National Site Visits on Transportation and Growth
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Final Report

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Throughout the country, recognition is growing of the critical linkages between transportation and land use. State and regional transportation agencies are realizing that land use strategies can help to minimize infrastructure investment needs while improving safety, mobility, and accessibility for their customers, the traveling public. Local agencies are searching for transportation solutions that preserve the character of their communities and minimize environmental impacts, while maximizing economic development potential. Consequently, agencies at all levels are finding ways to work together on transportation and land use planning and decision-making.

In June 2004, representatives from Federal, state, regional, and local agencies visited six states in two weeks, taking a first-hand look at successful programs and projects to integrate transportation and land use planning, decision-making, and project development. Site visit participants met with staff at state departments of transportation (DOT), metropolitan planning organizations (MPO), transit agencies, and local communities, as well as with private developers. These site visits were conducted through the National Cooperative Highway Research Program (NCHRP), with sponsorship from the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA).

Programs and Projects Visited

Programs and projects visited include:

- Comprehensive regional planning and visioning in Denver, Colorado;
- Corridor planning approaches in Colorado, Kentucky, and New Jersey that consider a range of transportation and land use strategies;
- Context-sensitive design practices in Kentucky, New Jersey, and Vermont to tailor transportation solutions to fit individual communities;
- State DOT participation in local comprehensive planning in Wisconsin;
- Financial and technical assistance to support transit villages, downtown revitalization, and sustainable development in New Jersey, Vermont, and Dallas-Fort Worth, Texas; and
- Freight corridor planning to support economic redevelopment in western Vermont.

Critical Success Factors

Site visit participants found that transportation agencies throughout the country are successfully working with communities to improve the linkages between transportation and land use. They identified a set of “critical success factors” common to these efforts:

- **Vision** – A widely supported statement describing the values held within a community, region, or state, and how these values should be reflected in the transportation system and development patterns;
- **Leadership** – A committed champion, either within or supported by top levels of management, and a willingness to sustain commitment over time;
- **Partnerships** – Working relationships among different agencies and stakeholder groups, as well as among different disciplines within the same agency;
Public Process – An open and inclusive process, involving affected communities from the early stages of planning;

Technical Resources – Dedicated and skilled staff, training and technical assistance programs, and analysis tools to assess the impacts of different alternatives; and

Implementation Tools – Specific policy, regulatory, and financial mechanisms that ensure transportation and development projects are consistent with an established vision.

Implementation Tools

Participants identified nine specific implementation tools that state, regional, and local transportation agencies can apply to more closely link transportation and land use decision-making. These tools, which have successfully been demonstrated throughout the country, include:

- **Agency policies** – Adopting policy statements that describe how the agency will address land use and related community issues in various aspects of its planning, programming, and project development processes;
- **Design guidelines and standards** – Revising roadway and other facility design guidelines or standards to allow designs to better support land use and community objectives;
- **Planning activities** – Conducting planning studies such as statewide, regional, corridor, or area plans that address land use;
- **Investment policies and funding programs** – Establishing program priorities, project selection criteria, and designated programs to support land use objectives;
- **Staffing** – Hiring staff with expertise in specific areas related to transportation and land use;
- **Training** – Conducting internal and external training on topics that relate transportation and land use, such as context-sensitive design, secondary and cumulative impact assessment, and community involvement methods;
- **Technical assistance** – Making staff available to help local jurisdictions or other partner agencies develop and implement plans and projects;
- **Interagency coordination** – Entering into formal or informal relationships with other agencies to coordinate plans, programs, and review processes; and
- **Process streamlining** – Revising transportation project development and land use permitting processes to expedite or reward projects supporting particular objectives.

This report shares the findings and lessons learned from the site visits. The practices described in this report should help agencies at all levels of government identify and implement transportation and land use solutions designed to improve mobility and safety, provide transportation choices, minimize infrastructure investment needs, reduce environmental impacts, and help communities grow in a manner that supports and strengthens their self-defined character.
Introduction to the Site Visits

Objectives

In March 2002, the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the Environmental Protection Agency (EPA) joined forces to launch the “Smart Moves: Transportation Strategies for Smart Growth” competition. The intent of this competition was to showcase outstanding state and local efforts to promote smart growth principles in the planning and delivery of transportation projects. Eight winners were selected, led by four state departments of transportation (DOTs), two metropolitan planning organizations (MPOs), and two local jurisdictions. Perhaps more significantly, the enthusiastic response to the competition—a total of 32 proposals were submitted from 21 states—showed that state and regional agencies are strongly interested in improving the linkage between transportation and land use and supporting local efforts to promote smart growth. A second competition, announced in September 2004 and sponsored by FHWA and AASHTO, resulted in 36 new proposals from 21 states.

These competitions have served to highlight successful examples of integrating transportation and land use practice throughout the United States. The competition’s sponsors also identified a need for in-depth discussions with successful agencies, in order to identify success factors and lessons learned and to share these findings with other agencies. Working through the National Cooperative Highway Research Program (NCHRP), AASHTO and FHWA sponsored a series of National Site Visits on Transportation and Growth to provide a first-hand look at some of the competition-winning projects as well as other programs and projects to integrate transportation and land use practice. In June 2004, a tour group comprised of representatives from Federal, state, regional, and local agencies visited six states in two weeks, meeting with state and regional transportation agencies, local communities, and private developers involved in transportation and land use planning and decision-making.

The findings from these site visits are the subject of this report. The report presents successful practices, identifies factors leading to successful efforts, and describes key challenges and lessons learned. The report considers the effectiveness of the programs from a variety of different perspectives, including the state and regional agency perspective, the local perspective, and that of the private sector. In addition to contributing to this report, tour participants are sharing their experiences with colleagues and peers through presentations and discussions at conferences, technical meetings, and in other venues.

The Transportation – Land Use Connection

Transportation and land use are inextricably linked. Transportation policies and investments affect land use and development patterns. At the same time, land use patterns have implications for the transportation system and the benefits it provides. Traditionally, though, transportation planning and land use planning have been conducted in separate spheres. State DOTs and MPOs, the agencies responsible for transportation planning and programming at the state and metropolitan levels, have for the most part viewed land use as a local responsibility, because of the legal sovereignty that...
local governments have over land use decisions in most states. Local jurisdictions participate in statewide and regional transportation planning but may not have the same perspective on regionwide needs as the State DOT or MPO. At the local level, transportation or public works departments may not always coordinate closely with planning departments to ensure that transportation facilities are compatible with adjacent land uses, or that land use decisions respect transportation capacity.

The traditional separation between practice areas is beginning to change, though, as agencies at all levels recognize their mutual self-interests. State and regional transportation agencies are realizing that land use strategies can help to minimize infrastructure investment needs while providing maximum safety, mobility, and accessibility for their customers, the traveling public. At the same time, they recognize that their customers want not only to travel but also to live in quality communities. Local agencies are looking beyond their borders, observing that decisions in other communities impact mobility and quality of life for their own residents, and joining forces to consider growth and transportation issues from a regional perspective. Consequently, agencies at all levels are finding ways to work cooperatively on transportation and land use planning and decision-making, without encroaching upon traditional sovereignty in each arena. Their mutually-held objective is to create a pattern of transportation and land use that maximizes access to social and economic opportunities, preserves livable and healthy communities, and minimizes negative consequences such as safety and impacts on the natural environment.

How do the Site Visits Relate to “Smart Growth”?“Smart growth” is a term used in many communities to describe development practices that integrate transportation, environmental, and community considerations. Principles commonly associated with the term “smart growth” include:

- Create a range of housing opportunities and choices;
- Create walkable neighborhoods;
- Encourage community and stakeholder collaboration;
- Foster distinctive, attractive places with a strong sense of place;
- Make development decisions predictable, fair, and cost effective;
- Mix compatible land uses;
- Preserve open space, farmland, natural beauty and critical environmental areas;
- Provide a variety of transportation choices;
- Strengthen and direct development towards existing communities; and
- Take advantage of compact building design.

While interest in the principles and values the term “smart growth” encapsulates is widespread, the term itself is not universally accepted. Some communities embrace the term while others view it as politicized or loaded. Given this diversity of viewpoints, in this report the term “smart growth” is not used directly, unless the specific community or agency visited uses it to describe their programs or objectives. Nevertheless, the practices of integrating transportation and land use described in this report are broadly directed at “smart growth” principles – including minimizing infrastructure investment needs, providing people with transportation choices, reducing environmental impacts, and helping communities to grow in a manner that supports and strengthens their self-defined character.

Overview of Site Visits
To ensure rich discussions and broad interpretation of the site visits, participants were selected from a range of geographic areas, functional specialties, and agency types. Participants included:

- Kathleen Ames, Deputy Director of Planning and Programming, Illinois Department of Transportation;
- Bruce Bender, Senior Policy Advisor, Vermont Agency of Transportation;
- Hubert Morgan, Common Ground Program Manager, Northeast Illinois Planning Commission;

1 Adapted from http://www.smartgrowth.org/.

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The first week, June 14-18, participants visited Kentucky, New Jersey, and Vermont. The second week, June 28-July 2, participants visited Texas, Colorado, and Wisconsin. These tour locations not only represent examples of good program practice, but also a range of geographic contexts nationwide, including small and large metropolitan areas and rural areas.

A total of 20 meetings and field visits were held with 90 local participants, including state, regional, and local agency staff, elected and appointed officials, and developers. Appendix A identifies the locations visited, agencies and persons met with, and topics discussed. Appendix A also provides a brief description of each topic.

Kentucky
In Kentucky, tour participants:

- Met with the Kentucky Transportation Cabinet (KYTC) and the City of Lexington to discuss KYTC’s corridor planning handbook as well as three examples of corridor planning – the Newtown Pike Extension in Lexington, U.S. 25 between Lexington and Georgetown, and Cemetery Road in Bowling Green; and
- Visited a “road diet,” or reduction in travel lanes, implemented on Euclid Avenue in Lexington.

