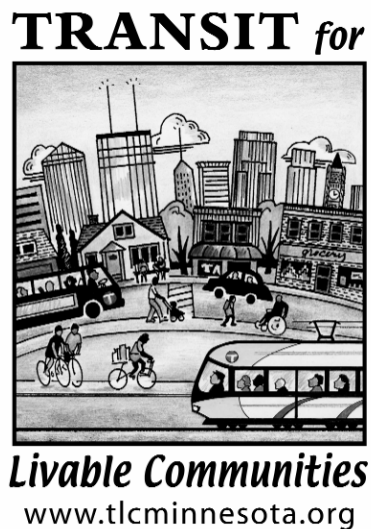


Transit for Livable Communities Non-Motorized Transportation Pilot Program

Request for Applications Packet Planning, Operations, and Infrastructure Projects

February 2007

Application Deadline: Tuesday, April 10, 2007 at noon



**Transit for Livable Communities
Non-Motorized Transportation Pilot Program
February 2007 Request for Applications**

Welcome!

The six-year federal transportation bill (SAFETEA-LU) enacted in the summer of 2005 authorized a Non-Motorized Transportation Pilot Program (NTP) in four communities – one of which is in Minnesota. Transit for Livable Communities (TLC) was selected by Congress to administer the NTP in Minneapolis and its adjoining communities. Approximately \$21.5 million has been authorized for the period 2006 through 2009 to evaluate how infrastructure improvements, combined with planning, public education, and promotion, can increase the number of people walking and bicycling and reduce driving.

Application Instructions and Application Submittal Documents

This document contains the program overview, application instructions, and selection criteria. The application form and required budget form must be downloaded from the TLC web site at www.tlcminnesota.org. The application procedure is explained in Section II of this packet.

Timeline for February 2007 Request for Applications (RFA)

Application Available	February 8, 2007
Applications Period Closes. All applications must be received by noon Central Standard Time (CST).	Tuesday, April 10, 2007 12:00 noon CST
Applicant Information Meeting (see page 7)	February 21, 2007 1:30 to 3:30 pm
TLC Board Selects Projects	June 5, 2007

Funding Available for the February 2007 Request for Applications

Application Category	Funding Available for the February 2007 RFA by Category
Planning	\$300,000
Operations	\$2,000,000
Infrastructure	<u>\$5,000,000</u>
Total	\$7,300,000

Future Solicitations

The timeline for the second solicitation (RFA) for planning, operations, and infrastructure for the Non-Motorized Transportation Pilot Program has not been finalized, but it is anticipated that a second RFP will be issued in the fall of 2007. Based on current projections, it is estimated that \$6 million will be available for the second request for applications.

Contact Information

Transit for Livable Communities, 626 Selby Avenue, St. Paul, MN 55104, 651-767-0298
 Barb Thoman, Program Director, barbt@tlcminnesota.org 651-767-0298 (Ext. 105)
 Steve Clark, Program Manager, stevec@tlcminnesota.org 651-767-0298 (Ext. 119)

Table of Contents

	Page Number
I. NTP Program Overview	
A. Transit for Livable Communities	4
B. NTP Federal Program Overview	4
C. NTP Minnesota Program Overview	4
D. Amount of Funding Available	5
E. Categories of Available Funding	5
F. Program Timeline	7
II. Program Guidelines, Application Process and Project Selection	
A. Eligible Applicants	8
B. Non-eligible Applicants	9
C. Program Funding and Project Eligibility	9
• Eligible Expenses	
• Ineligible Expenses	
D. Application Materials and Procedures	10
E. Project Evaluation and Selection	11
F. Rights of Transit for Livable Communities	11
Appendices	
A. Federal Law Authorizing the NTP Program	12
B. Project Authorization Process	13
C. Table of Eligible Expenditures by Program Category	14
D. Proposal Scoring Criteria	16
E. Glossary of Terms and Project Ideas	26

I. Program Overview

A. Transit for Livable Communities

Transit for Livable Communities (TLC) is a non-profit, non-partisan organization, located in St. Paul, Minnesota. TLC works to improve the quality of life in Minnesota communities through a balanced transportation system that encourages transit, walking, biking, and transit-oriented development. In the 2005 federal transportation bill, the US Congress named TLC to administer the Non-Motorized Transportation Pilot Program in Minnesota. For more information about TLC, visit www.tlcminnesota.org.

B. NTP Federal Program Overview

The six-year federal transportation bill (SAFETEA-LU) enacted in the summer of 2005 authorized a Non-Motorized Transportation Pilot Program in four communities – Minneapolis/adjoining communities in Minnesota; Sheboygan County, Wisconsin; Marin County, California, and Columbia, Missouri. Each community will receive approximately \$21.5 million over four years.

The program will test how infrastructure improvements, combined with planning, public education, and promotion, can increase the number of people bicycling and walking and reduce driving. The program funds will be used to create a network of non-motorized transportation facilities, including sidewalks, bicycle lanes, and pedestrian and bicycle trails, that directly connect directly with transit stops, schools, residences, businesses, recreation areas, and other community activity centers.

The four communities will also study the impact of these investments on traffic congestion, energy use, health, and the environment. Results will provide information to other communities and provide information for the next federal transportation bill. The complete language from SAFETEA-LU regarding the NTP can be found in Appendix A.

Selected projects are required to comply with a number of federal and state requirements. While the funding provides a great opportunity, communities are advised that following federal and state regulations require a significant commitment of time and resources on the part of the applicant and/or sponsor. Communities are encouraged to consider their ability to meet these requirements before to submitting an application. Some considerations should include:

- Do I have the necessary staff to administer the funding?
- Do I have the funding to cover project costs until they are reimbursed?
- Do I have the funding to support costs that cannot be reimbursed?
- Do I have the resources to support continuation of the project after project completion?

C. NTP Minnesota Program Overview

The TLC Board of Directors, in consultation with its staff, advisory committee, and agency partners, will determine how the program funding will be used. TLC will allocate funding to projects through several means:

- Through at least two rounds of requests for applications for planning, operations, and infrastructure and up to two rounds of requests for applications for education and community outreach,
- By directly funding projects selected by the TLC Board, and
- By retaining funds for projects implemented or managed by TLC.

Since this is a pilot project, with evaluation being a key part of the NTP program, TLC is committed to funding a variety of different projects and measuring the effectiveness of those projects.

Proposed designs for bikeways and for combined bike/pedestrian facilities must meet MnDOT State Aid standards, and also take MnDOT Bicycle Transportation Planning and Design Guidelines into consideration. Exceptions to the State Aid standards are granted during final design based on social, economic or environmental alternatives, not through this solicitation process. Failure to meet the standards or justify exemptions will result in cancellation of the grant and reallocation of funds.

- State Aid rules are at <http://www.revisor.leg.state.mn.us/arule/8820/>
- Bicycling guidelines are at http://safety.fhwa.dot.gov/ped_bike/docs/mnbikeguide.pdf

D. Amount of Available Funding for February 2007 Request for Applications

Up to \$7.3 million in funding is available for this solicitation or request for applications. Funding is available in the following three categories with the minimum and maximum grant requests as specified.

Application Category	Minimum Grant Amount	Maximum Grant Amount	Funding Available for February 2007 Solicitation By Category
Planning	\$10,000	\$50,000	\$300,000
Operations	\$20,000	\$150,000	\$2,000,000
Infrastructure	\$50,000	\$3,500,000	\$5,000,000
Total			\$7,300,000

E. Categories of Available Funding

This February 2007 Request for Applications seeks applications for planning, operations, and infrastructure projects. Projects will create, complete, or expand a network of sidewalks, on-street bike lanes, and off-street pathways that connect to key destinations including transit stops, recreational facilities, employment sites, shopping, housing, libraries, schools, and other community activity centers. Applicants are encouraged to contact TLC to discuss any proposed project prior to submitting an application. A description of the types of projects sought in each of these categories is presented below.

