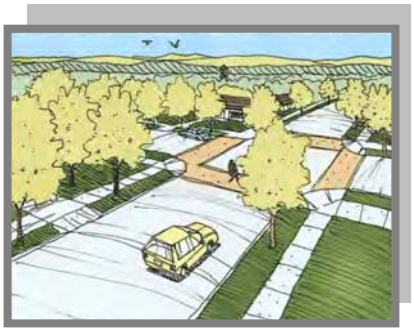
City of Des Plaines
Neighborhood Traffic Management Policy



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Last Updated:

City of Des Plaines
Neighborhood Traffic Management Policy

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INTRODUCTION

There is increasing interest across the country in developing new strategies to reduce the speed and amount of traffic in residential neighborhoods. Measurement of speeds, traffic volumes, and crash rates are essential in helping determine which strategies work and can be applied at similar locations.

The purpose of this document is to describe a process that will:

1. Determine the extent of existing traffic problems in a neighborhood.
2. Describe the range of alternatives available to reduce those problems.
3. Utilize local input in assessing the determination of traffic calming alternatives.
4. Determine if the traffic calming measure is appropriate based on sound engineering criteria.
5. Develop a priority ranking system for the City Council to use when the estimated cost of projects exceeds the approved funding level.

GUIDING PRINCIPLES

The following basic principles are to be used as a foundation as we work through the process of managing traffic in neighborhoods.

A. Traffic operations and safety are important and should be addressed in order to enhance the quality of our neighborhoods. Both the perception of and the measurable characteristics of traffic problems should be considered.

B. Adequate emergency and public service access is essential and must be maintained. Therefore, traffic calming measures may be limited to certain streets.

C. Local residents, businesses, schools and park users should have input into how the street operates, although the final decision is made through the use of sound engineering judgment.

D. Prioritization will be established when projects compete for limited funding and staff resources.

E. The traffic control measure(s) selected should not move traffic to adversely affect other streets.

F. Proposed changes must be fair and consistent throughout the City.

G. Based on engineering criteria set forth in this document, the City will make the final determination of the location and type of traffic calming device to be installed.

TRAFFIC CALMING OBJECTIVES

Traffic calming is the combination of mainly physical and educational measures used to alter driver behavior in order to reduce the negative effects of motor vehicle use and thereby improve conditions for non-motorized street users.

The general objectives of traffic calming measures are to improve the quality of life in neighborhoods and promote alternative modes of transportation by:

1. Slowing traffic
2. Reducing cut-through traffic
3. Increasing safety for:
    a. Pedestrians
    b. Bicycles
    c. Vehicles
4. Enhancing the aesthetics of neighborhood streets when possible (e.g. landscaping at curb extensions or traffic circles) and at the least not detracting from the aesthetics of the neighborhood

ALLOWABLE TRAFFIC CALMING MEASURES

There is a range of tools available to control traffic speeds and reduce volumes, each with its associated costs, benefits, and rules for proper application. The following is a list of measures that may be considered in the development of neighborhood traffic management plans. Each of these measures is discussed in Appendix A.

Speed monitoring options:

Traditional Police enforcement
Mobile radar speed display
"Keep Kids Alive, Drive 25" campaign

Changes to traffic control:

Turn restrictions (Full-time or peak-hour)
Additional signs - stops signs, speed limits (subject to Federal MUTCD warrants)
Additional markings - edgelines delineating the parking lane(s)
Parking modifications - adding parking; relocating parking to create a chicane effect
One-way streets - traditional one-way pairs, non-traditional one-way patterns ("mazes")

Physical changes to streets:

Curb extensions and street narrowings
Traffic circles constructed at intersections within existing curblines
Mid-block islands
Speed humps/tables
Speed bumps (to be used only in alleys)
Diagonal diverters
Partial intersection closures
Cul-de-sacs

Other options:

Education – newspapers, flyers, driver's education classes, banners, city electronic message boards
Arterial improvements (most arterials are under IDOT jurisdiction)

SPEED HUMP EXCLUSIONS:

All traffic management measures have rules regarding their appropriate application. However, speed humps are unique in that they create a vertical deflection in the roadway surface. Due to their greater adverse impacts upon critical City services, there are certain locations where speed humps will not be considered. The following is a list of these locations, based upon extensive national experience and best practices. A map of the excluded streets is included in Appendix B.

- Arterial streets
- Collector streets
- Truck routes
- Streets adjacent to Hospitals
- CTA/PACE Bus Routes
- Snow Routes
- Dead end blocks of local residential streets
- Emergency Response Routes as designated by the Fire Department
- Streets deemed inappropriate for speed humps as determined by the Staff Traffic Advisory Committee (STAC), based upon other factors not considered above.

CRITERIA

In order to provide an objective means for justifying the expense, resources and various trade-offs associated with implementing traffic calming measures, the following criteria are to be used, singularly and in combination, to determine whether there is an objective problem worthy of further study:

1. 85th Percentile speeds more than 7 mph over the posted speed limit
2. A greater than average crash experience in a pattern that is related to unreasonable volumes or speeds
3. Cut-through traffic in excess of 50 percent of the average daily traffic on the street during peak hours
4. Other facts and circumstances that, in the judgment of the Staff Traffic Advisory Committee, establish the existence of a problem which warrants consideration by the Committee, despite the failure to satisfy the criteria listed in 1, 2 or 3 of this section.

FUNDING

When routine maintenance on streets is deferred, the deterioration of the street accelerates, resulting in the need for a premature and very expensive full reconstruction of the street. Therefore, the first priority of the City's capital improvement program is to maintain the condition of the existing streets.

There is often insufficient funding to keep up with this primary task of maintenance. As such there will necessarily be a limited amount of City funding available for projects to modify the streets for traffic management purposes. In order to ensure the commitment of residents to the various traffic management projects and to stretch the limited City funds as far as possible, the City is adopting a cost-sharing approach for all traffic calming projects.

Project Cost Share

Project Phase	City Share	Resident Share
Traffic Study of Neighborhood	100%	---
Basic Measures (e.g. signage, striping, education)[1]	100%	---
Engineering Design and Management of Physical Measures[2]	100%	---
Construction of Physical Measures[3]	---	100%
Future Maintenance of the Installed Physical Measures	100%	---

[1] "Basic Measures" include *changes to traffic control*, *speed monitoring* and other less expensive measures outlined in the "Allowable Traffic Calming Measures" section above.

[2] "Physical Measures" include the *physical changes* outlined in the "Allowable Traffic Calming Measures" section above.

[3] The City will manage the construction and advance the money to complete the project. The subject residences will then reimburse the City through the creation of a Special Service Area (SSA) as detailed in Step 4 of the "Process" section.

Approximate Cost For Initial Construction of Traffic Calming Measures

Traffic Calming Measure	Estimated Cost[1]
Curb extension and street narrowing	$9,000 - $15,000
Traffic circle constructed at intersection within existing curblines	$5,000 - $20,000
Mid-block island	$8,000 - $15,000
Speed hump/table	$2,500/$5,000
Speed bump (to be used only in alleys)	$500
Diagonal diverter	$40,000
Partial intersection closure	$40,000
Cul-de-sac	$120,000

[1] Source: Combination of several documents including ITE/FHWA, 1999 "Traffic Calming State of the Practice." and ~1999 Newark, NJ study of ITE reported projects. Prices from study adjusted to 2009 assuming 3% annual inflation. National information from websites tends to be both dated and wildly variable so these costs must be treated as very rough estimates. Local costs from neighboring communities (e.g. speed humps) were used when available.

Costs vary considerably depending upon nature of the measures installed (e.g. extent of landscaping for traffic circles, drainage structures impacted by curb extensions). Construction of measures as stand-alone projects is more expensive than constructing them as part of a larger street reconstruction project.

