

Final Report

Arterial Traffic Calming Program

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TRAFFIC CALMING DEVICES REPORT

INTRODUCTION

During the recent Arterial Streets Classification Policy update (now called the Transportation Element of the City of Portland Comprehensive Plan), citizens and neighborhood associations throughout the City expressed concerns about the negative impacts of excessive traffic volumes and speeding on Neighborhood Collector Streets. They also expressed frustration that, unlike their neighbors on Local Service Streets, they did not have access to a program to deal with the traffic and livability issues. Hence, the Transportation Element recommended that a "Collector Recovery Program" be developed. On February 26, 1992, City Council adopted Ordinance No. 165132 establishing the "Collector Recovery Program" in the Bureau of Traffic Management (BTM). The Ordinance authorized funding for the program development, including two full-time staff positions.

Neighborhood Collector Streets are very different from Local Service Streets in that they are part of the City's arterial street system. They are intended to serve as distributors of traffic between Major City Traffic or District Collector Streets and Local Service Streets. In other words, they are the streets that are commonly called "through" streets. They serve as fire response routes, many are transit streets, and most are designated bike routes. A few are even designated truck routes. On the other hand, like Local Service Streets most Neighborhood Collectors are also residential in nature. As residential streets, it is important that livability is maintained and enhanced to ensure the long-term viability of Portland's neighborhoods.

The inherent conflict between the need to move traffic efficiently and the need to keep the neighborhood livable, presented a unique challenge for the citizens and staff developing the "Collector Recovery Program." To be successful, the program has to balance the many different needs, interests, and uses of Neighborhood Collectors. This draft report outlines the recommended program produced by the work of three committees made up of citizens from each District Coalition area, staff, and other agency representatives. The committees also recommend that the program name be changed to the Arterial Traffic Calming Program (ATCP) to better describe the program and its purpose.

The purpose of the recommended program is to enhance livability for residents along Neighborhood Collector Streets by confronting traffic problems through the use of education, enforcement, and engineering tools. This is an innovative and progressive program; staff research found no similar programs in the United States addressing these types of traffic issues on arterial streets. Its development represents the ongoing commitment of the City of Portland and the Office of Transportation to the safety and livability of residential neighborhoods. Further, it complements the "Reclaiming Our Streets" and Neighborhood Traffic Management Program efforts to

protect neighborhoods from the negative impacts of traffic, and puts into practice the goals and policies contained in the Transportation Element.

To solicit broad citizen review and comment, this draft report will be sent to all of the District Coalition Offices and Neighborhood Associations, and a list of interested citizens who have asked to receive the draft report. In addition, two public Open Houses will be held the last week of April. The Open Houses offer the general public an opportunity to learn about the proposed program and make comments in a comfortable, informal setting. ATCP staff need to receive all comments, written or oral, by 5 p.m., May 24, 1993.

Following the comment period, the Program Development and Citizens Advisory Committees will review and consider the comments for incorporation into the final report to City Council. The report will be revised as necessary. Once the final report is complete, a date for City Council adoption of this program will be requested. At this time, the target for adoption of this program is the last week in July.

OBJECTIVES AND POLICIES

The goal of the Arterial Traffic Calming Program (ATCP) is to enhance neighborhood livability for residents of Neighborhood Collector Streets by addressing traffic problems using education, enforcement, and engineering tools. While maintaining neighborhood livability is important to the health of the City and the primary goal of the program, it must be recognized that Neighborhood Collector Streets are part of the regional arterial street system and must accommodate efficient movement of all modes of transportation, including automobiles. The inherent conflict of needs unique to Neighborhood Collector Streets must be acknowledged, considered, and balanced throughout all aspects of the Arterial Traffic Calming Program. To that end, the program is guided by the following objectives and policies.

OBJECTIVES

- 1.Improve neighborhood livability by mitigating the impact of vehicular traffic on residential neighborhoods.
- 2.Promote safe and pleasant conditions for all modes of transportation, including motorists, bicyclists, pedestrians, transit riders, and emergency vehicles on Neighborhood Collector Streets.
- 3.Promote and support the use of transportation alternatives to the single occupant vehicle.
- 4.Ensure opportunities for citizen involvement in all phases of Arterial Traffic Calming Program activities.
- 5.Make efficient use of City resources by prioritizing traffic management projects.

POLICIES

- 1.Application of the Arterial Traffic Calming Program should be limited to Neighborhood Collector Streets (as designated in the Transportation Element of the City of Portland Comprehensive Plan) that are primarily residential. Where appropriate, an ATCP project should coordinate with the Neighborhood Traffic Management Program (NTMP).

2. To achieve the ATCP's objectives, education, enforcement, and engineering methods should be employed, and alternative transportation should be encouraged. Traffic management devices should be planned and designed in keeping with sound engineering and planning practices.
3. Emergency vehicle access should be preserved within the existing Fire Bureau response standards. If current emergency vehicle access does not meet the existing response standard, an ATCP project should not further degrade the response time.
4. ATCP projects should not significantly impact transit service access, safety, and scheduling.
5. Pedestrian and bicycle movement should be given equal consideration with vehicle movement in the design and implementation of ATCP projects. ATCP projects should be coordinated with the bicycle and pedestrian programs where appropriate so they do not conflict with or preclude each other.
6. Parking removal should be considered on a project-by-project basis. Parking needs of residents should be balanced with the equally important functions of traffic, emergency vehicle access, transit, bicycle, and pedestrian movement.
7. Through traffic should be encouraged to use higher-classification arterials, as designated in the Arterial Streets Classification Policy (contained in the Transportation Element of the City of Portland Comprehensive Plan).
8. The amount of traffic increase acceptable on a Local Service Street should be defined on a project-by-project basis to a maximum of 150 vehicles per day. Under no circumstances should an ATCP project divert traffic through the use of traffic diversion devices.
9. To implement the ATCP, certain procedures should be followed by the Office of Transportation in processing traffic management proposals in accordance with applicable codes and related policies and within the limits of available resources. At a minimum, the procedures should provide for project selection and evaluation; citizen participation in plan development and evaluation; communication of any test results and specific findings to area residents and affected neighborhood organizations; and appropriate Council review.
10. At the beginning of each project, the City (ATCP staff) and project traffic committee should enter into a nonbinding contract to define the roles and responsibilities of the City, traffic committee, and project area residents.

PROJECT SELECTION PROCESS AND CRITERIA

PROJECT INITIATION

Arterial Traffic Calming Program projects will be initiated by the Bureau of Traffic Management (ATCP staff) by applying the selection criteria to the approximately 275 designated Neighborhood Collector Streets, by segments, to determine project priorities. The project ranking process will be performed at three-year intervals.

Although the Arterial Traffic Calming Program is designed not to be a complaint-driven program, citizen involvement and participation is very important to the ATCP program and ATCP staff. At the start of the project selection cycle, and throughout the process, ATCP staff will disseminate information to citizens City-wide regarding the Arterial Traffic Calming Program—how ATCP projects are selected and prioritized, and whom to contact to ask questions, obtain more information, make suggestions, and/or express interests or concerns.

PROCESS FOR PROJECT RANKING AND SELECTION

On a three-year cycle, ATCP staff will perform an initial survey of all Neighborhood Collectors by segment. A street segment is defined as that portion of a Neighborhood Collector that is between two arterials. The purpose of the initial survey is to determine which segments are primarily residential. To be considered primarily residential, at least 75 percent of the properties with frontage on the segment must be in residential zoning. Those segments that are not primarily residential will be eliminated from further consideration. The remaining segments will be assigned points and ranked using the following criteria to develop a list of potential projects.

Criteria	Points	Basis for Point Assignment
Speed	30	Average daily speed during nonpeak hours.
Volume	25	Average daily traffic.
Density	20	Residential density along segment, based on zoning.
Sidewalks	9	Absence of continuous sidewalk on at least one side.
Elem. School Crossing	7	Points assigned if children must cross segment to get to elementary school.
Pedestrian Generators	5	Points assigned if other pedestrian generators are along segment or within 1000 feet of the street.
Street Width	4	Points assigned for segments over 40 feet wide.

