Bicycling, Walking, and Trails: Innovations in Transportation

Fall, 2011

State University of New York at Albany
SECTION 1.

Introduction
This course will present an overview of mobility systems both in the United States and internationally with an emphasis on the growing role that walking, bicycling and trails can play in global and local sustainable development and quality of life.
“Someday we’ll look back on this and it will all seem funny”
Take this Personally

STEP IT UP CONGRESS
CUT CARBON 80% BY 2050!
Act Locally...

- New County Water Line
- Trail to Middle School
- Path around Campus
- Pedestrian Fatalities
- Road Diet Plan for Broadway
Key Questions

- How Many of us walked to school as kids?
- How do you get across campus?
- Who knows somebody hit by a car?
- Who lives in a place where you have to walk more than 10 minutes to get something to eat?
- Who drives an SUV to the gym?
- Do you take the elevator to use the stair master?
- What is the fastest growing sport in the US?
- Is walking or biking socially acceptable?
The End of Nature?
The Environment
The Transportation "Food Pyramid"
The Road to Nowhere
Can Transportation Get Us Back on our Feet?
SECTION 2.

A Global Perspective for Local Action
Anything is Possible

Autobahn shuts down to host giant "no-cars allowed" party

Autobahn was 'car-less' for hours on Sunday as more than 3 million people celebrated a cultural event on the famous highway.

People walk and cycle along the Autobahn A40 near Essen, western Germany on July 18, 2010, where 20,000 picnic tables were lined up end-to-end after it was cleared of its usual traffic. The 40-mile-long stretch of one of Europe's busiest motorways, between the cities of Dortmund and Duisburg, became a stream of pedestrians and cyclists.

(NEWSCOM)
By AP
posted July 18, 2010 at 2:08 pm EDT

Berlin —
Germany's autobahns are renowned for average speeds well in excess of 80 miles (130 kilometers) an hour. But the average dropped near zero Sunday as tens of thousands of people sat at a 37-mile table for a cultural celebration titled, appropriately enough, "Still Life."

Cars were strictly verboten.
Mayors Beat World Leaders Promoting Cycle Paths

By Mark Scott and Jeremy van Leno - Jun 4, 2010

Los Angeles: city of freeways, smog, and -- bike lanes?

That’s where Mayor Antonio Villaraigosa wants to take his town. In one of the less likely transformations in the global effort to cut carbon output, Los Angeles plans to spend $230 million on 1,700 miles of bicycle paths, Bloomberg Businessweek reports in its June 7 issue.

Most of the program will be completed by 2015, and includes changing rooms, showers, and bike storage areas operated by the city and private partners, the city’s Web site says. It comes on top of subsidies for installing solar panels and incentives for planting trees and switching to electric vehicles.

“We have to make a change,” says Michelle Mowery, senior coordinator for the city’s bike program. “We can’t fit any more cars in.”

From the freeways of Los Angeles to the canals of Amsterdam, cities are taking the lead in the fight to reduce carbon-dioxide emissions. As world leaders squabble over how to cut greenhouse gases, city hall is becoming the best hope for reducing heat-trapping emissions, Peter Lacy, a sustainability consultant at Accenture, said in an interview.

Given their smaller jurisdictions, local officials can green-light eco-projects faster than national programs can be started.

‘Right Now’

“We’re not going to wait for national politicians, we’re acting right now,” Toronto Mayor David Miller said in an interview. His city plans to invest more than $1 billion in public transport and eco-friendly air-conditioning systems for buildings by 2017.

The efforts could have a profound impact. Cities are home to more than half the world’s population and pump out more than two-thirds of CO2 globally. That may grow as people flock to megacities in the developing world, Angel Gurría, the secretary general of the Organization for Economic Cooperation and Development, said in Paris last month.

What's Wrong with this Picture?
The Developing World
Developing the World
Succumbing at last to the worldwide love affair with the car, China - of all places - is officially turning up its nose at the humble bicycle. Its biggest city, Shanghai, plans to ban bikes from all major roads next year to ease congestion, state-run newspapers said on Tuesday.
The Price of Gas v. the Cost of Gas

- It’s only $2.65 / gallon...
- Who needs conservation? We’ve got the Marines!
- Energy Dependence v. Freedom
- Support for Terrorists
- Physical Inactivity
- Air Pollution
City + Center = Life
Gaviotas and Bogota
Better Roads - 1890

BICYCLE CLUB AT Ausable Chasm, 1890s. THE FROGMAN'S SIGN READS “WE NEED GOOD ROADS – WE CAN'T SWIM ALL THE TIME,” A REFERENCE TO THE “GOOD ROADS” MOVEMENT LED BY THE LEAGUE OF AMERICAN WHEELMEN, A NATIONWIDE CYCLING GROUP.

