property owners and other neighborhood representatives. Comments on the Plan or improvement will be taken at the meeting or can be submitted to the City Engineer's Office. Comments must be received on or before the meeting date so they can be discussed at the meeting. If the Neighborhood is comfortable selecting one of the Plan alternatives or concur that improvements are adequate the Plan can proceed to step 4. The Plan will be available at the City Development Counter and ready to proceed to step 4.

#### **4. Testing**

NTMP staff will mail a letter, ballot and the Plan to the list of property/business owners within the "affected area" and "area of concern". (See Implementation Procedure & Plan Approval, Local Streets, 1. Application, page 5). The letter will describe the NTMP process to date and outline the proposed Plan. The ballot will request support or opposition to the proposed Plan. One vote per residence, business or property owner will be counted.

According to the voting results and approval by the NTMP staff, the proposed Plan will proceed to be tested or not to be tested, seek funding or be discontinued due to lack of support.

To proceed to testing, not less than 55% of the mailed ballots must be returned within four (4) weeks. A 75% majority of the returned ballots must respond in favor of the Plan.

However, testing may be skipped and proceed immediately to step 5: Funding, Design and Construction if:

- 1) A Minimum of 80 % of those balloted responded within four (4) weeks, and
- 2) Of those ballots received, greater than or equal to 75% were in favor of implementation of the measures

The objectives of testing are to allow the neighborhood to experience the improvements first hand and to determine the effectiveness of the measures. If the measures are not functioning to the satisfaction of NTMP staff or the NTC or the test creates an unforeseen hazard, the test may be revised or discontinued. The NTMP staff will determine a testing timeline. During the test period, NTMP staff may collect and analyze new traffic data. If test results show that the measures are not effective or excessively impact streets outside of the project boundaries, NTMP staff may modify the Plan following consultation with the NTC or the



entire neighborhood as deemed appropriate. At the conclusion of the testing period, all test measures will be removed as directed by NTMP staff.

Following testing, NTMP staff will prepare and mail a newsletter to all residences, businesses or property owners within the project boundaries. The newsletter will summarize testing results, describe funding options and include a ballot requesting support or opposition to construction of the tested Plan. One vote per resident or business or property owner will be counted. If a simple majority of all issued ballots are returned in favor of the Plan, it will proceed to step 5. If not, NTMP staff will meet with the NTC to decide whether to revise the Plan or discontinue the traffic management request.

## **5. Funding, Design and Construction**

Once a Plan has been finalized by receiving the endorsement of the neighborhood and NTMP staff, the city will prepare a cost estimate and proposed schedule for project design and construction. Design and construction will proceed as determined by the availability of funds (see Funding Options shown in the next section.)

## **COLLECTOR STREETS PROCESS**

(See sample flow chart in Appendix C for summary of the process).

### **1. Initiation**

Collector streets provide connection between arterials and local streets and, unlike local streets, they generally serve more than one neighborhood. Therefore, in order to initiate the process for a collector street, two members of City Council must sponsor the project. Citizens seeking Council member sponsorship may find it useful to circulate a petition within the affected area to demonstrate a broad base of concern regarding traffic conditions on the collector street.

### **2. Staff Review**

The sponsoring Council members will contact the City Engineer and MPO Director to initiate the study. NTMP staff will conduct an initial review of the collector street. The intention of the initial review is for staff to familiarize themselves with the concern and determine the approximate boundary of the “affected area” where the claimed traffic concern exists. After this, the staff could create and provide a map of the “affected area” and “area of concern”. The City could also create a list of all property owners addresses within these areas. This list could be used for notification of any implementation measures, of any public meetings and other necessary communication. This information could also be sent to the Cheyenne Police Department traffic unit and the Cheyenne Fire Department assistant fire chief for their information and review.



During the initial review, NTMP staff could use any of the following methods in determining the potential needs of the “affected area”:

- Discussions with city council members, neighbors, or other members of the public with insight into the problem.
- Collection of traffic data that could include traffic volumes, vehicular speeds, crash history, school crossing data, presence or lack of sidewalks, sight triangles, pedestrian generators, and site triangles.
- Traffic origin and destination studies or cut-thru studies to estimate the percentage of locally generated versus out-of-area traffic using the street.

### **3. Public Meeting #1**

**An initial meeting** will be held with residents, business and property owners, neighborhood representatives, and any other affected members of the public. NTMP staff could use mailing lists, changeable message signs, newspaper ads, or other items deemed necessary to inform the public of this meeting. Staff will also invite the City Council members for the ward and the sponsoring Council members. The primary purpose of this meeting is to share information between the parties involved. Staff will seek input from the public on the specific traffic problems associated with the “affected area”. Staff will then educate the public about alternative techniques that can be used as traffic management tools for this area. Comments will be taken at the meeting or can be submitted to the City Engineer’s Office after the meeting. They will be used to develop the alternatives in the next step of the process.

### **4. Develop Alternatives**

Using input received from the public meeting, NTMP staff will summarize and prioritize the existing traffic concerns. A draft Plan will be developed to address the traffic issues. The Plan may include alternatives and a preferred alternative for addressing the issue identified. The Plan could be a multi-phase solution. Potential solutions will be vetted by public agencies affected.