1. Grants for Site-Specific Planning and Design

Transit for Livable Communities (TLC) will fund up to \$300,000 in applications for planning/design projects that will lead to improvements in safety and accessibility for bicyclists and/or pedestrians. Project proposers may submit one or more applications in this category, but may only submit one application per project site or location.

Examples of planning projects include, but are not limited to:

- Planning for specific corridors or sites where bicycling and walking have not been able to reach full potential due to high volume and/or speed of motor vehicle traffic, lack of usable space, and/or poor condition of bicycle/pedestrian facilities.
- Interim treatments for locations where bicycle and pedestrian access is currently limited or unsafe and where a more comprehensive project will not be designed or built for several years. (An example would be installing a median at a high crash location where a larger intersection reconstruction is not planned for several years.)
- Innovative treatments or demonstration projects such as contra-flow bicycle lanes on one-way streets, wide bike lanes (seven feet wide or greater), head start boxes on pavement for bicyclists, traffic lane reductions to make room for bike lanes, improved

signalization for pedestrians, parking benefit districts (see Appendix E) and other treatments.

- Studies or planning efforts to ensure that the needs of bicyclists and pedestrians are considered and provided for as part of a proposed new development (e.g. shopping center, housing complex, recreational facility, etc.).
- Studies or plans that address inter-jurisdiction connections for bicyclists or pedestrians.

An applicant whose project is selected will be asked to complete the plan or design within 12 months after Notice to Proceed is given by MnDOT.

2. Grants to Improve Operations

TLC will fund up to \$2 million in applications for Operations projects that make the existing transportation infrastructure safer, more convenient, and more appealing to bicyclists and pedestrians. Examples of Operations projects include, but are not limited to:

- Striping of bike lanes on existing roads and re-striping roads for wider outside curb lane (e.g. two 12 foot lanes to one 10 foot and one 14 foot lane).
- Re-striping roads for conversion of four lane to three lane, including a center turn lane (for traffic calming and easier pedestrian crossing).
- Bicycle and pedestrian amenities (e.g. benches, bicycle parking facilities, bike rental program).
- Proven traffic calming strategies including closures and diverters (see Appendix E)
- Signage (way finding and traffic control).
- Special signalization for bicyclists and pedestrians.
- Bicycle boulevards (see Appendix E for explanation).
- Advance boxes on roadway for bicyclists (see Appendix E for details).
- Bicycle parking, including racks and lockers.
- Signal retiming to provide automatic walk phases or more frequent walk phases.
- Signal countdowns for intersections with a high number of pedestrians.
- Shower facilities (only at locations that serve a very high number of employees who ride bicycles).

Operations projects do not involve “turning of earth.” Right of way costs or construction costs are not eligible costs for Operations projects. TLC will accept applications in this funding category for more than one project location. Examples include: 1) a proposer could submit one application to re-stripe several different streets to add bicycle lanes within one municipality or 2) a proposer could submit one application to install bicycle racks at several locations within a specific jurisdiction.

An applicant whose project is selected will be required to complete the plan or design within 24 months after Notice to Proceed is given by MnDOT.

3. Grants for Infrastructure Projects

TLC will fund up to \$5 million in applications for Infrastructure projects to create, complete, or expand a network of sidewalks, on-street bike lanes, and off street pathways that connect to key destinations including transit stops, recreational facilities, employment sites, shopping, housing, libraries, schools, and other community activity centers.

The Infrastructure category includes three project categories. Projects in the categories listed below will be compared with projects in the same infrastructure category. The total amount

available for all three categories combined in this first funding round is \$5 million. TLC is interested in funding at least one project in each of the three categories.

On the application form, one must select the project category that most closely describes the project. A proposer may not submit an application in more than one category for the same project. A proposer may not submit more than one application for the same project, even if it's a slightly different location (Examples include: two bike trails projects on the same corridor or a pedestrian district project and a livable streets project on the same corridor, even if they are one mile apart). If you have questions, please phone TLC.

a. Off-street bike and/or pedestrian facilities. These paved off-street paths or trails can be a new facility, fill a gap in an existing network, provide a short-cut, or provide access over or under a barrier (railroad crossings, river, roadway, etc.). Projects that provide access or improve connectivity to destinations listed in the law are preferred. In addition to facility construction costs, projects can include signage, lighting, fencing, benches, and other related costs. Skyways are not eligible.

b. Pedestrian districts and/or plazas. These are projects in a small geographic area (maximum 1/4th mile radius out from a central point) with a high volume, or potential high volume, of pedestrian traffic. This may be the site of a new development (preferably mixed-use) or existing development where the proposed project will encourage walking, outdoor dining, and also provide bicycle parking. A project might include: widening of a sidewalk or boulevard, installation of bike racks, street trees, benches, pedestrian scale lighting, bus shelter facilities, new parking meters (where none exist today). You must coordinate with your local transit provider on any bus shelters included as part of your proposal.

c. Livable street projects or boulevards. These are projects along one street or a segment of a street that make the street work better for bicycling, walking, and using transit. Projects may include installation or widening of a sidewalk or boulevard, installation of bicycle lanes and bicycle parking, bump-outs, street trees, benches, pedestrian scale lighting, and bus shelter facilities. Costs for rebuilding the portion of a road to serve motor vehicle traffic or motor vehicle parking are not eligible. You must coordinate with your local transit provider on any bus shelters that are included as part of your proposal.

Applicants whose project is selected will be required to complete the plan or design within 36 months after Notice to Proceed is given by MnDOT.

F. Program Timeline

The timeline for the February 2007 Request for Applications is presented here.

Program Activity	Timeline
TLC releases February 2007 NTP Application Materials	February 8, 2007
Optional informational meeting for potential applicants. The meeting will include a review of the State Aid contracting process and requirements and will provide an opportunity for applicants to ask questions about the application process.	Wednesday, February 21, 2007, 1:30 to 3:30 p.m.; Sumner Community Library, Cargill Room 611 Van White Memorial Blvd Minneapolis, Minnesota
Applications due to TLC	Tuesday, April 10, 2007 12:00 noon, Central Std. Time

Review and scoring of Applications (site visits may be requested during this time)	April 11, 2007 through May 21, 2007
TLC Board selects projects	June 5, 2007
Notice to Proceed given to each grantee by the Minnesota Department of Transportation	July/August 2007