New Jersey
In New Jersey, tour participants:

- Met with the New Jersey Department of Transportation (NJDOT) and New Jersey Transit (NJ Transit) in Trenton to discuss New Jersey’s State Development and Redevelopment Plan, NJDOT’s corridor pilot studies, its context-sensitive design program, and the Transit Village Initiative;
- Visited a context-sensitive design project in the Borough of Avon-by-the-Sea; and
- Visited transit villages in the Borough of Metuchen and the City of Rahway.

Vermont
In Vermont, tour participants:

- Met with the Vermont Agency of Transportation (VTrans) and the Agency of Commerce and Community Development in Montpelier to discuss flexible design standards, the Western Vermont Transportation Corridor, and the Vermont Downtown program;
- Visited the City of Rutland to discuss a potential rail yard relocation; and
- Visited the small City of Vergennes to observe a successful example of downtown revitalization.
Texas
In the Dallas-Fort Worth region of Texas, tour participants:

- Met with the North Central Texas Council of Governments (NCTCOG), the Dallas Area Rapid Transit Authority (DART), and the Texas Department of Transportation (TXDOT) in Arlington to discuss initiatives to promote sustainable development in the region; and
- Visited the Cities of Plano and Addison to tour and discuss examples of sustainable development.

Colorado
In the Denver region of Colorado, tour participants:

- Met with the Denver Regional Council of Governments (DRCOG) to discuss the Metro Vision regional planning initiative;
- Met with the Colorado Department of Transportation (CDOT) and Denver Regional Transit District (RTD) to learn about joint highway-transit corridor studies, including the Transportation Expansion (T-REX) project;
- Visited the City and County of Denver to discuss citywide transportation-land use planning and transit-oriented development activities;
- Visited the City of Lakewood to tour a new town center; and
- Met with the City and County of Broomfield and Boulder County to discuss innovative land use protections implemented in conjunction with a new toll road serving Denver’s northwestern communities.

Wisconsin
In Wisconsin, tour participants:

- Met with the Wisconsin Department of Transportation (WisDOT) in Madison to discuss how the agency has worked with local jurisdictions on comprehensive planning issues; and
- Visited with communities west of Madison – including the City of Middleton, the Town of Springfield, and the Villages of Sauk City and Prairie du Sac – to discuss how the communities have worked with WisDOT on land use issues related to improvements to the U.S. 12 corridor.

The remainder of this report documents the findings from the site visits in more detail; identifies “key success factors” emerging from the site visit findings; and documents a set of tools available to state, regional, and local transportation agencies.
Site visit participants found that transportation agencies are taking a variety of approaches to successfully integrate land use considerations into their policies, programs, and projects. These approaches include:

**Statewide and Regional Planning**
Throughout the United States, MPOs, regional planning agencies, and state agencies are developing comprehensive plans that establish a vision for how their region or state wants to grow – simultaneously addressing transportation systems, development patterns, and other issues of regional importance. Agencies also are directing investments, through regional transportation plans and project selection criteria, to support statewide and regional objectives established in these vision plans. One example is Denver’s Metro Vision plan, which establishes a long-term framework for transportation, land use, open space, water supply, and environmental protection.

**Corridor Planning and Project Development**
State transportation agencies are increasingly working with local communities to address land use issues as part of the planning and project development process for specific transportation corridors. In Kentucky, the Transportation Cabinet has developed an approach to corridor planning that closely involves local communities both in the design of the transportation facility and in the development of land use controls for the highway corridor. In New Jersey, the DOT is undertaking ten corridor pilot studies working with local communities on issues such as access management, local street connectivity, and land use. In the Denver region, the Colorado DOT and the Regional Transit District have established a unique set of agreements to jointly conduct highway and transit corridor planning, and are working with local jurisdictions to take advantage of transit-oriented development opportunities.

**Context Sensitive Design and Solutions Practices**
Context sensitive design (CSD) has been defined by FHWA as a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. FHWA has established a goal for all 50 state transportation agencies to adopt CSD policies by 2007. Many have already done so and are successfully applying CSD principles in practice. On these site visits, two examples were reviewed: Vermont’s flexible highway design standards, and New Jersey’s Context Sensitive Design program.

**Participation in Local Comprehensive Planning**
State and regional agencies are working with local governments to more fully address transportation issues in local comprehensive plans, and are taking the initiative to provide technical assistance to local jurisdictions and to provide input into plan development. The Wisconsin DOT, for example, is working with communities in the local comprehensive...
planning process to address local street connections and access management issues to help preserve capacity and improve safety on the state highway system. WisDOT also is working closely with communities in its long-range corridor planning process to ensure that local land use objectives are met and that land use strategies are considered.

Financial and Technical Assistance

Transportation and other agencies have chosen to use Federal and state funds in ways that provide incentives to local governments and the private sector to change development practices. They also have dedicated staff resources to providing technical assistance to local jurisdictions who want to change their practices but lack sufficient resources of their own. In the Dallas-Fort Worth region of Texas, the MPO is providing Federal transportation funds to support locally-initiated “sustainable development” projects, through its Transportation – Land Use Joint Venture Program. The New Jersey DOT has designated communities as “transit villages” and along with 10 other state agencies is providing recognition, technical assistance, and funding to communities that are actively working to create redevelopment in transit station areas. In Vermont, state agencies have collaborated through the Vermont Downtown Program to provide funding and technical assistance to communities working to strengthen their downtowns.

The following sections describe these successful examples of practice in more detail and identify lessons learned from each effort.
Description

In 1992, the Denver Regional Council of Governments (DRCOG), the MPO for the Denver region, began the Metro Vision planning process to develop a unified growth concept for the region—a contrast to previous regional growth plans, which were simply a compilation of local plans. The DRCOG Board of Directors (currently made up of representatives of each of the region’s nine counties and its 42 cities and towns) adopted a vision statement for the plan in 1992. After an extensive outreach and consensus-building process, Metro Vision 2020 was formally adopted in 1997.

Metro Vision integrates the Regional Transportation Plan, Regional Development Plan, and Clean Water Plan into a single plan for the future through the year 2020. The plan is largely conceptual in nature and calls for additional planning activities, such as identifying specific urban centers and developing a regional open space plan. Since the plan is voluntary, meaning that local jurisdictions choose to meet its core elements without mandate, DRCOG’s primary roles in implementing the plan have included information sharing, facilitation, and negotiation. Plan principles also are applied by DRCOG in developing the Transportation Improvement Program (TIP), and by state and Federal agencies in their regulatory decision making regarding water quality. Implementation activities have continued and DRCOG is now updating the plan to a 2030 time horizon.

One key finding of the Metro Vision planning process was that Coloradans highly value open space. To preserve open space, protect the environment, and reduce infrastructure needs, the plan calls for development to occur within a growth boundary area of 747 square miles. This compares to a year 2000 urbanized land area of 500 square miles and a build-out in local long-range plans of 1,100 square miles. DRCOG worked closely with local jurisdictions to identify a growth boundary that could accommodate jurisdictions’ growth expectations while meeting regional objectives. As of 2004 this boundary has been endorsed by jurisdictions covering over 80 percent of the region’s population and over half of its land area. A Regional Open Space Plan also was developed, as called for in Metro Vision, and was adopted in 1999. The plan identifies a system of open space to protect agricultural, natural, and recreational resources as well as to buffer and define communities.

DRCOG staff note that over the past 10 years, agencies at all levels of government have undertaken significant initiatives to acquire and preserve open space. While hesitating to attribute these initiatives solely or even primarily to regional agency efforts, staff note that most communities in the region have approved taxes for the purchase of open space—a concept nearly unheard of 20 years ago and unusual in 1997. Local land preservation efforts have been supported by the state’s Great Outdoors Colorado Trust Fund, established by voters in 1992 and funded with lottery proceeds.
To support open space preservation and reduce transportation needs, Metro Vision also calls for increasing growth in designated urban centers. Many local jurisdictions are taking steps to meet this objective. For example, the City and County of Broomfield – halfway between Denver and Boulder – is purchasing development rights and negotiating conservation easements in outlying areas while increasing development intensities in the U.S. 36 corridor, which is heavily served by transit. The City of Lakewood, just west of Denver, is creating a new high-density, mixed-use town center. The City and County of Denver’s recently-adopted transportation and land use plan, Blueprint Denver, facilitates infill by designating “areas of stability” and “areas of change,” where areas of change provide opportunities for higher-density development served by high-capacity transportation. Consistent with this plan the city is working to promote transit-oriented development around light rail stations and to undertake large-scale infill projects in areas adjacent to downtown as well as at Stapleton Airport and the Lowry Air Force Base.

While DRCOG staff hesitate to link these local initiatives directly to the Metro Vision effort, they do believe that the Metro Vision discussion process has increased the awareness of the urban center concept among local jurisdictions and is contributing to the increasing efforts by many jurisdictions to redevelop existing centers or to create new centers with traditional urban characteristics.

DRCOG also is implementing Metro Vision through its TIP project selection criteria. The agency is gradually increasing the strength of these criteria, starting with the 1999-2004 TIP, continuing with the 2001-2006 TIP, and most recently with the 2005-2010 TIP. The scoring system for projects in the 2005 TIP awards up to 16 points (out of 100) based on sponsor actions implementing Metro Vision. Sixteen criteria are listed and are worth two points each, meaning that a jurisdiction must meet at least eight criteria to achieve the maximum score. While all but two of the 22 local governments proposing projects in the 2005 TIP scored sufficient points to gain the maximum score on Metro Vision criteria, DRCOG believes that the criteria serve a useful purpose. “We are ratcheting up the standards,” notes Director of Planning Services Larry Mugler. “The plan criteria contain a long list of tangible things that you can do, and for which you get points.”

Lessons Learned

Denver’s regional vision plan represents a significant step in a region where individualism and local control have been historical norms. A number of lessons can be learned from DRCOG’s experience developing and implementing the Metro Vision plan over the past decade and a half:

“Voluntary” efforts can be successful. Like most regional agencies, DRCOG has no regulatory authority to implement land use recommendations. Even implementation mechanisms subject to its control, such as distribution of regional transportation funds, must be supported by its member jurisdictions. Yet through education, outreach, and information-sharing, the agency has still managed to help local jurisdictions embrace a more regional perspective on land use and other issues. For example, the Denver region has clearly experienced an evolution of attitudes towards land preservation, which is likely due to a variety of factors including demographic shifts, state incentives, and the work of citizen advocates and interest groups, as well as to regional planning initiatives.