The plan will be diagrammatic in nature. If available, aerial photography of the subject study area could be used as the base mapping. Some field measurements should be taken to ensure that suggested traffic mitigation measures could reasonably be constructed in the locations depicted in the plan. Photographs or diagrams of similar improvements installed in other locations in Cheyenne or elsewhere could be assembled to illustrate the contemplated improvements.



## **5. Public Meeting #2**

A **second meeting** will be held with the public to discuss the Plan and any additional alternatives considered during development of the Plan. NTMP staff could use mailing lists, changeable message signs, newspaper ads, or other items deemed necessary to inform the public of this meeting. Staff will also invite the City Council members for the ward and the sponsoring Council members. The primary goal of this meeting is to get feedback from the public on the Plan and the alternatives. Comments on the Plan will be taken at the meeting or can be submitted to the City Engineer's Office after the meeting. They will be used to finalize the plan in the next step of the process.

## **6. Finalize Plan**

Using input received from the public meeting, NTMP staff will create a final Plan to address the traffic issues. Staff will discuss this final plan with the sponsoring Council members. If there is majority support from the public and concurrence from the supporting Council members for certain components of the plan and these are relatively inexpensive (can be accomplished without allocating additional funds), the City Engineer or Public Works director could implement these components immediately. All improvements regardless of funding sources shall be approved by the City Engineer. More expensive components of the Plan would proceed to the Funding, Design and Construction step and may need to go to City Council for approval. The city could then notify the public of the proposed Plan by a letter, public meeting, or other means deemed appropriate by staff.

## **7. Funding, Design and Construction**

Once a Plan has been finalized by the NTMP staff, the city will prepare a cost estimate and proposed schedule for project design and construction. Design and construction will proceed as determined by the availability of funds (see Funding Options shown below.)

## **FUNDING OPTIONS**

An approved NTMP project will likely have funding implications. Funding for all NTMP projects must be obtained before engineering design and construction can occur. Following is a list of funding options available for NTMP projects:

- 1. Capital Improvement Program (CIP):** Plans approved through the NTMP process and endorsed by Neighborhoods may be submitted by the Neighborhoods or the City Engineer's Office in accordance with the city's CIP process for consideration as capital improvements. All citywide proposals for capital improvements compete for CIP funds annually. City Engineering, Public Works and MPO staff prioritizes the funding requests and provides the Mayor with



prioritized recommendations. The Mayor considers these recommendations in developing a CIP funding proposal based on funds available. The City Council considers the recommendation of the Mayor and adopts a CIP budget as part of the annual city budget approval process. The city's fiscal year is July 1 – June 30. For more information visit our web site at: <http://www.cheyennecity.org>

- 2. Neighborhood Matching Grant Funds:** Neighborhoods may apply for partial funding of approved NTMP projects through the Neighborhood Matching Grant program. Under this program up to \$5,000 of matching funds are available per project and require a 50% match in cash or labor. Each funding application will compete with other projects throughout the city for the available funding. Applications are typically solicited in the spring and again in the fall. Separate citizen and city staff committees review and prioritize each grant application. The City Council considers these recommendations and approves funding for projects. Cheyenne's Traffic Management Program annual funding is included in the City's fifth penny tax program as a line item. Until approval through fifth penny tax funding, general funds could be used, if available, to start a pilot program for approved recommendations of capitol improvement. For more information visit our web site at: <http://www.cheyennecity.org>
- 3. Community Development Block Grant (CDBG) Funding:** Neighborhoods meeting the federal qualifications for CDBG funding may apply for 100% Grant Fund. For more information visit our website at: <http://www.cheyennecity.org>
- 4. 100% Neighborhood Funding:** Any approved NTMP project can be funded 100% through neighborhood funding sources. Neighborhoods may collect monies in any manner they deem equitable to pay for the cost of their project.
- 5. Special Improvements District:** Any approved district created by NTMP to fund public improvements such as roads, curbs, sidewalks, utilities and other similar projects. These public improvements will be funded from the proceeds of a bond issue sold by the City. Bonds for the approved district will be sold after a majority of the district's property owners agree to the district. All properties within the "affected area" benefiting from these improvements will be included in the district.



## **MODIFICATIONS TO CONSTRUCTED MEASURES**

### **Local Streets**

NTMP Staff will consider a request for removal or modification of existing traffic management measures if a petition is submitted with the signatures of a majority of the residents or business or property owners within the original project area. NTMP staff will then organize a neighborhood meeting to discuss the request. A mailing providing the results of the meeting and a ballot, if appropriate, will follow. To be approved for removal or modification at least 67% (2/3) of the returned ballots must be in favor of the request. All costs incurred for removal or modification will be borne by the neighborhood. However, if the city determines a traffic management measure must be removed or modified due to technical, safety, or other reasons, the city will pay for all removal costs incurred.

### **Collector Streets**

Collector streets impact more than a single neighborhood, and their area of influence may change over time. Therefore, modifications to NTMP improvements installed on collector streets may be studied and implemented through a public involvement process.

## **TRAFFIC MANAGEMENT TOOLS**

Following is a list of the NTMP measures in the city's current toolbox. The measures are classified into three broad categories: Resident Participation/Education, Speed Limit Enforcement, and Physical Improvements. NTMP staff will use this toolbox to custom tailor a solution for each neighborhood or street while attempting to balance planning/engineering judgment with neighborhood desires and traffic flow throughout the city. It should be noted, that many of the tools are appropriate only on local streets and do not work well on arterial or collector streets, where through traffic volumes and speeds are higher.