PHOTOGRAPH BY J. W. BALDWIN. COURTESY OF THE AUSABLE CHASM MUSEUM, BLUE MOUNTAIN LAKE.
Transportation Re-Defined

Overview of Walking, Bicycling, Transit, and Car Mode Share

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>% of Trips to Work (1)</th>
<th>% of All Trips (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50 States</td>
<td>Major U.S. Cities</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>2.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0.5%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Bus</td>
<td>4.8%</td>
<td>17.3%</td>
</tr>
<tr>
<td>Car</td>
<td>91.9%</td>
<td>77.1%</td>
</tr>
</tbody>
</table>

Sources: (1) ACS 2007 (2) NHTS 2001 Notes: (3) This includes trips by private car and "other" means that are not public transportation, bicycling, or walking. (4) These values are estimated using metropolitan areas with populations over 1 million and do not reflect the study area cities of this report exactly.
Moving People and Goods
Sustainable Technology

The 'Windway'

Human powered vehicle street, HPV's (bicycles, rollerbladers, skateboarders, wheelchairs and others.)

No space, no alternatives
We need safe space for alternatives to grow

Broadway Corridor
Global Culture
SECTION 3. The American Experience

ISTEA and TEA-21

The Transportation Planning Process

Jeff Olson, R.A.
U.S.A.
“America the Beautiful”
The National Trend

Prevalence of Obesity* among U.S. Adults
BRFSS, 1991
(*Approximately 30 pounds overweight)

Obesity Trends* Among U.S. Adults
(*BMI ≥30, or ~ 30 lbs overweight for 5’4" woman)
BRFSS, 2001

Jeff Olson, R.A.
Fast Food Nation
Recreation
Fitness

Overweight and Obesity Among NYS Adults (2001 BRFSS)

56% of NY Adults are Overweight or Obese

- Males: 43%
- Females: 49%
- Total: 56%

BMI 30
BMI 25-30
The Colorado Connection

Denver’s Greenway System

- Mayor’s Greenway Initiative
- Urban Redevelopment / Brownfields Infill
- New REI, Stadium, Amusement Park
- Platte River re-creation (10,000 Trees)
- High Quality Construction
- Comprehensive Management Program
Phoenix Growth

Population Distribution
Since 1970, there have been more people in U.S. suburbs than in central cities or rural areas.

The Expanding Metropolis
Phoenix has sprawled almost tenfold since 1950.

1994
Area of city: 449.8 sq. mi.
Population: 1,052,000

1970
Area of city: 247.9 sq. mi.
Population: 584,000

1950
Area of city: 17.1 sq. mi.
Population: 107,000

Source: Bureau of the Census
Source: City of Phoenix Planning Dept.
ISTEA, TEA-21, SAFETEA...
“Show me the Money”
ISTEA

The National Bicycling and Walking Study
Transportation Choices for a Changing America

BICYCLE AND PEDESTRIAN PROVISIONS
under the
Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991

Moving America
for people, technology, environment

Jeff Olson, R.A.
SAFETEA:
The Safe, Accountable, Flexible and Efficient Transportation Equity Act of 2005

- Passed in 2005 after multiple extensions and delays
- New Safe Routes to Schools Program
- Enhancements, CMAQ strengthened
- No “Complete Streets”
- More “Earmarks”
The Highways v. Transit Problem

- What facility does a bus drive on?
- Is a person who walks to the transit stop a pedestrian or a transit rider?
- How should we fund on-street bike lanes that lead to a transit station that has buses with bike racks?
- If we’re spending Highway funding on bike/ped facilities, why aren’t we part of the “highway lobby?”
THE PLANNING PROCESS
Planning Model

The Four 'Layers': Greenways, On-Street Improvements, Pedestrian Facilities, Transit Linkages

The 'Key Triangle'