II. Program Guidelines, Application Process, and Project Selection

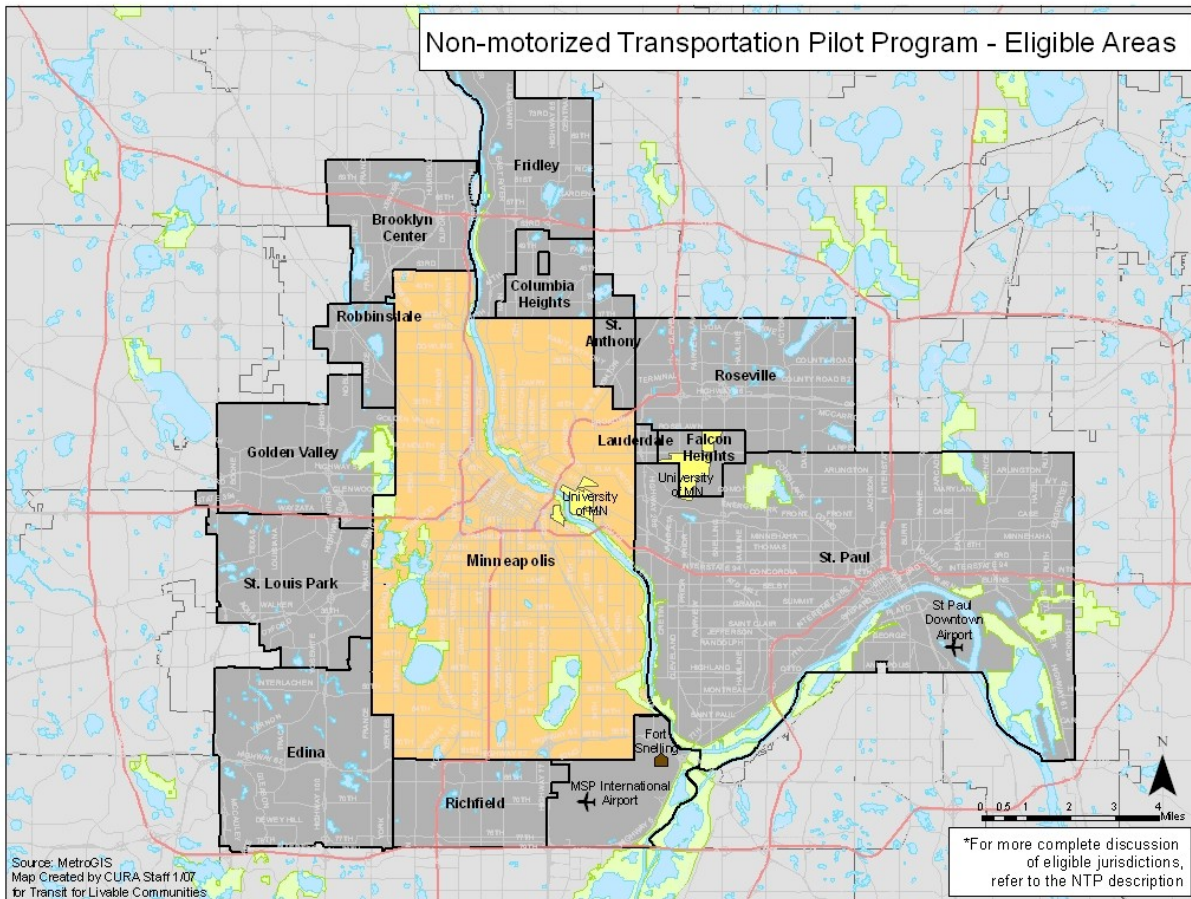
A. Eligible Applicants

As required by the Federal Highway Administration and the Minnesota Department of Transportation only organizations that have taxing authority are eligible for direct funding. Accordingly, entities identified below are eligible to directly apply for funding.

The majority of applications and selected projects will likely be located in the City of Minneapolis. However, TLC will also fund projects in the adjoining jurisdictions if the projects are located along corridors that provide connections in and out of Minneapolis by bicycle, walking, or public transit. An application for a project that is located in whole or in part within a community or jurisdiction not listed below is not eligible.

Municipalities	
City of Brooklyn Center	City of Minneapolis
City of Columbia Heights	City of Richfield
City of Edina	City of Robbinsdale
City of Falcon Heights	City of Roseville
City of Fridley	City of St. Anthony Park
City of Golden Valley	City of St. Louis Park
City of Lauderdale	City of St. Paul
Counties	
Anoka County	Ramsey County
Hennepin County	
Other Entities	
Department of Natural Resources for Fort Snelling	Metropolitan Council
Minneapolis/St. Paul Airport (Metropolitan Airports Commission)	Minnesota Department of Transportation
Minneapolis Park and Recreation Board	Three Rivers Park District
Minneapolis School District	University of Minnesota for campuses in the project area
Minnesota State Colleges and Universities for campuses within the project area	

NTP Project Area Map



B. Non-eligible Applicants

Neighborhood organizations, non-profit groups, community development corporations (CDCs), businesses, and other non-taxing organizations are ineligible to apply directly for funding. Organizations that would like to seek funding for a project are encouraged to contact the planning or public works department of an eligible agency to request that the eligible agency serve as a project sponsor/fiscal agent.

C. Program Funding and Project Eligibility

Under federal guidance for the NTP, eligible applicants are advised that NTP funding should be used to supplement, not replace, existing funding. A project for which an agency seeks to apply may not already be listed for full funding under an agencies' capital improvement budget, Metropolitan Council /TAB funding, federal appropriation, or other document. Section 1.E of this document provides a summary of the Planning, Operations, and Infrastructure projects that are eligible for funding.

The TLC Board will designate to whom a grant will be awarded and the scope and specificity of the award. After this time, successful agencies must execute contracts for the funds that conform to the award specifics through the Metro Division office of MnDOT State Aid. An overview of the Project Authorization Process is included in Appendix B. Applicants should

demonstrate sufficient time in the Project Timeline to receive the necessary approvals prior to the start of work.

Eligible Expenses

NTP projects can be funded up to 100 percent of the project cost with no local match required. The NTP Program is a reimbursable grant program, meaning that recipients of the funds will front the cost of the project, and recipients will be reimbursed during the course of the project. All costs submitted for reimbursement are subject to federal, MnDOT State Aid Requirements, and NTP program eligibility requirements. Any costs incurred prior to being given a Notice to Proceed from MnDOT are not eligible for reimbursement. Project applicants are responsible for all cost overruns above the grant amount.

A list of eligible expenses by project category can be found in Appendix C. This list is intended to serve as a guideline and is not a complete listing of eligible expenditures.

Applicants should develop the budget proposal with the anticipated cost in the year the funds will be expended. Neither TLC nor MnDOT will add an inflation adjuster after the project is selected and the grant award is determined.

Ineligible Expenses

The following projects are ineligible for funding under this NTP program. This list is provided as guidance to applicants and is not a comprehensive list.

- Projects that do not specifically serve the stated purposes of the NTP program.
- Projects that are primarily for the convenience of drivers rather than to improve conditions for walking and bicycling.
- Projects that would primarily encourage transit riders to become walkers and bicyclists (the goal of the program is to replace motor vehicle trips with travel by bicycling and walking).
- Recurring costs such as city staff salaries (program management expenses associated with implementation of projects are eligible.)
- Projects where facilities will not be maintained in winter.

D. Application Materials and Procedures

Submittal of Applications

Submit all applications to: Attention: Barb Thoman, Program Director, Transit for Livable Communities, 626 Selby Avenue, St. Paul, MN, 55104. All applications must be received no later than noon CST on Tuesday, April 10, 2007. Applications received after this time may be rejected. TLC, in its sole discretion, reserves the right to accept or reject any or all applications. Applicants shall submit its application in a sealed package addressed as noted above, bearing Applicant's name, address and clearly marked as follows: Non-Motorized Transportation Pilot Program.

Upon submission, all applications become the property of TLC and will not be returned.

Application Format

Applicants shall submit the application on both a Microsoft Windows compatible CD and on paper as follows:

The one CD shall contain:

1. The completed grant application form which is a Microsoft Word template file that can be downloaded from www.tlcmnnesota.org Please use arial font and 11 point type.

2. The completed project budget form which is a Microsoft Excel file that can be downloaded from www.tlcmnnesota.org
3. Digital files (saved in a pdf format) for the maps, photos, and plan diagrams that are part of the application's required attachments.

The paper submittal shall include five collated, stapled, or paper-clipped applications, each of which includes:

1. The completed application form.
2. The completed Excel budget form.
3. Required attachments.

Addenda/Clarifications

Any changes to this Request for Applications will be made by written addendum. No oral modification will be binding. TLC changes to this Request for Applications can be found at www.tlcmnnesota.org. It is the responsibility of the applicant to check the web site regularly for any TLC changes to this Request for Applications.

Pre-Contractual Expenses

TLC shall not, in any event, be liable for any pre-contractual expenses incurred by the Applicant in the preparation of the application. Applicants shall not include any such expenses as part of the application.

Pre-contractual expenses are defined as expenses incurred by the applicant in: 1) preparing its application in response to this Request for Applications; 2) submitting the application to TLC; 3) negotiating with TLC or MnDOT on any matter related to this application; or 4) any other expenses incurred by the Applicant prior to the date of execution of the proposed agreement.

