

National Bicycle and Pedestrian Documentation Project:

DESCRIPTION

Prepared for:

**Institute of Transportation Engineers
Pedestrian & Bicycle Council**

Prepared by:

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Table of Contents

INTRODUCTION

The National Documentation Project (NDP) is an annual bicycle and pedestrian count and survey effort that is sponsored by the Institute of Transportation Engineers Pedestrian and Bicycle Council. This report provides guidance to local agencies and organizations conducting bicycle and pedestrian counts and surveys as part of the National Bicycle & Pedestrian Documentation Program being sponsored by the Institute of Transportation Engineers (ITE) Pedestrian and Bicycle Council.

The report provides an overview of the National Documentation program, goals and objectives of the program, and instructions on how to become involved. The report also suggests specific research topics that could be initiated through this data collection effort.

Alta Planning + Design, a national bicycle and pedestrian planning firm, initiated this effort through the ITE Pedestrian & Bicycle Council in 2003, when it was identified as a priority for the Council and will continue to lead this effort along with the ITE Pedestrian and Bicycle Council. Alta has been responsible for the development of the draft methodology and materials.

OBJECTIVES

Working with universities, organizations and agencies around the country, the National Documentation Project proposes the following objectives:

- Establish a consistent national bicycle and pedestrian count and survey methodology, building on the ‘best practices’ from around the country, and publicize the availability of this free material for use by agencies and organizations on-line.
- Establish a national database of bicycle and pedestrian count information generated by these consistent methods and practices.
- Use the count and survey information to begin analysis on the correlations between various factors and bicycle and pedestrian activity. These factors may range from land use to demographics to type of new facility.

BACKGROUND

One of the greatest challenges facing the bicycle and pedestrian field is the lack of documentation on usage and demand. Without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in these modes, especially when compared to the other transportation modes such as the private automobile.

The Guidebook on Methods to Estimate Non-Motorized Travel (U.S. Department of Transportation, Federal Highway Administration, Publication N. FHWA-RD-165, July 1999) states that “further development of modeling techniques and data sources are needed to better integrate bicycle and pedestrian travel into mainstream transportation models and planning activities (Vol. 1, Section 4).” In addition, the

Bureau of Transportation Statistics notes that, “While a few cities and metropolitan planning organizations routinely conduct pedestrian and bicycle counts, most collect them only sporadically for specific studies or do not collect them at all.”¹

Modes such as the private automobile have established documentation sources such as the Institute of Transportation Engineers’ (ITE) *Trip Generation*, which is used nationally to establish roadway demand and distribution and to justify expenditures on and responsibility for roadway improvements. Existing sources such as the U.S. Census Journey-to-Work and the National Household Travel Survey either cover a limited population sample (employed adults) or do not provide all of the needed information, with the result that transportation professionals have a hard time (a) justifying new bicycle/pedestrian investments, (2) undercount bicycling and walking in regional modeling efforts, and (3) undervalue the transportation, economic, safety, health, and other benefits.

Meanwhile numerous of agencies and organizations around the country are counting and surveying bicycles and pedestrians every year. Unfortunately with no consistent counting or surveying methodology, this data is of limited value and cannot be used to establish any national standard or help establish linkages between land use, density, type of facility, demographic, or other factors and usage levels.

METHODOLOGY

The National Documentation program will develop a consistent bicycle and pedestrian count methodology with input from the ITE Pedestrian and Bicycle Council, interested professionals, and groups such as the Transportation Research Board, American Association of State Highway and Transportation Officials, the Association of Pedestrian and Bicycle Professionals, and other groups.

Alta has already collected many count methodologies and surveys from around the country. A new study on bicycle count methodologies (The Pedestrian and Bicycle data Collection case Study Report) being completed by the Toole Design Group, LLC, for the FHWA and PBIC provides insights into effective count methods. This report is scheduled to be released in late 2004.

Another report entitled ‘National Survey of Pedestrian & Bicyclist Attitudes and Behaviors’ produced by the U.S. Department of Transportation Bureau of Transportation Statistics provides excellent background information on non-motorized travel patterns that can be used for comparison purposes with local count and survey results.