For Bicycle and Pedestrian Planning

J SO 8.94

Jeff Olson, R.A.
The Third Mode

TOTAL PERSONAL TRIPS BY TRAVEL MODE
WITHIN NYMTC AREA*

PERSONAL VEHICLES (63.81%)

TRANSIT (14.80%)

WALK/BIKE (20.72%)

AIRPLANE (0.09%)
AMTRAK (0.24%)

OTHER (0.35%)

Source: Planning Data Analysis Group
Data Source: Nationwide Personal Transportation Survey
August 1995
* Residence Based
Physical Inactivity

*Regular Vigorous — 20 minutes 3 times per week of vigorous intensity
†Regular Sustained — 30 minutes 5 times per week of any intensity
Safety Data
Crash Typing

Motorist failed to yield right-of-way at a junction (21.7 percent of all crashes).

Jeff Olson, R.A.
“Hidden” Killer

Pedestrian Deaths:
New York State's "Hidden Killer"
An Examination with Legislative Recommendations

A Report to the Legislature by the Legislative Commission on Critical Transportation Choices
Senator Norman J. Levy, Chairman

February 1990
L.O.S. Analytical Approach

\[
BLOS = a_1 \ln(PCEVol15/L) + a_2 \ln(S(1 + HV)3) + a_3 \ln(COM15NCA) + a_4 (2/PR10)^2 - a_3 We2 - c
\]
Florida DOT’s new multimodal model integrating walking, bicycling, transit, car and other modes of travel is available online at www.dot.state.fl.us
10 Planning Solutions

1. Corner Stores
2. Sidewalks & Crossings
3. Bike Parking Ordinance
4. In Law Apartments
5. Access Management
6. Streamlined Permits
7. Road Diets
8. Telecommuting
9. Alternate Work Hours
10. Mixed Use
SECTION 4. 
The Four Layers

Greenways
On-Street Bike Improvements
Pedestrian Facilities
and
Intermodal Connections.
1. GREENWAYS
Toronto
Manhattan’s West Side - 1994
San Francisco

Jeff Olson, R.A.
KATY Trail
Missouri, USA
Acadia Trails Forever
Trail Design

Figure 3.84: Beds of ballast in asphalt trail preparation.

Figure 3.85: Typical road/trail intersection.
Bridges
A Green Infrastructure

NATIONAL CYCLE NETWORKS IN EUROPE

The Danish Government opened 2,000 kilometres of new national cycle route in 1993, linked with extensive local traffic calming measures. A Danish cyclist is now ten times safer than their counterpart in Britain. Cycling now accounts for nearly 20% of all journeys there - compared to only 2% in Britain.

Holland is well-known for its thousands of miles of national and local cycle network. 60% of Dutch children cycle to school - compared to only 2% in Britain.

Extensive networks of named national routes exist and are being greatly extended in both Germany and Switzerland. Despite higher levels of car ownership than Britain, all these countries are beginning to provide a real choice for those who choose to cycle.

The results are less congestion, less pollution, better health and more attractive town centres for everyone.

EXISTING NATIONAL CYCLE ROUTES

NATIONAL CYCLE ROUTES PROPOSED BY SUSTRAINS

DENMARK
NETHERLANDS
GERMANY
New Urban Life
2. ON ‐ STREET BIKE IMPROVEMENTS
It’s the LAW!

The Definition of Traffic

New York State Vehicle and Traffic Law

Section 152. Traffic Pedestrians...vehicles, bicycles and other conveyances either singly or together while using any highway for the purposes of travel.
Typical Street Sections

BICYCLE ROUTE  INTEGRATED WITH TRAFFIC

BICYCLE LANE  DISTINCT BIKE LANE
  bike only lane
designated by painted line

BICYCLE PATH  SEPARATED BIKE PATH

BICYCLE AND PEDESTRIAN FACILITIES - TYPICAL SECTIONS
(source: Ottawa, Ontario Bicycle and Pedestrian Program)
Urban Bike Lane
Intersections for Bicyclists

Figure 103: Signalized intersection sensitive to bicycles

1. Loop detectors in bike lane on side street
2. Loop detectors in bike lane prolongs green phase
3. Stencil placed to indicate most sensitive area of loop
4. Push-buttons placed close to the roadway