The top ranking potential projects will be reviewed by BTM and ATCP staff for compatibility with other Portland Department of Transportation (PDOT) projects, budget availability/limitations, and the potential size/complexity of projects to establish program priorities. Normally, two or three ATCP projects will be undertaken each year.

Potential projects will also be examined to see if it would cause a "cumulative impact" situation. Cumulative impact has been defined by the Portland Fire Bureau (PFB) and BTM\ATCP staff as follows:

A cumulative impact is defined as potential negative impacts on the Portland Fire Bureau's response time and route patterns by consideration of ATCP and/or Neighborhood Traffic Management Program (NTMP) projects on two or more adjacent parallel fire response routes, as identified on the Fire Bureau's "Fire Response Map." The expansion of existing projects will also trigger this definition.

When a cumulative impact situation is identified, ATCP staff will initiate a meeting with PFB to identify, as specifically as possible, the potential negative impacts related to the proposed project. If the project is undertaken, the information generated at this meeting will be included in discussions with the traffic committee and in decision making by ATCP staff. Identification of cumulative impact will not preclude ATCP in any way from undertaking the proposed project.

For efficiency reasons, a priority may be given to potential projects which can be jointly undertaken and funded by ATCP and other appropriate programs (e.g., Bicycle, Pedestrian, Neighborhood Traffic Management). The Arterial Traffic Calming Program will attempt to undertake one joint project each year.

PROJECT PROCEDURES

After the top two or three potential projects are identified, ATCP staff need to determine if the residents on those potential project segments want a project to be undertaken. To do this, for each proposed project segment, ATCP staff will send the residents a "survey to proceed," which is described in Step 1 below. If the residents support proceeding with the proposed project, ATCP staff will initiate the project by holding a public meeting as described in Step 2. If the residents do not want to proceed with the proposed project, the project will not be initiated.

The project procedures that will be used for ATCP projects are described in detail below and summarized in the flowchart on the next page.

STEP 1: SURVEY TO PROCEED

ATCP staff will mail a survey to all households and businesses that have addresses on the project street segment (the "survey area"). The purpose of the survey is to establish the level of support among residents to proceed with a project. ATCP staff prepare the survey, describing the problem and the procedures to be followed if a project is undertaken. The survey will ask for a yes/no response to whether the project should proceed. It will also ask the recipients to identify their major concerns and priorities concerning street improvements. This information can be used by the traffic committee in determining project goals and objectives in Step 4.

Each household, business, and nonresident property owner is entitled to one survey. A majority of the surveys that are returned must give a yes response for the project to proceed. If there is a low initial response to the survey, the ATCP staff will send a second notice to remind the recipients to return their surveys.

If approval to proceed is not obtained, the project does not proceed to Step 2. However, the project will still be included in the next three-year project ranking and selection cycle.

STEP 2: NOTIFICATION OF PROPOSED PROJECT

ATCP staff holds a public meeting to:

- Provide an overview of the ATCP.
- Give the results of the survey.
- Obtain feedback about issues and concerns.
- Recruit members for the project traffic committee.

The meeting notification is:

- Mailed to all households and businesses (including nonresident property owners) within the "project area." The project area is defined as extending to the ends of the project segment, and halfway to the next parallel arterials. The City may also notify other interested parties as appropriate.
- Mailed to neighborhood and business associations that: 1) are recognized by the Office of Neighborhood Associations, 2) include the project segment, and 3) are adjacent to the associations that include the project segment.
- Mailed to other appropriate agencies and City bureaus.
- Published as a general public notice.

STEP 3: FORMATION OF PROJECT TRAFFIC COMMITTEE

The project traffic committee is formed. Members include those persons who volunteer at the public meeting (Step 2) or otherwise indicate interest in participating. ATCP staff will also extend invitations to appropriate parties (e.g., major institutions, businesses, Tri-Met, the Police and Fire Bureaus) to encourage a good representation of interests on the committee.

The traffic committee is an autonomous committee rather than a committee of the neighborhood association(s), able to make decisions that differ from the position of the neighborhood association(s). The appropriate role of the neighborhood association(s) is to participate in and support the process.

At the first traffic committee meeting, ATCP staff and the traffic committee enter into a nonbinding contract to define their general roles and responsibilities, such as meeting procedures and decision-making processes. The traffic committee and ATCP staff work together to arrive at mutually satisfactory solutions to problems or disagreements that may arise. Reasonable time limits for resolving these issues are mutually established.

STEP 4: PROJECT DEVELOPMENT

Project development involves identifying education, enforcement, and engineering solutions that can achieve the project's goals and objectives. The nonbinding contract (established during Step 3) can be expanded to identify activities that traffic committee members can implement while project development is underway.

Project development consists of the following steps:

- Assess problems and needs
- Identify project goals and objectives
- Identify mitigation criteria
- Develop and assess alternative plans/solutions
- Identify and/or implement recommended education and enforcement activities
- Identify recommended engineering solutions
- Decide to conduct or not conduct a demonstration project.

The demonstration phase (Step 5) of projects will be optional, at the discretion of the traffic committee. If there is a demonstration phase, the committee can determine its length.

STEP 5: DEMONSTRATION PROJECT

ATCP staff will send a ballot to all households and businesses that have addresses on the project street segment (the "ballot area") for approval to construct a demonstration project of proposed engineering devices. This is different from a test in the sense that it is permanent construction of devices such as speed bumps, with the assumption that they will remain permanent unless there is a later ballot to remove them (Step 6). The demonstration project may not necessarily include all of the devices that are planned; some (such as curb extensions) may be deferred until construction (Step 8).

Each household, business, and nonresident property owner is entitled to one ballot. A majority of those ballots that are returned must be in favor of the demonstration project for it to proceed. If there is a low initial response, ATCP staff will send a reminder to recipients to return their ballot.

If ballot approval for the demonstration project is not obtained, the project will not proceed any further. However, the project will still be included in the next three-year project ranking and selection cycle.

Step 5A: City Council Approval

If ballot approval for the demonstration project is obtained, City Council approval will not be required unless: 1) the project costs over \$50,000, 2) a contract is let, or 3) the demonstration involves new devices that may be controversial.

Step 5B: Evaluation of Demonstration Project

The demonstration project will remain in place approximately one year (or less, at the discretion of the traffic committee). After this time, ATCP staff collects data (e.g., speed and volume counts, diversion to Local Service Streets) to help evaluate project impacts. The project is evaluated on the basis of the objectives and mitigation criteria developed during Step 4. Mitigation measures or revisions that are necessary to address any unacceptable impacts are identified and/or implemented.

The results of the demonstration project are reviewed with the traffic committee and area residents. The demonstration period also gives residents the chance to experience the results of education and enforcement efforts, as well as of the engineering devices.

STEP 6: BALLOT FOR PERMANENT PROJECT

ATCP staff sends a ballot to households and businesses that have addresses on the project street segment (the "ballot area"). The purpose of the ballot is to make a recommendation to City Council about the project; ballot approval is not in itself a binding decision.

If there has been a demonstration project, the ballot asks if the project should remain permanent. With this approach, people are asked to react to the overall project (education, enforcement, and engineering measures) based on their perceptions of how it has affected their livability. The results of the Step 5B evaluation are also provided to the ballot recipients.

If there has not been a demonstration project, the ballot asks if a permanent project should be constructed. The results of the evaluation conducted during Step 4 are provided to the ballot recipients.

Each household, business, and nonresident property owner is entitled to one ballot. A majority of those ballots that are returned must be in favor of the project for it to proceed to City Council action (Step 7). If there is a low initial response, ATCP staff will send a reminder to recipients to return their ballot.

STEP 7: CITY COUNCIL ACTION

If ballot approval is obtained in Step 6, ATCP staff prepares a final report and recommendations for City Council action. The report and recommendations address the entire project (i.e., education, enforcement, and engineering measures).