PRIORITY

Given the cost of traffic calming measures and the fact that demand for this type of program nearly always outstrips available funding, the following point system is being adopted to allow for a prioritization and ranking of petitioned projects.

Criteria	Values	Number of Points Possible	Points Awarded
85th Percentile Speed	7-8 mph over 9-10 mph over >10 mph over	2 3 4	
Crashes per year[1]	1-3 crashes >3 crashes	1 2	
% of Cut-through Traffic[2]	25% - 49% >49%	1 2	
Average Daily Traffic Volume	1,000 – 1,499 >1,499	1 2	
Pedestrian Volume	Elementary/middle school or large park within 600'. Or on a designated school walk route.	2	
Total Points			

[1] Per block

[2] Based upon peak hour. Determined through traffic counts and observations

PROCESS FOR DEVELOPING A NEIGHBORHOOD PLAN

The following process is to be used for the request, investigation and determination of whether to implement traffic calming measures on a street within the City. A flow chart summarizing the process is included in Appendix C.

Step 1 – Neighborhood Petition

A neighborhood identifies a traffic issue(s) and submits a letter and *Neighborhood Traffic Management Petition* to the City.

- The letter should explain the residential traffic concern(s).
- The *Neighborhood Traffic Management Petition* must be signed by 65% of all of the households living on the affected block, indicating support of the resident concern. The *Neighborhood Traffic Management Petition* form is included in Appendix D and is available on the City's website.
- The letter and accompanying petition should be submitted to the City, care of the City Manager. Contact information for a neighborhood representative should be included so that the City can follow up on the letter and petition.

Step 2 – Data Collection and Committee Review

Upon receipt of the letter and petition, the Public Works and Engineering Department will perform a traffic study of the area. The study typically includes a site review of the neighborhood, collection of speed and volume data, and review of the crash history.

The results of the traffic study will be reviewed by the Staff Traffic Advisory Committee (STAC) which will make any necessary traffic management recommendations. The Committee will take all factors into consideration including roadway geometry, snow routes, emergency routes, roadway classification, bike routes, drainage patterns, lighting, street resurfacing schedule, etc. The STAC is comprised of representatives from the Public Works and Engineering, Community and Economic Development, Police, Fire, and Legal Departments.

The Alderman of the subject ward will be kept informed throughout the process. In addition, an email will be sent out to the submitter of the original petition and all those who signed the petition (and included an email address) notifying them of the date, time and location of the STAC meeting so that they may attend if desired.

The STAC will write a response to the neighborhood. Simpler and relatively inexpensive interventions recommended by the STAC such as an enforcement program, signs, or pavement markings may be implemented directly after notification to the residences in the neighborhood.

If more significant changes to the street are warranted and recommended by the STAC, then the following additional steps will be followed.

Prioritization of Projects

It is important to note that even with the resident cost share, the City still faces limitations in staff resources to perform the traffic management studies and traffic management design as well as a limit in the amount of money available to front the project construction costs.

The City will make every effort to address traffic concerns in a timely manner. However, if the demand outstrips available resources, then the City will apply the prioritization formula to the project to determine where it fits in relative to the other petition areas that the City has received. If there is a current waiting list in excess of available City resources, then the location will be put onto the waiting list pending the availability of traffic monitoring equipment, staff time and/or funding.

The traffic management program is designed as a triage rather than a first-come first-served program. Therefore, a petitioned location on the waiting list can be superseded by a newly petitioned street if the new street scores higher in terms of priority.

Step 3 – Neighborhood Survey

If the STAC recommended physical changes to the street, then the City will mail a survey, specific to the type of traffic calming or other measure recommended, to all affected residences. Some measures (e.g. speed humps, diagonal diverters, etc.) have the potential to divert traffic to other local streets. In these cases, surveys will also be sent to residents on adjacent blocks who are likely to be affected. The survey will include:

- Summary of the results of the traffic study
- Explanation of the measures recommended by the City based upon the study
- Concept drawing for any infrastructure changes
- Ranking of the proposed project in the City's priority queue
- Rough preliminary cost estimate of the proposed changes including the cost to each individual residence if the measures are implemented
- Description of the Special Service Area process

The City will then tabulate the survey results. The following conditions must be met for the process to continue:

- A *minimum of 75%* of the residences on the block requesting the traffic calming measure must vote in favor of the project. The survey will state that any surveys *not* returned will be counted as a "NO" vote.

AND, for measures that may divert traffic to other local streets…

- A separate survey will be mailed to the residences on the likely affected adjacent blocks. A *minimum of 51%* of the residences on all of the adjacent blocks must vote in favor of the traffic calming measure. The survey will state that any surveys *not* returned will be counted as a "YES" vote.

Step 4 – Special Service Area (SSA)

If the minimum thresholds are met from the neighborhood survey then City staff will prepare a more detailed engineering design of the proposed measures with detailed cost estimates. Similarly the Legal Department will prepare the necessary paperwork for a special service area (SSA). The SSA is a mechanism for contiguous residential areas to fund localized public improvements through a localized property levy. The SSA process for traffic calming measures will work as follows:

1. A representative of the neighborhood must work with the Legal Department in submitting an application to create the SSA. The application will include: the precise area and list of residences to be included within the SSA; the total dollar amount to be levied upon the SSA; the breakdown of the dollar share attributable to each individual property based upon assessed property value; and the repayment period (between 1 and 15 years).

    a. **SSA Boundary –** The general rule for the SSA is that it includes all of the homes that directly benefit from the improvements to be implemented. For traffic calming measures that occur between intersections (e.g. speed humps, curb extensions), the SSA will include all homes located on the individual block (as determined by driveway frontage). For intersection traffic calming measures (e.g. traffic circles, curb extensions), the SSA will include all homes along the blocks that feed into the intersection. These are general rules only and it is expected that each application will need to be examined individually in order to make a rational determination of the appropriate boundary area. An exhibit showing some sample applications of the policy is included in Appendix E.

    b. **Repayment Period –** Illinois law provides for a maximum repayment period of 15 years for SSA's. Since the City will be fronting the construction funds, the City naturally favors shorter payback periods. A reasonable annual interest rate, as determined by the Director of Finance at the time of the SSA creation, will be applied to the current construction cost in order to account for borrowing costs over the course of the selected repayment period. An exhibit showing sample costs per residence for the boundary area examples, given the various repayment periods, is included in Appendix E.

2. A letter will be sent to each of the homes in the proposed SSA explaining the SSA application, the SSA process and indicating the date for the public hearing.
3. A public hearing will be held for the SSA application at a City Council meeting. The public hearing will be advertised in accordance with State and local requirements.
4. Each residence in the proposed SSA that opposes the formation of the SSA, must submit a counter petition to the City expressing that opposition. Counter-petitions will be accepted for a period of 60 days following the public hearing.
5. If *51 percent or more* of the affected residences within the SSA file counter-petitions within the 60-day period, then the application to form the SSA will be terminated. City staff will work with the residents to determine if there are any alternatives that might be more acceptable to the neighborhood and if necessary repeat the above process.

6. If *less than 51 percent* of the affected residences submit counter-petitions, then the SSA application will be presented before the City Council for review and potential approval at the next available City Council meeting. Note that authority for approval of SSA's and City expenditures for projects rests with the City Council. A favorable vote by the neighbors and/or the STAC still requires the approval of the City Council.

Step 5 – Implementation

Upon approval of the Special Service Area by the City Council, the City will proceed with implementation of the proposed traffic calming measures. The residents will be kept informed of the project progress.