1995 Oregon Bicycle and Pedestrian Plan
Advanced Stop Line
Paved shoulders
Bike Parking
Route Signs
Dutch Stairway

Figure 94: Stairway provides easy access for bicycles and pedestrians.
3. PEDESTRIAN FACILITIES
The Safety Standard

The guilty party in traffic accidents?
Liability
Walkable Communities

Twelve Steps For an Effective Program

Pedestrian/Bicycle Program
June 1993

Phoenix Department of Transportation
State Safety Office

Guidelines for Walkable Communities
(Not a Standard)
Test Vehicles
Information
Keep It Simple
4. INTERMODAL CONNECTIONS
Bikes on Buses
Bikes on CARS
Multimodal Transport

Bicycle Safety Tips for Subway Customers

Effective June 19 thru October 29, 1994

Harlem Line

MTA Metro-North Railroad

Dover Plains
Harlem Valley-Westdale
Appalachian Trail
Pawling
Patterson
Brewster North
Brewster
Croton Falls
Purdy’s
Golden’s Bridge
Katona
Bedford Hills
Mt. Kisco
Chappaqua
Pleasantville
Hawthorne
Mt. Pleasant
Valhalla
North White Plains
White Plains
Hartsdale
Scarsdale
Crestwood
Tuckahoe
Bronxville
Flaxwood
Mount Vernon West
Wakefield
Woodlawn
Williams Bridge
Botanical Garden
Fordham
Tremont
Metsrose
125th Street
Grand Central Terminal
New York City

Jeff Olson, R.A.
Toronto – Mixed Use Lane
Intermodal Center: Delft
It’s Cheap, It’s Easy, It Works

LOW COST WAYS TO MAKE YOUR FACILITY SAFE AND ACCESSIBLE FOR BICYCLISTS & PEDESTRIANS

- BIKE PARKING RACKS
- BIKE ROUTE SIGNAGE
- HIGH VISIBILITY CROSSWALKS
- BIKE & WALKING MAPS
- BIKE / PED SAFETY RODEO
- 'SHARE THE ROAD' SIGNS
- STRIPED BIKE LANES
- ROUTINE MAINTENANCE
- POLICE ON BIKES
- INTEGRATE IN CAPITAL PROJECTS
Section 5.

TRAFFIC CALMING
Traffic Calming
Our Customers
Complete Streets

Let's Complete America's Streets!

THE LATEST

KY Senator Introduces Complete Streets Bill
Read the proposed legislation and follow the progress of this bill.

Complete Streets on Capitol Hill
A standing-room only briefing on the link between the built environment and public health, including complete streets.

Congress shows support for complete streets
The energy bill that was recently signed by President Bush includes a "Sense of Congress" provision.

Get the latest Complete Streets News!

Overview article from On Common Ground Magazine

Elements of Complete Streets Policies

Frequently Asked Questions

Thunderhead Alliance's Complete Streets Page

Groups Working for Complete Streets

Complete Streets brochure pdf or html

Join the Coalition!
Safe Routes to Schools

Creators of the National Model Program

Do you want to start a Safe Routes to Schools program in your community?

The MCBC program offers training and technical assistance to assist you in developing a comprehensive program that will fit the needs of your community.

Safe Routes to Schools is a popular program spreading across Canada and the U.S. designed to decrease traffic and pollution and increase the health of children and the community. The program promotes walking and biking to school through education and incentives that show how much fun it can be. The program also addresses the safety concerns of parents by encouraging greater enforcement of traffic laws, educating the public, and exploring ways to create safer streets.

Support the MCBC, the developers of the Safe Routes to Schools Marin program, by clicking here.
Speed Kills

Pedestrians' chances of death if hit by a motor vehicle

Source: Killing Speed and Saving Lives, UK Department of Transportation.
Arterial Streets

Existing Arterial Through Hamlet
- 52' Width Discourages Pedestrian Crossing
- 5-Lane Wide Appearance Promotes Speeding

Pedestrian Friendly Main Street
- Crosswalk Shortened with Flared Sidewalks
- Street Trees and On-Street Parking serve as Buffer Zone between Sidewalk and Traffic
- Median Acts as Pedestrian Refuge Island
- 2-Lane Boulevard Slows Traffic in Hamlet
Roundabouts

Figure 112: Modern urban roundabout
Woonerf

Figure 1. A Model “Woonerf”
Boulevard: Den Haag
Integrated Design: Complete Streets
Las Vegas Strip
Intersection Problem
Intersection Solution
Section 6.