The City Engineer's Office is maintaining communication with other traffic calming and traffic management professionals around the country to share and experiment with new ideas. It is our intention to update this toolbox as more experience is gained with the unique problems facing our city and with future advancements in the traffic management field. The public is encouraged to submit new ideas for traffic management measures to the Cheyenne Metropolitan Planning Organization by telephone, fax or mail at the numbers and address shown on the back cover of this document.



## **Resident Participation/Education**

### 1. Neighborhood Speed Watch

The Neighborhood Speed Watch program is a neighborhood self-help tool used to educate drivers and residents about speeding problems in neighborhoods. Residents first distribute educational flyers in their neighborhood informing residents of the problems of speeding and how to reduce it.

### 2. Neighborhood Speed Patrol

Local residents could borrow from the City hand held radar equipment connected to a small digital readout used for displaying the speed of approaching vehicles to the drivers. Residents would operate the radar equipment and write down the license plate numbers of the speeding vehicles. Next, NTMP staff would send letters to the owners of the speeding vehicles to explain the quality of life and safety issues associated with speeding and request they drive within the speed limit. Speeding drivers would receive no fines or points on their driving record.

## **Speed Limit Enforcement**

### 3. Speed Trailers:

Similar to the Neighborhood Speed Watch Program, the Speed Trailer Program uses a radar trailer to educate the public about speeding. This program uses fully automated trailers and a large digital sign to display and log the speed of approaching vehicles. Speeding drivers seeing their speed displayed are reminded that they could have been ticketed. City police periodically follow up the use of the speed trailers with increased speeding enforcement. NTMP staff or City Police can arrange the use of speed trailers for areas exhibiting speeding problems.

### 4. Enforcement and Monitoring:

This monitoring and enforcing process utilizes Police cars to patrol neighborhoods. The law enforcement presence influences drivers to monitor speeds and enables both formal/courtesy citations. This process may be implemented when streets with documented speeding problems need quick mitigation.

### 5. Targeted Enforcement

This enforcement process entails significantly increased police presence and enforcement. This enforcement targeted specifically at identified traffic issues, which are a significant threat to the health and safety of city residents. Targeted enforcement is subject to officer availability and is at the sole direction of the Chief of Police.





## Physical Modifications

### 6. Traffic Calming:

In conjunction with resident participation/education and enforcement/monitoring, physical changes may be made to roadways to influence driver behavior. Although most physical changes will have effects on both speed and volume, the primary objective of most traffic calming techniques is to **slow down traffic**, while still allowing vehicle access. Slower traffic is far less dangerous, less noisy and less polluting. Reducing speeds also discourages highway drivers from using neighborhood streets as short cuts. Typical traffic calming tools include speed humps, traffic circles, neighborhood entrance medians, bulbouts and raised crosswalks.

### 7. Street Reconfigurations and Traffic Control Modifications:

Street reconfigurations and traffic control modifications are dramatic measures used to reduce through traffic in neighborhoods by eliminating or reducing traffic movements. Street reconfigurations include measures such as cul-de-sacs, medians, road closures and diverters. Traffic control modifications may include No Left/Right Turn signs, changes in signal timing, and one-way streets.

### 8. Pedestrian Safety:

The continually growing number of pedestrian safety elements being used by the city can become traffic management tools that may be added to the NTMP program. These tools may be used in traffic management plans at locations with pedestrian safety problems. Other tools are discussed in the toolbox in the “Safety Improvement” section of the table.

### 9. Bicycle Facilities & Safety:

As with pedestrian safety tools, the addition or enhancement of bicycle routes will be incorporated into traffic management plans as appropriate. Such tools include striping and signing of bicycle routes, but also may include recommendations of parking removal to provide additional street width for bicycle routes or physical separation of bicycle routes from traffic lanes. Parking removal is typically not popular with abutting property owners, but may prove to be an important element of the traffic management solution.

The following tables and index card descriptions provide details on the benefits of various tools used for traffic management. This NTMP toolbox is provided to help applicants better understand the potential benefits and drawbacks of current traffic management measures.



**TRAFFIC MANAGEMENT TOOLBOX WITH ATTRIBUTES  
(TABLE 1 OF 4)**

<i>Traffic Calming Improvement</i>	<i>Bike Lanes</i>	<i>Chicanes</i>	<i>Chokers or Curb Extensions</i>	<i>Diverter</i>	<i>Entrance Ways</i>
<i>Detailed Description Shown on:</i>	<i>Page 20</i>	<i>Page 20</i>	<i>Page 21</i>	<i>Page 21</i>	<i>Page 22</i>
Allowed for Local	Yes	Yes	Yes	Yes	Yes
Allowed on Collector & Arterial	Yes	Not on Arterials	Yes	No	Yes, Some Restrictions
Traffic Reduction	Unlikely	Possible (Short Term)	Unlikely	Yes	Unlikely
Speed Reduction	Possible	Possible (Short Term)	Possible	Possible	Possible
Safety Improvement	Possible	Possible	Pedestrians (Low)	Possible for Pedestrians	Possible
Traffic Access Restrictions	None	None	Possible	Yes	Can Preclude Large Trucks
Emergency Vehicle Access	No Problems	No Problems	No Problems	Potential Problems	No Problems
Maintenance Problems	Needs Frequent Sweeping	Curb Hits	Curb Hits	None	None
Landscaping Maintenance Responsibility	Not Applicable	Resident	Resident	City	Varies
Level of Violation	Not Applicable	Not Applicable	Not Applicable	Low	Not Applicable
Cost	Low	Moderate	Moderate	Moderate	Varies
Noise and Pollution	Decrease	No Change	No Change	Decrease	No Change
Parking Impact	Yes	Yes	Yes	Yes	Possible