Note: Some measures such as speed humps tend to find general support from residents on the street; however no one wants the device in front of their home. The City will take into account the individual circumstances on each street and recommend a design that minimizes any adverse impacts. However, the placement of measures is to be in accordance with the published technical literature, national standards and guidance, and accepted best practices as determined by the Public Works and Engineering Department, and is not a political process. The location of the proposed traffic calming measures will be depicted as accurately as possible in the concept exhibit sent to residents with the Neighborhood Survey in Step 3.

Step 6 – Evaluation of the Traffic Calming Measures after installation

The Public Works and Engineering Department will collect new traffic data after the implementation of the traffic calming measures in order to conduct a before-after evaluation. The results of the evaluation will be shared with the residents and will be reported back to the STAC in order to build a knowledge base for future decision making.

Request for Removal of Installed Traffic Calming Measures

It has been the experience in some communities that after speed humps in particular are installed, residents have changed their minds and requested that the City remove the speed humps. Due to the cost involved in installing traffic calming infrastructure measures, the City has an interest in avoiding the arbitrary removal of installed measures. As such, if after the installation of the measures the residents determine that they no longer want the installed measures, and provided that the traffic calming measures were installed correctly per plan and there is no evidence of new unsafe conditions as a result of the traffic calming measure, then the following process can be pursued by residents to remove the traffic calming measure:

- Representative of the neighborhood must submit to the City a new petition with signatures from 65% of the households on the subject block, indicating desire to remove the speed hump. The petition must accurately indicate the potential additional costs to the residents as detailed below.
- The measure may be removed during the next scheduled resurfacing, rehabilitation, or reconstruction of the street, depending upon the measures installed, at no cost to the residents. For instance, speed humps consist of asphalt and can feasibly be removed during a typical resurfacing. Curb extensions, however, typically involve concrete curb and drainage work that is beyond the scope of a resurfacing project. Therefore, they would not be eligible for remove until the next significant

rehabilitation or reconstruction of the street. The removal of a measure does not absolve the residences of complete payment of the previously incurred installation costs.

- If the neighborhood does not wish to wait until the next scheduled construction on the street, then they may still have the measures removed. However, the residences in the SSA must reimburse the City for its previous contribution to the installation of the measures and fund the removal of the measures. An amendment to the SSA must be filed following the same procedure used for initially creating the SSA, as outlined in Step 4.

***Coordination between Traffic Calming Projects and Capital Improvement Program**

During the Data Collection (Step 2), the City will review the current 5-year Capital Improvement Program (CIP) to see whether the subject street is scheduled for any upcoming construction work. If the street is scheduled for upcoming work, there is potential for any proposed traffic calming measures to be implemented as part of the larger CIP project, resulting in a decreased cost to the residents.

Furthermore, if upcoming CIP work is scheduled for the subject street, the City reserves the right to delay the installation of any traffic calming measures until that time. This is to prevent the City from having to manage the construction of traffic calming measures, only to have to potentially fund their reconstruction during the CIP work. [Note: As per the "Project Cost Share" table in the Funding Section of this policy, residents pay for the initial construction, but the City then assumes the cost of future maintenance for any installed measures].

The coordination of traffic calming projects with CIP projects will be addressed on a case-by-case basis and will be coordinated with the Alderman and the petitioning residents.

APPENDICES

A. Description of Allowable Traffic Control Measures
B. Speed Hump Exclusion Streets – Maps
C. Flow Chart of Process for Developing a Neighborhood Plan
D. Neighborhood Traffic Management Petition Form
E. Special Service Area – Sample Boundary Areas and Costs
F. 2003 And 2009 Regional Traffic Calming Survey Results

Resources:

AASHTO Policy on Geometric Design of Highways and Streets
Federal Manual of Uniform Traffic Control Devices (MUTCD)
North American Design Guidelines for Traffic Calming Measures
ITE Guidelines for the Design and Application of Speed Humps

Traffic Calming: State of the Practice, FHWA/ITE/Reid Ewing
APWA Traffic Calming Webcast
Traffic Calming Primer, Pat Noyes & Associates

City of Evanston Neighborhood Traffic Management Policy
City of Park Ridge Neighborhood Traffic Management Policy
Village of Wilmette Traffic Calming Policy and Procedure
City of Naperville Neighborhood Traffic Mitigation/Calming Plan
Village of Western Springs Neighborhood Traffic Management Plan
City of Seattle, WA Traffic Calming Program
City of Sarasota, FL Traffic Calming Program Warrants

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APPENDIX A

ALLOWABLE TRAFFIC CONTROL MEASURES

ALLOWABLE TRAFFIC CONTROL MEASURES

These traffic control measures form the basis from which the final recommendations for each neighborhood are to be selected. They are divided into subsections and follow the order listed in the text of this report. Not all measures are appropriate in all situations. Each may have different impacts and levels of inconvenience on neighborhoods.

SPEED MONITORING OPTIONS

Traditional Police Enforcement

Police enforcement is an essential part of any traffic management plan. However, it must be recognized that enforcement is staff intensive and it is impossible to have constant patrol of an area. In addition, once a campaign of enforcement has ended, driver behavior tends to return to "normal."

Mobile Radar Speed Display

This is a trailer-mounted unit that has radar and a speed display showing the speed of the vehicle to the driver. These units are effective in slowing vehicles while they are in place. The City has two units that are rotated throughout the City.

"Keep Kids Alive, Drive 25" Campaign

This is an educational campaign involving the placement of signage on lawns along a street for a fixed period of time. The Police launched a pilot of this program in 2009 in coordination with their neighborhood watch program. The signage can be rotated to trouble locations throughout the City similar to the mobile radar speed display.

CHANGES TO TRAFFIC CONTROL

Turn Restrictions

This measure involves restricting turning movements into or out of neighborhood streets and has been shown to be effective in reducing cut-through traffic. These do require an ordinance. In addition, since many of the arterials within the City are under the jurisdiction of IDOT or Cook County Highway, coordination with these agencies will be required.

While relatively easy and inexpensive to implement, turn restrictions do have drawbacks. First, the turn restrictions apply to residents as well as non-residents, and so can introduce an inconvenience to residents on a street. The second drawback is that turn restrictions will tend to concentrate cut-through traffic to adjacent streets and so a series of turn restrictions may be necessary. Finally, regular police enforcement is necessary to maintain the effectiveness of these restrictions.

Signage

Placing additional regulatory signs (e.g. stop signs, lowered speed limit signs) is often the first request of residents in response to perceived speed issues. However, the location of

stop signs and the level of speed limits are subject to the federal Manual of Uniform Traffic Control Devices (MUTCD).

For example, the role of stop signs is to control right-of-way. They are explicitly not to be used in controlling speeding. The reason for this is that decades of national and local research have revealed that using stop signs where they are not warranted for controlling right-of-way actually makes conditions less safe for pedestrians due to more drivers ignoring these unwarranted signs and also by reducing the credibility of warranted stop signs. Similarly, artificially reduced speed limits have been unquestionably shown to not reduce speeds. They serve only to make violators out of even responsible drivers.

While it is quite easy and inexpensive to litter the City with stop signs and artificially lowered speed limits, doing so would not only not solve the issues, it would knowingly create more hazardous conditions and be a direct violation of federal guidelines. The City will investigate each location against the applicable stop sign and speed limit warrants. However, there are not likely to be many locations remaining in the City where stop signs or lowered speed limits would be warranted.

Pavement Markings

Pavement markings may be used to guide traffic flow or to visually narrow the roadway. A common application is to add a parking lane edgeline on a street, along with diagonal striping in the "no parking" zones adjacent to intersections and fire hydrants. However, this approach is only possible on two-way streets that are at least 28 feet wide or one-way streets that are at least 20 feet wide.