E. Project Evaluation and Selection

All projects will be evaluated by the TLC staff and its agents. All projects will be selected by the TLC Board of Directors. An advisory committee established by TLC (known as the Bike – Walk Advisory Committee) will advise the TLC Board. TLC will use the selection criteria included in Appendix D to score and rank project applications.

F. Rights of Transit for Livable Communities

TLC may require confirmation of information furnished by the applicant. TLC reserves the right to:

- Reject any or all applications if such action is in the public interest;
- Cancel the entire Request for Applications;
- Issue a subsequent Request for Applications;
- Remedy technical errors in the Request for Applications or Request for Applications process;
- Require a site visit to proposed project location;
- Appoint evaluation committees to review applications; and
- Negotiate with any, all, or none of the applicants on project cost and scope.

Appendix A

Federal Legislation for the NTP: Section 1807 of SAFETEA-LU

The Federal Legislation authorizing the Non-motorized Transportation Pilot Program (Section 1807 of SAFETEA-LU) is as follows:

(a) ESTABLISHMENT.--The Secretary shall establish and carry out a non-motorized transportation pilot program to construct, in the following 4 communities selected by the Secretary, a network of non-motorized transportation infrastructure facilities, including sidewalks, bicycle lanes, and pedestrian and bicycle trails, that connect directly with transit stations, schools, residences, businesses, recreation areas, and other community activity centers:

- (1) Columbia, Missouri.
- (2) Marin County, California.
- (3) Minneapolis-St. Paul, Minnesota.
- (4) Sheboygan County, Wisconsin.

(b) PURPOSE.--The purpose of the program shall be to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within selected communities.

(c) GRANTS.--In carrying out the program, the Secretary may make a grant of \$6,250,000 per fiscal year for each of the communities set forth in subsection (a) to State, local, and regional agencies that the Secretary determines are suitably equipped and organized to carry out the objectives and requirements of this section. An agency that receives a grant under this section may sub allocate grant funds to a nonprofit organization to carry out the program under this section.

(d) STATISTICAL INFORMATION.--In carrying out the program, the Secretary shall develop statistical information on changes in motor vehicle, non-motorized transportation, and public transportation usage in communities participating in the program and assess how such changes decrease congestion and energy usage, increase the frequency of bicycling and walking, and promote better health and a cleaner environment.

(e) REPORTS.--The Secretary shall submit to Congress an interim report not later than September 30, 2007, and a final report not later than September 30, 2010, on the results of the program.

(f) FUNDING.-- (1) AUTHORIZATION OF APPROPRIATIONS.-- There is authorized to be appropriated to carry out this section, out of the Highway Trust Fund (other than the Mass Transit Account), \$25,000,000 for each of fiscal years 2006 through 2009. (2) CONTRACT AUTHORITY.--Funds authorized to be appropriated by this section shall be available for obligation in the same manner and to the same extent as if the funds were apportioned under chapter 1 of title 23, United States Code; except that the Federal share of the cost of the project shall be 100 percent, and the funds shall remain available until expended and shall not be transferable.

(g) TREATMENT OF PROJECTS.--Notwithstanding any other provision of law, projects assisted under this subsection shall be treated as projects on a Federal-aid system under chapter 1 of title 23, United States Code.

Appendix B

Project Authorization Process

This document provides a brief overview of the Federal Aid process to assist applicants in determining if NTP funding is an appropriate resource for a project and to assist in the development of the applicant's project timeline. It was obtained from MnDOT. The contact person for the Federal Aid process is Dan Erickson, MnDOT Metro District State Aid at phone 651-582-1407 or e-mail at dan.erickson@dot.state.mn.us

Overview of Project Authorization Process

Pre-Authorization Process for all Projects

1. Complete NTP application package and submit to TLC.
2. Project selected by TLC Board and applicant notified.
3. Project added to Metro Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP).
4. Project added by MnDOT to Program and Project Management System (PPMS) and federal project number assigned.
5. Applicant prepares Environmental Document research.
6. Applicant prepares Environmental Document.
7. Submit Environmental Document for review and approval to MnDOT.
8. Environmental Document approved by MnDOT.

Post- Authorization, Non-Infrastructure Process

9. Authorization by the Federal Highway Administration (FHWA).
10. Agreement between grantee and MnDOT prepared and executed.
11. Competitively hire any professional assistance to complete project.
12. Process depends on type of work to be done and amount of funds to be used.
13. Project work commences.
14. Project work completed.
15. Project bills submitted to Metro District State Aid Engineer.
16. Project audited and closed out.

Post-Authorization, Infrastructure Process

9. FHWA authorization to proceed with design.
10. All requirements of the National Environmental Policy Act (NEPA) met.
11. If necessary, hire a consultant to assist in preparation of construction documents.
12. Prepare construction documents.
13. Agreement between grantee and MnDOT prepared.
14. Obtain necessary local approvals and permits.
15. Submit construction documents to District State Aid Engineer (DSAE) for review and approval.
16. Plan approval by MnDOT District State Aid Engineer (DSAE) and State Aid for Local Transportation (SALT).
17. Authorization by Federal Highway Administration to proceed with construction (FHWA).
18. Project let by competitive bid Delegated Contract Process (DCP) process.
19. Project work commences.
20. Project work completed.
21. Project bills submitted.
22. Project inspected, audited, and closed out.

Appendix C

Table of Eligible Expenditures by Program Category

Expenditure/Item	Planning and Design	Operations	Infrastructure
Benches	no	yes	yes
Bicycle lane construction	no	no	yes
Bicycle lane markings	no	yes	yes
Bicycle parking lockers	no	yes	no
Bicycle parking racks	no	yes	yes
Bicycle parking shelters	no	yes	yes
'Bicycle Street' markings	yes*	yes	yes
Bike-friendly drainage grates	no	yes	yes
Bike-friendly utility covers	no	yes	yes
Bridges/ overpasses	no	no	yes
Building demolition	no	no	yes
Bump-outs at crossings	no	no (1)	yes
Cleaning/scrubbing	no	yes	yes
Crosswalk improvements	yes*	yes	yes
Culverts	no	no	yes
Design and engineering	yes	yes	yes
Easements	no	yes	yes
Educational materials	yes	yes	yes
Enforcement efforts	yes	yes	yes
Evaluation of project	yes	yes	yes
Feasibility studies	yes	no	no
Fill	no	no	yes
Fill/top soil	no	no	yes
Grading (rough, fine)	no	no	yes
Gravel	No	no	yes
Law enforcement outreach	No	yes	yes
Legal work	yes	yes	yes
Loop detectors for bicycles	no	yes	yes
Maps and mapping	yes	yes	yes
Mulch/fertilizer	no	yes	yes
Parking removal	yes	yes	yes
Pavement markings/restriping	yes*	yes	yes
Pavement removal	no	no	yes
Paving (trails, paths)	no	no	yes
Planning	yes	no	no
Policy development/ variance	yes	yes	yes
Post-approval engineering	yes	yes	yes
Pre-approval engineering	yes	yes	yes
Printed materials	yes	yes	yes
Public participation materials	yes	yes	yes
Program management costs	yes	yes	yes
Retaining walls	no	no	yes
Right of way negotiations	yes	no	yes
Right of way purchase	yes	yes	yes
Sidewalk construction	no	no	yes
Sidewalk rehabilitation	no	yes	yes
Signage	no	yes	yes
Signalization study	yes	no	no
Signal timing improvements (2)	yes*	yes	yes
Signals	no	yes	yes
Site preparation	no	yes	yes

Shelters at transit stops	no	yes	yes
Showers/ lockers	no	yes	yes
Sodding/grass seed	no	yes	yes
Supervision	yes	yes	yes
Traffic calming diverters	no	yes (3)	yes
Training and workshops	yes	yes	yes
Trash receptacles	no	yes	yes
Tree/shrub planting	no	yes	yes

Note: This is intended as a guideline and is not a complete listing

* Only for design work, or feasibility study

Notes:

- (1) Limited to non-permanent mobile structures.
- (2) The improvements must be for pedestrians and bicyclists.
- (3) Limited to non-permanent structures, markings, or signage.