If a permanent construction project does not obtain the required ballot approval, it is not forwarded to City Council. If a demonstration project does not obtain the required ballot approval to become permanent, the ballot results are reported to City Council.

STEP 8: DESIGN AND CONSTRUCTION/IMPLEMENTATION

Final design and construction of permanent engineering devices is administered by the City. Any education and enforcement tools that were identified during project development (Step 4), but have not yet been put in place, are implemented.

STEP 9: EVALUATION OF PERMANENT PROJECT

If there has not been a demonstration project, the ATCP staff collects data (e.g., speed and volume counts, diversion to Local Service Streets) to help evaluate project impacts. The project is evaluated on the basis of the objectives and mitigation criteria developed during Step 4. Mitigation measures or revisions that are necessary to address any unacceptable project impacts are implemented.

STEP 10: MONITORING

The City conducts ongoing monitoring of the project to determine if the project's goals and objectives continue to be met.

PROGRAM TOOLS

ATCP will use a three-pronged approach to solve traffic problems on Neighborhood Collector Streets. Targeted enforcement will be used to slow traffic, although it is recognized that the effect is of limited duration. The use of engineering tools (traffic management devices) will permanently slow traffic on the project street. The third

prong, education, potentially offers the key to solving neighborhood traffic problems over the long term. Through education, ATCP will promote the use of alternative transportation modes, and an awareness of the negative effects that speeding and excessive vehicle volumes have on the livability of Portland neighborhoods.

The Arterial Traffic Calming Program is new and innovative because it is designed to address traffic problems on streets which are both residential and part of the arterial street system. ATCP staff research found no programs worldwide to use as a model for developing this program. Consequently, the education, enforcement, and engineering tools envisioned by this program are dynamic and will evolve over time. Many of the tools listed below, particularly the education tools, will need to be developed, tested, and evaluated over the next several years. As new tools are identified, they will be tested as part of this program as well.

EDUCATION TOOLS

Education tools will be developed to target three levels of audience: the general public, nonlocal traffic using the ATCP project street, and local traffic using the ATCP project street. Education tools that target the general public can be incorporated with the BTM Reclaiming Our Streets program education efforts. Education tools aimed at nonlocal and local users of ATCP project streets will be developed to include the following topics:

- Reduced speeding
- More appropriate use of streets/routes
- Increased use of alternative transportation
- Increased awareness of multiple use of streets/shared public space

The following ideas are possible education tools. These ideas will require further investigation, development, testing, and evaluation of effectiveness by ATCP staff.

- Work with Tri-Met to promote the use of transit.
- Work with the pedestrian and bicycle programs to promote these modes of transportation
- Develop a simple, standardized ATCP sign (similar to the Neighborwatch signs) for placement on ATCP project streets.
- Investigate cost-effective ways to design and install neighborhood "gateway" treatments.
- Develop formats to utilize house meetings, neighborhood coffees, neighborhood picnics, block parties, etc. to deliver ATCP educational messages.
- Investigate the use of testimonials from participants of past projects.
- Encourage carpooling, walking, biking to traffic committee meetings
- Organize carpools within the neighborhood.

- Establish information centers in the neighborhood with information about alternative transportation methods.
- Work with trucking company dispatchers encourage truck routing to appropriate roadways.
- Provide information to children through the schools.
- Work with community policing/education efforts.
- Work with radio traffic reporters to make announcements about specific project streets.

Once an ATCP project is undertaken, the traffic committee will be expected to participate in educational activities as part of the project. The nonbinding contract with the project traffic committee will define the committee's role and identify specific activities (for example, Speedwatch, promotion of alternative transportation, data collection, or any other appropriate activities). Initial studies may be needed at the beginning of each project to determine the origin and destination of the traffic. Based on this information, appropriate education targets and goals can be identified.

Since only a limited number of ATCP projects can be undertaken each year, residents should be given the opportunity and encouraged to try "interim" education activities. In this way, they will have some recourse for addressing their problems until an ATCP project can be done. ATCP staff will work with the Reclaiming Our Streets program to develop information packets that outline possible "interim" education activities. Some of the activities that might be included are:

- Speedwatch
- Sample articles for neighborhood/community newsletters
- Sample information that local school can distribute (e.g., educational flyers for students to take home)
- How to form a committee to address the problems
- How to hold events such as meetings or block parties
- Sample graphic materials, flyers, etc. that can be delivered door-to-door

ENFORCEMENT TOOLS

Enforcement is a somewhat limited ATCP tool, but an important tool nonetheless. Despite the limited resources of the Portland Police Bureau, Traffic Division, they have agreed to provide targeted enforcement for ATCP project streets. Enforcement causes motorists using the project street to be aware of their speed. When enforcement is used at the beginning of a project, and particularly when it is used in

conjunction with Speedwatch, it can provide the traffic committee with a temporary tool to deal with traffic problems while the rest of the project is being designed.

Although photoradar is not yet available, the concept is very appealing and would provide ATCP with a potentially valuable enforcement tool. In addition, ATCP staff will encourage traffic committees to work with the community policing liaison officer in a project area. Community policing officers can issue tickets and may be able to work with the community to address traffic issues.

ENGINEERING TOOLS

A number of traffic management devices have been identified for use as engineering tools in the Arterial Traffic Calming Program. Most of these devices have been tested on either local service or Neighborhood Collector Streets. Several of the devices have not yet been tried in Portland. As new devices are identified, they will be developed, tested, and evaluated for inclusion in the Arterial Traffic Calming Program.

Current ATCP engineering tools are detailed more fully in the report "Traffic Calming Devices" included in the Appendix section of this report. However, the following is a list of devices described in the report that are available for use in ATCP projects:

- Entry Treatment
 - 22' Arterial Speedbumps
 - Median Slow Point
 - Curb Extensions
 - Raised Crosswalk
 - Textured Pavement Treatment
 - Medians

ATCP staff will continue to investigate new devices for potential ATCP project use. At a minimum, potential new devices should meet the following criteria:

- Devices must minimize conflicts between vehicles and bicycles.
- Devices must be well illuminated and visible.
- Medians must accommodate appropriate markings and signs.
- Devices must allow the traffic stream to maintain an acceptably consistent speed of approximately 30 mph.
- Pavement treatments must not pose a hazard to bicycles or pedestrians, or impede people with disabilities.

- Devices must ensure safety and visibility to pedestrians and other nonvehicular traffic.
- Devices cannot inappropriately restrict buses, emergency vehicles, and trucks from providing normal and necessary services to the neighborhood.

PROJECT FUNDING GUIDELINES

ATCP staff will develop general funding guidelines for the use of engineering tools in ATCP projects. These guidelines will estimate the cost per mile of project, based on experience with similar kinds of projects. The guidelines will be flexible enough to allow the project traffic committee to consider various options. The traffic committee and ATCP staff can then develop project design using these options, putting together a plan that is within the general funding guidelines, but that is selected to fit their particular needs and preferences.

The guidelines do not represent an absolute cap or limit, but rather a goal for project development. The traffic committee and ATCP staff will work together to come to agreement about a reasonable budget for the project. (Budget development is part of the iterative process the committee goes through, and must be done in conjunction with developing the project goals, objectives, and alternatives.)

Information about both costs and types of devices for various situations will be developed as the ATCP evolves. The data base is limited at present, but will expand as more experience is gained. Funding guidelines can become more refined as the data base grows.

The ATCP will have an overall budget each year for education and enforcement; some will be allocated to programwide efforts, and some will be allocated to specific projects.

OBJECTIVES AND POLICIES

The goal of the Arterial Traffic Calming Program is to enhance neighborhood livability for residents of Neighborhood Collector Streets by addressing traffic problems using education, enforcement, and engineering tools. While maintaining neighborhood livability is important to the health of the City and the primary goal of the program, it must be recognized that Neighborhood Collector Streets are part of the regional arterial street system and must accommodate efficient movement of all modes of transportation, including automobiles. The inherent conflict of needs unique to Neighborhood Collector Streets must be acknowledged, considered, and balanced throughout all aspects of the Arterial Traffic Calming Program. To that end, the program is guided by the following objectives and policies.