Adequate time is needed for plan development and endorsement. DRCOG spent five years developing the Metro Vision plan, from the point when its board agreed to undertake the plan to the point when the plan was formally adopted. This time was spent conducting public outreach, obtaining stakeholder input, and iterating the plan to the point where most parties involved found it acceptable. While five years may seem like a long time, it is consistent with the time frame for regional visioning efforts conducted in other metropolitan areas such as Portland, Oregon. Once a region has established the precedent, processes, and relationships for regional planning, future plan development and updates should require less time.
Developing a plan is only the first step. The Metro Vision plan adopted in 1997 was not the end product but rather the beginning of an ongoing process of implementation and refinement. More specific plans were needed to implement general recommendations on some issues. Work continues on defining growth centers and working with local jurisdictions to develop strategies for these centers. At the same time, regional and local agencies are undertaking work to update the plan from a 2020 to 2030 time horizon to ensure that the plan does not become out-of-date.

Community Spotlight: Blueprint Denver and Transit-Oriented Development

The City and County of Denver (a single government entity) has been a leader in implementing transportation-efficient development patterns in the Denver region. Denver’s efforts, while not undertaken directly in response to Metro Vision, show how planning by local jurisdictions can support, further, and even influence the objectives established on a regional basis. In 2000, following completion of its new comprehensive plan, the City undertook the development of a transportation-land use plan known as Blueprint Denver. A two-year planning effort was undertaken with the help of a 42-member advisory committee representing various neighborhood groups and public agencies. Adopted in 2002, Blueprint Denver includes specific steps to support urban centers, environmental quality, and a balanced, multi-modal transportation system. The plan is being implemented through actions such as changes to the city’s zoning code to greatly simplify the code and introduce new classifications such as transit-oriented development; a new street classification system and design guidelines; and small area plans and associated capital improvements.

Blueprint Denver divides the city into two broad planning categories: “areas of stability,” where maintaining and enhancing the existing character is most important, and “areas of change,” where investment in new buildings and alternative transportation can be integrated. The city’s objective is to direct new development into areas where increased density and mixed-use development is appropriate, generally along major corridors, near planned transit stations, and in the downtown area. Areas of change have been designated adjacent to five of the seven T-REX light rail stations in the city, and the city is already working to facilitate transit-oriented development in some of these areas. Other major infill projects include the Stapleton Airport and Lowry Air Force Base redevelopments, which will ultimately add 14,000 housing units and close to 40,000 jobs in mixed-use, walkable environments; and the redevelopment of the Central Platte Valley just west of downtown with an anticipated 2,000 units of high-density lofts, apartments, and condos and three million square feet of commercial development.

The city also is working to connect transportation and land use through an innovative set of,
Street classification guidelines and design standards. The typologies allow Denver planners to more precisely characterize streets, using terms such as “mixed-use arterial” or “residential collector.” Blueprint Denver includes typical cross-sections and birds-eye views for each typology, which the city is beginning to use in designing new or reconstructed streets. The plan’s classification and design guidelines are assisting the city in providing pedestrian and bicycle accommodations and reducing roadway cross-sections where appropriate, better supporting the character of many urban and residential neighborhoods.

City officials feel that the Blueprint Denver effort was ambitious but successful. Steve Gordon, Development Program Manager at Denver Community Planning and Development, notes that change is always a challenging issue to address, and that extensive public involvement was critical to gaining consensus on Blueprint Denver. Residents agreed on the desire to accommodate new development in a way that least impacted existing neighborhoods. A series of charrettes and neighborhood meetings were used to define “areas of stability” and “areas of change.” The involvement of both the community development and public works departments was important in developing the street classification and design guidelines, and continued cooperation will be required to formulate street cross-sections consistent with the typologies in the plan.

Redevelopment at the Lowry Air Force Base is placing housing adjacent to shops, reducing the need for residents to make trips by automobile.

Resources

**Blueprint Denver**

http://www.denvergov.org/comp_plan/default.asp

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The Kentucky Transportation Cabinet (KYTC) has developed and applied a new corridor planning philosophy that involves working closely with communities and stakeholder groups on the design of transportation facilities and on land use strategies for the areas adjacent to these facilities. The Cabinet has worked with Bluegrass Tomorrow, a regional nonprofit organization, to codify its corridor planning approach in its Bluegrass Corridor Management Planning Handbook, conduct internal and external trainings, and apply this approach in corridor studies throughout the State.

The Cabinet’s approach to corridor planning largely originated in the seven-county “Bluegrass country” surrounding Lexington. Horse farming is the signature industry in this region, and residents are especially concerned about preserving the character of the Bluegrass countryside. The Paris Pike project, a nationally recognized example of context-sensitive design, also was one of the first projects to extensively address land use issues. The Cabinet is now using elements of the Paris Pike project as a template for another corridor project in the Bluegrass Region, the widening of U.S. 25 between Lexington and Georgetown. A proposal in the early 1990s to widen a six-mile segment of this road from two to five lanes was met with considerable concern by local residents and business owners. After working with the affected communities, including corridor property owners as well as officials from Lexington/Fayette County, Georgetown, and Scott County, a revised design was developed that addresses stakeholder concerns over aesthetic and development impacts. The design, which is similar to that of the Paris Pike, includes four travel lanes separated by a 40-foot depressed grass median, with access typically provided at 1,200-foot intervals. (The width of the median is adequate to accommodate a vehicle with a horse trailer making a turn.)

While the proposed four-lane, divided footprint for U.S. 25 is larger than for an undivided five-lane facility, the design creates a more aesthetically pleasing roadway while managing, but not eliminating, access to adjoining properties. James Ballinger, KYTC District 7 Engineer, notes that “We came to accept that we didn’t need the same solution for the entire [U.S. 25] corridor. We could vary the alignment and the access spacing – but we had to engage the public to understand their needs.” The design is also more expensive than a five-lane facility – with costs currently estimated at $33.5 million versus $29.5 million – but the Cabinet estimates that the extra costs would be roughly offset by savings to the public because of reduced crashes. As of mid-2004 the U.S. 25 project is entering a more detailed (Phase 2) design stage.
The Bluegrass region is not the only area to benefit from community-based corridor planning principles. In Bowling Green in southwestern Kentucky, the State and the community had reached an impasse over the widening of Cemetery Road from two to five lanes, first proposed in the early 1980s to address congestion and safety issues on this heavily traveled road. Residents feared that the widened road, which serves as an important gateway connecting downtown Bowling Green to I-65, would be overwhelmed with strip development similar to Scottsville Road to the north. Reviving the project in the mid-1990s, KYTC district engineers worked with a wide range of stakeholders to select a new alignment for an arterial, enact land use protections along the alignment through a zoning overlay district, and incorporate bicycle and pedestrian accommodations into the design. Jeff Moore, District 3 Engineer, notes that “The second time around, we brought people to the table instead of running from them when they began to throw rocks.” Stakeholders involved in the planning process included city and county planning and engineering staff, planning and zoning commissioners, corridor residents and business owners, a nonprofit civic group, developers, utilities, downtown redevelopment interests, and a university that would benefit from improved access. Reconstruction of Cemetery Road was completed in 2004.

The Cabinet also has begun to apply a more holistic approach to corridor projects in urban areas, as exemplified by the Newtown Pike Extension project. This project would provide a connection from the existing Newtown Pike (with access from I-75) around downtown Lexington to the University of Kentucky. Similar to Paris Pike and Cemetery Road, the project – which would serve an estimated 25,000 vehicles per day passing through low-income and largely minority neighborhoods – had been stalled for many years due to community opposition.

In 1999, the Cabinet approached the City of Lexington and offered to provide financial support for land use planning in the corridor, to be performed in conjunction with the analysis of roadway extension alternatives. The Cabinet agreed to let the City manage the transportation study, thus helping to facilitate...
closer coordination with land use and redevelopment planning activities. The City, in turn, established a close working relationship between its engineering and planning departments for the project, to ensure coordination between these traditionally separate activities. The City also hired a neighborhood/community liaison to create a line of communication between the project design team and area residents, and appointed a 15-member advisory committee with representatives from the community and local institutions. Public outreach was conducted through public meetings, focus groups, neighborhood association meetings, and other individual meetings and interviews. One result was the Newtown Pike Extension Corridor Plan, adopted as part of the Urban County Comprehensive Plan in 2002. Another was the environmental documentation for the transportation project; the draft EIS was scheduled for approval in fall 2004.

The community influence on the corridor plan is apparent both in land use and redevelopment objectives and in the design of the proposed transportation improvements. Street cross-sections vary depending upon their context, and include both two- and four-lane boulevards with a 35 mph design speed. Designs typically include a median, bicycle lanes, narrower (11-foot) travel lanes, and textured pedestrian crossings at major intersections and other key access points. Unused rail corridors are identified for future pedestrian and bicycle access connecting to a regional trail network. Land use plans identify locations and design criteria for new mixed-use, urban development opportunities as well as for preservation of existing neighborhoods and housing stock.

While redevelopment was an important objective given the numerous vacant or underutilized parcels throughout the area, maintaining housing affordability also was important to the community. The plan calls for the creation of a Community Land Trust, a nonprofit organization that can acquire property, purchase or build homes, and lease the homes with provisions to maintain affordability. A specific plan for the 25-acre Southend Park neighborhood was developed through a series of five public meetings, beginning with a neighborhood visioning process, as a first step in implementing the general corridor plan. The City already has begun to lay the groundwork for implementation by adopting mixed-use zoning provisions that apply to most of the corridor, as well as residential design guidelines to help in maintaining character. As of summer 2004, developers have expressed interest in six projects, one of which – redevelopment of a factory building into 80 loft units – is under construction.

Success Factors and Lessons Learned
KYTC notes that its more inclusive philosophy to corridor planning, which it began implementing in the mid-1990s, represents a significant change from past practice for the agency. It further notes that as a large, decentralized agency, it has been an ongoing challenge to incorporate this philosophy into corridor studies and other policy and project work.