Research indicates that pavement marking tends to slow the fastest drivers on a street due to the psychological narrowing effect. However pavement markings alone do not typically reduce the 85th percentile speed by a substantial margin. And while relatively inexpensive compared to physical changes to the street, the cost of pavement marking can still be significant if a long stretch of street is to be treated.

Parking Modifications

The addition of parking to a street or to both sides of a street can slow traffic due to the narrowing effect it has upon a street. However, various standards apply depending upon the width of and volume of traffic on the street, to ensure safe access for both resident vehicles and emergency response vehicles.

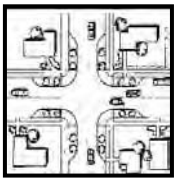
One approach for streets with parking on one side is to alternate the side of the street where the cars are parked in order to create a "chicane" or serpentine effect. Basically this approach serves to help break up a long straight stretch of roadway.

One-way Streets

A strategy used in gridded areas (e.g. Chicago) is to convert alternating streets to one-way traffic. This is typically used to address severe cut-through traffic issues rather than speed issues since the conversion of the street to one-way flow without an accompanying narrowing or addition of parking could actually result in increased speeds.

The main drawback of one-way street patterns is the frustration of having to navigate those one-way street patterns. In addition to simple frustration, the newly-introduced one-way pattern might force some residents to exit their neighborhood at an arterial intersection where turning movements are difficult rather than at the signalized intersection to which they formerly had access.

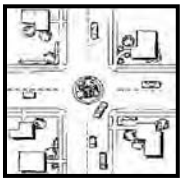
PHYSICAL CHANGES TO STREETS



Curb Extensions and Street Narrowings

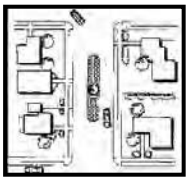
Curb extensions and other narrowings generally involve moving the curb toward the center of the street, thereby creating a bottleneck effect. Curb extensions can be applied at intersections to create a more narrow entrance to a block and to shorten the crossing distance for pedestrians. They can also be applied mid-block. This may require the removal of parking spaces.

Curb extensions are most effective on wider streets with one or two parking lanes. The addition of the extensions tends to have a positive aesthetic benefit for the neighborhood due to the replacement of roadway with additional green grassy area. The cost of curb extensions varies dramatically depending upon the number of drainage structures that are impacted by the extension.



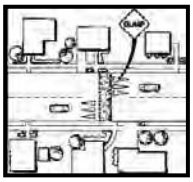
Traffic Circles

Traffic circles are raised circular islands constructed in the center of residential intersections. They reduce vehicle speeds by forcing motorists to maneuver around them. Drivers making left turns are directed to go on the far side of the circle prior to making the turn. The circles serve to break up long straight stretches of roadway and result in safer intersections. In addition, with landscaping the islands can improve the aesthetics of the neighborhood.



Mid-block Islands

Center Islands are used on long sections where there are no intersecting streets. This may require the removal of parking spaces in order to accommodate the shift in the travel lane. This measure serves to break up long, straight stretches of roadway that can encourage speeding.



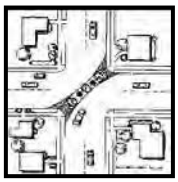
Speed Humps/Tables

Speed humps are approximately 3 to 4-inch high paved humps placed at strategic locations along a street to slow traffic. Humps typically extend the full width of the street with height tapering near the drain gutter to allow unimpeded bicycle travel. There are many different designs in circulation throughout the United States with the 12-foot hump being the most prevalent. However, there has been a movement toward 14-foot humps and even toward exclusive use of 22-foot speed "tables" in some jurisdictions since they are easier on both standard vehicles and the more sensitive emergency response vehicles.

Speed humps are the most widely used of the physical traffic calming measures due to the relatively low cost, relative ease of implementation, and effectiveness in slowing vehicles when applied properly. However, they also tend to be the most controversial, even with residents living on the street where the humps are applied, due to the hassle and the braking/accelerating noise from vehicles. In addition, among the traffic calming measures, speed humps tend to have the greatest adverse impact upon ambulances and the larger fire department vehicles. For this reason, there is a standard list of street types, used by municipalities across the country, where speed humps are not allowed. This full list is included in the policy document.

Speed Bumps

Speed bumps cannot be used on streets but they do have some application for parking lots and alleys. They are generally 1-foot wide and 6 inches high.



Diagonal Diverters, Partial Intersection Closures, and Cul-de-sacs

Each of these measures is intended to fully or partially close access to a street. They are to be measures of last resort both due to their expense and because they, by their nature, fracture the connectivity of the street network. Diversion of traffic to other local streets is an inherent issue with closures.

OTHER OPTIONS

Education (Public Relations)

This technique can involve a range of activities from newspaper articles to neighborhood involvement.

Arterial Improvement

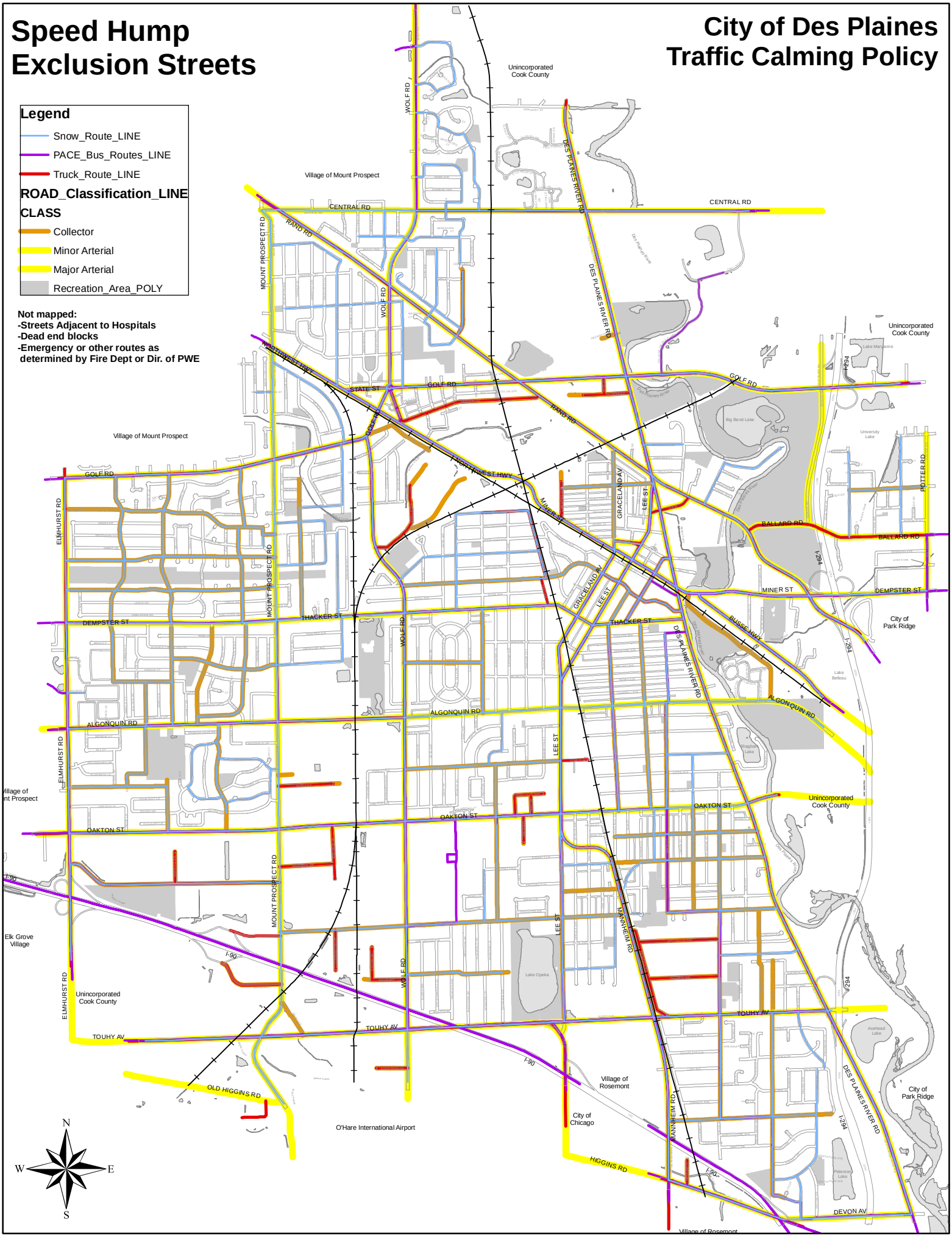
One way to minimize cut-through traffic is to review the arterial street system to ensure that it is working as efficiently as possible. However, most arterials are owned and maintained by either the Illinois Department of Transportation or the Cook County Highway Department. In addition, many arterials or intersections are operating at or above their design capacity due to the steady increase in vehicle ownership and "vehicle miles traveled" throughout the region. Even if funding were available, there is often not a way to feasibly increase the capacity at these locations. Nonetheless, the City will work with the various agencies regarding any potential arterial or signal improvements in problem areas.