**TRAFFIC MANAGEMENT TOOLBOX WITH ATTRIBUTES  
(TABLE 2 OF 4)**

<i>Traffic Calming Improvement</i>	<i>Half Closures</i>	<i>In-Pavement and Overhead Crosswalk Lighting</i>	<i>Medians</i>	<i>Neighbor- hood Speed Watch</i>	<i>Pavement Markings</i>
<i>Detailed Description Shown on:</i>	<i>Page 22</i>	<i>Page 23</i>	<i>Page 23</i>	<i>Page 24</i>	<i>Page 24</i>
Allowed for Local	Yes	Yes	Yes	Yes	Yes
Allowed on Collector & Arterial	No	Yes	Yes	Only Collectors	Yes
Traffic Reduction	Yes	No	Possible	No	Unlikely
Speed Reduction	Possible	Unlikely	Unlikely	Possible	Possible
Safety Improvement	Improved for Pedestrians	Improved for Pedestrians	Possible	Possible	Possible
Traffic Access Restrictions	Yes	None	Some Movements	None	None
Emergency Vehicle Access	Potential Problems	No Problems	Some Constraint	No Problems	No Problems
Maintenance Problems	None	Minimal	Curb Hits	Not Applicable	Minimal
Landscaping Maintenance Responsibility	City	Not Applicable	City	Not Applicable	Not Applicable
Level of Violation	Low	Unknown	Low	Not Applicable	Low
Cost	Moderate	Moderate	Moderate	None to Residents	None to Residents
Noise and Pollution	Decrease	No Change	No Change	No Change	No Change
Parking Impact	Yes	No Change	Possible	No Change	Possible



**TRAFFIC MANAGEMENT TOOLBOX WITH ATTRIBUTES  
(TABLE 3 OF 4)**

<i>Traffic Calming Improvement</i>	<i>Road Closure</i>	<i>Speed Display Trailers</i>	<i>Speed Humps</i>	<i>Speed Lumps</i>	<i>Speed Table</i>
<i>Detailed Description Shown on:</i>	<i>Page 25</i>	<i>Page 25</i>	<i>Page 26</i>	<i>Page 26</i>	<i>Page 27</i>
Allowed for Local	Yes	Yes	Yes	Yes	Yes
Allowed on Collector & Arterial	No	Two Lane Streets	Not on Arterials	Not on Arterials	Not on Arterials
Traffic Reduction	Yes	Unlikely	Possible	Possible	Possible
Speed Reduction	Possible	Possible Short Term	Possible	Possible	Possible
Safety Improvement	Possible	Possible Short Term	Possible	Possible	Possible
Traffic Access Restrictions	Yes	None	None	None	None
Emergency Vehicle Access	Potentials Problems	No Problems	Minor Problems	Minor Problems	Minor Problems
Maintenance Problems	None	Not Applicable	Minimal	Minimal	Minimal
Landscaping Maintenance Responsibility	City	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Level of Violation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Cost	Moderate	None to Residents	Low	Low	Low
Noise and Pollution	No Change	No Change	Increased Noise Likely	Increase Noise Possible	Increase Noise Possible
Parking Impact	No Change	No Change	Yes	No Change	No Change



**TRAFFIC MANAGEMENT TOOLBOX WITH ATTRIBUTES  
(TABLE 4 OF 4)**

<i>Traffic Calming Improvement</i>	<i>Street Narrowing</i>	<i>Textured Crosswalk</i>	<i>Traffic Circles</i>
<i>Detailed Description Shown on:</i>	<i>Page 27</i>	<i>Page 28</i>	<i>Page 28</i>
Allowed for Local	Yes	Yes	Yes
Allowed on Collector & Arterial	Possible	Yes	Not on Arterials
Traffic Reduction	Possible	Unlikely	Possible
Speed Reduction	Possible	Possible	Yes
Safety Improvement	Possible	Improved for Pedestrians (Low)	Possible
Traffic Access Restrictions	None	None	None
Emergency Vehicle Access	No Problems	No Problems	Some Constraint
Maintenance Problems	Yes	Minimal	Yes
Landscaping Maintenance Responsibility	Resident	Not Applicable	City
Level of Violation	Not Applicable	Not Applicable	Low
Cost	High	Low	Moderate
Noise and Pollution	Not Change	No Change	No Change
Parking Impact	Possible	Possible	Yes



## TRAFFIC MANAGEMENT TOOLBOX REFERENCE INDEX

### Bike Lanes – Summary on Table 1, page 16

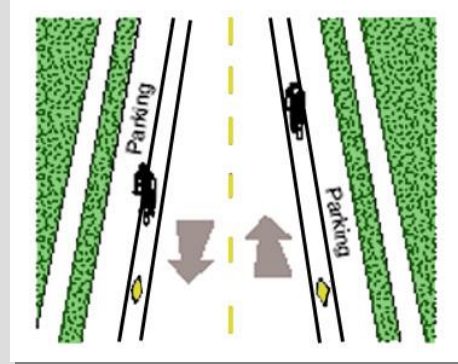
A bike lane is a portion of the roadway designated for the preferential or exclusive use of bicyclists by striping, signing and/or pavement markings. Bicycle lanes provide dedicated space and increase motorists' awareness that bicyclists are welcome and encouraged on roadways. Bicycle lanes also enhance pedestrian safety if a travel lane is removed or travel lanes are narrowed to make space for the bike lane.