Appendix D Project Scoring Criteria

1. NTP TECHNICAL EVALUATION CRITERIA - PLANNING GRANTS 100 Points Possible

1. GOAL: Modal shift - Maximize Bicycle Use and Walking (20 points)

What is the potential to increase travel by bicycle and walking at this location based on travel shed and traffic volumes, existing and planned land uses (including proximity to schools, transit stops, recreational facilities, employment centers, shopping, and other community activity centers), and current bike/ped counts.

1.a Total forecast population and employment for 2010, and destinations within reasonable access of the project (10 points). TLC will also use some information from Met. Council for this determination.

1.b System connectivity: study site is located on a major bike corridor or location near key destination(s). (10 points).

2. GOAL: Addresses Clear and Documented Need (20 points)

What is the severity of the problem or the opportunity at the project location? Why is it a good candidate for a study? (20 points).

2.a High crash locations for bicyclists and pedestrians, high vehicle ADTs, lack of usable bike/ped space, lack of alternative facilities, high vehicle speeds, complex intersections, lack of bicycle parking, lack of pedestrian facilities (15 points).

2.b Project listed in a Bike or Pedestrian Plan, City Comprehensive Plan, Small Area Plan, neighborhood plan, identified in a Gap Analysis, or TLC's Needs Analysis (5 points).

3. GOAL: Comprehensive Approach (10 points)

Study will look at the problem or opportunity in a comprehensive way including evaluation (planning, focus groups, and surveys), design/engineering, education/promotion, and enforcement.

4. GOAL: Certainty of Completion (10 points)

These studies are intended to yield results that can be implemented during the NTP timeline (by the end of 2009). Can this study be completed within 12 months? Are federal permits or right of way needed?

5. GOAL: Innovation (10 points)

The NTP program is intended to allow for innovation and evaluation of results. TLC is interested in funding some studies that look at innovative treatments to problem areas, new treatments that have not yet been tried in the Twin Cities region, or treatments that have been tried but where results have never been measured.

6. GOAL: Public Participation (10 points)

Projects that have been preceded by a strong public involvement program or ones that include a strong public involvement plan are preferred.

7. GOAL: Improve Access to Underserved Areas (10 points)

Projects located in areas with a limited bike/ped network or minimal facilities for bicycles and pedestrians. Areas that have been traditionally underserved.

8. GOAL: Biggest Impact for Reasonable Cost (10 points)

Total project cost per estimated annual bicyclist and pedestrian at the project location or corridor.

2. NTP TECHNICAL EVALUATION CRITERIA - OPERATIONS GRANTS 100 Points Possible

1. GOAL: Modal shift - Maximize Bicycle Use and Walking (20 points)

What is the potential to increase travel by bicycle and walking at this location based on travel shed and traffic volumes, existing and planned land uses (including proximity to schools, transit stops, recreational facilities, employment centers, shopping, and other community activity centers), and current bike/ped counts.

- 1.a Total forecast population and employment for 2010, and number of destinations within reasonable access of the project (10 points). TLC will also use some information from Met. Council for this determination.
- 1.b Will the project improve conditions for bicyclists and pedestrians by filling a gap, improving directness or providing a short-cut, overcoming a natural or manmade barrier, improving the safety, convenience, or appeal of access by pedestrians and bicyclists. (10 points)

2. GOAL: Addresses Clear and Documented Need (20 points)

What is the level of opportunity or need at the project location?

- 2.a High crash locations for bicyclists and pedestrians, high vehicle ADTs, lack of usable bike/ped space, high vehicle speeds, complex intersections, lack of bicycle parking, lack of pedestrian facilities, lack of shelters for bus waiting. (15 points).
- 2.b Project listed in a Bike or Pedestrian Plan, City Comprehensive Plan, Small Area Plan, neighborhood plan, identified in a Gap Analysis, or TLC's Needs Analysis (5 points).

3. GOAL: Comprehensive Approach (10 points)

Will the project address a problem or opportunity in a comprehensive way? For example: Four lane to three lane conversion with bike lanes includes bike parking and signage, and project will include an educational component to publicize the project.

4. GOAL: Certainty of Completion (10 points)

Can this project be completed within 24 months? Does right of way need to be purchased? Do federal permits need to be obtained? Do state and local permits need to be obtained?

5. GOAL: Innovation (10 points)

The NTP program is intended to allow for innovation and evaluation of results. TLC is interested in funding some projects that test innovative treatments to problem areas, new treatments that have not yet been tried in the Twin Cities region, or treatments that have been tried but where results have never been measured.

6. GOAL: Public Participation (5 points)

Projects that have been preceded by a strong public involvement program or ones that include a strong public involvement plan are preferred.

7. GOAL: Improve Access to Underserved Areas (15 points)

Projects located in areas with minimal facilities for bicycles and pedestrians or projects in traditionally underserved areas will be given priority.

8. GOAL: Biggest Impact for Reasonable Cost (10 points)

Total project cost per estimated annual estimated bicyclist and pedestrian. Total cost per linear mile of project facility.

3. NTP TECHNICAL EVALUATION CRITERIA Off-STREET BICYCLE AND PEDESTRIAN FACILITIES

100 Points Possible

1. GOAL: Modal shift - Maximize Bicycle Use and/or Walking (20 points)

What is the potential for travel by bicycle and pedestrians at this location based on travel shed and traffic volumes, existing and planned land uses (including proximity to schools, transit stops, recreational facilities, employment centers, shopping, and other community activity centers), and current bike/ped counts.

1.a Total forecast population and employment for 2010, and number of destinations along the project corridor and within one mile of either terminus of the project (10 points).

1.b Will the project improve conditions for bicyclists and/or pedestrians by filling a gap in the network, improving directness, providing a short-cut, overcoming a natural or man-made barrier, improving the safety, convenience, or appeal of access by bicyclist and pedestrians (10 points)

2. GOAL: Addresses Clear and Documented Need (20 points)

What is the level of opportunity or need at the project location?

2.a High crash locations for bicyclists and pedestrians, high vehicle ADTs, lack of usable bike/ped space, lack of facilities within convenient distance, high vehicle speeds, complex intersections, lack of bicycle parking, lack of pedestrian facilities (15 points).

2.b Project listed in a Bike or Pedestrian Plan, City Comprehensive Plan, Small Area Plan, neighborhood plan, identified in a Gap Analysis, or TLC's Needs Analysis (5 points).

3. GOAL: Comprehensive Approach (10 points)

Will the project address a problem or opportunity in a comprehensive way? For example, an off road trail includes facilities for bicyclists and pedestrians, signage, security, lighting, education, and enforcement.)

4. GOAL: Certainty of Completion (10 points)

Can this project be completed within 24 months? Does right of way need to be purchased? Do federal permits need to be obtained? Do state and local permits need to be obtained? If this application is awarded funding, is all funding for the project secured? Does the project have strong public support?

5. GOAL: Innovation /Quality of Design (10 points)

The NTP program is intended to allow for innovation and evaluation of results. TLC is interested in funding some projects that redesign problem areas. For example new treatments that have not yet been tried in the Twin Cities region, or treatments that have been tried but where results have never been measured. (See appendix E).

6. GOAL: Public Participation (5 points)

Projects that have been preceded by a strong public involvement program or ones that include a strong public involvement plan are preferred.

7. GOAL: Improve Access to Underserved Areas (15 points)

Projects located in areas with minimal facilities for bicycles and pedestrians or projects in areas that have been traditionally underserved.