APPENDIX B

SPEED HUMP EXCLUSION STREETS - MAPS

Speed Hump Exclusion Streets

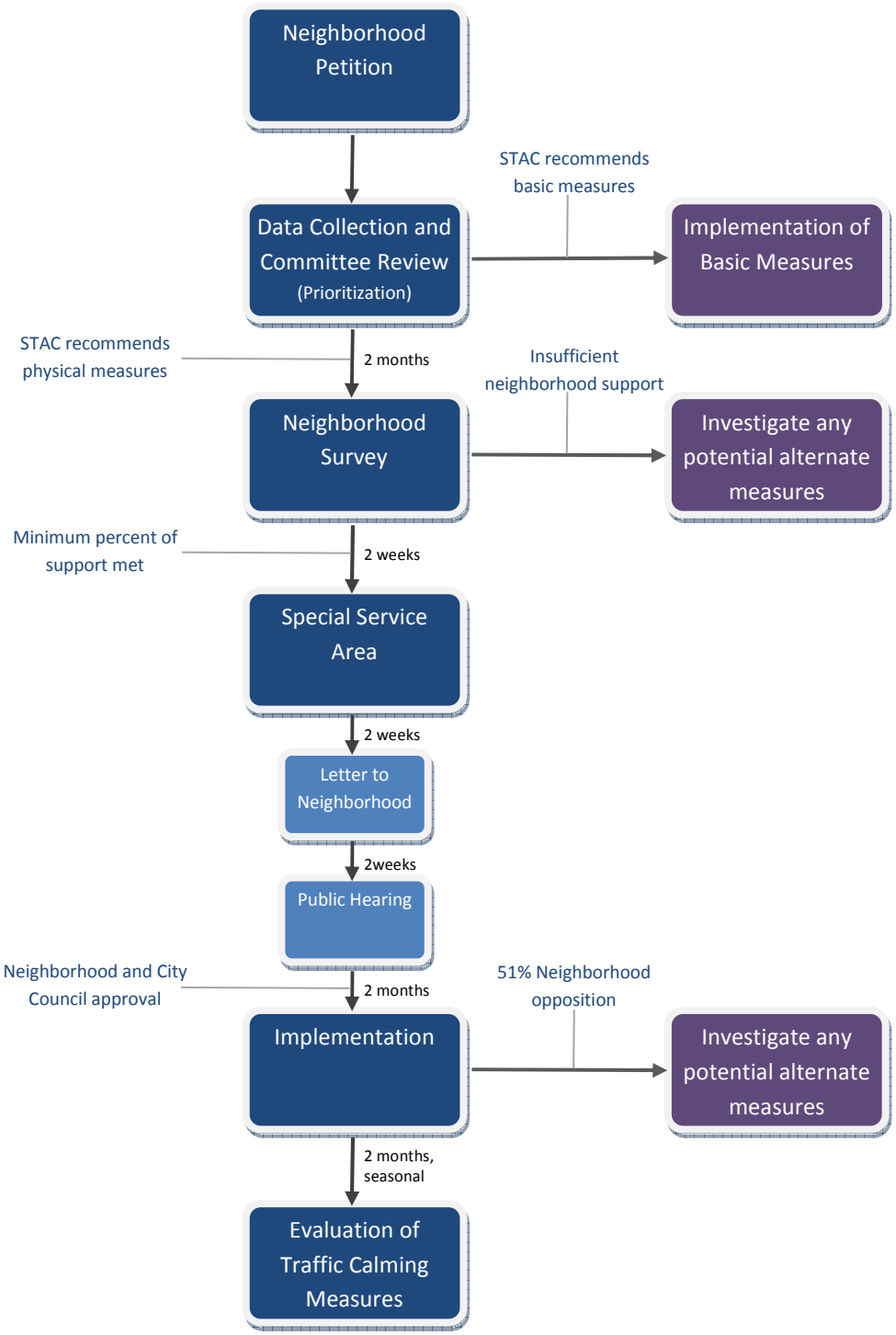
City of Des Plaines Traffic Calming Policy



APPENDIX C

FLOW CHART OF
PROCESS FOR DEVELOPING A NEIGHBORHOOD PLAN

Process for Developing a Neighborhood Plan



APPENDIX D

NEIGHBORHOOD TRAFFIC MANAGEMENT PETITION

City of Des Plaines
Neighborhood Traffic Management Petition

Purpose	To request that the City of Des Plaines provide a traffic study of the requested street and to provide potential solutions to the issues described.
Instructions	Only one signature per household. Minimum 65% of households on the street must sign. The following should be attached during the collection of signatures: - **Written description of the issue(s) for which the study is being requested** - ***Summary of City of Des Plaines Neighborhood Traffic Management Policy***

Name	Address	Telephone	Email	Date

City of Des Plaines
Neighborhood Traffic Management Petition

Summary of City Policy

There is increasing interest across the country in developing new strategies to reduce the speed and amount of traffic in residential neighborhoods. Given the cost involved with implementing any physical changes to streets, and in order to address resident requests in a fair and systematic manner, the City has adopted a *Neighborhood Traffic Management Policy*.

The attached petition represents the first step in the process to investigate reported issues on a street. The full policy includes the following items:

- **CRITERIA –** criteria by which to judge whether there is an objective issue warranting physical changes to a street. The criteria include measured traffic speeds, crash history and any other unique circumstances that may pertain to a street.

- **POINT SYSTEM –** Given the limited amount of equipment for conducting traffic studies and limited staff and funding, the Policy establishes a point system for the ranking of resident requests. If there is a backlog of requests then the highest ranking streets will be addressed first.

- **COST SHARE –** In order to stretch limited funds as far as possible, and in order to ensure the commitment of residents to potential infrastructure changes, the Policy outlines a system of cost sharing. The City provides staff time and equipment for the study, design, construction management, and future maintenance of any items; however, the residents on the subject street must fund the initial cost of constructing the changes. The cost is addressed through the use of a Special Service Area.

- **PROCESS –** After the filing of a petition, the City will perform a traffic study of the street and surrounding neighborhood. The results of the traffic study and any recommendations will be shared with the residents. If basic measures are recommended, they will be implemented upon notification to the residents.