Attitudes of many agency staff have shifted, though, as they see how working closely with affected communities and stakeholders can help to overcome opposition and expedite project delivery, while adding little to project costs. Some of the key lessons learned from Kentucky’s experience include:

**Sustained leadership is required.** Having a champion is critical to changing practices – but ongoing leadership at all levels is needed to create sustainable change. In Kentucky, a number of champions can be identified whose actions have supported each other. In 1995, Governor Bereketon C. Jones requested the KYTC and Bluegrass Tomorrow to work together to develop a corridor plan for U.S. 27 between Fayette and Jessamine Counties. This
relationship ultimately led to the development of the Bluegrass Corridor Management Planning Handbook, and to Bluegrass Tomorrow’s partnership with the KYTC to conduct outreach and training on this handbook throughout the State. Then-KYTC Secretary James Codell and Deputy State Highway Engineer John Carr were instrumental in developing an agreement on the Paris Pike project as well as offering to support the City of Lexington in developing a land use plan in conjunction with the Newtown Pike Extension Corridor Study. At the city level, Mayor Pam Miller of Lexington initiated the corridor planning study with key stakeholder groups including the city engineering and planning departments, the University of Kentucky, and groups representing the affected communities. Leaders among agency staff such as KYTC District Engineers James Ballinger (Lexington) and Jeff Moore (Bowling Green) have introduced corridor planning principles into other studies. City of Lexington planner Henry Jackson and engineer Andrew Grunwald have worked to carry out the inclusive planning process that was so critical to the success of the Newtown Pike Extension study.

**Conduct training.** A training program that reaches both internal and external constituents – including staff throughout the transportation agency, local government officials and staff, consultants, and even the interested public – is required to introduce and build comfort with new concepts. After the corridor planning handbook was published, the Cabinet worked with Bluegrass Tomorrow to conduct four training sessions, including two attended by 40 to 50 Cabinet staff, one in Lexington for local planning officials, and one “public” session attended by 150 people including consultants and community advocates. While this was an important initial step, no internal training sessions have been held since, and the agency is now evaluating the need to conduct another set of sessions.

**Establish and maintain partnerships.** Involvement of key agencies and stakeholder groups is critical to the successful integration of land use planning and transportation project development. In the Newtown Pike Extension study, not only did city, state, and Federal agencies meet monthly, but within the City the engineering and planning departments communicated closely. Lexington planner Henry Jackson notes that, “Ten years ago our land use plan would have been sent to the engineering department, where it would have sat on a shelf. Now land use planning and roadway design are being done in conjunction with each other.”

**Listen to affected communities.** All of the projects discussed had been stalled due to community opposition, but began moving forward because the transportation agency took the time to listen and respond to community concerns. Typically the Cabinet found that most people were not opposed to transportation improvements, and in fact wanted to see congestion and safety addressed. They also wanted to ensure, however, that the proposed improvements would not decimate unique characteristics of their community or important historic, cultural, or natural features – either as a result of the facility itself or because of development that would occur because of the improvements. Training sessions on the Bluegrass corridor handbook strongly emphasized the importance of the process of working with the community. KYTC’s Moore notes, “we tried to teach process – but people at first were more interested in the product. We emphasized that you need to have a conversation with people before you can get to the nuts and bolts of the project design.”

**Take a flexible attitude towards design.** Once an agency recognizes the need to listen to the community it must also adopt a more flexible philosophy towards roadway design. If implemented properly, flexible design should not compromise safety or functionality or incur additional liability risk. U.S. 25 engineers felt that 1,200-foot cross-median access spacing would provide an adequate compromise between access, safety, and functionality, but determined that 600-foot spacing could be applied in limited areas with a high concentration of existing businesses. At the same time, the Cabinet convinced Fayette County – whose standards called for a minimum of 1,600-foot spacing – to make an exception to these standards.

“Ten years ago our land use plan would have been sent to the engineering department, where it would have sat on a shelf. Now land use planning and roadway design are being done in conjunction with each other.”

“We emphasized that you need to have a conversation with people before you can get to the nuts and bolts of the project design.”

The completed Cemetery Road in Bowling Green, Kentucky.
standards. In developing the design for the Newtown Pike Extension, state engineers note that there was a lot of “give and take” on design features and the result was a roadway design that is more urban in character than a typical new roadway in an urban setting – e.g., with narrower travel lanes and tighter curve radii. Cabinet engineers note that the design of the Newton Pike Extension can be implemented using the existing flexibility in state standards, and acknowledge the importance of standards that allow such flexibility.

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<tr>
<td>Bluegrass Corridor Management Planning Handbook</td>
<td>Jeff Moore, District Engineer Kentucky Transportation Cabinet District 7 270-746-7898</td>
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<td><a href="http://transportation.ky.gov/multimodal/access.asp">http://transportation.ky.gov/multimodal/access.asp</a></td>
<td>Newtown Pike Extension <a href="http://www.newtownextension.com">http://www.newtownextension.com</a></td>
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<tr>
<td>Brent Sweger Kentucky Transportation Cabinet Division of Multi-Modal Programs 502-564-7686</td>
<td>Henry Jackson, Planner Lexington-Fayette Urban County Government 859-258-3174 <a href="mailto:hjackson@lfucg.com">hjackson@lfucg.com</a></td>
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<td>U.S. 25 Corridor Study</td>
<td>Andrew Grunwald, Engineer Lexington-Fayette Urban County Government 859-258-3597 <a href="mailto:agrunwal@lfucg.com">agrunwal@lfucg.com</a></td>
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<tr>
<td>James Ballinger, District Engineer Kentucky Transportation Cabinet District 3 859-246-2355</td>
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<td>Cemetery Road Project</td>
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The New Jersey Department of Transportation (NJDOT) is undertaking ten corridor planning pilot studies throughout the State. The studies focus on arterial roads of two to 30 miles in length with congestion and/or safety problems. The studies address not just the roadway itself, but also local street networks that interface with the roadway as well as adjacent land use patterns. In each case, the Department is working with local jurisdictions to address circulation systems, access management, and land use in the corridor. Funding for the studies has come from a variety of sources, including State Planning and Research (SPR) funds, Federal earmarks, and state funds. The corridor studies are one way in which the Department is supporting the New Jersey State Development and Redevelopment Plan, which is intended to limit infrastructure needs, protect the environment, and direct growth into existing urbanized areas.

A significant objective of the corridor studies is to find solutions to transportation problems that are less capital-intensive than building multilane and limited-access highways. NJDOT has realized that there is no way it can fund all of the statewide capital improvements that have been studied or planned throughout the State. In the short term, construction funding needs in 2006-2008 are roughly double projected revenue during this period. In the long term, the agency estimates that it would take 100 years just to build all of the projects currently undergoing study and development. Furthermore, consistent with the state administration’s emphasis on smart growth, the Department is reducing...
capital expenditures on new capacity projects from about 20 percent to only four percent of its overall budget and shifting these funds into highway preservation and maintenance, operations, and non-highway modes. Gary Toth, Director of Project Development for NJDOT, notes that “We’ve kept building roads, but congestion continues to mount and needs are outstripping resources... We’ve realized we have to find alternative ways of reducing needs to a manageable level.”

Toth expects that connected local street networks will reduce the traffic burden on state highways, while land use strategies to create mixed-use, walkable communities will reduce the need for vehicle travel, especially for short trips. In early 2004, the Department worked with Raritan Township and the Borough of Flemington to develop an integrated transportation and land use plan for the area near the intersection of U.S. 202 and State Route 31. This area, which includes a mix of farmland and industrial development, was zoned industrial in order to encourage revenue-generating development for the town. After two decades of planning, the State had advanced a $150 million, four-lane bypass of this area through the completion of a draft EIS. At this point, though, NJDOT revisited the concept and made the determination that the plan was unaffordable and did not support the administration’s smart growth policy.

The Department proceeded to work with the communities to develop a revised proposal that includes a new two-lane signalized roadway at a cost of $50 million, along with improvements to other state roadways. The proposal also includes a new internal circulation system, valued at about $30 million, of which one half may be funded by local developers. The total cost of the revised plan is about half that of the original four-lane alternative. Toth notes that town officials as well as abutting businesses and property owners favor the revised plan and that the MPO has supported reprogramming funds from the bypass to the less expensive alternative. As of summer 2004, NJDOT was working with FHWA to resolve environmental documentation and approve the reprogramming. NJDOT is planning to test the transportation impacts of the revised plan using a simulation model, but notes that the communities are willing to accept less than the ideal levels of traffic service, if necessary.

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NJDOT has found that communities in all of the pilot corridors have been receptive to the agency’s interest in land use issues and are interested in the State’s assistance in controlling sprawl. The Department’s pilot studies include an average of about $500,000 per study to bring in specialists to help communities reshape their land use and street network patterns. NJDOT’s Toth notes that this cost is small in the overall scheme of things – “The money we are spending on land use planning is a small fraction of the cost of capital investments that we can’t afford.” Toth also notes that the Department is willing, if necessary, to use its leverage over transportation funds as an incentive for communities to partner with them on land use issues - and if a community is not receptive, to advance such a corridor study as a lesser priority in its capital program. In Trenton, for example, the State is working with the City on the redesign of Route 29, the Riverfront Parkway, currently a four-lane freeway walling off adjacent neighborhoods and the downtown from the Delaware River. The City would like to convert the highway to a boulevard and realign it to reduce impacts on adjacent neighborhoods and create better pedestrian access to the river. The State has indicated its willingness to pursue the project, but only as long as the City undertakes land use and local road network planning in conjunction with the state highway redesign.
Success Factors and Lessons Learned

Most of New Jersey’s corridor pilot studies are still in their early stages, so the ultimate success of the effort remains to be demonstrated. Response from the affected communities, though, has been very positive and payoffs already are beginning to result. NJDOT staff note a number of lessons learned from the early success of these pilot projects.