8. GOAL: Biggest Impact for Reasonable Cost (10 points)

Total project cost per estimated annual estimated bicyclist and pedestrian. Total cost per linear mile of project facility.

4. NTP TECHNICAL EVALUATION CRITERIA PEDESTRIAN DISTRICT AND PLAZA - 100 Points Possible

1. GOAL: Modal shift - Maximize Walking, Transit use, and Bicycle access (20 points)

What is the potential for travel to this location by peds, bicyclists, and transit users, or within this location by pedestrians based on travel shed and traffic volumes, existing and planned land uses (including proximity to schools, transit stops, recreational facilities, employment centers, shopping, and other community activity centers), and current bike/ped, transit counts.

1.a Total forecast population and employment for 2010, and number of destinations at or within walking distance of the project location. (10 points).

1.b Will the project improve the safety, convenience, or appeal of access by pedestrians, transit riders, and bicyclists. Will it provide additional space for waiting for transit? Will it provide a community gathering space or place for outdoor dining? Will it provide a short-cut? (10 points)

2. GOAL: Addresses Clear and Documented Need (20 points)

What is the level of opportunity or need at the project location?

2.a Lack of usable and appealing pedestrian space (narrow sidewalks, few trees, no pedestrian scale lighting, no plantings) high vehicle ADTs, high vehicle speeds, complex intersections, lack of bicycle parking, location on a major transit corridor (15 points).

2.b. Project listed in a Bike or Pedestrian Plan, City Comprehensive Plan, Small Area Plan, neighborhood plan, identified in a Gap Analysis, or TLC's Needs Analysis. (5 points).

3. GOAL: Comprehensive Approach (10 points)

Will the project address a problem or opportunity in a comprehensive way? For example, a pedestrian district is part of a mixed use development, with shared parking, ground floor retail with windows, transit access, pedestrian amenities, etc.

4. GOAL: Certainty of Completion (10 points)

Can this project be completed within 24 months? Does right of way need to be purchased? Do federal permits need to be obtained? Do state and local permits need to be obtained? If this grant is awarded is all funding for the project secured? Does the project have strong public support?

5. GOAL: Innovation / Quality of Design (10 points)

The NTP program is intended to allow for innovation and evaluation of results. TLC is interested in funding some projects that test innovative treatments to problem areas, new treatments that have not yet been tried in the Twin Cities region, or treatments that have been tried but where results have never been measured. For example a new pedestrian plaza with traffic calming elements, and new paid vehicle parking.

6. GOAL: Public Participation (5 points)

Projects that have been preceded by a strong public involvement program or ones that include a strong public involvement plan are preferred.

7. GOAL: Improve Access to Underserved Areas (15 points)

Projects located in areas with minimal facilities for bicycles and pedestrians or projects in areas that have been traditionally underserved.

8. GOAL: Biggest Impact for Reasonable Cost (10 points)

Provide access at a reasonable cost. Total project cost per estimated annual estimated bicyclist and pedestrian. Total cost per block or square foot. Total cost per jobs or housing at project location.

5. NTP TECHNICAL EVALUATION CRITERIA

LIVABLE STREETS - 100 Points Possible

1. GOAL: Modal shift - Maximize Bicycle Use and/or Walking (25 points)

What is the potential for travel by bicycle and pedestrians at this project location based on travel shed and traffic volumes, existing and planned land uses (including proximity to schools, transit stops, recreational facilities, employment centers, shopping, and other community activity centers), and current bike/ped counts.

1.a Total forecast population and employment for 2010, and number of destinations along the project corridor. (10 points).

1.b Implement design elements that will help to reduce automobile speeds¹ along street segments, with a goal of reducing speeds to 25 - 30 miles per hour, or less (10 points).

1.c Does project achieve optimum sidewalk width of 10 feet or more and provide for planed area between road and sidewalk? – (5 points)

(Note: Candidate projects that are constrained by narrow right-of-way may obtain full 5 points upon demonstration that all practical means are employed to maximize sidewalk width including: narrowing travel lanes and center median, elimination of on-street parking on one or both sides of street.

2. GOAL: Addresses Clear and Documented Need (20 points)

What is the level of opportunity or need at the project location? Project corrects an existing safety problem and reduces potential for collisions involving pedestrians and bicyclists. Very wide roads with fast moving traffic make crossing difficult and dangerous. Factors such as high number of collisions involving pedestrians or bicyclists, traffic volume, posted speed greater than 30 mph, number of travel lanes, road width, complexity of traffic environment² and existence of sidewalks will be considered in determining critical safety problems. Project applications should document these factors.

2.a Project addresses existing hazards to walking, biking and use of transit³ and improves appeal and access for pedestrians and bicyclists (15 points).

2.b Project listed in a Bike or Pedestrian Plan, City Comprehensive Plan, Small Area Plan, identified in a Gap Analysis, or TLC's Needs Analysis. (5 points).

3. GOAL: Certainty of Completion (10 points)

Can this project be completed within 24 months? Does right of way need to be purchased? Do federal permits need to be obtained? Do state and local permits need to be obtained? If this grant is awarded is all funding for the project secured? Does the project have strong public support?

¹ Design elements that reduce motor vehicle speeds include narrowed travel lanes, on-street parking, reduced turn radii, street trees, curb extensions, ITS elements (signal timing and speed display) and pedestrian crossing demarcated with texture / color / platform treatment.

² Complexity of traffic environment refers to number of driveways and turning movements in project area.

³ Project includes actions to correct the following safety factors: travel speeds greater than 40 mph, lack of pedestrian refuge, more than 330 feet between marked pedestrian crossings, poor vertical delineation of pedestrian-way (e.g., no curb, intermittent curb, sub-standard width), numerous driveways, sight distance and high incidence of collisions with pedestrians and bicyclists.

4. GOAL: Innovation (10 points)

The NTP program is intended to allow for innovation and evaluation of results. TLC is interested in funding some projects that test innovative treatments to problem areas, new treatments that have not yet been tried in the Twin Cities region, or treatments that have been tried but where results have never been measured.

5. GOAL: Public Participation (10 points)

Projects that have been preceded by a strong public involvement program or ones that include a strong public involvement plan are preferred.

6. GOAL: Improve Access to Underserved Areas (15 points)

Projects located in areas with minimal facilities for bicycles and pedestrians or projects in locations that have been traditionally underserved.

7. GOAL: Biggest Impact for Reasonable Cost (10 points)

Total project cost per estimated annual estimated bicyclist and pedestrian. Total cost per linear mile of project facility.

Appendix E

Glossary of Terms and Project Ideas

Advance Boxes

Advance boxes allow cyclists to gather in front of motorists at a red light and enter the intersection first. They are generally well-marked areas ahead of a stop marking on a street. Advance boxes are quite popular in Europe and have been piloted in several United States cities including Davis, California. Often, the advance boxes are accompanied by an exclusive bicycle signal that turns green a few seconds before the green signal for motorists. Advance boxes should only be tried in locations where:

- 1) Significantly used bike lanes or bicycle boulevards exist;
- 2) The street to be crossed is a busier street than the street with the advance boxes (a longer delay allows more bicyclists to congregate in the advance box); and
- 3) A large number of the cyclists using the advance boxes will be turning left. This allows cyclists to move from the bike lane to the proper side of the travel lane to make the left turn.

Automatic Walk Signals (see Signal Improvements for Pedestrians)

Bicycle Boulevards or Bicycle Streets

Although bike boulevards or bicycle streets can be located anywhere, they are often located on a parallel arterial street when bike lanes cannot be provided on the main arterial. In order to attract bicyclists who want to move at a steady pace, bicycle boulevards must be properly designed and engineered. Typically, most stop signs are removed to give priority to bicycle movement. Other features of bicycle boulevards or bicycle streets often include:

- Minimized delays at signalized intersections,
- Automobile access is restricted to local traffic,
- Motor vehicle speeds and through trips are reduced through traffic calming measures,
- Special markings denoting a bicycle boulevard are placed on the pavement
- Speed limits are reduced to 25 miles per hour or lower.
- Where necessary, diverters, alternating one-ways, or block closures for motor vehicles are installed.