#### PLUS

- May reduce speeds through narrowing of travel lanes to make room for bike lane
- Provides dedicated space for bicyclists on roadways.

#### MINUS

- Parking may need to be eliminated to make room for the bike lane/s.
- Maintenance – striping multiple times
- False sense of security - cyclists



### Chicanes – Summary on Table 1, page 16

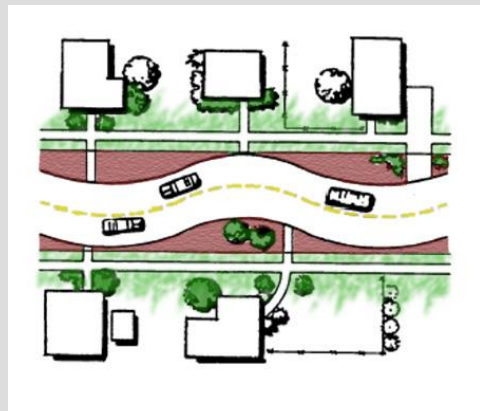
Chicanes are usually a set of two or three landscaped curb undulations that extend out into the street. Chicanes narrow the street encouraging motorists to drive within the speed limit in order to maneuver between them.

#### PLUS

- Reduces vehicle speeds.

#### MINUS

- Increased maintenance for landscaping and pavement.
- Loss of on-street parking.
- Maintenance





**Chokers or Curb Extensions --  
Summary on Table 1, page 16**

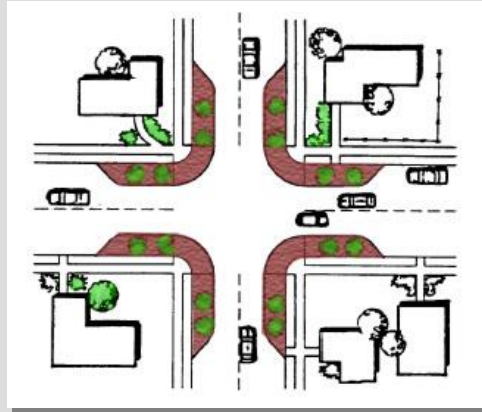
Chokers or curb extensions narrow the street by extending the sidewalk at intersections or the landscaped parking strip at mid-block locations these devices improve pedestrian crossings by shortening the crossing distance and reducing the time that pedestrians are in the street.

**PLUS**

- Slight traffic slowing normally results.
- Shorter pedestrian crossing distance and better motorist/pedestrian visibility of each other.
- Creates added area for landscaping

**MINUS**

- Potential obstacle for motorists to run into.
- May result in loss of on-street parking.
- Maintenance
- Drainage



**Diverters – Summary on Table 1,  
page 16**

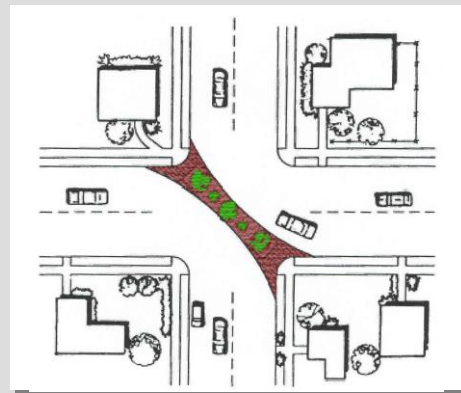
Diverters can be designed in a number of ways. They are an effective tool in redirecting traffic from one street onto another street. Diverters can extend all the way across an intersection or they may prohibit only one direction of traffic while allowing the traffic coming in the opposite direction to continue on its normal pathway.

**PLUS**

- Reduce traffic.
- Reduce speed of traffic as it redirects the path of the motorist.

**MINUS**

- Potential obstacles for motorist to run into.
- May result in loss of on-street parking.
- Restricts emergency vehicles.





### Entrance Ways – Summary on Table 1, page 16

Entranceways are special entrance features, which provide identity to a neighborhood. The exact configuration of the entrance way will depend on location, desired neighborhood identity, etc.

#### PLUS

- Creates neighborhood identity.
- Can discourage truck entry.
- Creates added streetscape area for landscaping

#### MINUS

- Increased maintenance costs.



### Half Closures – Summary on Table 2, page 17

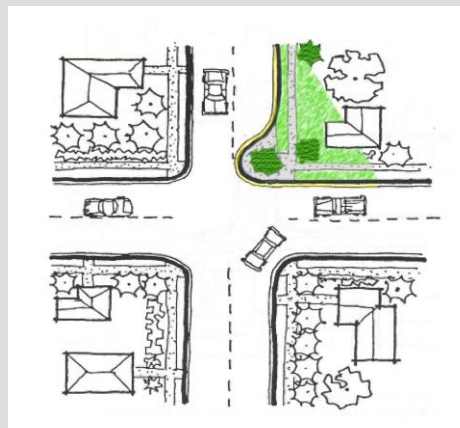
Half closures are a physical barrier constructed at the entrance to the neighborhood to reduce cut through traffic. This is a partial closing of that street for traffic use.