There have been numerous other research projects focused on estimating demand for bicycle and pedestrian facilities, which would benefit from a consistent and comprehensive national database. This includes research efforts by the Texas Transportation Institute, Pedestrian and Bicycle Information Center, and the Transportation Research Board.

¹ U.S. DOT BTS, 2000

Other sources such as Bike Count, Travel Diary, and Intercept Surveys have been developed as part of the Bicycle Friendly Program developed by the League of American Bicyclists (www.bicyclefriendlycommunity.org) along with numerous other technical resources. The Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area published a report entitled Handbook for Bicyclist and Pedestrian Counts in 2003 that is an excellent resource.

Based on this research, a proposed bicycle and pedestrian count and survey forms and methodology have been developed. Participating agencies and organizations will use the forms and methodology to conduct annual counts and surveys during the official National Documentation Days in the second week of September. Supplementary counts and surveys can be conducted during January, May and July to provide seasonal data. Samples of Data Entry sheets are shown below:

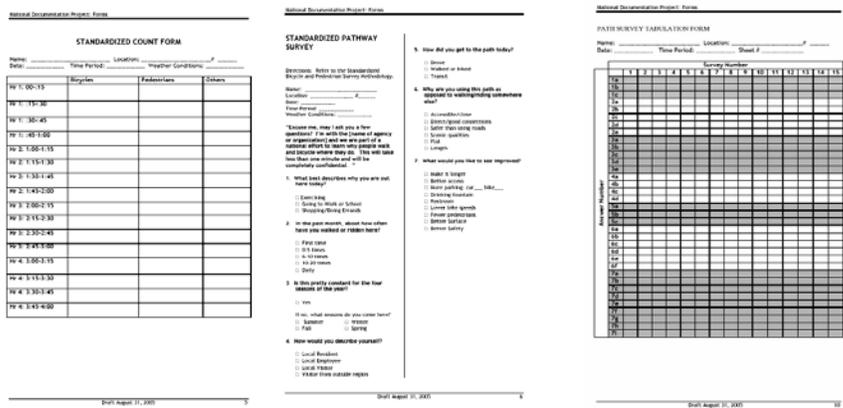


Table 1: Proposed Dates for the National Documentation Project

Official	Optional	Optional	Optional
Sept. 10-17, 2005	January 10-12, 2006	May 9-11, 2006	July 4-6, 2006
Sept. 9-16, 2006	January 9-11, 2007	May 8-10, 2007	July 3-5, 2006
Sept. 8-15, 2006	January 8-10, 2008	May 6-8, 2008	July 1-3, 2008

Instructions for the count and survey and count and survey forms are in the “National Documentation Project Count and Survey Instructions and Forms” document, which is downloadable as a PDF from the Alta Planning + Design Website: www.altaplanning.com.

DATA ACCESS AND ANALYSIS

Upon completion of the survey and counts, participating agencies may submit their data to the National Documentation Project for inclusion in a national database. All agencies and organizations that participate in this project will have free and unlimited access to the database. A Summary Report for each participating entity and all research institutions will also be printed automatically from the database. Approved research institutions will also be provided direct access to the database as

part of research efforts in this field. Alta will publish a Summary Report of Trends annually that will be made available to the general public.

The specific types of trends and analysis that Alta intends to study include:

1. Volumes by user group
2. Comparison of volumes to background data
3. Comparison of volumes to location attributes
4. Factors that influence usage
5. Comparison of usage figures to survey results
6. Understanding of trip purpose
7. Understanding of trip frequency
8. Understanding of trip origin
9. Understanding why people use specific facilities
10. Types of enhancements people would like to see

Ultimately, Alta intends to develop and refine generation rates and demand projection tools that can be used in the same manner as similar tools for other modes that can yield information on:

1. **Demand Projections.** What is the projected demand for a specific type of bikeway or pedestrian facility in a variety of settings? This will help planners and designers select appropriate facility types, evaluate alternate alignments, size facilities, and justify the facilities in grant applications.
2. **Trip Generation and Distribution.** What is the existing and projected mode split of non-motorized users for a variety of land uses? This can help modelers and planners develop more accurate traffic models, estimate the impact/benefit of bikeways/pedestrian facilities, estimate reduce vehicle miles and vehicle trips, and develop more comprehensive ordinances and requirements for developers.
3. **Overall Trends.** What is the overall trend in walking and bicycling in the United States and Canada, by demographic group, land use, density, geography, climate, and a multitude of other factors.