Bicycle Signal Heads

Bicycle signal heads are especially useful when used in conjunction with advance boxes (see Advance Boxes), since they allow cyclists to enter the intersection ahead of motor traffic. Bicycle signal heads are also recommended in places where a right turn lane crosses a side path. Right-turning vehicles would receive a red arrow signal during the green phase for bicyclists. Bicycle signals are common in many European cities and were also piloted in Davis, California.

Bicycle Parking Facilities

Studies show that a lack of bicycle parking facilities is a significant deterrent to using bikes for transportation. NTP funds can fund bike racks at targeted locations, including schools, shopping centers, workplaces, libraries, post offices, recreational areas, and other activity centers. Racks placed on private property must be fully accessible to the general public. Because racks are a relatively low cost item, applicants are encouraged to consider integrating a bike-parking program with larger operational improvement or infrastructure project. Grid bicycle racks will not be funded. Racks should be located in highly visible locations and should be located closer to the front entrance of an establishment than motor vehicle parking. A number of cities (e.g., Palo Alto, California and Madison, Wisconsin) require that all new developments provide adequate

bicycle parking and specify that the spaces “cannot be farther away than the closest car parking space.”

Bike Paths or Multi-Use Trails

Most bike paths are shared-use facilities that accommodate bicyclists, pedestrians, and skaters. When possible, pedestrians should be separated from the bicyclists on bike paths or multi-use trails. These off-street facilities are best located along rivers, railroad corridors, utility easements, and canals, or through parks and other open space. In such environments, bike paths and multi-use trails can safely allow for two-way travel with a minimum width of 10 feet (minimum of 12 feet when shared with pedestrians). Two-way trails adjacent to urban streets (side paths) are not recommended due to the high number of intersections and driveway crossings. Rather, sidewalks on both sides of the street for pedestrians and on-street bike lanes for bicyclists (see “Bike Lanes”) are the preferred methods of accommodation. If “side paths” are deemed to be the only suitable solution, trails should be placed on both sides of the roadway for one-way bike travel consistent with roadway travel. Such trails should be a minimum of seven feet wide and well marked with one-way directional arrows. Generally, two-way side paths will not be eligible under the NTP program because of the inherent safety problems. Short paths providing bicyclists and pedestrians with through travel from cul-de-sacs or dead end streets to other roads or destinations are strongly encouraged. These short paths should be well-marked as part of the ‘Dead End’ signage in order to maximize use. (See “Shortcuts”).

Bike Routes

The term ‘bike route’ may denote any corridor that is recommended for bicycle travel. For bicycle planning purposes, the term is limited to roads with bike route signs placed along them. There is no uniform or consistent methodology employed to determine what roads are suitable for such a designation. As a result, many bicyclists believe that designated “bike routes” do more harm than good, since they can lead motorists to believe that cyclists shouldn’t travel on roads without such signs. Bike route signs may help cyclists navigate where gaps exist within the bikeway network. In such situations, the signs should also include way-finding.

Bike Stations

Bike stations are places where people can park bikes, rent bikes, get bikes fixed, obtain maps, rent lockers, and sometimes, even take a shower. Most bike stations, especially in Europe, are a part of or adjacent to a train station or some other major transit hub, allowing for convenient multi-modal travel. Full-service bike stations with sheltered parking for 3,000 or more bicycles can be found in Germany, Japan, Denmark, and the Netherlands. Eligible jurisdictions are encouraged to partner with non-profits and other entities to create or support existing ‘neighborhood bike stations’ where bike repair and bike handling skills are taught and reconditioned bikes are made available to the public.

Bridges/Overpasses

NTP funds will not be used to construct an overpass where a suitable at-grade crossing is possible. Studies show that most pedestrians and bicyclists will avoid an overpass if an at-grade crossing is nearby and saves time. Not only do grade-separated crossings cost more to build, but they also demand more energy from user (distance and climb). Techniques to reduce delays and increase the safety of non-motorists (see “Signal Improvements,” “Trail Crossings,” “Traffic Calming,” and other topics) at major intersections should be fully explored before an overpass or underpass is considered. Special bike and pedestrian facilities bridging rivers, creeks, or limited access highways are eligible for funding, but they must demonstrate cost-effectiveness.

Bump-outs

Also known as “neck-downs,” these intersection treatments reduce the distance a pedestrian has to travel to cross the street, thus allowing a shorter walk phase and quicker cycles. Bump-outs also tend to slow down right-turning motorists and increase the visibility of pedestrians to

motorists. Bump-outs work especially well on collectors and minor arterials where on-street parking is allowed; the bump-outs provide the perpendicular boundary for the parking lane. Bump-outs do not negate the use of bike lanes and are also quite compatible with bicycle boulevards.

Contra-flow Bike Lanes

Special lanes allowing bicyclists to travel in the opposite direction of motorists on one-way streets have had successful trials in Minneapolis and many other cities. Since this is still a relatively unusual treatment, such lanes need to be well marked with warning signs at all side streets. (In Copenhagen, Denmark, bicyclists are allowed two-way travel on all one-way streets -- consequently no special signs are required). Contra-flow lanes should be located on the side that is consistent with normal two-way movement (e.g., northbound bike lane on a southbound one way should be located on the east side of the street; southbound bike lane on northbound one-way should be on the west side of the street). To prevent wrong way riding within the contra-flow lane, a regular bike lane (on the opposite side of the street) should also be provided.

Diverter

Diverter can be permanent or non-permanent structures including bollards, landscaped medians, and even public art that compel motor vehicles to turn right or left on a street that continues to be a through street for bicyclists and pedestrians. Because of the turning movements, markings (preferably colored asphalt) should be used to help non-motorists get safely across the street and between or through the diverters. This traffic calming approach is a useful strategy in creating bicycle boulevards (see "Bicycle Boulevards").

Four to Three Lane Conversions (see "Multiple Lane Conversion/Reduction Projects)

Incentive Programs

In an effort to get more people walking and bicycling, many cities have conducted various types of incentive programs. For instance, all city employees in Olympia, Washington receive \$2 per day if they walk, bike, or use public transportation to get to work. In Arlington, Virginia, employees who ride or walk at least three times a week receive \$35/month. The City of Westerville, Ohio had a program that provided employees an extra 15 minutes of vacation time for each day they biked or walked to work. These cities justify such incentives through savings in parking costs, health benefits, and even increased productivity at work.

Medians/Refuge Islands

Medians can become useful refuge islands for pedestrians and bicyclists trying to cross a busy roadway. Medians allowing bicyclists and pedestrians to enter, stop, and continue on are a simple and effective method of improving conditions. For a median to be useful, it needs to have a curb cut and path and be at least six feet wide. To be useful for cyclists pulling trailers, 10 feet is the minimum width.

Mid-block Crossings

Mid-block crossing are often safer (and, often, more convenient) than intersections because they provide pedestrians with a marked crosswalk. Mid-block crossings are especially encouraged in areas with high levels of jaywalking, since these locations are already key destination points or have high pedestrian volumes. Marked crosswalks at these locations should be accompanied by signs and/or special signals (depending upon road conditions) to maximize motorist compliance and pedestrian safety. Mid-block crossings (and trail crossings) on roads with more than two lanes should be signalized.