#### PLUS

- Reduces cut through traffic.
- Possible reduction in traffic speeds.
- Creates added streetscape area for landscaping.

#### MINUS

- Increased maintenance costs.
- Traffic violations, especially during the late evening hours.







### Lighted Crosswalks – Summary on Table 2, page 17

In-pavement and overhead crosswalk lights are used to provide additional safety for pedestrians and motorists. The lighting is used at mid-block crosswalks or at intersection crosswalks that are not controlled by a traffic signal or stop sign

#### PLUS

- Warn motorists of pedestrians when activated by the pedestrian.
- Provide higher visibility at night.

#### MINUS

- Increase in maintenance cost
- False sense of security.
- Pedestrians may not take as much precaution as they enter the roadway.



### Medians – Summary on Table 2, page 17

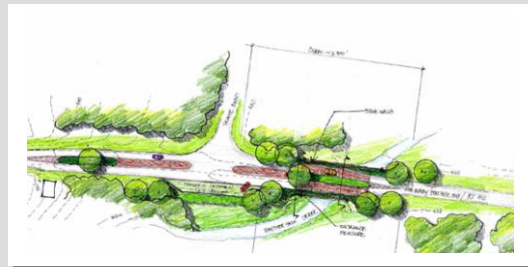
Medians are raised islands built in the center of a street. Medians can slow traffic, decrease accidents, and give pedestrians a safe place to stop as they cross the street. Building a median usually requires narrowing land widths, reducing the number of travel lanes, or removing on-street parking. Landscaping is encouraged if sufficient space is available.

#### PLUS

- Speeds may decrease.

#### MINUS

- On-street parking may be removed.
- Maintenance





### Neighborhood Speed Watch Program -- Summary on Table 2, page 17

Residents concerned with speeding traffic in their neighborhood use this educational program to inform motorists they are speeding. Use only on local street, neighborhood residents are loaned a radar gun and speed display board to record speeds and display them to drivers. The City sends letters to drivers traveling more than seven (7) miles an hour over the posted speed limit, reminding the motorist the importance of obeying the 30 mph speed limit, and that children and pedestrians are endangered by high speeds.

**PLUS**

- Neighbors feel they are part of the solution
- An effective public relations tool
- Speeds may be reduced during short intervals when the radar gun is in use.

**MINUS**

- Not an enforcement tool.



### Pavement Markings – Summary on Table 2, page 17

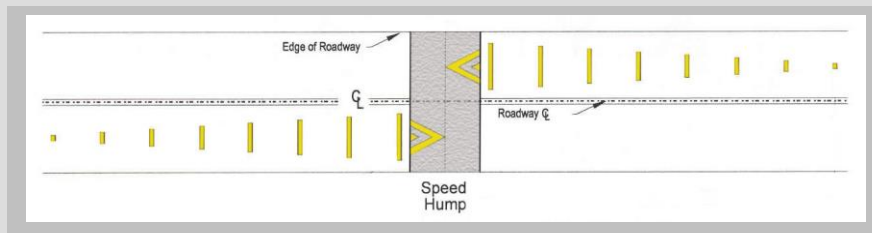
The use of pavement markings can be a simple, low cost influence to change the pattern of driver behavior on a roadway. Pavement markings can be used to guide motorists, delineate on-street parking areas, or create the impression of a narrowed roadway, all in an attempt to affect drivers in a manner that tends to slow them. The reduction may not be dramatic, but there should be a noticeable improvement.

**PLUS**

- Possible reduction in speeds.
- Changes can be quickly implemented if paint is used.

**MINUS**

- Increases regular maintenance.





### Road Closure – Summary on Table 3, page 18

Road closures are the most extreme of the traffic management tool. They are used when other methods have not proven too effective in reaching the desired goal. They are used to prevent traffic from either entering onto or exiting from a particular street.

#### PLUS

- Eliminates all cut through traffic.
- Provides a buffer for business areas and residents between residential street and higher volume streets.

#### MINUS

- Potential obstacles for motorists run ins could occur.
- Restricts emergency vehicles
- Restrict residential traffic.



### Speed Display Boards – Summary on Table 3, page 18

Administered by the Cheyenne Police Department, this program involves the placement of speed boards or speed-watch trailers on designated streets. Vehicle speed is visually displayed to drivers as they approach the speed boards. Speed enforcement generally follows use of these boards.

#### PLUS

- Speeds may be reduced during time speed display board is in operation.
- Effective public relations and education tool.

#### MINUS

- Not an enforcement tool.
- Not effective on multi-lane roadways that have significant traffic volumes. In these cases there is limited ability to differentiate between more than one approaching vehicles.





**Speed Humps – Summary on Table 3, page 18**

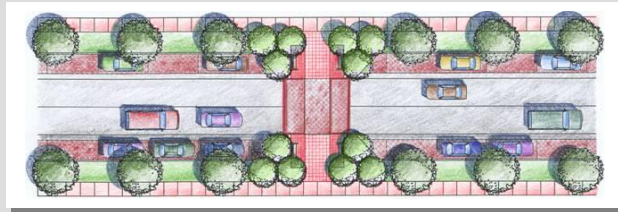
Speed humps are used to slow vehicle speeds through the use of paved mounds, raised approximately 3 to 4 inches over a 12-foot length. Speed humps extend the width of the street and are spaced approximately 300 to 500 feet apart. Vehicles are forced to drive at the speed limit to comfortably cross over the speed hump.