Change must be supported by top-level leadership. The leadership of NJDOT Commissioner Jack Lettierie accelerated efforts to shift the Department’s focus away from capital intensive strategies and towards other priorities, including land use. Toth notes that the Commissioner had the courage to send the draft EIS for the U.S. 202/SR 31 corridor back to agency staff because it did not support the administration’s Smart Growth policy.

At the top levels of state governance, upon taking office in 2001 New Jersey’s governor issued executive orders that established a Smart Growth Policy Council and directed state agencies to work together on policies and projects supporting smart growth. These actions served to reinforce and bolster support for strategies that were already underway to support the existing State Development and Redevelopment Plan, including NJDOT’s formation in 1999 of an Implementation Team to align its policies and programs with the plan.

Establish partnerships with communities. The State has taken a “partnering” approach with communities in the pilot corridors, providing planning funds and technical expertise while at the same time bringing in its own viewpoints on how issues of local street networks, state highway access, and land use should be addressed to minimize transportation demands. While state agencies are often reluctant to tread in areas of land use and local sovereignty, NJDOT has found that communities are concerned about the same issues as the Department and that communities have been receptive to this partnering approach. NJDOT’s willingness to direct funding to cooperative communities provides an additional incentive to work with the State on land use issues.

Involving the private sector. Involving property owners and developers in discussions has been especially valuable in the U.S. 202/SR 31 corridor study. Developers, wanting to ensure good access to their properties, were willing to help finance publicly owned local roads because these roads served the same access function as privately built access streets that would have been required under the original bypass proposal. Developers also were open to the idea of alternative (and potentially more profitable) land uses in this area that was initially zoned for industrial development.

Use corridor planning to expedite the environmental process. NJDOT notes that the corridor planning studies are typically being done as a “pre-NEPA” (National Environmental Policy Act) activity, since the corridor alternatives are not specific enough to warrant a NEPA analysis (a corridor study can receive a categorical exclusion under NEPA). Once a specific project emerges from a corridor study, it is subject to the standard NEPA process. NJDOT’s Paul Cohn believes that conducting advance corridor planning will save time and effort in the environmental documentation phase. “Because we’ve already discussed the alternatives and options with the community and gained consensus on the proposed approach, the NEPA analysis is likely to involve fewer alternatives, less controversy, and fewer iterations,” observes Cohn. Also, secondary and cumulative impacts have been considered up front, through the development of a land use master plan, reducing or eliminating the need to speculate about the effects of the project on growth and related impacts.

Resources

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Vermont’s Western Transportation Corridor: Focus on Freight

Transportation and land use strategies involve the movement of freight as well as people. In Vermont, a coalition of business, environmental, and community interests is working with the Vermont Agency of Transportation (VTrans) to examine rail and roadway infrastructure improvements in the western part of the State, in a broad north-south corridor running parallel to U.S. 7. The proposed improvements would support both economic development and “smart growth” objectives by concentrating industrial development adjacent to rail infrastructure, freeing up land in town centers for redevelopment, and reducing the impacts of truck traffic on Vermont’s historic town and village centers.

Because of community concerns about truck traffic and opposition to roadway expansion, the State, local communities, and industry are increasingly looking to rail as an alternative means of moving freight. The existing rail infrastructure has limitations, however, including substandard weight restrictions, bridges that do not allow double-stack container clearance, and overcapacity rail yards that create bottlenecks. Corridor stakeholders are evaluating short-term improvements that would include new rail yards to increase capacity, sidings to provide access to businesses, and intermodal connectors between rail transfer points and the National Highway System (NHS). Long-term improvements would include track and bridge clearance upgrades to support larger trains. Project proponents are hoping that these improvements would help attract businesses without requiring major highway investments.

The City of Rutland’s experience highlights the potential benefits as well as challenges associated with the proposed freight improvements. The Rutland Redevelopment Authority has worked with VTrans to study the relocation of the downtown railroad switching yard, currently a major bottleneck in the statewide rail system. One option relocates the yard just south of the City, adjacent to land zoned for industrial uses. A connector road would be constructed to make the yard accessible to the NHS. In addition to opening up new opportunities for industrial development and increasing rail capacity, the project would free up key city parcels adjacent to downtown for redevelopment.

While funding has not yet been identified for the rail yard relocation, the project has strong support from communities as well as businesses along the western side of the State that would either directly or indirectly benefit from the improvements.

Relocation of this switching yard in Rutland would remove a bottleneck that affects 80 percent of rail freight bound to or from Vermont businesses.

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CDOT and the Regional Transit District are working together to conduct studies of corridors where both highway and transit solutions are being considered.

Description

The Colorado Department of Transportation (CDOT) and the Denver Regional Transit District (RTD) are working together to conduct, and in some cases jointly manage, studies of corridors where both highway and transit solutions are being considered. The agencies have entered into a master intergovernmental agreement stating their intent to consider each others’ proposed projects, programs, and facilities in any major corridor project, and to minimize costs to the other party for future upgrades or modifications. The agencies also have established intergovernmental agreements for specific corridor projects, and have worked with FHWA and FTA to establish interagency agreements coordinating their environmental processes.

One of the first examples of this joint approach to corridor projects is the Southeast Corridor Project, also known as the Transportation Expansion or T-REX project, which involves highway and transit improvements to the I-25 corridor southeast of downtown Denver. A major investment study published in 1997 recommended both highway improvements and construction of light rail in this corridor, to improve transportation between downtown Denver and the booming Southeast Business District which together employ more than 180,000 people. Recognizing the engineering challenges posed by joint highway and transit construction work in such a confined corridor, CDOT and RTD joined forces to create a unique entity, now called the T-REX Project, to design and build the $1.67 billion project together. The project involves highway reconstruction and widening, interchange reconstruction, and the construction of 19 miles of new light rail adjacent to the highway right-of-way. It is now under construction and is scheduled to be completed in fall 2006.

CDOT and RTD formally established joint management of the T-REX project by signing an intergovernmental agreement in September 1999 outlining the responsibilities of each agency, a project description, an explanation of the design-build concept, and the proposed method of financing the project. In October 1999, the FHWA Colorado Division Office and the FTA Region 8 Office signed an interagency agreement, under which both partners agreed to “cooperatively work together to seamlessly implement the U.S. Department of Transportation... procedures that pertain to the Transportation Expansion Project.”

Executives from all four agencies – CDOT, RTD, FHWA, and FTA – as well as the project contractors began meeting in 2001 in bimonthly partnering sessions. At the initial session, the agencies finalized a project charter of mutual goals, established a team evaluation process, and agreed upon issue escalation principles. During the bimonthly sessions, the project management team provides a project status report, and partners review team goals, discuss key issues, and establish action plans. In addition to executive-level partnering, project partnering also takes place through 20 task force teams. Team leaders submit monthly reports summarizing issues of disagreement, goal progress, and status of team relationships. Issues that have reached an impasse are escalated to the next level of management.
Coordination of T-REX improvements with adjacent land use has taken place through community involvement on urban design (including bridge architecture, retaining and noise wall appearance, landscaping, light rail stations, and related architecture); improved pedestrian and bicycle access across the freeway and to light rail stations; and accommodation of requests from local jurisdictions and developers to make changes to the project to support transit-oriented development. The T-REX project team includes a liaison to local communities and developers to deal with requests for joint development on agency-owned property next to transit stations, or to realign transit station entrances to provide more direct access to nearby developments. Although unwilling to compromise the fast-track design-build project approach, the team has agreed to make design modifications or to issue change orders to better support transit-oriented development proposals. For example, at the Colorado Boulevard station, the light rail alignment is diverted away from the freeway, along an existing rail right-of-way, to provide better access to the Colorado Center transit-oriented development. In Greenwood Village, the project issued a $7.0 million change order (paid for by the City) for CDOT to consolidate a maintenance facility, giving the village space to construct a new town center adjacent to its planned LRT station.

The RTD has supported transit-oriented development opportunities in T-REX and other transit station areas by surveying existing and planned development sites in station areas, maintaining a database of potential developers, marketing RTD-owned properties, and publicizing adjacent available properties. While requiring one-for-one replacement of parking, RTD has been willing to reconfigure station-area parking in order to accommodate development projects. Local jurisdictions, especially the City and County of Denver, also have been key players in promoting transit-oriented development. The City is working to facilitate high-density, mixed-use development on the 50-acre site of the former Gates Rubber Factory, adjacent to the intersection of I-25 and Broadway and a station stop on both the southeast corridor and existing southwest corridor LRT lines. The City has worked with a developer to rezone and clean up the site, and has worked with RTD and CDOT to identify infrastructure improvements needed to support planned development.

Following the success of the T-REX project, CDOT and the RTD are applying a similar joint planning approach to other corridors in the region, including the U.S. 36 corridor between Denver and Boulder and the I-70 corridor east of Denver. These corridors are still in the alternatives analysis phase and are identified in the long-range transportation plan as locations needing both highway and transit improvements. The joint approach should continue to help facilitate multimodal transportation solutions throughout the region to support local and regional land use objectives.

Success Factors and Lessons Learned

The experience of Colorado agencies with joint highway and transit corridor planning holds a number of lessons for other agencies considering a similar approach:

**Agencies can develop successful working relationships.** Highway and transit projects have traditionally been planned separately, and have been subject to separate environmental processes consistent with FHWA and FTA requirements. Colorado’s experience shows that highway and transit agencies can successfully work together to undertake projects, and that Federal agencies can help to harmonize Federal requirements in order to expedite jointly managed projects. As a result, project planning and development efforts require less duplication of effort and can be implemented more quickly than if conducted separately for the same corridor. Furthermore, the partnering process provides a formal mechanism for agencies to gain agreement on common issues and resolve conflicts.
Demand for transit-oriented development is increasing. Residents of Denver and other high-growth areas with significant traffic congestion are increasingly looking for alternatives to the automobile to meet their travel needs. While transit-oriented development had a much lower profile in the 1990s when the T-REX project was first being planned, T-REX project manager Larry Warner now notes that property owned by CDOT and the RTD has been especially attractive because of its direct proximity to transit stations. “Developers have been coming to us to propose joint development projects,” he observes. The success of early TOD projects – such as the Englewood City Center on the southwest LRT line and the revitalization of Lower Downtown – has greatly increased both community and developer interest in similar projects at other light rail station locations, suggesting that TOD should be an important part of future transit corridor planning.