Multiple Lane Conversion/Reduction Projects

A preliminary assessment conducted by Transit for Livable Communities indicated that numerous four-lane streets in Minneapolis and adjoining communities could be converted to

three lanes with negligible impact on the level of service for motorists. Four to three lane conversions provide a single travel lane for each direction of travel, but allow for left turns from the center lane. These conversions typically free up enough space for bike lanes to be marked on both sides of the street. In addition to four to three lane conversions, there is also potential for six to five lane conversions and on many one-way streets, three to two lane conversions. Four to three lane conversions have been successful even on major arterials with AADTs greater than 25,000.

Parking Benefit Districts

Special parking districts can be used to provide dedicated funding for improvements in a corridor or node, often to encourage non-motorized travel. Fees paid by motorists to park in such a district can be earmarked for new sidewalks, transit incentives, lighting, signage, enforcement, and other costs. Several successful example of Parking Benefit Districts are described in the book The High Cost of Free Parking by Donald Shoup. The best known example is on Colorado Boulevard in Pasadena California.

Pedestrian Districts

Special pedestrian zones that provide wide sidewalks, trees, benches, and other amenities not only improve the safety of pedestrians but create focal points within a community and enhance social interaction. A pedestrian district can range from a half-block sidewalk expansion project to a full-fledged pedestrian plaza or mall – sometimes transforming an entire street or block.

Pedestrian Scale Lighting

Pedestrian scale lighting provides illumination in a sidewalk area, not just the roadway. Pedestrian scale lighting makes it more inviting to walking at night, and adds to a more pleasant atmosphere even during the day.

Pedestrian Plazas

Pedestrian plazas greatly encourage walking, and often become community activity centers and places of great social interaction. Cities with notable pedestrian plazas or malls include Boulder, Colorado; Iowa City, Iowa; Santa Monica, California; Copenhagen, Denmark; and many other European cities.

Raised Bike Lanes

Also known as “cycle tracks,” these on-street facilities are typically separated from the travel lanes by a parking lane. A half curb from the parking lane prevents parked cars from occupying any part of the bike lane. Raised bike lanes are wide (minimum of eight feet to allow for riding two abreast) and one-way both sides of the street. This would be an experimental treatment that could be piloted through NTP funding. In many ways, raised bicycle lanes provide the security of off-street facilities without the high costs for a separate right of way and without the inherent safety problems at crossings. Elevated bike lanes would be considered an Infrastructure project.

Road Narrowing or Lane Narrowing

Although many commonly assume that improvements for pedestrians and bicyclists require wider roads or more right-of-way, the current roadway width or cross section is often adequate for the level of motor vehicle traffic. By re-striping travel lanes or reducing the number of travel lanes (often called a “road diet”), space can be made available to better accommodate pedestrians and bicyclists.

- **For sidewalks** consider the following example: A residential street is built to a 44' (or greater) standard. If the street is has a curb, an additional curb can be built over the existing surface, 6' (+/-) in from the existing curb, and a sidewalk can be placed between the two curbs. Some adjustments to drainage inlets will have to be made.

- **Narrow residential streets.** It is not uncommon for local streets to be as narrow as 28' with parking on both sides. These are called queuing streets, since two cars cannot pass side-by-side when cars are parked on both sides. These have been demonstrated to be as safe (or safer) as wider streets, and they provide sidewalks while still preserving the landscaping.
- **On collectors and arterials** where traffic volumes allow, consideration should be given to reducing travel lanes from four to three lanes (with a center turn lane), allowing space for bike lanes on both sides of the street. Less popular, but achievable in many areas, is the elimination of parking from at least one side of the street. Reducing travel lane widths to 11 feet or narrower (which may require a variance) especially on streets with four or more lanes, can allow room for bike lanes. Even if five feet can't be achieved on both sides, simply having a wider curb lane can significantly improve the cycling environment. Many U.S. cities (e.g., Boulder, Colorado and Portland, Oregon) have reduced lane widths on urban arterials to 10 feet in order to add space for bicyclists.

Roundabouts

Roundabouts can provide an innovative solution to problem intersections and benefit all road users when properly designed. Conflict points for pedestrians and bicyclists are greatly reduced, and crossing distances are also improved. Roundabouts need to be designed to move traffic at no more than 18 miles per hour through the intersection. Bike lanes can be part of a roundabout, but it is safer to encourage cyclists to take the full lane to avoid crossing conflicts. All pedestrian crossings need to be well-marked, with prominent signs reminding vehicle operators that pedestrians have the right of way. Recommended features include a landscaped center island, patterned concrete truck apron, and a splitter island at each approach, which deflects traffic to the right and serves as a refuge for pedestrians. Some of the best examples of effective roundabouts are located in Brown County, Wisconsin.

Shortcuts

Shortcuts are popular with bicyclists and pedestrians. When enough people discover a shortcut, they often make what is sometimes called a 'cow path' in a vegetated area. Planners look for these unofficial public paths (often through parks or schoolyards, across railroad tracks, or from dead-end streets) for opportunities to add sidewalks or trails. Providing more formal shortcuts is a proven way to encourage people to walk or bicycle. Sometimes right-of-way or easement needs to be negotiated. Because of short distances, shortcuts are not typically cost-prohibitive.

Signal Improvements for Pedestrians

Projects that result in shorter cycle lengths and/or longer walk intervals for pedestrians are encouraged. The conversion of push buttons to **Fixed-time Signals** (for an automatic walk phase) is an example of an eligible project under *Operational Improvements*. The funding of pedestrian pushbuttons will be considered in locations where there is currently no walk phase and pedestrian travel is intermittent. Quick response to the pushbutton should be programmed into the system and the pushbuttons need to be easily accessible to pedestrians in wheelchairs and those with visual disabilities.

A **Leading Pedestrian Interval (LPI)** gives pedestrians a walk signal before the motorists get a green light. This way, pedestrians are more visible to motorists, and motorists are more likely to yield to them. The advance pedestrian phase is especially recommended where there is a two-lane turning movement. A LPI needs to be accompanied by an audible signal (during the WALK phase) to accommodate the visually impaired.

An **Exclusive Pedestrian Phase** (sometimes called a "scramble") stops traffic in all directions and may be preferable to the LPI where there are high-volume turning movements by motor vehicles. Exclusive pedestrian timing has been shown to reduce pedestrian crashes by 50

percent in some downtown locations where pedestrian traffic is especially heavy. Since this treatment will result in longer delays for pedestrians unless vehicular phases are downgraded, applicants will need to specify how the wait between walk signals will not be lengthened.

Signs and Signage

All traffic control signs should conform to the Manual for Uniform Control Devices (MUTCD). Experimental signs will be considered if an applicant is willing to apply to MUTCD for experimental study status. **Distance/Destination signs** are an effective way to promote walking and biking and should be considered as part of any bikeway or walkway project. In Portland, Oregon, signs include estimated riding times to key destination points!

Traffic Calming

There are numerous traffic calming strategies, including changing the geometry of a street, installing diverters or medians, planting trees within the right of way, using creative graphics or markings on the roadway, locating development closer to the street, and encouraging multi-story building near the street to create the feeling of an “outdoor room.” The goal of traffic calming is to reduce vehicular speeds and make a corridor more pleasant and safe for pedestrians, bicyclists, and all road users.

Trail Crossings

There is considerable confusion among public officials and the public on the use of traffic control devices (including crosswalk markings) where multi-modal trails cross streets and highways. Because trails are public right-of-ways, and because bicyclists are defined as operators of vehicles, a crosswalk (whether marked or unmarked) exists wherever a trail intersects the roadway.

Bicyclists have the rights and duties of pedestrians when they enter a crosswalk, including the need to enter at a walking speed so their movements can be anticipated by roadway users. Any signage and markings on the roadway and trail way should conform to the Manual for Uniform Traffic Control Devices (MUTCD).

Underpasses

Underpasses are not preferred where suitable at-grade crossings are feasible. When underpasses are necessary, they should be designed and constructed in a way that allows maximum light to shine through, and they should be clearly visible from the street level. Many underpasses are underutilized due to concerns about personal safety.