OBJECTIVES

- 1.Improve neighborhood livability by mitigating the impact of vehicular traffic on residential neighborhoods.
- 2.Promote safe and pleasant conditions for all modes of transportation, including motorists, bicyclists, pedestrians, transit riders, and emergency vehicles on Neighborhood Collector Streets.
- 3.Promote and support the use of transportation alternatives to the single occupant vehicle.
- 4.Ensure opportunities for citizen involvement in all phases of Arterial Traffic Calming Program activities.
- 5.Make efficient use of City resources by prioritizing traffic management projects.

POLICIES

- 1.Application of the Arterial Traffic Calming Program should be limited to Neighborhood Collector Streets (as designated in the Transportation Element of the City of Portland Comprehensive Plan) that are primarily residential. Where appropriate, an ATCP project should coordinate with the Neighborhood Traffic Management Program.
- 2.To achieve the ATCP's objectives, education, enforcement, and engineering methods should be employed, and alternative transportation should be encouraged. Traffic management devices should be planned and designed in keeping with sound engineering and planning practices.

3. Emergency vehicle access should be preserved within the existing Fire Bureau response standards. If current emergency vehicle access does not meet the existing response standard, an ATCP project should not further degrade the response time.
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9. To implement the ATCP, certain procedures should be followed by the Office of Transportation in processing traffic management proposals in accordance with applicable codes and related policies and within the limits of available resources. At a minimum, the procedures should provide for project selection and evaluation; citizen participation in plan development and evaluation; communication of any test results and specific findings to area residents and affected neighborhood organizations; and appropriate Council review.
10. At the beginning of each project, the City (ATCP staff) and project traffic committee should enter into a nonbinding contract to define the roles and responsibilities of the City, traffic committee, and project area residents.

DISCUSSION:

The committees limited the Arterial Traffic Calming Program to Neighborhood Collector Streets that are primarily residential because the intent of the program is to address traffic-related livability issues for residents along the street segment. The committees did recognize that Neighborhood Collectors that have primarily commercial uses can also affect the overall livability in a neighborhood. However, due to budget and staffing limitations, it is necessary for this program to focus on Neighborhood Collectors that are primarily residential.

The committees discussed at length the issue of ATCP projects causing increased fire response time for both residents along the project segment and for residents beyond the project segment. The committees agreed that it is acceptable for an ATCP project to increase emergency response time as long as Fire Bureau response standards are still met. However, the Fire Bureau expressed concern that there may be a "cumulative impact" on response time when successive ATCP and/or Neighborhood Traffic Management Program projects are installed within a response area.

Through a series of meetings, BTM and the Fire Bureau agreed upon a definition of "cumulative impact" and the process that will be used for ATCP or NTMP projects that trigger this definition. This definition and process is incorporated into the ATCP Process for Project Ranking and Selection outlined in a later section of this report.

PROJECT SELECTION PROCESS AND CRITERIA

PROJECT INITIATION

Arterial Traffic Calming Program projects will be initiated by the Bureau of Traffic Management (ATCP staff) by applying the selection criteria to the approximately 275 designated Neighborhood Collector Streets, by segments, to determine project priorities. The project ranking process will be performed at three-year intervals.

Although the Arterial Traffic Calming Program is designed not to be a complaint-driven program, citizen involvement and participation is very important to the ATCP program and ATCP staff. At the start of the project selection cycle, and throughout the process, ATCP staff will disseminate information to citizens City-wide regarding the Arterial Traffic Calming Program, how ATCP projects are selected and

prioritized, and whom to contact to ask questions, obtain more information, make suggestions, and/or express interests or concerns.

DISCUSSION:

The committees decided to have ATCP projects initiated by BTM for two primary reasons. First, a manageable amount of data collection is required to rank each street given the relatively small number of Neighborhood Collector streets. Second, this approach provides for equity; those neighborhoods without the resources or information to pursue a request process will have an equal chance of selection, based on project need.

PROCESS FOR PROJECT RANKING AND SELECTION

On a three year cycle, ATCP staff will perform an initial survey of all Neighborhood Collectors, by segment. A street segment is defined as that portion of a Neighborhood Collector that is between two arterials. The purpose of the initial survey is to determine which segments are primarily residential. To be considered primarily residential, at least 75 percent of the properties with frontage on the segment must be in residential zoning. Those segments that are not primarily residential will be eliminated from further consideration. The remaining segments will be assigned points and ranked using the following criteria to develop a list of potential projects.

Criteria	Points	Basis for Point Assignment
Speed	30	Average daily speed during nonpeak hours.
Volume	25	Average daily traffic.
Density	20	Residential density along segment, based on zoning.
Sidewalks	9	Absence of continuous sidewalk on at least one side.
Elem. School Crossing	7	Points assigned if children must cross segment to get to elementary school.
Pedestrian Generators	5	Points assigned if other pedestrian generators are along segment or within 1000 feet of the street.
Street Width	4	Points assigned for segments over 40 feet wide.

The top ranking potential projects will be reviewed by BTM and ATCP staff for compatibility with other PDOT projects, budget availability/limitations, and the potential size/complexity of projects to establish program priorities. Normally, two or three ATCP projects will be undertaken each year.

For efficiency reasons, a priority may be given to potential projects which can be jointly undertaken and funded by ATCP and other appropriate programs (e.g., Bicycle, Pedestrian, Neighborhood Traffic Management). The Arterial Traffic Calming Program will attempt to undertake one joint project each year.

DISCUSSION:

Project selection generated much discussion in both the Program Development and Citizens Advisory Committees. Listed under "Eliminated Selection Criteria" are the selection criteria that were considered and discussed by the committees, but eliminated. After a number of meetings, the committees reached consensus on the selection criteria and process to be used to rank and prioritize projects outlined above. A more detailed explanation of the criteria and process is given below.

QUALIFICATION CRITERIA

A street segment must meet the following two criteria to be qualified for inclusion in the Arterial Traffic Calming Program:

Transportation Element Classification: The street must be classified as a Neighborhood Collector.

Primarily Residential: The street segment must be primarily residential. This means that at least 75 percent of the properties with frontage on the segment must be in residential zoning. No distinction is made between single-family and multi-family residential.

There may be situations where a segment ("Segment 1") might not pass the "primarily residential" criterion because it includes a commercial area. However, it might also include a residential area that extends into the adjacent segment ("Segment 2") and that has significant traffic problems. That part of the residential area that is in Segment 1 will be excluded from the program; in other words, it will be penalized for falling into a segment with commercial uses. This issue will be addressed by allowing flexibility in defining project areas. For example, when a

project is undertaken in Segment 2, the project area can be extended to include the adjacent residential area in Segment 1.

DISCUSSION:

The committees decided to base the definition of primarily residential on zoning rather than current use. This approach is consistent with City policy, placing transportation decisions and priorities within an overall planning context. This is also consistent with the Transportation Element, which directs that changes in streets should be consistent with the designated use.

Street segments which meet the above qualification criteria will be assigned points and ranked using the criteria detailed below in a two-step process. The first step will apply the speed and volume criteria to generate a ranked list. The top ranked segments on this list will be carried forward to the second step, where the remaining criteria will be applied and the list reranked. The relative rankings among segments may change the following application of the secondary criteria. Enough segments will be carried forward to the second step to account for these possible changes.

DISCUSSION:

The committees decided to rank segments initially using speed and volume for several reasons. First, the BTM District Operations section has collected speed and volume information for many streets in the City of Portland. The most cost-efficient and expedient way to rank the segments is to utilize existing data and to collect data only where information does not exist. Secondly, the speed and volume criteria are weighted number one and two, respectively, for the selection criteria overall. Consequently, by assigning points for speed and volume and ranking the segments, the segments with the worst traffic problems will automatically be included on the list. Finally, having ATCP staff do the necessary research to assign points for the remaining criteria for all Neighborhood Collector segments would be too time-consuming and costly.