RE: DEVELOPING SUBURBIA
A Cartoon World
The Suburban Strip
Toys Are U.S.
Suburban Streets
Cars on Vacation
New Suburbanism

Discouraged: Winding streets and cul-de-sacs exacerbate traffic.

Preferred: Streets converge on transit and commercial center.

Source: "The Next American Metropolis," by Peter Calthorpe

Jeff Olson, R.A.
Infill on the Strip
Section 7.
Main Streets
Miracle on 34th St.
Main Street - USA
Main Street – The Netherlands
Economic Development
The Art of Public Places
The “Main Street” Way of Life

“...The community is committed to maintaining this unique harmony through wise long term planning and by pursuing development that is environmentally and economically sustainable...”

Jeff Olson, R.A.
Street Crossings
The Corning Plan

- Centennial Square involves implementation of the approved plans for streetscape and landscape improvements around the old Centennial Clocktower. The new square will effectively link Market Street with the parking garage. Centennial Bridge, the Corning Glass Corporate Building, and the proposed Ionnew Park.

- Carfield Park Residential proposes conversion of a portion of Carfield Park to new luxury townhouse and condominium residential units and provides an opportunity for creating new housing for the adjacent area.

- Ionnew Park involves the conversion of the existing 2.8-acre parking lot into a major new urban park. This park will provide a beautifully landscaped focal point in the heart of Ionnew Corning, and space for outdoor entertainment, activities, and public functions.
Corning Square
Chicago O’Hare
SECTION 8.

TOOLS OF THE TRADE
IMPORTANT RESOURCES

The National Bicycling and Walking Study: Transportation Choices for a Changing America,
STATES DEPARTMENT OF TRANSPORTATION (USDOT) (1993)

Design and Safety of Pedestrian Facilities,
INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) (1998)

Guide(s) for the Development of Bicycle Facilities and Pedestrian Facilities,


The Oregon State Bicycle and Pedestrian Plan: An Element of the Oregon Transportation Plan,
OREGON STATE DEPARTMENT OF TRANSPORTATION (1995)

The Dutch Bicycle Master Plan: Description and Evaluation in an Historical Context,
MINISTRY OF TRANSPORT, PUBLIC WORKS and WATER MANAGEMENT, The Netherlands, 1999

Improving Conditions for Bicycling and Walking: A Best Practices Report,
THE ASSOCIATION OF BICYCLE AND PEDESTRIAN PROFESSIONALS, 1998  www.apbp.org
AASHTO Guide

AASHTO Design Publications

The following AASHTO publications are developed and/or updated by the Technical Committees of the Subcommittee on Design. These publications may be purchased at the AASHTO Online Bookstore.

- Design Standards - Interstate System, A Policy on, 2005
- Geometric Design for Highways and Streets (Green Book), A Policy on, 2004
- Geometric Design of Very Low-Volume Local Roads (ADT < 400), Guidelines for, 2001
- High Occupancy Vehicle Facilities, Guide for, 2004
- Highway Drainage Guidelines, 2007
- Model Drainage Manual, 2009
- Park-and-Ride Facilities, Guide for, 2004
- Pavement Management Guide, 2000
- Pavement Structures, Supplement to the Guide for Design of, 1996
- Protective Screening of Overpass Structures, Guide for, 1999
- Refuse Areas on Major Arterials and Freeways, Guide for Development of, 2001
- Roadway Lighting Design Guide, 2005
- Traffic Noise, Guide on Evaluation and Abatement of, 1993
- Transportation Landscape and Environmental Design, Guide for, 1991
- Utilities Within Freeway Right-Of-Way, A Policy on the Accommodation of, 2005
- Utilities Within Highway Right-of-Way, Guide for Accommodating, 2005
Chapter 9A. General

Section 9A.01 Requirements for Bicyclist Traffic Control Devices

Support:
General information and definitions concerning traffic control devices are found in Part 1.

Section 9A.02 Scope

Support:
Part 9 covers signs, pavement markings, and highway traffic signals specifically related to bicycle operation on both roadways and shared-use paths.

Guidance:
Parts 1, 2, 3, and 4 should be reviewed for general provisions, signs, pavement markings, and signals.