  If physical changes are warranted then a more involved process is required. A survey will be sent to each of the affected residents describing the proposed changes and indicating the cost to each residence. If the results of the survey indicate sufficient support for the proposed changes, then a representative from the neighborhood will work with the City's Legal Department on an application to create a Special Service Area (SSA). The SSA provides the mechanism for the subject residences to fund the construction. Upon approval of the SSA, the City will proceed to complete design and construction of the physical changes.

  The entire process from petition to implementation of physical changes to the street (if warranted) can take anywhere from 8 months to a year.

The full City *of Des Plaines Neighborhood Traffic Management Policy* is available on the Engineering page of the City of Des Plaines website (http://www.desplaines.org/Services/PWandEngineering/Engineering/OverviewEngineering.asp).

City of Des Plaines
Neighborhood Traffic Management Petition

Description of Issue

Instructions	Please use this form to provide a description of the issue(s) that you wish the City to investigate. Alternatively include the description in a typed letter. Whichever is more convenient. Please include as much detail as you can such as: specific locations, approximate dates; time of day, etc. This will help the City in studying the issue. This form (or letter) describing the issue(s) must accompany the Petition when it is being circulated for signatures.

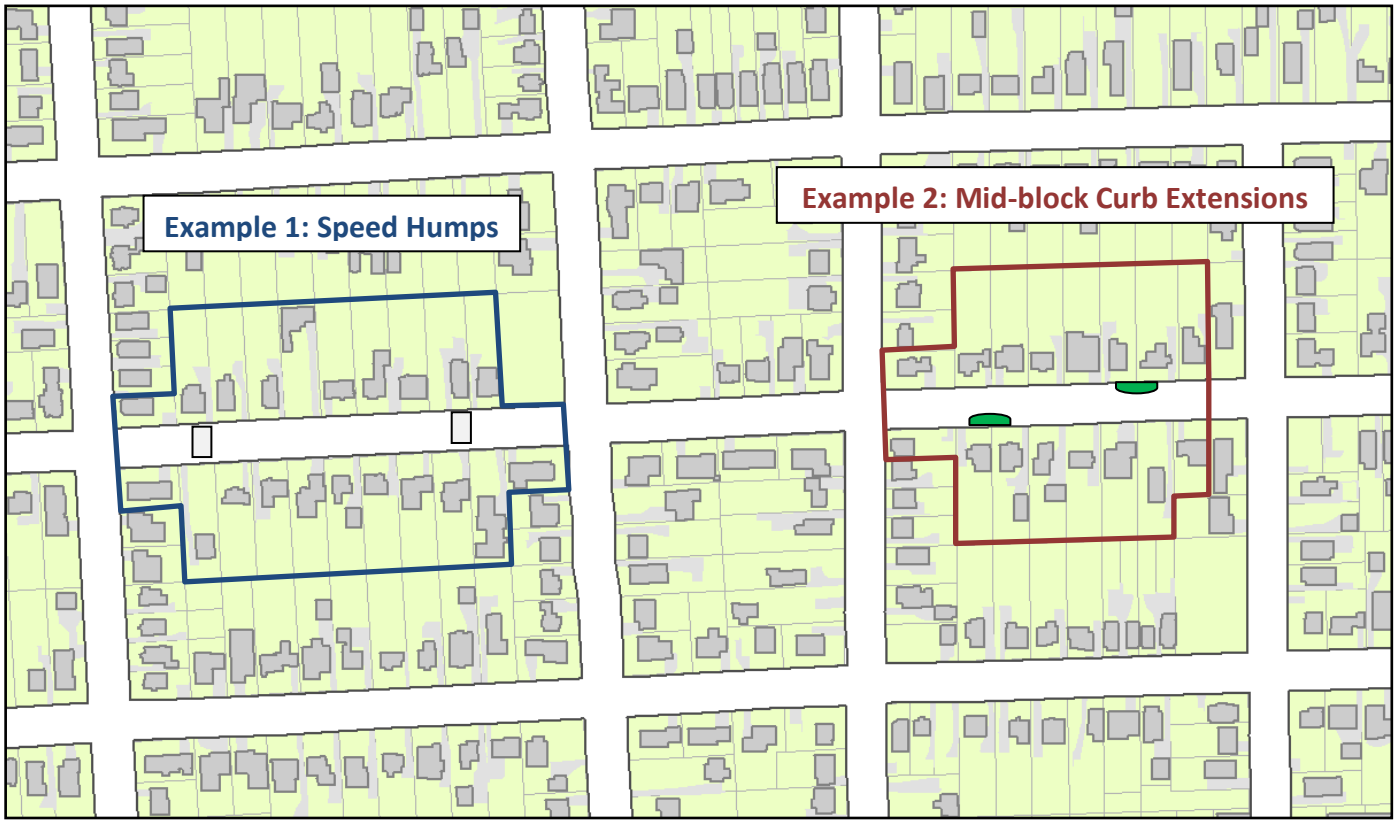
Description:

Return completed petition to: Attn: City Manager
City of Des Plaines
1420 Miner Street
Des Plaines IL 60016