SELECTION CRITERIA

Speed: Speed will be based on average daily speed during nonpeak hours. Up to 30 points can be assigned (2 points for every mile over 30 mph, up to a maximum of 30 points for 45 mph and over).

Volume: Volume will be based on average daily traffic. Up to 25 points can be assigned (1.667 points per 1,000 ADT, up to a maximum of 25 points for 15,000 ADT).

Residential Density: Residential density will be determined based on zoning. All buildings with frontage on the street segment will be included. Both single-family and multi-family residential will be considered. Up to 20 points can be assigned [4 points per 100 dwelling units per mile (DUPM), up to 500 DUPM].

Lack of Sidewalks: Street segments lacking sidewalks will be given 9 points. The lack of sidewalks is defined as the absence of a continuous sidewalk on at least one side of the street. Selection of these streets does not necessarily mean that sidewalks will be built as part of the project; other approaches could be taken (e.g., installation of Tri-Met pads) to improve conditions. These streets could also be targeted as possible joint projects with the pedestrian program.

Elementary School Crossings: Street segments will be assigned 7 points if children have to cross the street to get to an elementary school. This includes marked crossways.

Other Pedestrian Generators: Street segments will be assigned 5 points if any of the following pedestrian generators occur within the street segment (i.e., from arterial to arterial) and within 1,000 feet of the street:

- Retail commercial uses
- Institutional uses
- Parks
- Other schools not included in the elementary school crossing criterion (e.g., high schools)

Street Width: Street segments over 40 feet wide will be given 4 points.

DISCUSSION:

ELIMINATED SELECTION CRITERIA

The committees considered and eliminated following proposed selection criteria:

Accidents: Accidents will not be included as a selection criterion for the following reasons:

- The number of accidents on a roadway segment is usually a function of the amount and speed of traffic on the segment. Since speed and volume are primary selection criteria, including accident rates as a criterion is somewhat redundant.
- Specific accident patterns at specific locations (i.e., high turning-accident rate at intersection of A Street and Central Avenue) can usually be addressed outside a process such as the ATCP.
- Accident rates for Neighborhood Collectors are generally very similar and therefore will not significantly impact selection criteria scores from roadway to roadway.
- The collection, refinement, and evaluation of accident data is a very time-consuming effort.
- Many accidents are unreported. Citizen observation of accidents is unreliable and subjective.

Noise: Noise is too difficult to measure and assess. For example, how is the distinction made between ambient and collector-generated noise? Also, how would a high ambient noise level from other sources be evaluated (i.e., as a liability because it adds to the traffic noise, or as an existing condition that "cancels" out traffic noise)?

Local vs. Nonlocal Mix: It is too difficult and costly to obtain data on traffic mix. (It requires stopping traffic to ask origin and destination.)

Percent Trucks: It is too difficult to measure traffic mix. Also, some Neighborhood Collectors are designated truck routes, and it is difficult to distinguish between "appropriate" and "inappropriate" truck traffic. The street classification system and other PDOT programs (e.g., the truck route program and educational efforts) are "drainage area," based on size, land use, and residential density, versus traffic coming from outside the drainage area. It is suggested that this issue be considered again when the ATCP is evaluated in six years; viable models for this kind of analysis may exist by that time.

Street Classification: Street classification (e.g., designated transit or bicycle routes) will not be included because the difference among streets will be insignificant. There is also the problem of whether to consider the classification as an asset or a liability. (For example, should a designated bicycle route be given points because it presents greater opportunities for achieving the program's objectives, or not be given points because it

already has an advantage over streets that are not designated routes?)

Property Values: This is too difficult to measure/evaluate.

Other Criteria to Address Neighborhood Conditions: The Citizens Advisory Committee considered other possible criteria (besides property values) to address the issue of neighborhood conditions. For example, one view is that neighborhoods with poor or declining conditions may not be helped by an ATCP project, while neighborhoods with stable, but on the verge of declining conditions could be stabilized or improved by a project. The Citizens Advisory Committee considered whether there could be some kind of a "measurable outcome" criteria to help assess the likely results of a project (e.g., how it is likely to improve neighborhood livability). After some discussion, however, they decided that this is not feasible; "measurable outcome" is very subjective and impossible to predict or measure.

Proximity to Site Destination Facility: The term "site destination facility" is very broad. Most Neighborhood Collectors are likely to have some kind of site destination facility located nearby, and the difference among segments will be insignificant.

Protected Pedestrian Crossways: Few Neighborhood Collectors have pedestrian activated signal protected crossways between arterials. Also, it would be more logical to subtract points if a street has a crossway than to add points if it doesn't. However, on some streets residents feel that the crossway (as it currently works) is a liability, not an advantage. Pedestrian crossing problems are related to traffic speed and volumes, street width, and pedestrian generators, and will be addressed by those criteria.

Substandard Street: The sidewalks criterion will help address substandard conditions.

Drainage: Drainage is a design issue, not a selection consideration.

PROJECT PROCEDURES

After the top two or three potential projects are identified, ATCP staff need to determine if the residents on those potential project segments want a project to be undertaken. To do this, for each proposed project segment ATCP staff will send the residents a "survey to proceed," which is described in Step 1 below. If the residents support proceeding with the proposed project, ATCP staff will initiate the project by

holding a public meeting as described in Step 2. If the residents do not want to proceed with the proposed project, the project will not be initiated.

The project procedures that will be used for ATCP projects are detailed in detail below and summarized in the flowchart on the next page.

STEP 1: SURVEY TO PROCEED

ATCP staff will mail a survey to all households and businesses that have addresses on the project street segment (the "survey area"). The purpose of the survey is to establish the level of support among residents to proceed with a project. ATCP staff prepare the survey, describing the problem and the procedures to be followed if a project is undertaken. The survey will ask for a yes/no response to whether the project should proceed. It will also ask the recipients to identify their major concerns and priorities concerning street improvements. This information can be used by the traffic committee in determining project goals and objectives in Step 4.

Each household, business, and nonresident property owner is entitled to one survey. A majority of the surveys that are returned must give a yes response for the project to proceed. If there is a low response to the survey, the ATCP staff will send a second notice to remind the recipients to return their surveys.

If approval to proceed is not obtained, the project does not proceed to Step 2. However, the project will still be included in the next three-year project ranking and selection cycle.

DISCUSSION:

The committees discussed whether interest in proceeding with a project should be determined by having a petition signed by the majority of the households and businesses on the project street. They ultimately rejected this approach for two primary reasons:

- Because ATCP will not be "complaint-driven," there may not be any residents who have previously been involved with traffic issues on the project street. Without a "contact person" on the project street, it may be difficult to recruit volunteers to circulate the petitions.
- Even if enough volunteers were recruited, they may not have sufficient background to discuss the project with residents as they circulate the petition.

It was suggested that the petition could be circulated after a traffic committee was

formed and has established project goals and objectives; residents could then be given more specific information about the proposed project. The problem with this approach, however, is that residents' interest in the project is not determined until project planning is already underway.

STEP 2: NOTIFICATION OF PROPOSED PROJECT

ATCP staff holds a public meeting to:

- Provide an overview of the ATCP.
- Give the results of the survey.
- Obtain feedback about issues and concerns.
- Recruit members for the project traffic committee.

The meeting notification is:

- Mailed to all households and businesses (including nonresident property owners) within the "project area." The project area is defined as extending to the ends of the project segment, and halfway to the next parallel arterials. The City may also notify other interested parties as appropriate.

- Mailed to neighborhood and business associations that: 1) are recognized by the Office of Neighborhood Associations, 2) include the project segment, and 3) are adjacent to the associations that include the project segment.
- Mailed to other appropriate agencies and City bureaus.
- Published as a general public notice.

