CHAPTER 16, Pedestrian and Bicycle Facilities; TCRP REPORT 95, Traveler Response to Transportation System Changes; is now in the TRB publication process. Release is estimated for the second half of 2012 (check www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=1034 for status). Chapter 16 may be the most comprehensive effort to date to consolidate what is known about pedestrian and bicycle facility, policy, and promotion impacts on choice of walking and cycling as a transportation mode and means of health-supporting exercise. (An outline follows.) While not “light reading” in any sense of the word, with 540 pages and sources from Aarts to Zwerts, it should provide a strong basis for informed advice and follow-on information dissemination by both the transportation and public health professional communities. (Photographs to illustrate chapter topics including use of the facility types covered are solicited — please email recommended photos or links to Dick Pratt at rhpratt@his.com with permission for TRB use.)

OVERVIEW AND SUMMARY
Objectives of Pedestrian and Bicycle Improvements
Types of Pedestrian and Bicycle Improvements/Programs
Analytical Considerations
National and Regional NMT Data
Facility Counts and Research Surveys
Trip Purpose Versus Motivation
NMT Modeling and Research Procedures
Traveler Response Summary
RESPONSE BY TYPE OF NMT STRATEGY
Sidewalks and Along-Street Walking
Pedestrian Volumes Overview
Individual Sidewalk Provision Examples
Sidewalk Indirectness Effects
Sidewalk Coverage and Traffic Conditions
Residential and Mixed-Use Traffic Calming
Sidewalks and Traffic Calming for Business Districts
Sidewalk Use by Bicyclists
Street Crossings
Crosswalks and Traffic Controls
Pedestrian and Bicycle Grade Separations
Pedestrian Zones, Malls, and Skywalks
Pedestrian Zones and Malls
Pedestrian Skywalks
Bicycle Lanes and Routes
Popularity, Preferences, and Route Choice
Bicycle Lane Implementation
Bicycle Lane System Coverage
Bicycle Lane Variations, Bicycle Boulevards, and Other Signed Bicycle Routes
Shared Use, Off-Road Paths and Trails
Preferences, Route Choice, and Walk/Bikesheds
Shared Use Path Implementation
Shared Use Path System Coverage
Pedestrian/Bicycle Systems and Interconnections
Overall Systems and System Expansions
River Bridges and Other Linkages
Pedestrian/Bicycle System Linkages with Transit
Non-Motorized Access to Transit
Transit Oriented Development
Bicycles on Transit Vehciles
Point-of-Destination Facilities
Bicycle Parking and Changing Facilities
Other Destination Amenities
Bikesharing
Pedestrian/Bicycle Friendly Neighborhoods
Density
Diversity
Design
Other “D’s”
Overall Neighborhood Environment
The Built Environment and Child Walking and Bicycling
Walk Elasticities for Land Use and Site Design Parameters
Non-Motorized Transportation Policies and Programs
New World Program Examples
European Programs and Comparisons
Schoolchild-Focused Programs
Pedestrian/Bicycle Promotion and Information
Transportation Mode Shift Promotions
Individualized Marketing
Physical Activity Promotions and Interventions
UNDERLYING TRAVELER RESPONSE FACTORS
Behavioral Paradigms
Derived Versus Direct-Benefit Demand
A Combined Mode Choice Decision Paradigm
Differential Sensitivities Among Different Choice Categories

The Travel Choice Making of and for Children

Environmental Factors
- Natural Environment
- System Environment
- Surroundings Environment

Trip Factors
- Walk Trip Distance, Time, and Route Characteristics
- Bicycle Trip Distance, Time, and Route Characteristics
- Travel Cost
- Trip Purpose
- Schoolchild Trip Factors

User Factors
- Multidimensional User Characteristics
- Gender
- Age
- Income
- Automobile Ownership
- Education
- Ethnicity

Other Factors and Factor Combinations
- Security and Safety
- University Affiliation
- Factor Combinations Involving Trip Purpose
- Attitudes and Modal Biases

Choice of Neighborhood / Self-Selection
- Self-Selection Investigations
- Neighborhood Preference Matches and Mismatches
- Working with Self-Selection

RELATED INFORMATION AND IMPACTS

Extent of Walking and Bicycling
- Extent of Walking
- Extent of Bicycling

Characteristics of Walking and Cycling
- Overall
  - Trip Distance and Duration
  - Trip Purposes
  - User Characteristics

Facility Usage and User Characteristics
- Frequency of Facility Usage by Facility Type
- Sidewalks and Streets in Suburbs and City Neighborhoods
- Sidewalks and Other Provisions in Major Central Business Districts
- On-Street Bicycle Facilities
- Off-Road Shared Use Paths

Travel Behavior Shifts
- Prior or Alternative Modes of New Facility Users
- Mode Shares “Before and After”

Time to Establish Facility Use
- Motorized Transportation and NMT Experience Compared
- Melbourne St. Kilda Road Bike Lanes
- Seattle Burke-Gilman/Sammamish River Trails

Safety Information and Comparisons
- Pedestrian and Bicyclist Safety Highlights
- Foreign Versus U.S. Safety Comparisons
- Facility Type Safety Comparisons
- Other Traffic Safety Issues and Findings

Public Health Issues and Relationships
- Baseline Walking and Bicycling Activity
- Health Benefits for Adults of Enhanced NMT Systems and Policies
- Health Benefits for Children of Enhanced NMT Systems and Policies
- Tradeoffs Between Health Benefits and Crash/Pollution Disbenefits
- Adult and Child Public Health Relationships
- Summary

Traffic, Energy, and Environmental Relationships
- Driving Avoidance Estimates
- Facility and Project Impacts
- Program Impact Model Findings

Economic and Equity Impacts
- Societal Economic Impacts
- Land Value and Commerce Impacts
- Equity Issues

ADDITIONAL RESOURCES

CASE STUDIES
- Special Mini-Studies in Montgomery County, Maryland
- Pedestrian Activity Effects of Neighborhood Site Design – Seattle
- 50 Years of Downtown NMT Facility Provisions – Minneapolis
- Bicycle Lanes in the Downtown Area – Toronto
- Anderson Road Bicycle Lanes – Davis, California
- Six Urban, Suburban, and Semi-Rural Trails – Indiana Trails Study
- Variations on Individualized Marketing in the North West United States

REFERENCES