**PLUS**

- Reduces speeds.
- Can cause non-local traffic to shift to arterial streets.

**MINUS**

- Can cause traffic to shift to other neighborhood streets.
- May affect emergency vehicle response times
- May increase noise adjacent to hump.



**Speed Lumps – Summary on Table 3, page 18**

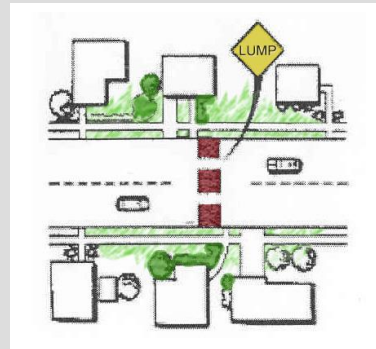
The speed lump is a variation of the speed hump. Two wheel cuts are added and designed to allow large vehicles, such as buses and emergency vehicles to pass without slowing. These large vehicles will dictate the distance and spacing of cut outs. This will allow the larger vehicle to pass but will cause the standard size vehicles to be affected during its pass by the hump.

**PLUS**

- Reduce speeds.
- Maintains rapid emergency response times
- Inexpensive

**MINUS**

- Aesthetics
- Increased noise to adjacent residences
- Private vehicles with large wheel widths can avoid the lump using the wheel cut outs





### Speed Table – Summary on Table

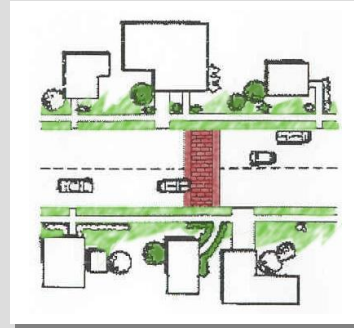
A speed table is a flat-topped speed hump with some type of textured material on the flat portion such as brick. The flat-topped portion of the speed table is long enough to accommodate an entire wheelbase of a full size passenger automobile. Speed tables are generally designed to allow greater speeds than speed humps. This would include gently sloped ramps and long flat fields. Texture materials improve the overall appearance.

#### PLUS

- Smoother on large vehicles such as trucks & buses.
- Effective in reducing speeds, though not to the extent of speed humps.

#### MINUS

- Aesthetics
- Cost if textured materials used.
- Increased noise to adjacent residences.



### Street Narrowing – Summary on Table 4, page 19

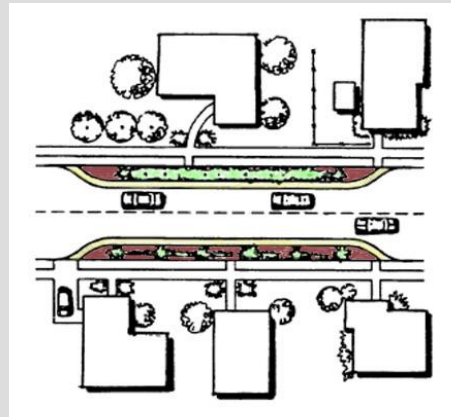
Street narrowing involves the reduction of the pavement width along a roadway. The narrowing can be achieved by removing part of the pavement surface or by using pavement markings that narrow the travel lanes. Landscaping is encouraged.

#### PLUS

- Changes can be quickly implemented if paint is used.
- Speeds may decrease.

#### MINUS

- Striping not always perceived as an effective tool for speed reduction.
- Parking may be reduced or eliminated.
- Maintenance





### Textured Crosswalks – Summary on Table 4, page 19

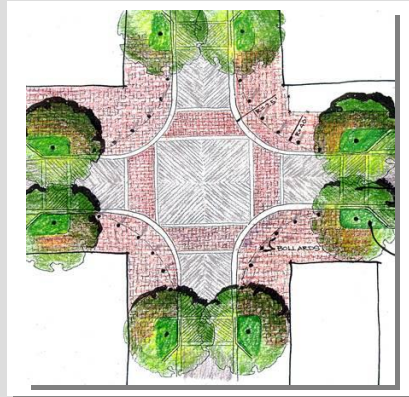
Textured crosswalks incorporate a patterned surface that contrasts with the adjacent roadway. These crosswalks will define the crossing location for the pedestrian. Can be used at intersection and mid-block locations. In some cases, textured crosswalks can be incorporated into speed humps. These crosswalks are subject to the same warrants as painted crosswalks.

#### PLUS

- Indicates a preferred crossing location.
- Enhanced visual, emphasizes pedestrian priority.
- Often viewed as an aesthetic addition to the neighborhood.

#### MINUS

- Pedestrians may place too high a level of reliance on the ability of a crosswalk to control driver behavior.
- Can be more maintenance than with traditional crosswalks.



### Traffic Circles – Summary on Table 4, page 19

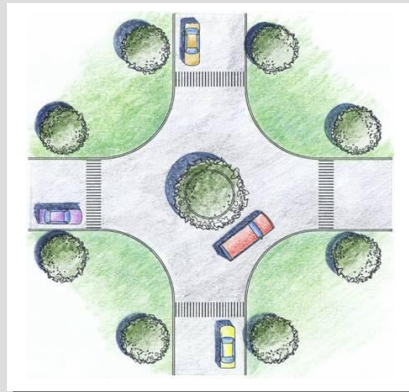
Traffic circles are raised islands placed in an intersection. The primary purpose of a traffic circle is to slow high-speed traffic by causing motorists to decrease speed in order to maneuver around the circle. An additional benefit is that they can reduce the number of reported accidents. (Reported accidents tend to be more severe than unreported accidents.)