Include flexibility to respond to development proposals. While the T-REX project team worked to accommodate design changes to support development proposals, it was sometimes hard-pressed to meet these changes while adhering to the rigorous project schedule and cost objectives of the design-build process. One way to help address this challenge may be to set aside a “reserve fund” in the project budget to allow for change orders to accommodate relatively minor design changes that will not upset the project schedule.

Plan for development in advance. Even more importantly, project sponsors must work with local jurisdictions at the early stages of project development, to identify and plan for future opportunities for transit-oriented development. Catherine Cox-Blair, a Denver planner who has worked with development projects in T-REX station areas, appreciates the willingness of CDOT and RTD to work with the City to support transit-oriented development, but acknowledges that some challenges have been faced because of the speed of the design-build process. Cox-Blair notes it would have been a good idea for all of the partners, including the City, to engage in station area planning earlier in the process. Taking advantage of these opportunities can benefit the project in the long run by boosting ridership, even if up-front planning and design costs are slightly higher.

Community Spotlight – Northwest Parkway Communities Address Transportation Needs While Preserving Open Space

In Denver’s northwest suburbs, four communities came together in the 1990s to preserve open space while addressing common mobility needs. The communities established a nonprofit authority to construct a toll road as a link in Denver’s circumferential highway system, while at the same time implementing strong land protection measures to ensure that the road would not simply become another conduit for suburban sprawl.

The history of the Northwest Parkway project dates to the 1970s, when the State began planning a beltway at a radius of approximately 15 miles from downtown Denver to serve the increasing amount of traffic between the region’s booming suburbs. Three-quarters of this beltway was constructed in the 1980s and 1990s, but the northwestern quadrant, known as W-470, was stalled, in large part because of resident fears – especially in Boulder, a community with a long history of growth controls – about the growth-inducing impacts of the highway and the potential loss of open space.

1 The City of Broomfield was originally part of four different counties. In 2001, following authorization by the state legislature, Broomfield incorporated itself as a separate county and is now known as the “City and County of Broomfield.”
Opinions in Broomfield, midway between Denver and Boulder along U.S. 36, typified those of other nearby communities. Residents wanted the mobility benefits the proposed parkway would bring, including a reduction of 20 minutes travel time to Denver International Airport, and local leaders wanted the tax revenues that would come from increased development. Over time, though, residents increasingly sympathized with concerns that rampant development would overrun the open space and mountain vistas that they valued so highly. In 1991, Boulder County, Broomfield, Lafayette, and Louisville established an Intergovernmental Agreement (IGA) designating 2,400 acres near the parkway alignment as open space. (A law passed by the Colorado state legislature in the 1980s allows IGAs to be enforceable for the duration of the agreement, making IGAs an effective means in Colorado for interjurisdictional land use planning.) The communities began updating their master plans to reflect these designations and undertaking annexation efforts to bring more land into their jurisdiction. Realizing that stronger protections than zoning – which can be changed through political pressures – were required to protect land from development, Boulder County acquired most of the 2,400 acres as open space. In the late 1990s, the four communities entered into new IGAs designating 2,000 additional acres of open space buffers and expanding arrangements for land acquisition and protection. At the same time, several jurisdictions agreed to facilitate parkway construction. As permitted under state law, they created a public highway authority, known as the Northwest Parkway Authority, to design, construct, finance, and operate a 10-mile toll parkway linking U.S. 36 to the existing E 470 beltway at Interstate 25. Under a key aspect of the agreement, the authority would issue bonds for the acquisition of open space, with the bonds being paid back from toll revenue obtained from the operation of the parkway. A total of $417 million in bonds was sold for parkway construction, with approximately $20 million supporting open space preservation efforts. With land protection agreements in place and the institutional framework established, construction began in 2001, and the parkway was opened to traffic in 2003.

While state legislation helped create the framework for their efforts, it was the initiative of key leaders, primarily elected officials, that brought the communities together to achieve results. Boulder County Commissioner Ron Stewart notes that in the 1980s, the County was a consistent voice in the corridor about the need for cooperative efforts to manage growth. Sustained leadership led to the establishment of cooperative working relationships first with Broomfield, then with the adjacent Cities of Louisville and Lafayette. “Initially, we were nowhere close, but we are at peace now,” observes Kirk Oglesby, Broomfield’s Planning Director. These relationships were successful in part because the communities realized that to achieve one mutual objective – improved transportation access – they had to work together on another objective – growth management. Managing growth does not mean restricting it; Broomfield has transferred development rights to areas of higher density in the U.S. 36 corridor, and Lafayette has designated a commercial development area along U.S. 287 north of its intersection with the parkway. It does mean, however, that areas critical for preservation – whether for natural habitat, recreation, or scenic vistas – are identified and set aside before they are threatened by development pressures.

**Resources**

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*Community Spotlight – Northwest Parkway Communities Address Transportation Needs While Preserving Open Space (continued from previous page)*
Compared to the multilane arterials and extensive traffic congestion in many of the country’s major population centers, Vermont’s transportation system and traffic problems are modest in scale. Aside from the Interstate system and a few arterials in Burlington, the State’s road network is almost entirely two-lane. Low population growth rates and the largely rural character of the State have kept highway expansion needs to a minimum. Yet Vermont’s rural character also means that even relatively minor roadway improvement projects can have a significant impact on a community. In the 1990s, the Vermont Agency of Transportation (VTrans) was finding that its efforts to bring state roads up to design standards – through shoulder widening, horizontal and vertical realignment, and other means – were increasingly meeting community opposition, especially in the State’s historic town and village centers. Residents would ask why the road needed to be so “big and straight,” impacting their front yard as well as the village common areas.

As the number of stalled projects accumulated, the agency took another look at its design practices. “The majority of projects needed design exceptions… We concluded that perhaps we were using the wrong standards.” For example, agency standards called for “rural typical” cross-sections of two 12-foot travel lanes and two eight-foot shoulders in villages too small to be designated as urban areas, but where such widths were nevertheless incompatible with the existing right-of-way. VTrans undertook a 21-month process to develop a new and more flexible set of design standards that would allow the agency to apply lower-impact practices where appropriate. The standards were developed with input from a wide range of stakeholders including other state agencies, local governments as represented through Vermont’s regional Transportation Advisory Committees, environmental and historic preservation groups, professional engineers, and bicycle and pedestrian interests. In 1997, the agency’s flexible design standards were adopted as legislative rules by the state legislature.

Since adopting the standards, VTrans has worked to apply them to projects throughout the State. While bridge projects have represented the greatest number of affected projects, improvements to National Highway System routes through towns and villages have had the greatest community impact. One example is the Town of Danville, population 2,300, which straddles U.S. 2 in northeastern Vermont. U.S. 2 is difficult to cross and also noisy due to the high volume of through traffic, including trucks. In 1987, the town asked the State to reconstruct the road to address a dangerous pedestrian situation involving poor visibility at a knoll located between the village businesses, the town green, and the high school. Because of the road’s classification as a principal arterial, VTrans initially resisted the town’s request to reduce the width of the reconstructed road, proposed to have 12-foot
The two-year consensus-building process is allowing the project to move forward – addressing important safety concerns while enhancing the historic character of the community.

VTrans revived the project in 1998, after adopting its flexible design standards, and established a unique collaboration with the Vermont Arts Council upon the initiation of then-Secretary Brian Searles. The partners sponsored a design competition and hired the winning artist to assist with the design of the roadway and adjacent public spaces, facilitate community involvement on aesthetic treatments, and incorporate artistic elements that would both reflect and enhance the community’s identity. The public was involved over a two-year process through a Local Review Committee, a series of public meetings and workshops, school events and classroom projects, one-to-one meetings, site walks, and focus groups. The resulting design – which was widely accepted within the community – incorporates sidewalks, textured crosswalks, narrower-than-typical shoulders (four feet), splitter islands approaching town to calm traffic, and a median at intersections in the center of town to provide refuge for pedestrians crossing the street.

VTrans staff note that the cost differences of the final Danville project design are relatively minor compared to how the roadway would have been designed prior to the adoption of flexible standards. The total project cost of $4.5 million includes about $600,000 to $800,000 in costs that are not strictly road-related. Increased costs for medians and pedestrian treatments, though, are offset by the reduced pavement width. Furthermore, the agency notes that the two-year consensus-building process probably saved money compared to the time and cost of fighting opposition to the project, and also is allowing the project to move forward – addressing important safety concerns while enhancing the historic character of the community. Construction is expected to begin in 2007.

The Danville project is just the first in a series of projects affecting Vermont’s smaller communities. In Brandon, a town with a population of 1,900 in western Vermont, the State has worked with the community to design a realignment of U.S. 7 through the town center, as part of a larger project to upgrade a 12.5-mile segment of this corridor. The two-lane road carries over 10,000 vehicles daily, including numerous trucks. The realignment will reduce the curvature on a dangerously sharp curve with poor visibility, retaining a town green while providing more parking for downtown businesses. A local steering committee worked with the community to design a realignment of U.S. 7 through the town center, as part of a larger project to upgrade a 12.5-mile segment of this corridor. The two-lane road carries over 10,000 vehicles daily, including numerous trucks. The realignment will reduce the curvature on a dangerously sharp curve with poor visibility, retaining a town green while providing more parking for downtown businesses. A local steering committee

Examples of Vermont’s Flexible Design Standards
Examples of the “flexibility” provisions of VTrans’ 1997 design standards include:

- The standards provide for variation in lane widths for urban and village arterials (both principal and minor) from 10 to 12 feet. The guidelines note that 10-foot lanes are appropriate in “highly restricted areas having little or no truck traffic;” 11-foot lanes are extensively used, and 12-foot lanes are generally used on all higher speed, free-flowing arterials. Minimum lane widths for collectors vary from nine to 11 feet depending upon traffic volume and design speed.