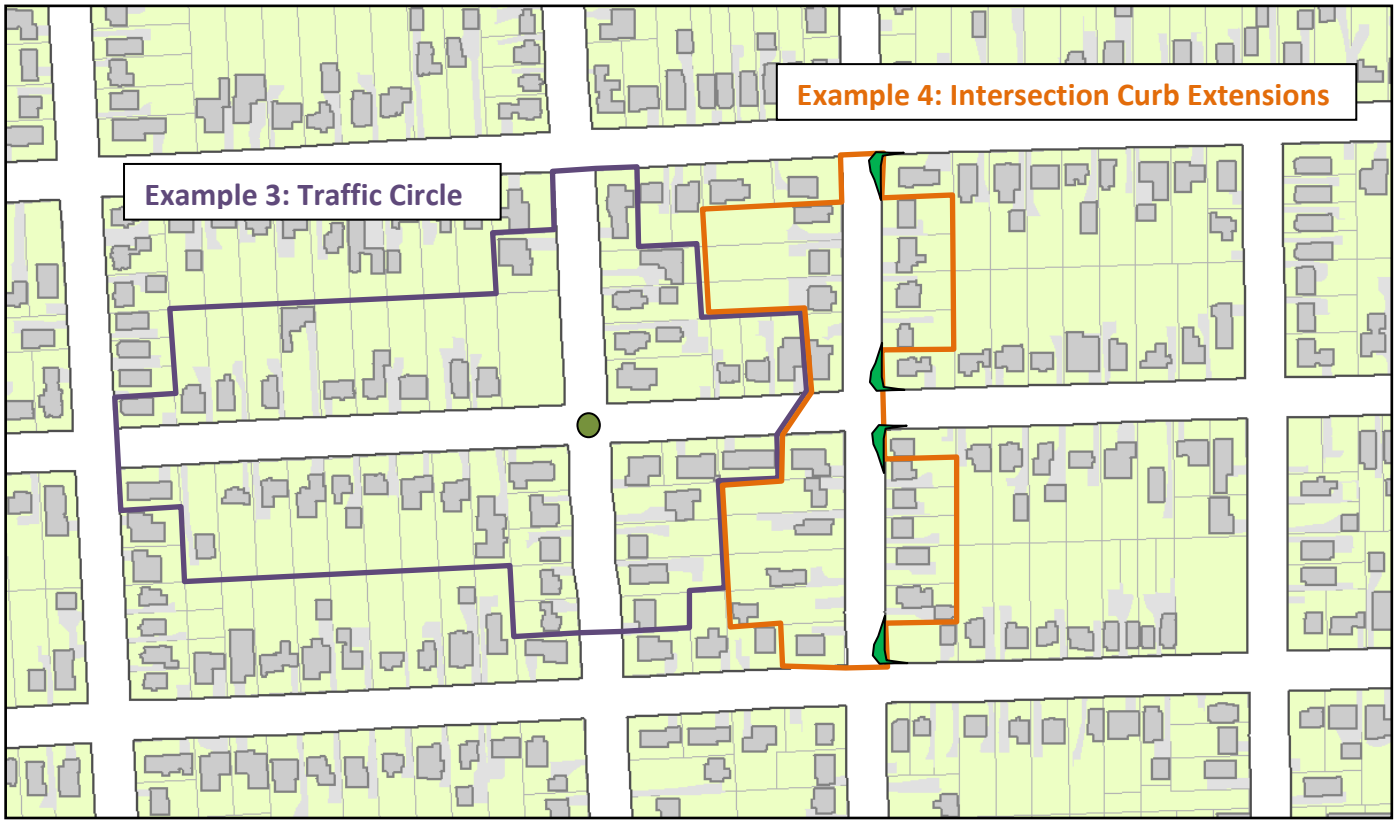
APPENDIX E

SPECIAL SERVICE AREA – SAMPLE BOUNDARY AREAS AND COSTS

SPECIAL SERVICE AREA –BOUNDARY AREAS EXAMPLES



Traffic Calming Measure between Intersections



Traffic Calming Measures at Intersections

Special Service Area - Approximate Cost per Residence for Boundary Area Examples

	Construction Cost Estimate[1]	# of Residences in SSA	Average Annual Cost per Residence (based upon SSA Duration in Years)				
			1	3	5	10	15
Example 1: Speed Humps	$7,500	21	$357	$130	$81	$45	$33
Example 2: Mid-block Curb Extensions	$18,000	16	$1,125	$409	$256	$142	$105
Example 3: Traffic Circle	$12,500	41	$305	$111	$69	$39	$28
Example 4: Intersection Curb Extensions	$48,000	19	$2,526	$919	$575	$319	$235

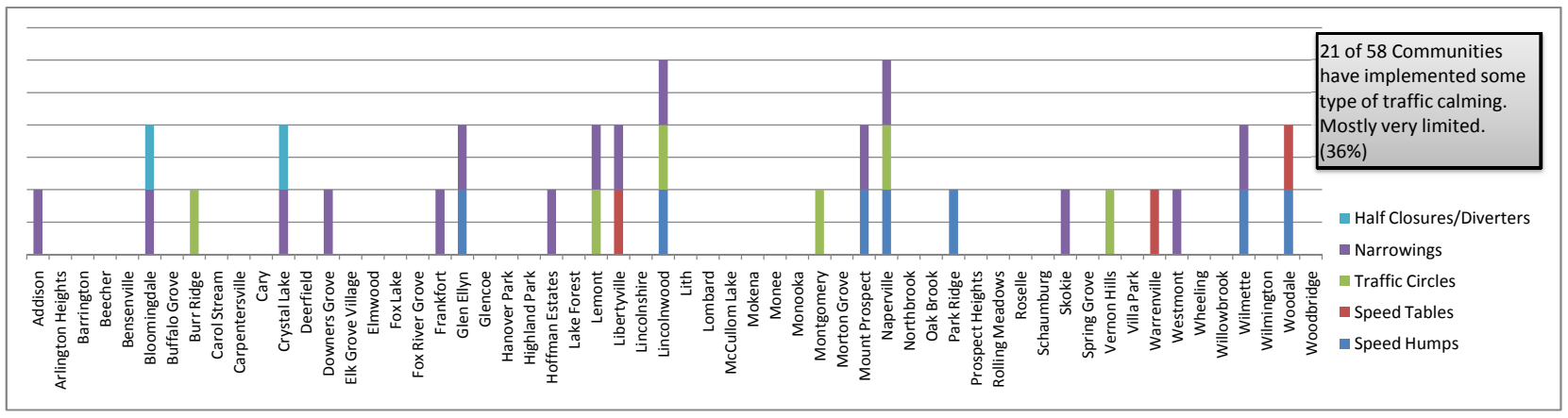
[1] Based upon mid-range costs from "Approximate Cost" Table in the Funding section of the Policy

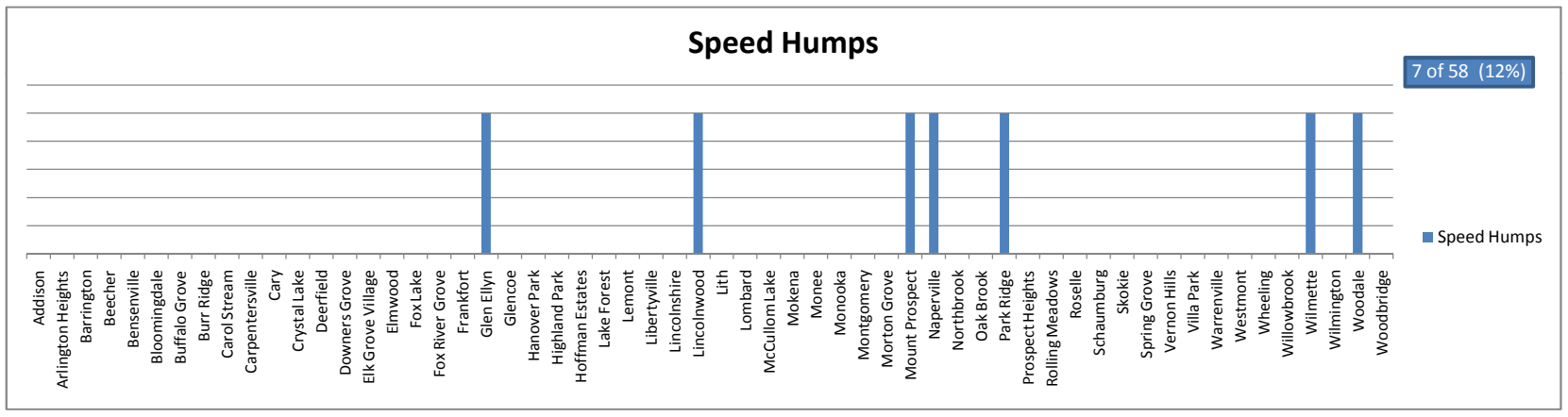
[2] Assumes 4.5 percent annual interest rate to account for inflation and borrowing cost over the period of the SSA.