STEP 3: FORMATION OF PROJECT TRAFFIC COMMITTEE

The project traffic committee is formed. Members include those persons who volunteer at the public meeting (Step 2) or otherwise indicate interest in participating. ATCP staff will also extend invitations to appropriate parties (e.g., major institutions, businesses, Tri-Met, the Police and Fire Bureaus) to encourage a good representation of interests on the committee.

The traffic committee is an autonomous committee rather than a committee of the neighborhood association(s), able to make decisions that differ from the position of the neighborhood association(s). The appropriate role of the neighborhood association(s) is to participate in and support the process.

At the first traffic committee meeting, ATCP staff and the traffic committee enter into a nonbinding contract to define their general roles and responsibilities, such as meeting procedures and decision-making processes. The traffic committee and ATCP staff work together to arrive at mutually satisfactory solutions to problems or disagreements that may arise. Reasonable time limits for resolving these issues are mutually established.

STEP 4: PROJECT DEVELOPMENT

Project development involves identifying education, enforcement, and engineering solutions that can achieve the project's goals and objectives. The nonbinding contract (established during Step 3) can be expanded to identify activities that traffic committee members can implement while project development is underway.

Project development consists of the following steps:

- Assess problems and needs
- Identify project goals and objectives
- Identify mitigation criteria
- Develop and assess alternative plans/solutions
- Identify and/or implement recommended education and enforcement activities
- Identify recommended engineering solution

- Decide to conduct or not conduct a demonstration project.

The demonstration phase (Step 5) of projects will be optional, at the discretion of the traffic committee. If there is a demonstration phase, the committee can determine its length.

DISCUSSION:

The terms "goals," "objectives," and "mitigation criteria" used in Step 4 above are defined as follows:

Goals are general statements about what the project hopes to achieve. For example: "Reduce excessive speeding on the project street."

Objectives are more specific statements that help define how to reach the goals and help guide the project design. They should be realistic statements of what the project will try to attain (for example: "Reduce speed by 10 mph"). However, the project should not be considered a "failure" if the objectives are not strictly achieved (for example, if speed is reduced by only 5 mph).

Mitigation criteria define what project results are or are not acceptable. If a project cannot meet a mitigation criterion, it must be mitigated or revised until it can. A project that cannot meet these criteria is unacceptable.

There are two kinds of mitigation criteria:

- 1)"Programmatic" criteria that apply to all projects and must be met under all circumstances. These would include criteria such as required emergency response times and diversion limits (i.e., a maximum traffic increase of 150 vehicles per day on any Local Service Street).
- 2)Criteria that are determined by the traffic committee (working with staff) on a project-by-project basis. These criteria basically define how close the project must come to the objectives in order to be acceptable. For example, the objective may be to reduce speed by 10 mph, but the traffic committee may consider a reduction of 5 mph to be acceptable.

This approach allows a project to be designed to achieve realistic objectives, but it can still be considered successful if the objectives are not strictly achieved (as long as the mitigation criteria are met). This enables residents on the project street to evaluate a project in terms of their overall subjective experience of it. For example, speed

reduction may be less than the original objective, but residents may still view the project as positive because of a combination of engineering, education, and enforcement measures. This approach will also increase a project's chances of getting approval for permanent construction (Step 6); residents will know that an attempt has been made to make the project work as well as possible through mitigation and revision.

The committees stressed the need to provide traffic committees with enough information to make informed decisions (e.g., to develop appropriate goals, objectives, and criteria; to assess the need for a demonstration project; etc.) Tools such as videos and testimonials from other projects should be made available for the committees' use. It may be useful to develop a "briefing book" for traffic committees; this could include procedural information, results of past projects, examples of the nonbinding contract, technical background, identification of available resources (such as the videos), etc. It is also suggested that the traffic committee participate in a "field trip" to other projects to provide them with some direct observation/experience.

The City will provide a list of topic areas that traffic committees may want to consider including in their objectives. Examples of topic areas that may be included are noise, visual aesthetics, air pollution, historic preservation considerations, parking loss, and ability of project to help reinforce zoning and comprehensive plan designations.

As stated above, the demonstration phase (Step 5) of projects will be optional, at the discretion of the traffic committee. If there is a demonstration phase, the committee can determine its length. This approach has the following advantages:

- It allows traffic committees to take a conservative approach in the first years of ATCP. It is not possible to rely on past experience to demonstrate to residents how the ATCP devices will work, because performance of devices such as speed bumps has not yet been adequately established. Residents and others, particularly on adjacent streets, may oppose the project if they anticipate potential negative impacts to their street and have no demonstration/evaluation phase to show otherwise.

It is likely that traffic committees will decide to bypass the demonstration phase once they can use the experience from prior ATCP projects to demonstrate performance results.

- It enhances the citizen involvement process by giving individual traffic committees the responsibility for making the decision, rather than having to abide by fixed, program-wide rules.

In order to make its decision, the traffic committee will have to evaluate whether residents are likely to approve a permanent project without first seeing it demonstrated. This requires the committee to keep in touch with residents, assess their information needs, and educate them about the proposed project and its expected results.

STEP 5: DEMONSTRATION PROJECT

ATCP staff will send a ballot to all households and businesses that have addresses on the project street segment (the "ballot area") for approval to construct a demonstration project of proposed engineering devices. This is different from a test in the sense that it is permanent construction of devices such as speed bumps, with the assumption that they will remain permanent unless there is a later ballot to remove them (Step 6). The demonstration project may not necessarily include all of the devices that are planned; some (such as curb extensions) may be deferred until construction (Step 8).

Each household, business, and nonresident property owner is entitled to one ballot. A majority of those ballots that are returned must be in favor of the demonstration project for it to proceed. If there is a low response, ATCP staff will send a reminder to recipients to return their ballot.

If ballot approval for the demonstration project is not obtained, the project will not proceed any further. However, the project will still be included in the next three-year project ranking and selection cycle.

Step 5A: City Council Approval

If ballot approval for the demonstration project is obtained, City Council approval will not be required unless: 1) the project costs over \$50,000, 2) a contract is let, or 3) the demonstration involves new devices that may be controversial.

Step 5B: Evaluation of Demonstration Project

The demonstration project will remain in place approximately one year (or less, at the discretion of the traffic committee). ATCP staff collects data (e.g., speed and volume counts, diversion to Local Service Streets) to help evaluate project impacts. The project is evaluated on the basis of the objectives and mitigation criteria developed during Step 4. Mitigation measures or revisions that are necessary to address any unacceptable impacts are identified and/or implemented.

The results of the demonstration project are reviewed with the traffic committee and area residents. The demonstration period also gives residents the chance to experience the results of education and enforcement efforts, as well as of the engineering devices.

DISCUSSION:

The committees noted that putting speed bumps in as a demonstration and then asking residents if they want to take them out may seem like an unusual approach. It is important to note the two basic assumptions underlying this approach: 1) a demonstration phase will be important for some projects, and 2) most demonstration projects will in fact be approved for permanent construction.

The committees noted reasons both for and against conducting a demonstration phase for individual ATCP projects. A traffic committee can weigh these factors in making its decision about conducting a demonstration phase.

Arguments against conducting a demonstration phase include:

- Most projects will use similar engineering devices (primarily speed bumps and slow points). The results of using these devices will be fairly predictable; individual demonstrations for each street are not necessary.
- It is not possible to install speed bumps as temporary devices. Once they are installed, they are essentially permanent devices; it is more appropriate to ask residents to vote for or against them as permanent devices.

It is likely that most residents will be in favor of speed bumps and will vote for their permanent construction without a demonstration phase.

- The elimination of the demonstration phase will streamline the process, saving time

and funding that can be made available for other projects.

Arguments for conducting a demonstration phase include:

- Residents may be unwilling to approve a permanent project if they have not seen the devices demonstrated on their street. There is not yet enough previous experience with these devices to convince people that they will have acceptable results.
- Residents on adjacent Local Service Streets may oppose the project if they perceive negative impacts to their street. The results of the demonstration phase are important to obtain data about the project's impacts.
- A demonstration provides the opportunity to see the impacts of the devices and fine-tune the project if necessary (and possible).