- The standards state that shoulders are desirable but their width may be restricted because of available right-of-way, adjacent development, and other constraints. Shoulders of two to six feet in width, depending upon traffic volumes and design speed, are recommended on both urban and rural arterials to accommodate shared use by bicycle traffic. As an alternative, shared-use curb lanes ranging from 12 to 15 feet can be used in urban settings.

- “Special design guidelines” are provided to assist the designer in avoiding, minimizing, or mitigating negative impacts on the environment and other sensitive resources, as well as to enhance the design to fit the context of the project site. Guidelines are provided for historic/archeological resources, natural resources, recreational resources, scenic resources, village or city entrance considerations, and economic vitality considerations. For example, the guidelines state that speed management strategies may be applied at entrances to towns, villages, or cities through roadway design, signage, and other corridor treatments. Reductions in standards consistent with these guidelines may be pursued in accordance with VTrans design exception policy.

- Horizontal curves below the stated design speed (up to 10 mph for arterials or 15 mph below for collectors) may be used without design exception, where necessary to avoid and/or minimize disturbance of historic, archaeological, scenic, natural, or other resources.

has met with VTrans on a bimonthly basis to guide the project, and residents who were initially suspicious of VTrans have become supportive as they realize that the agency is working to address the town’s concerns.

Success Factors and Lessons Learned

Although adopted in 1997, due to the multiyear time scale of project development Vermont’s flexible design standards are only beginning to be reflected in built projects. Success is already being demonstrated, though, by greatly increased acceptance of roadway project designs which are now moving forward to construction. VTrans staff note a number of factors that have led to the successful adoption and implementation of their flexible standards.

Codify standards into law or regulation. VTrans staff note that internal support for adopting and applying more flexible design standards was far from unanimous. In Danville, a five-person “minority report” rebutted the proposed design with concerns about shoulder widths and other issues. Adopting the standards as legislative rules, however, helped to institutionalize the standards, as engineers uncomfortable with the standards noted that they would “play by the rules” once they were passed. At the same time, the legislature passed a “hold harmless” provision to ensure that design engineers would not be held liable in any legal proceedings related to the flexible standards.

A public process is critical. The extensive public involvement process taken in Danville ensured that people felt that their ideas as well as their concerns were being heard. The involvement of an artist meant that aesthetic issues could be creatively addressed and that community members felt that the project would enhance the community not just from a transportation and safety perspective, but also strengthen its historic character and thereby support downtown businesses. An additional benefit of the public process was that people increasingly came to understand the function of the roadway, design issues, and other concerns of agency engineers. VTrans’ Rogers notes that once people understand these issues, they start to accept some design tradeoffs that they would not otherwise have accepted. According to Rogers, as a result of the extensive community involvement in Danville “every member of the town feels like they own the project.”

Recognize the unique needs of each community. A significant motivation behind the State’s flexible standards is the recognition that “one size does not fit all.” While some level of consistency in roadway design is important, consistency can be achieved without imposing a uniform standard on each community. Appropriate designs that address both safety concerns and community character can be developed through discussion between state highway engineers and community interests. In Brandon, preserving space for the town green – the location of many community events – was important and a design compromise was reached that would allow this preservation to occur even while the state highway was realigned.

Resources

Vermont Flexible Design Standards
http://www.aot.state.vt.us/progdev/standards/statabta.htm

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The realignment of U.S. 7 in Brandon will fix safety problems while leaving area for a relocated town green.

An additional benefit of the public process was that people increasingly came to understand the function of the roadway, design issues, and other concerns of agency engineers.
The New Jersey DOT’s context-sensitive design program is one of a series of initiatives identified in 1999 by an agency implementation team established to support the State Development and Redevelopment Plan. The Department began pursuing CSD approaches on specific projects earlier in the 1990s, and formally adopted a CSD policy in 1999 as a foreword to the state highway design manual. The policy notes that NJDOT’s mission is to improve the overall quality of life in New Jersey, and that mobility and safety are only part of this picture.

Beginning in 2000, the Department sponsored a three-year training program that reached 800 people. The program, which consisted of five-day sessions with 30 to 35 people each, was conducted by Project for Public Spaces (PPS), the Voorhees Transportation Policy Institute at Rutgers University, and Oldham Historic Properties, Inc. The training program emphasized respectful communication, negotiation, design flexibility, and liability. It also emphasized the concepts of placemaking, defined by PPS as “helping communities turn their lifeless and unwelcoming spaces into great places where people want to be.” Richard Dunne, chief of design for NJDOT, notes that the training was especially important for engineers taught to focus on traffic issues. Remarks Dunne, “It’s amazing how quickly engineers change their paradigm when you put them in the place of schoolchildren trying to cross the street.” NJDOT is now continuing to conduct CSD training through a contract for a three-day course with the FTA’s New Jersey-based National Transit Institute.

The department’s CSD approach has given communities more say in the design of state highways with moderate traffic volumes that also serve as the community’s main street. A successful example is the redesign of State Route 71 through the Borough of Avon-by-the-Sea, a resort community along the New Jersey Shore. This road, the community’s traditional civic center and business district, for a long time had been four lanes through the borough but two lanes in the adjoining communities. The width of the road encouraged traffic to speed through the town and also made it difficult for pedestrians to cross from the community’s residential area to many of its civic destinations, including the city hall, high school gymnasium, and post office.

The town approached NJDOT about reducing the number of lanes on SR 71, ultimately helping convince the Department to participate and fund the project by offering to pay for design activities out of its own budget. An advisory committee, comprised of business, residential, elected, and environmental interests from the borough, worked with the State on a design that includes two 12-foot travel lanes, four-foot bicycle lanes, and a 12-foot median with turn lanes, within the existing curb-to-curb width. The design also includes marked pedestrian crosswalks and sidewalk reconstruction with new street trees. By making Main Street more attractive and calming traffic, the...
reconstruction – which was completed in 2003 – has supported the borough’s efforts to increase private investment downtown, helping to stimulate reinvestment in downtown businesses, conversion of second-floor space into residential units, and construction of apartments and condominiums on vacant properties.

Success Factors and Lessons Learned

NJDOT staff note that their efforts to introduce CSD principles over the past five years have been successful, although the agency continues to work to gain understanding and acceptance of these principles, both within and outside of the agency. Agency staff as well as local communities have identified the following success factors and lessons learned for other agencies, both from the agency’s overall CSD program and from the SR 71 redesign in Avon.

Involve agency staff. NJDOT notes that one of the reasons for the successful implementation of its CSD policy has been the involvement of a wide range of agency staff from different departments, via the CSD Implementation Team. Maintenance staff were brought onboard early in the process to discuss how context-sensitive designs could minimize maintenance impacts – for example, through the use of flush or textured medians instead of curbed medians with grass. Even so, the large size of a state agency such as NJDOT can pose a challenge both for communities hoping to work with the DOT and for agency staff working to introduce and disseminate new practices internally. In the case of the Avon SR 71 redesign, the leadership of former Governor Christie Whitman – an avid bicyclist and occasional visitor to Avon – helped bring about a meeting between the town and various NJDOT departments, providing a forum for all departments to air their concerns and for the agency to move forward on reaching a design solution with the borough.

Share costs. One reason for the successful completion of the SR 71 project was cost-sharing. While the DOT funded reconstruction of the roadway from its local aid program, Avon agreed to pay for the design of the roadway (a cost of approximately $250,000), as part of its capital improvement program. The borough also agreed to maintain landscaping over the life of the project. Especially when the context-sensitive design may be more expensive than a traditional reconstruction project, cost-sharing can demonstrate to the state agency that the municipality is serious about wanting the improvements and perceives that they will materially benefit from the improvements. By taking responsibility for any additional maintenance costs – such as landscaping of the median – a municipality can also assure the State agency that the design will not become a long-term burden on the State.

Pay attention to details. In Avon, the advisory committee and the State spent considerable time discussing the details of the street design, including the type and size of trees,

Context Sensitive Design in New Jersey’s Roadway Design Manual

NJDOT’s Roadway Design Manual addresses context-sensitive design principles directly in the foreword to the manual. For example, the foreword states that:

- “In conceiving, scoping and designing projects, the NJDOT will consider the needs of all road users and neighbors.”
- “The designer should carefully consider the appropriate target speed for a roadway section based upon land use conditions, building densities, the environment and the disparate needs of users of the facility.”
- “The designer may proactively alter the existing geometry and roadway environment in an attempt to decrease the operating speed and enhance the safety of pedestrians and bicyclists, or the viability of downtown or residential areas, in balance, not competition, with the safety of motorists.” Examples of such elements include traffic calming, narrow lanes and shoulders, and curvilinear alignments. (Note that NJDOT will generally consider traffic calming elements only when the design speed is 35 mph or less.)
- “Highway designs must reflect a thoughtful understanding of the context of the project, in addition to adherence to standards and guidelines.”

design of lampposts, median material, and other issues. Columnar cherry trees with a narrow diameter were planted to overcome the DOT’s concerns about placing trees in the median of the street. An historic lamppost design with breakaway poles was used for lighting. The City wanted to avoid planting grass between the sidewalk and street because it knew that not every property owner would monitor and care for the grass, but used strips of red brick pavers to break up the monotony of a continuous swath of concrete. Without the close involvement of the community, these design issues might not have been satisfactorily resolved. Instead, the time spent on design details resulted in a design that was acceptable to the DOT, attractive and affordable to the community, and should continue to look good 20 years into the future.

Address liability concerns. NJDOT notes that an agency that pays close attention to liability when implementing alternative design practices should not expect to experience significant liability-related problems. According to NJDOT’s Dunne, it is important to find a good rationale for the alternative design treatment and to document this rationale. In the past 25 years, the department notes that it has been sued only once for a project which had a written design exception on file. Liability training, provided by attorneys, is a critical part of the Department’s overall training on CSD practices.

Revisit university curricula. NJDOT notes that its CSD training activities have been more necessary and also more challenging because young engineers graduating from college are – for the most part – not yet gaining exposure to CSD principles. Curricula have not addressed the engineering, safety, or liability issues related to CSD, or the public involvement process required to support CSD. Planners and architects typically understand these principles but not engineers. The Department notes that a shift in mentality may be needed within college and university engineering departments, similar to the shift in mentality that the Department is working to effect with its own staff and consultants.