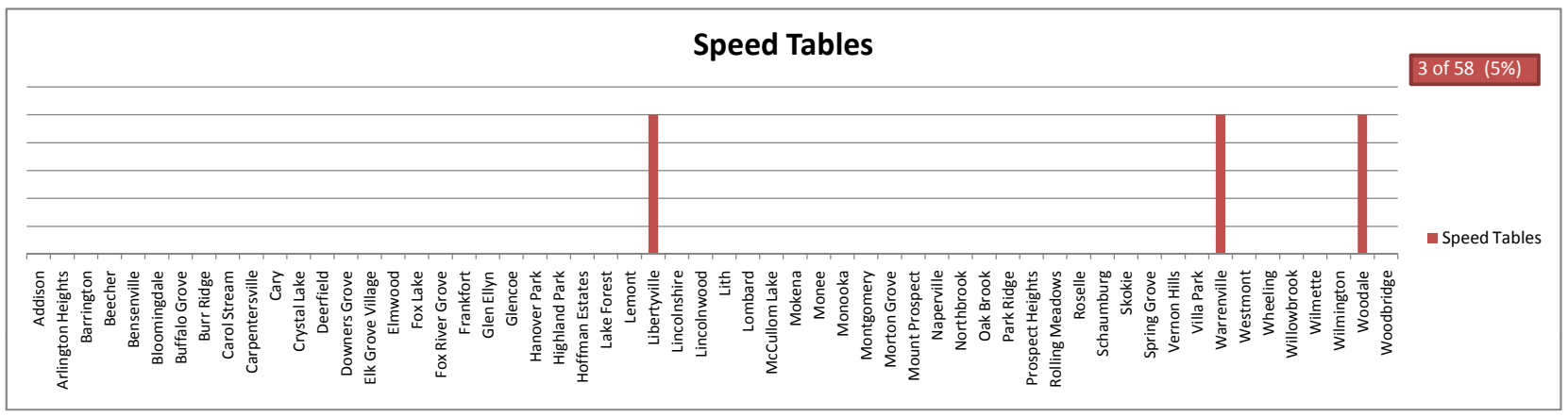
APPENDIX F

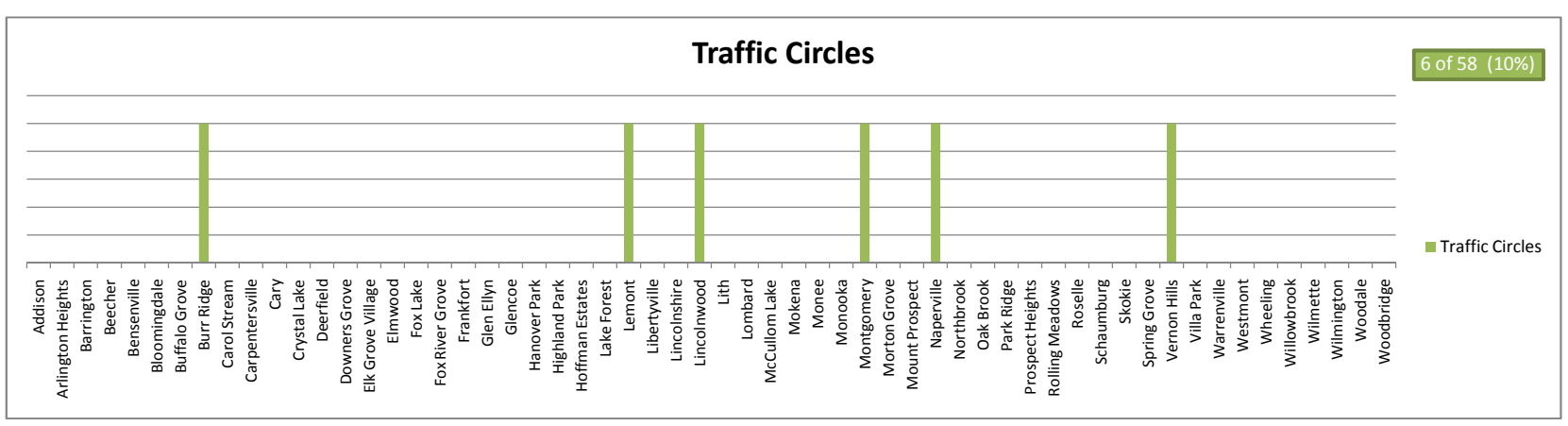
2003 AND 2009 REGIONAL TRAFFIC CALMING SURVEY RESULTS

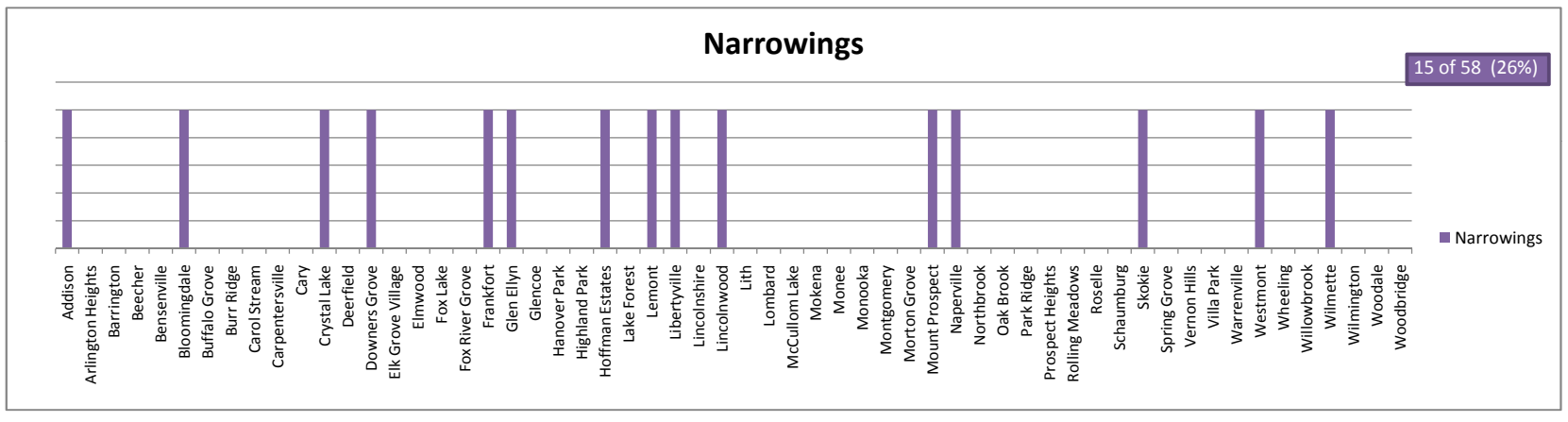
2003 and 2009 Traffic Calming Survey Results

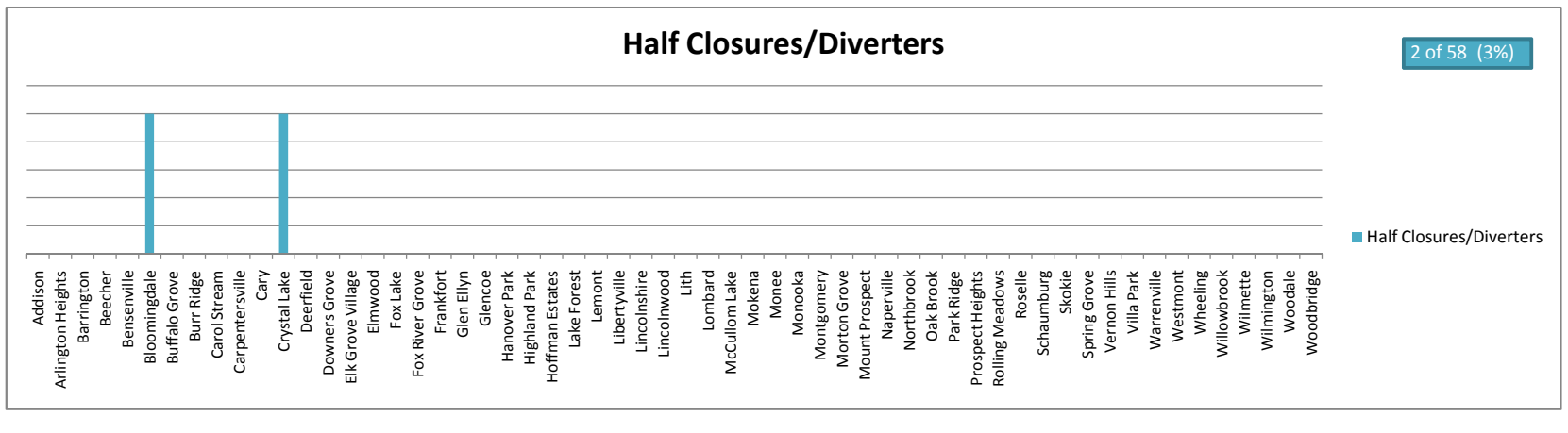












2003 Survey conducted by DuPage County. Included most of Chicago region: 37 of 58 responses- no traffic calming.
2009 survey conducted by City of Des Plaines. Included only NWMC: 12 of 18 responses- no traffic calming