STEP 6: BALLOT FOR PERMANENT PROJECT

ATCP staff sends a ballot to households and businesses that have addresses on the project street segment (the "ballot area"). The purpose of the ballot is to make a recommendation to City Council about the project; ballot approval is not in itself a binding decision.

If there has been a demonstration project, the ballot asks if the project should remain permanent. With this approach, people are asked to react to the overall project (education, enforcement, and engineering measures), based on their perceptions of how it has affected their livability. The results of the Step 5B evaluation are also provided to the ballot recipients.

If there has not been a demonstration project, the ballot asks if a permanent project should be constructed. The results of the evaluation conducted during Step 4 are provided to the ballot recipients.

Each household, business, and nonresident property owner is entitled to one ballot. A majority of those ballots that are returned must be in favor of the project for it to proceed to City Council action (Step 7). If there is a low response, ATCP staff will send a reminder to recipients to return their ballot.

DISCUSSION:

The committees discussed at length whether the ballot area should be confined to the project street segment or expanded to a larger project area. They noted that people on other streets may experience impacts from the project, such as increased traffic or increased fire response time. Also, Neighborhood Collectors are for the use of people beyond those living on the project street; these users should perhaps have a voice in approving or disapproving projects.

Both the committees recommend that the ballot area be confined to the project street segment, for the following reasons:

- People in the larger project area will have adequate opportunities to participate in the decision-making process. These include participation on the traffic committee, public meetings, and ongoing information exchange throughout project development.
- People in the larger project area will not be greatly affected by the project. ATCP policy ensures that traffic increases on other streets will be minimal. Basically, people will just be required to reduce their speed to conform to the speed limit.
- The main issue is livability for people on the project street; these are the people who should be balloted.

The purpose of the ballot is to demonstrate support for the project by people living on the project street. It is not practicable to define boundaries for the ballot that will encompass everyone who may be somewhat impacted, therefore the intent is to get a response from the people most directly affected.

At the same time, the ATCP process recognizes the policy basis of Neighborhood Collectors (i.e., that they serve a larger area) by providing opportunities for these other users to participate and ensuring that they will not experience unacceptable impacts. This "holistic" approach addresses both the needs of the people on the project street and the concerns of others in the larger area. The ATCP also addresses the needs of the larger area by disallowing some of the approaches that would be allowed if the objective were to fulfill only the wishes of people on the project street (e.g., diversion).

If there is no demonstration phase, it will be important to make sure residents in the ballot area have adequate information about the proposed project so they can make an informed choice about permanent construction (Step 8).

It will also be important to educate people in the larger project area and address their

potential concerns. This may be particularly important if there is no demonstration phase; people may oppose the project because they anticipate potential negative impacts (e.g., on nearby Local Service Streets) and have no demonstration to show otherwise. The following points should be conveyed:

- Information about the project's expected performance.
- Assurance that unacceptable impacts from the project (e.g., unacceptable levels of traffic increases on adjacent Local Service Streets) will be mitigated (either during Step 5B for demonstration projects or during Step 9 for permanent projects).
- An explanation that the project's overall goal is livability for residents on the project street; that traffic increases on other streets will be minimal; and that the project's intent is to slow traffic to the speed limit rather than to impede traffic flow on the collector.

It may be desirable for ATCP staff to develop written informational materials that can be disseminated by traffic committees to the project area.

STEP 7: CITY COUNCIL ACTION

If ballot approval is obtained in Step 6, ATCP staff will prepare a final report and recommendations for City Council action. The report and recommendations address the entire project (i.e., engineering, education, and enforcement measures).

If a permanent construction project does not obtain the required ballot approval, it is not forwarded to City Council. If a demonstration project does not obtain the required ballot approval to become permanent, the ballot results are reported to City Council.

STEP 8: DESIGN AND CONSTRUCTION/IMPLEMENTATION

Final design and construction of permanent engineering devices is administered by the City. Any education and enforcement tools that were identified during project development (Step 4), but have not yet been put in place, are implemented.

STEP 9: EVALUATION OF PERMANENT PROJECT

If there has not been a demonstration project, the ATCP staff collects data (e.g., speed and volume counts, diversion to Local Service Streets) to help evaluate project impacts. The project is evaluated on the basis of the objectives and mitigation criteria developed during Step 4. Mitigation measures or revisions that are necessary to address any unacceptable project impacts are implemented.

STEP 10: MONITORING

The City conducts ongoing monitoring of the project to determine if the project's goals and objectives continue to be met.

PROGRAM TOOLS

ATCP will use a three-pronged approach to solve traffic problems on Neighborhood Collector Streets. Targeted enforcement will be used to slow traffic, although it is recognized that the effect is of limited duration. The use of engineering tools (traffic management devices) will permanently slow traffic on the project street. The third prong, education, potentially offers the key to solving neighborhood traffic problems over the long term. Through education, ATCP will promote the use of alternative transportation modes, and an awareness of the negative effects that speeding and excessive vehicle volumes have on the livability of Portland neighborhoods.

The Arterial Traffic Calming Program is new and innovative because it is designed to address traffic problems on streets which are both residential and part of the arterial street system. ATCP staff research found no programs worldwide to use as a model for developing this program. Consequently, the education, enforcement, and engineering tools envisioned by this program are dynamic and will evolve over time. Many of the tools listed below, particularly the education tools, will need to be developed, tested, and evaluated over the next several years. As new tools are identified, they will be tested as part of this program as well.

EDUCATION TOOLS

Education tools will be developed to target three levels of audience: the general public, nonlocal traffic using the ATCP project street, and local traffic using the ATCP project street. Education tools that target the general public can be incorporated with the BTM Reclaiming Our Streets program education efforts. Education tools aimed at nonlocal and local users of ATCP project streets will be developed to include the following topics:

- Reduced speeding
- More appropriate use of streets/routes
- Increased use of alternative transportation
- Increased awareness of multiple use of streets/shared public space

The following ideas were suggested as possible education tools. These ideas will require further investigation, development, testing, and evaluation of effectiveness by ATCP staff.

- Work with Tri-Met to promote the use of transit.
- Work with the pedestrian and bicycle programs to promote these modes of transportation.
- Develop a simple, standardized ATCP sign (similar to the Neighborwatch signs) for placement on ATCP project streets.
- Investigate cost-effective ways to design and install neighborhood gateway treatments.
- Develop formats to utilize house meetings, neighborhood coffees, neighborhood picnics, block parties, etc. to deliver ATCP educational messages.
- Investigate the use of testimonials from participants of past projects.
- Encourage carpooling, walking, biking to traffic committee meetings
- Organize carpools within the neighborhood.
- Establish information centers in the neighborhood with information about alternative transportation methods.
- Work with trucking company dispatchers to encourage truck routing onto higher classification roadways.
- Provide information to children through the schools.
- Work with community policing/education efforts.
- Work with radio traffic reporters to make announcements about specific project streets.

Once an ATCP project is undertaken, the traffic committee will be expected to participate in educational activities as part of the project. The nonbinding contract with the project traffic committee will define the committee's role and identify specific activities (for example, Speedwatch, promotion of alternative transportation, data collection, or any other appropriate activities). Initial studies may be needed at the

beginning of each project to determine the origin and destination of the traffic. Based on this information, appropriate education targets and goals can be identified.

Since only a limited number of ATCP projects can be undertaken each year, residents should be given the opportunity and encouraged to try "interim" education activities. In this way, they will have some recourse for addressing their problems until an ATCP project can be done. ATCP staff will work with the Reclaiming Our Streets program to develop information packets that outline possible "interim" education activities. Some of the activities that might be included are:

- Speedwatch
- Sample articles for neighborhood/community newsletters
- Sample information that local school can distribute (e.g., educational flyers for students to take home)
- How to form a committee to address the problems
- How to hold events such as meetings or block parties
- Sample graphic materials, flyers, etc. that can be delivered door-to-door

ENFORCEMENT TOOLS

Enforcement is a somewhat limited ATCP tool, but an important tool nonetheless. Despite the limited resources of the Portland Police Bureau, Traffic Division, they have agreed to provide targeted enforcement for ATCP project streets. Enforcement causes motorists using the project street to be aware of their speed. When enforcement is used at the beginning of a project, and particularly when it is used in conjunction with Speedwatch, it can provide the traffic committee with a temporary tool to deal with traffic problems while the rest of the project is being designed.