#### PLUS

- A noticeable reduction in speeds.
- Reduces accident potential.
- May eliminate need for stop signs.

#### MINUS

- Required signing may detract from its aesthetic quality.
- Pedestrians and cyclists must adjust to less traditional crossing patterns.
- Some parking may be lost on approaches.
- Snow plowing may be more difficult.





## APPENDIX A NEIGHBORHOOD TRAFFIC MANAGEMENT

### Community Action Request (CAR) Form for Local Streets

We, the undersigned, request a traffic study at the location stated below. The following signatures represent at least ten different households and/or businesses in close proximity to the location concerned. The signatures here represent the neighborhood's commitment to work with the NTMP for a safer traffic environment within our neighborhood.

Location of Concern: \_\_\_\_\_

Concerns for this location:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date Form Submitted to City: \_\_\_\_\_

*(Please place checkmark/s by name/s of primary contact/s)*

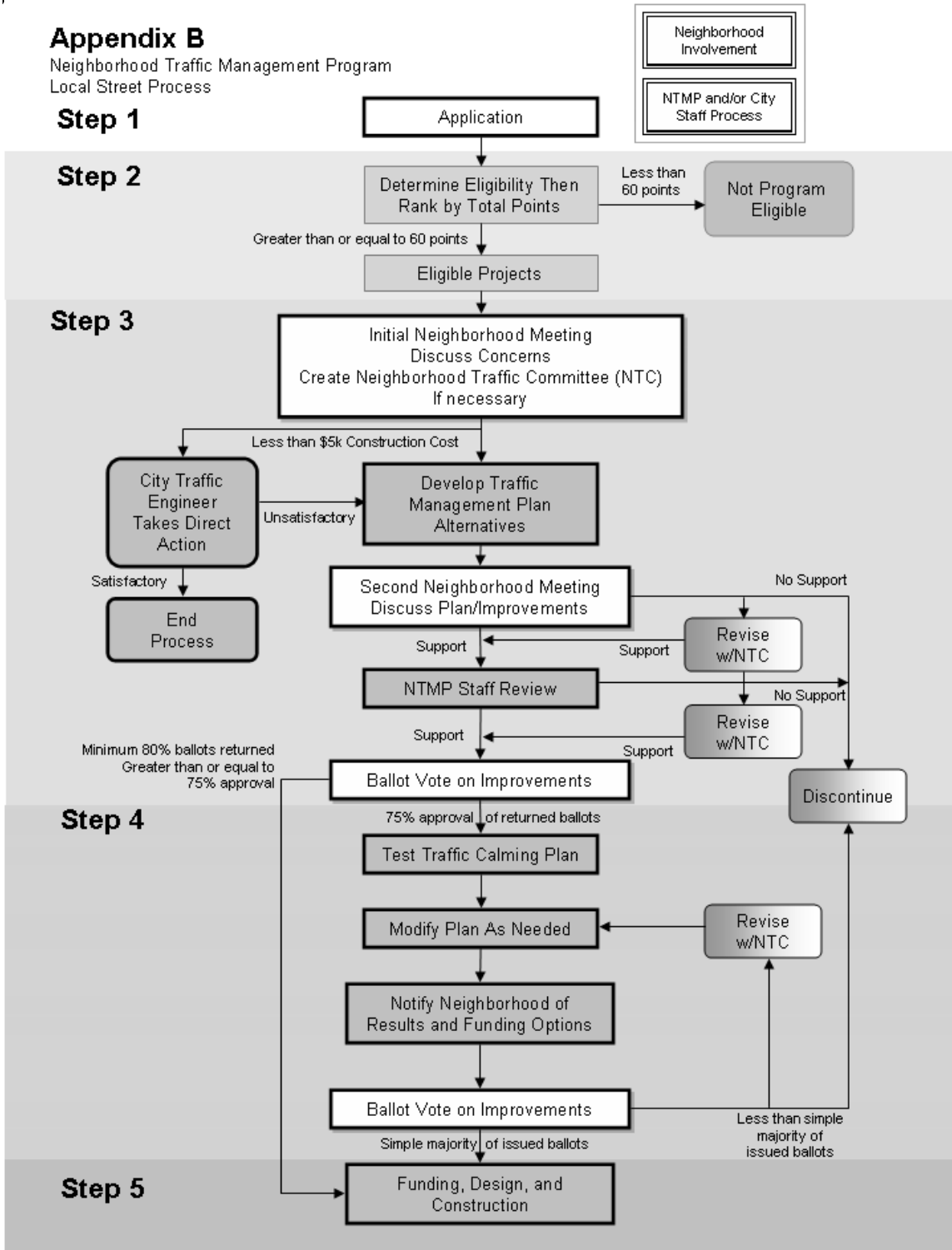
	<b>Signature</b>	<b>Address</b>	<b>Phone</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



# NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

## Appendix B

Neighborhood Traffic Management Program  
Local Street Process







### Appendix C

Neighborhood Traffic Management Program  
Collector Street Process