The main benefits of the research will include:

1. Planners, agency staff, and others will be able to quickly access the latest figures and trends in usage and demand for a variety of types of facilities in a variety of settings. This will be useful for developing estimates of usage for proposed improvements.
2. Researchers and others will be able to use the data to establish correlations between usage and a variety of land use and demographic data available in the U.S. and Canada. Modelers will be able to base their projections on actual empirical data.

3. National trends in bicycle and pedestrian activity could be a major annual benchmark in evaluating the success of investments in facilities and programs, and in national trends overall in terms of modal selection and activity.

Research findings from this effort will be made available free to agencies and the public including:

1. An annual 'Bicycle and Pedestrian Demand' summary report of trends and findings;
2. Access to a data base for researchers;
3. On-line reporting mechanism for agencies and groups; and
4. Recommended survey and count methods.

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ABOUT THE AUTHORS

Michael Jones is the founder of Alta Planning + Design, one of the leading alternative transportation planning and design firms in the United States. Mr. Jones has managed over 120 bicycle, pedestrian, trail, and school commute studies. Mr. Jones has conducted technical research projects for the Federal Highway Administration, Institute of Transportation Engineers, and other organizations. He has a Masters degree in City Planning. Presentation and research citations for Michael Jones include:

Safe Routes to Schools, VeloCity, Glasgow, 2001
Rails with Trails: Best Practices, AASHTO, Indianapolis, 2000
Bicycle Demand Modeling, ProBike, Philadelphia, 2000
Building a Better Bikeway, ITE International Conference, Toronto, 1998
School Safety Studies, APA California Conference, Stockton
Trails-with-Rails, First International Trail & Greenway Conference, San Diego, 1998
Managing Visitors, APA California Conference, Monterey, 1997
Trail Crossing Design, ProBike Conference, Portland, Maine, 1996
Bikeway Implementation, ITE Western Conference, Denver, 1995
Pathways in Urban Areas, Rails-to-Trails Conference, Concord, California, 1994
Funding Bikeway Projects, American Society of Landscape Architects Conference, 1994
Bikeway Planning Today, Planning Magazine, 1993
Bikeway and Pedestrian Planning, APA California Conference, Santa Barbara, 1993
Implementing Bike Lanes on Older Streets, ITE Western Conference, 1994
Guide to ISTEPA Funding, NRPA Journal, 1994

Stuart Goldsmith is one of the leading research experts in the United States in the non-motorized transportation. Stuart worked with the Seattle Transportation Bicycle and Pedestrian Program from July, 1992 to November, 1999. Stuart led research for the Federal Highway Administration from September, 1991 to May, 1992, and authored Case Study #1, entitled "Reasons Why Bicycling and Walking Are and Are Not Being Used More Extensively as Travel Modes," for the FHWA's *National Bicycling and Walking Study*. Stuart has a Masters of Public Administration, University of Washington, Seattle, March, 1992, and a Bachelor of Arts, University of Wisconsin, Madison, 1979.

Todd Litman is founder and executive director of the Victoria Transport Policy Institute, an independent research organization dedicated to developing innovative solutions to transport problems. His work helps expand the range of impacts and options considered in transportation decision-making, improve evaluation techniques, and make specialized technical concepts accessible to a larger audience. His research is used worldwide in transport planning and policy analysis. Mr. Litman is author of the *Online TDM Encyclopedia*, a comprehensive Internet resource for identifying and evaluating mobility management strategies. He authored *Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications*, one of the most comprehensive studies of transport impacts. Todd has written or co-written several guides and technical manuals dealing with transportation and land use planning issues. Todd is active in several professional organizations, including the Institute of

Transportation Engineers, the Transportation Research Board (a section of U.S. National Academy of Sciences) and the Centre for Sustainable Transportation.

The ITE Pedestrian & Bicycle Council has adopted the National Bicycle and Pedestrian Documentation Program as a research topic.