Although photoradar is not yet available, the concept is very appealing and would provide ATCP with a potentially valuable enforcement tool. In addition, ATCP staff will encourage traffic committees to work with the community policing liaison officer in a project area. Community policing officers can issue tickets and may be able to work with the community to address traffic issues.

DISCUSSION:

Although enforcement is a limited tool, there are things that can be done. While exploring the issue with the Traffic Division of the Portland Police Bureau, the following ideas and suggestions were made:

- ATCP and the Traffic Bureau can work together for their mutual benefit. For example, if an officer has documented complaints from neighbors or data from

ATCP regarding the incidence of speeding in a certain area, the officer can use that information to support tickets issued in that area. (The court tends to give more attention to violations with this kind of backup information.) Also the court could be notified that certain areas are being targeted and that police will be writing tickets for 10 mph over the speed limit.

- Courtwatch can be an effective tool. The more citizen pressure to enforce traffic violations, the better.
- Education can work; the success of the seatbelt program is an example. It is important to emphasize that speeders in people's neighborhoods are often their neighbors, not just people coming through from outside the area.

ENGINEERING TOOLS

A number of traffic management devices have been identified for use as engineering tools in the Arterial Traffic Calming Program. Most of these devices have been tested on either local service or Neighborhood Collector Streets. Several of the devices have not yet been tried in Portland. As new devices are identified, they will be developed, tested, and evaluated for inclusion in the Arterial Traffic Calming Program.

Current ATCP engineering tools are detailed more fully in the report "Traffic Calming Devices" included in the Appendix section of this report. However, the following is a list of devices described in the report that are available for use in ATCP projects:

- Entry Treatment
 - 22' Arterial Speedbumps
 - Median Slow Point
 - Curb Extensions
 - Raised Crosswalk
 - Textured Pavement Treatment
 - Medians

ATCP staff will continue to investigate new devices for potential ATCP project use. At a minimum, potential new devices need to meet the following criteria:

- Devices must minimize conflicts between vehicles and bicycles.
- Devices must be well illuminated and visible.
- Medians must accommodate appropriate markings and signs.

- Devices must allow the traffic stream to maintain an acceptably consistent speed of approximately 30 mph.
- Pavement treatments must not pose a hazard to bicycles or pedestrians, or impede people with disabilities.
- Devices must ensure safety and visibility to pedestrians and other nonvehicular traffic.
- Devices cannot inappropriately restrict buses, emergency vehicles, and trucks from providing normal and necessary services to the neighborhood.

PROJECT FUNDING GUIDELINES

ATCP staff will develop general funding guidelines for the use of engineering tools in ATCP projects. These guidelines will estimate the cost per mile of project, based on experience with similar kinds of project. The guidelines will be flexible enough to allow the project traffic committee to consider various options. The traffic committee and ATCP staff can then develop project design using these options, putting together a plan that is within the general funding guidelines, but that is selected to fit their particular needs and preferences.

The guidelines do not represent an absolute cap or limit, but rather a goal for project development. The traffic committee and ATCP staff will work together to come to agreement about a reasonable budget for the project. (Budget development is part of the iterative process the committee goes through, and must be done in conjunction with developing the project goals, objectives, and alternatives.)

Information about both costs and types of devices for various situations will be developed as the ATCP evolves. The data base is limited at present, but will expand as more experience is gained. Funding guidelines can become more refined as the data base grows.

The ATCP will have an overall budget each year for education and enforcement; some will be allocated to programwide efforts and some will be allocated to specific projects.

BACKGROUND

COMMITTEES

Three committees worked to develop the Arterial Traffic Calming Program. The committees are structured as follows:

- 1)The Program Development Committee (PDC) is a Bureau of Traffic Management (BTM) staff committee. This committee's charge is to develop and recommend program policies and procedures for the review of the Citizens Advisory Committee, review and consider suggestions and recommendations made by the other committees, and to review both the draft and final report to City Council. The PDC met weekly throughout the initial program development. They will meet as necessary to review the draft and final report.

- 2)The Citizens Advisory Committee (CAC) includes representatives from each neighborhood district and other neighborhood residents with an interest and background in transportation issues. The CAC is an advisory committee to BTM. This committee's function is to review and comment on the PDC's work, make suggestions and recommendations for the PDC's consideration, review both the draft and final report, and submit the final report to City Council. The CAC met twice a month throughout initial program development. They will meet as necessary to review the draft and final report, attend the public Open Houses, and submit the final report to City Council.

- 3)The Technical Advisory Committee (TAC) includes representatives from the Portland Police Bureau, Portland Fire Bureau, Bureau of Maintenance, Parks Bureau, Bureau of Transportation Engineering, and Tri-Met. This committee met twice to review the developed program. Staff met and worked with the Portland Fire Bureau and Tri-Met representatives outside of the TAC structure to resolve issues and concerns regarding the program. This committee has completed its work and will not meet again.

SUMMARY OF PROGRAM DEVELOPMENT COMMITTEE MEETINGS

<u>Meeting Date</u>	<u>Meeting Topic</u>
May 28, 1992	• Objectives and policies
June 4, 1992	• Objectives and policies
June 11, 1992	• Objectives and policies

- Engineering tools/performance criteria
- June 18, 1992 • Education tools
- June 25, 1992 • Objectives and policies
 - Enforcement tools
- July 9, 1992 • Education tools
- July 16, 1992 • Engineering tools
 - Project selection criteria
- July 23, 1992 • Project selection criteria
- August 13, 1992 • Project selection criteria
- August 20, 1992 • Project selection criteria
- August 27, 1992 • Project selection criteria
- September 3, 1992 • Project selection criteria
- September 9, 1992 • Project selection criteria
- September 17, 1992 • Project procedures
- September 24, 1992 • Project procedures
- October 1, 1992 • Project procedures
- October 8, 1992 • Project procedures
- October 15, 1992 • Project procedures
 - Project funding
- October 22, 1992 • Project funding/LID process
- November 12, 1992 • Project funding/LID process
- March 18, 1993 • Review preliminary draft report

SUMMARY OF CITIZENS ADVISORY COMMITTEE MEETINGS

- June 2, 1992
 - Committee roles and responsibilities
 - Transportation system history/overview
 - Transportation Element overview
- June 16, 1992
 - Objectives and policies
- June 30, 1992
 - Engineering tools
- July 14, 1992
 - Education tools
- July 18, 1992
 - Engineering tools
 - Project selection criteria
- August 11, 1992
 - Enforcement tools
- August 25, 1992
 - Project selection criteria
- September 8, 1992
 - Project selection criteria
- September 22, 1992
 - Project selection criteria
- October 6, 1992
 - Project procedures
- October 20, 1992
 - Project procedures
- November 10, 1992
 - Project funding
- November 17, 1992
 - Project funding
 - Loose ends
- March 23, 1993
 - Review preliminary draft report

SUMMARY OF TECHNICAL ADVISORY COMMITTEE MEETINGS

- January 14, 1993
 - Review program
- February 11, 1993
 - Review program

**ARTERIAL TRAFFIC CALMING PROGRAM
CITIZENS ADVISORY COMMITTEE
REPORT AND RECOMMENDATIONS**

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***DRAFT REPORT -
ARTERIAL TRAFFIC CALMING PROGRAM***

INTRODUCTION

SUMMARY
ARTERIAL TRAFFIC CALMING PROGRAM

***MAJOR DISCUSSION POINTS
DURING DEVELOPMENT
ARTERIAL TRAFFIC CALMING PROGRAM***

BACKGROUND INFORMATION

APPENDIX