Standard:
None of the bikeway designations in this Manual shall be construed to preclude permitted bicycle travel on roadways or portions of roadways that do not have bikeway designations.

Section 9A.03 Definitions Relating to Bicycles

Standard:
The following terms shall be defined as follows when used in Part 9:

1. Bicycle Facilities—a general term denoting improvements and provisions that accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically defined for bicycle use.
2. Bicycle Lane—a portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists.
3. Bikeway—a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether

MUTCD
Cities for Cycling is a project of the National Association of City Transportation Officials to catalog, promote and implement the world's best bicycle transportation practices in American municipalities.

Bicycling is good for cities. Providing safe, comfortable, convenient bicycling facilities is a cost-effective way for American municipalities to improve mobility, livability and public health while reducing traffic congestion and CO2 emissions.

Cities for Cycling focuses on implementing world-class bicycle transportation systems through design innovation and the sharing of best practices. American municipalities are increasingly pioneering new designs and adapting international best practices to local conditions. To assist this local-level leadership, the Cities for Cycling project works to share and promote state-of-the-art practices that ensure safe traffic conditions for all modes of travel.

Cities for Cycling is pleased to present a sampling of Design Resources for Urban Bicycle Transportation that have been developed by and for leading bicycling cities.

More detailed Emerging Best Practices Sheets highlight a few of the engineering techniques being deployed by NACTO members to make bicycling safer, more comfortable and more convenient. The dissemination and fine-tuning of these designs will prove to be key elements in unleashing the potential of American cities to achieve world-class levels of bicycling.

Emerging Best Practices Sheets

- Bike Boxes
- Bicycle Separation Shelters
New Technology

System on the opposite side of the road activated by radio signal when motion is detected.

Sign is solar powered with battery backup.

Motion detector maximum detection range of 100 feet.

Stop sign and red flashing light activated for path users.

Yellow caution sign and amber flashing light activated for vehicles.

Once activated, lights can run for a configured duration of time.

Lights are triggered by path activity via a motion sensor.
Vision
Kodak Moment ?
A New Way to Visit
Grand Canyon Greenway
National Leadership
October 5, 1998
Connections

www.millenniumtrails.org or call 1-877-MIL-TRLS.
Make no Small Plans…
Sustrans
Art on the Tracks

Jeff Olson, R.A.
EuroVelo
SECTION 9.

Balanced Programs: Engineering Education Enforcement Evaluation
ENGINEERING:
The Delta Work
EDUCATION: Safety Info

Getting There Safely
by foot, by bike, by bus, by car

A traffic safety booklet for young persons
(and grown-ups)

Cornell Cooperative Extension

Jeff Olson, R.A.
ENCOURAGEMENT

NEW YORK STATE
Bike & Walk Week '96
the healthy way to go!
FUN
HEALTHY
INEXPENSIVE
NON-POLLUTING
RELIEVES CONGESTION
CONSERVES RESOURCES
EVERY SEAT'S A WINDOW SEAT

Tuesday  May 21, 1996  12:00 Noon
Empire State Plaza (State Street side North)
RAIN DATE - May 22, 1996

For more information contact:
New York State Department of Transportation, Statewide Bicycle and Pedestrian Program, 457-8307
or
New York State Department of Health, Bureau of Community Relations, 474-5370
ENFORCEMENT

- Targeted / Specific
- It worked for DWI!
- The Rules of the Road
- The Rule of Law
BIG PICTURE ISSUES
Advocacy

Texas Bicycle Coalition

P. O. Box 1121, Austin, Texas 78767 (512) 476-7433

The Texas Bicycle Coalition is a non-for-profit, membership organization that advocates the advancement of bicycling access, safety and education in Texas.
Quality of Life
Social Life
Tools You Can Use

- Walk / Bike Audit
- Pedestrian Safety Roadshow
- NYBC.net
- Quality Communities
- Healthy Heart Program
- Bicycle Friendly Communities
- Safe Routes to Schools
- The President’s Council
Tourism (eco, heritage, cultural)
Smart Growth
Technology
Beauty
It’s Fun
The Future?
Section 10.

MID – TERM EXAM
SECTION 11/12.

“Charrette”:
Redevelopment of a Placeless Context
Thank You
Jeffrey S. Olson

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