Transportation and Smart Growth
ITE Traffic Engineering Workshop, March, 2004
Edward Beimborn, UWM
Acknowledgements

- CE 790, Transportation Systems Design, Fall, 2003. Theme: Transportation 2050
  - Joe Blakeman, Ryan Horton, Nathan Guequeirre, Carlos Alba and others contributed materials for this presentation
  - [http://www.uwm.edu/Dept/CUTS/2050/](http://www.uwm.edu/Dept/CUTS/2050/)
Wisconsin Smart Growth Law

- **Requires** all local and county governments to prepare a comprehensive plan by January 1, 2010 (68 months away)

- **Time is short:**
  - Three year process?
  - State funding favors multi-jurisdiction process
  - Lead time for local coordination, approval
  - Consultant resources may be overloaded
Multi Jurisdictional Planning

- Need to develop consistent county level and township and municipal level plans
- Concern at local level about County restrictions on local plans
- Memorandum of Understanding, opt out clause? payment for work done?
- County vs. local functions by element
Nine required Elements

- Issues and Opportunities
- Housing
- Transportation
- Utilities and Community Facilities
- Agricultural, Natural and Cultural Resources
- Economic Development
- Intergovernmental Cooperation
- Land Use
- Implementation
- (Tenth element: Citizen Participation Process)
Transportation Element

- Plans and programs for future development of highways, transit, services for the disabled, bicycles, walking, railroad, air, truck and water transport
- Consistent with state and regional plans
- Identify highways by function
Smart Growth

- Smart growth is not no growth
- Encourage all modes of transport
  - Reverse or limit current trends toward 100% auto dependency
- Asks local governments to take control of their future.
ITE Smart Growth Principles:

Bring transportation need & development into better balance to create livable communities through:

- Job/work force/housing balance
- Compact/complementary mix of land uses
- Building upon existing infrastructure
- Economic viability
- Attractive design
- Environmental sensitivity
- Choices of travel modes
- Fiscally sustainable over time

Provide choices for transportation modes – beyond single occupied vehicles.

Consider roadway capacity in land use decisions.
State Role?

- State should consider how it relates to local government
- State plans and programs should be consistent with local plans and programs
- State investment and relationship to local smart growth plans???
- Interchange area planning, access issues, coordination, land use impacts, technical assistance???
Top Ten list -1: Setbacks

- Identify future arterials and establish building setbacks for future generations
  - Add setback requirements that add 10, 20 or 30 feet per side for 60, 80, 100 and 120 foot ‘ultimate’ ROW widths.
Top Ten list -2: Connectivity

- Maintain connectivity between subdivisions
  - Leads to reduction in auto trips and trip lengths
  - Allows for reasonable use of other modes of transport, especially walking and cycling
  - Less congestion on arterial streets
  - Require connections to adjacent parcels, internal connections to all arterial streets surrounding a development, Avoid cul du sacs
  - Better connectivity can avoid the need for future road widening (10-50% increase in corridor capacity)
  - Critical tradeoff between though traffic and connectivity
Unnecessary Travel with Poor Connectivity
Top Ten list – 3: Pathways

- Provide pathways for internal circulation by pedestrians and bicycles
  - Long term plan for pathway system in your community
  - Include path systems in all new developments
  - Provide path connections at cul du sac ends
Top Ten list – 4: Access

- No residential driveways onto arterials
- Adopt an Access Management ordinance
  - “the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges and street connections”
  - Reduce the number of conflict points between traffic streams or between cars and pedestrians and bicycles
  - Increases safety and efficiency of arterials, and reduces emissions
  - See TRB Access management manual
Top Ten list - 5 & 6: School Bus/Bicycles

- Consider school bus movement, safe walk to school bus stop areas
- Create safe bicycle systems – designate future routes, include paths in new developments, follow accepted standards and guidelines
  - See WDOT Bicycle Facility Design manual
Top Ten List – 7: Energy

- Energy Contingency Planning
  - Sometime in the next ??? years there will be severe disruptions in energy supply and/or prices that will have major impacts on transportation systems and the economy.
  - Will result from growth of global demand that exceeds rate of new supply or conservation efforts
  - Conservation is not enough "If it could happen, it will happen"
  - Need to plan for the crisis in advance because there is no time to plan for it when it does happen.
Time to depletion midpoint (yrs)
Energy Contingency Plans

- Questions of Allocation and Priorities
  - Identify vulnerable groups
  - Determine essential services
  - Define alternative scenarios
  - Set priorities
Top Ten List - 8: Aging

- Consider Transportation for an Aging Population

2000

2025
Aging Population

- Need for alternative transportation services
- Older driver issues
- Travel by women
- Changes in travel patterns:
  - Time of day shifts
  - Slower growth in VMT
Top Ten list – 9: Transit

10) Identify Future Transit Corridors (Transit corridor Districts)
   - Locate future transit services along designated corridors
   - Mixed land uses, transit oriented land uses
   - Control of through automobile traffic
   - Used for primary pedestrian, bicycle and transit use
Top Ten list - 10: Education

- Smart Growth requires Smart People
  - Many of the problems associated with growth stem from a lack of knowledge and understanding.
  - Transportation and land use decisions once made are irreversible and permanent.
  - Educating local officials and citizens is imperative for smart growth to succeed.
  - Without adequate knowledge of the purpose and benefits of doing a smart growth comprehensive plan, many small community leaders and citizens react with resentment and frustration.

- Great Resources available from the state and federal agencies, universities and private groups.
Useful Web Sites - 1

- **Wisconsin DOA**
  - [http://www.doa.state.wi.us/section_detail.asp?linkcatid=224](http://www.doa.state.wi.us/section_detail.asp?linkcatid=224)

- **Wisconsin Smart Growth Element Guides**
  - [http://www.dnr.state.wi.us/org/es/science/landuse/data_wkshp.htm](http://www.dnr.state.wi.us/org/es/science/landuse/data_wkshp.htm)

- **WDOT Transportation Planning Guide**

- **WDOT Bicycle Guide**
Useful Web Sites -2

- UWM CUTS links to more links
  - http://www.uwm.edu/Dept/CUTS/booklast.htm#livable
- UWM CUTS year 2050
  - http://www.uwm.edu/Dept/CUTS/2050
- Ozaukee County
  - http://www.co.ozaukee.wi.us/SmartGrowth/
- Michigan Transportation Summit
  - http://www.michigan.gov/transportationsummit/
- Victoria Transportation Policy Institute
  - http://www.vtpi.org/
- Arizona land use white paper