Resources

**New Jersey Context-Sensitive Design Program**
http://www.state.nj.us/transportation/eng/csd

**Roadway Design Manual**
http://www.state.nj.us/transportation/eng/documents/rdme

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Euclid Avenue Goes on a Diet

The context-sensitive redesign of New Jersey State Route 71 in Avon is a type of project also known as a “road diet.” Road diets, which involve reducing rather than increasing the number of traffic lanes on a road, are increasingly being applied across the country as a way of enhancing bicycle and pedestrian mobility and safety and calming traffic in densely developed urban districts. A common form of road diet is to take a four-lane cross-section with no turn lanes or median and convert it into a three-lane section with bicycle lanes, where the center lane is a combination of median and/or left turn lanes. If applied under the right circumstances, road diets can also increase safety for motor vehicles, while having little negative impact on congestion, by providing a protected location for left turning vehicles.

Euclid Avenue in Lexington, Kentucky is the first example of a road diet applied in that state. This 52-foot-wide road, which serves residential and small-scale commercial development adjacent to the University of Kentucky and near downtown Lexington, was originally four lanes (two 12-foot curb lanes and two 12-foot inside lanes) with a four-foot concrete median. A high volume of left turns was creating safety and congestion problems, leading the Kentucky Transportation Cabinet to propose a five-lane cross-section (two 11-foot curb lanes, two 10-foot inside lanes, and a 10-foot two-way left turn lane). Adjacent residents and business owners reacted negatively to this proposal, as did the City of Lexington which saw the design as conflicting with its desire to improve conditions for bicyclists and pedestrians. In the late 1990s, Cabinet leadership worked with FHWA Division staff to propose an alternative three-lane design (12-foot travel lanes and a 14-foot median/left turn lane) with seven-foot bicycle lanes. A professor at the University of Kentucky simulated the traffic impacts of this design and found that the three-lane alternative would perform as well or better than the existing roadway, and would also perform well under future traffic conditions. Motor vehicle safety would be improved as travel lanes are moved away from curb, fixed objects, and parking.

The City and local stakeholders also agreed that the proposed three-lane design was much more appropriate given the urban character of the street. The Cabinet proceeded with the revised design plans, and the reconstruction and restriping of Euclid Avenue was completed in 2003. As predicted, traffic congestion has not been a problem, and the redesign appears to have reduced the number of crashes. The bicycle lanes are used by university students as well as other travelers, and are part of a growing network of bicycle facilities within the City of Lexington.

Resources

**Euclid Avenue Road Diet**

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Wisconsin:
DOT Guidance and Participation in Local Comprehensive Planning

Description
Wisconsin is fortunate to have an extensive network of two-lane and four-lane roads crisscrossing the State to provide mobility for rural residents and support economic development. Yet the very same development that occurs along these roads sometimes compromises their function, as turning traffic creates safety hazards, leads to congestion, and eventually requires stoplights that impede traffic. These issues are especially acute on state highways on the fringes of cities and towns, where commercial development has occurred most rapidly in recent years. To preserve mobility and safety, ensure environmental protection, and support state-led smart growth efforts, WisDOT has begun over the past five to 10 years to work with communities on land use issues, improving the linkage between transportation planning, project development, and land use decision-making.

A major impetus for WisDOT’s involvement in local comprehensive planning came with the 1999 passage of state legislation requiring communities to develop comprehensive plans and adopt land use regulations consistent with the plan by 2010, and providing financial incentives to develop plans with specific smart growth objectives. Even before this time, however, WisDOT recognized the important connection between transportation and land use. In 1998, the agency prepared a report entitled “Evaluations of WisDOT Programs with Relationships to Land Use, Land Use Planning and Land Regulation Authority,” which found that over 40 agency programs have a direct, indirect, or planning-related impact on land use. Two senior manager meetings focusing on land use were held in 2000. Discussions at these meetings and in other venues formed the basis for a land use vision statement, guiding principles, and set of land use goals. In 2001, a multidivisional working group in WisDOT met to discuss issues such as how local land use choices affect state transportation facilities, how WisDOT influences local land use choices, and how WisDOT could improve coordination between transportation and land use planning.

To implement the findings and recommendations from these discussions, WisDOT has undertaken a variety of activities focused on policy development, training, and outreach. These activities have included:

• Development of a Transportation Planning Resource Guide for local communities, intended to provide transportation planning information to support their comprehensive planning process and assist in making transportation-related decisions;
WisDOT has developed internal policy guidance and conducted training to help District staff understand their appropriate role in working with communities on land use issues.

- Preparation of guidance documents and training for District staff on WisDOT participation in local comprehensive planning; and
- Preparation of guidance for districts on corridor plans, explaining why corridor plans are beneficial, when and how to conduct them, and how they should be funded, used, and implemented; and identifying corridor planning needs as part of the statewide plan update.

The Transportation Planning Resource Guide discusses how to develop the transportation element of a comprehensive plan and how to consider state-level transportation issues in comprehensive planning. The resource guide supports the State’s comprehensive planning legislation, which requires that each municipality’s adopted plan contain a transportation element. To ensure that the guide met the needs of local communities, WisDOT formed an oversight steering committee that included representatives of local governments, regional planning commissions (RPCs), MPOs, Federal and state agencies, an economic development group, and an environmental group. WisDOT has worked to ensure that the published guidebook has been widely distributed, mailing copies to every local unit of government in Wisconsin as well as to RPCs, MPOs, and WisDOT’s District offices, and giving presentations throughout the State. WisDOT has posted the guidebook on the Internet, where the document receives more hits than any other document on the WisDOT planning web site.

In addition to reaching out to local governments, WisDOT has developed internal policy guidance and conducted training to help District staff understand their appropriate role in working with communities on land use issues. According to program and planning analyst Kassandra Walbrun, the agency used to be viewed by local government staff and elected officials as the “800-pound gorilla” that simply built transportation projects wherever it wanted. Today, Walbrun notes, state agency staff are committed to partnering with local jurisdictions on transportation planning and related land use issues. WisDOT’s opportunities to interact with local jurisdictions have focused especially on the local comprehensive planning process and on the state-led corridor planning process for major highway corridors.

District staff are provided with information on the status of local comprehensive plan development in their areas and are encouraged to work with local governments to provide input into these efforts. Because staff time is limited, staff are asked to prioritize efforts that have potentially significant implications for the state highway system – for example, a community in which a bypass is being studied or where land use issues are significant.

As part of a corridor planning process for State Highway 21, an important east-west corridor connecting Oshkosh and the Fox Valley to western destinations, WisDOT District 3 staff have worked with communities along the highway to ensure that protections are implemented to contain strip commercial development and preserve right-of-way for future expansion or realignment. WisDOT attended meetings and reviewed and commented on plan drafts for both the Town and Village of Omro, west of Oshkosh, as part of their local comprehensive planning efforts. The Town identified parallel and local street connections and recommended zoning around interchanges to support commercial development. WisDOT District 3 planner Jenny Cavanaugh. While not all of WisDOT’s suggestions were incorporated into the plan, the agency feels that its involvement was nonetheless beneficial in helping to ensure that issues of mutual interest were resolved.

“Omro is planning for what they want, not what they get stuck with.”
A 48-mile corridor study of State Highway 26 in southeastern Wisconsin included extensive community involvement to ensure that communities both support and will benefit from planned road improvements. The corridor includes proposed bypasses around the Cities of Milton, Jefferson, and Watertown. WisDOT established advisory committees in each community, with separate committees comprised of local officials and of citizens to ensure that citizen concerns could be discussed without political implications. Discussion issues related to land use and comprehensive planning included:

- How the community expects or would like to grow;
- What development the community would like to see around interchanges, and where interchanges can best be sited to support development objectives;
- Environmental concerns, including sensitive natural areas and historic sites that should be protected or avoided;
- What types of land use strategies can be used to encourage development in desired areas while protecting other areas; and
- What local street and pathway connections are needed to ensure that community connectivity is maintained.

In Jefferson, residents and local officials agreed that a bypass was needed in order to divert trucks from the town’s main street. Both the City and the surrounding Jefferson Township also agreed that a vital downtown was important to the community, and that development was not wanted outside of the city boundary. The stakeholder committees agreed with WisDOT that the bypass would define the edge of development, and that zoning controls and limitations on sewer extensions would be enacted to restrict development outside of the bypass corridor. Funding for the bypass has been approved, and construction could begin in the Jefferson area as early as 2008. In Watertown, city and town stakeholders developed recommendations for protection from development around the proposed interchange of State Routes 26 and 19. A preferred alternative for the corridor has been selected that includes improvement of the existing route to a four-lane highway.

The U.S. 12 corridor west of Madison provides an example of an earlier effort by WisDOT and local communities to develop land use protections at the same time as the road was being widened to improve safety and capacity. In a memorandum of agreement with Dane County adopted in the mid-1990s, WisDOT agreed to fund a corridor plan for the highway in Sauk County – just west of Dane County and the Madison metropolitan area – to preserve adjoining areas as farmland or natural habitat. Aided by “smart growth” planning grants from the state, communities in the corridor collaborated to jointly develop comprehensive plans, which reflect the results of the U.S. 12 corridor study and anticipate future improvements to the U.S. 12 corridor beyond the Dane County line.

Success Factors and Lessons Learned

WisDOT’s efforts to work with local communities on land use issues are beginning to affect local plans and policies in a way that should benefit the state agency as well as the communities. In addition, WisDOT’s corridor projects are incorporating increased public input that will help ensure that the projects minimize negative impacts on the affected communities and their environment, while maximizing the mobility, economic, and safety benefits to each community. Success factors and lessons learned from Wisconsin’s experience include:

**Be a partner, not a gorilla.** WisDOT is working hard to build trust with local communities who haven’t always agreed with WisDOT’s policies and who fear the state will intervene...
The City of Middleton, a 150-year old farming community just west of Madison, is increasingly becoming a well-to-do suburb and a center for high-technology business. U.S. 12, which bypasses Madison to the south as a limited-access highway, is undergoing reconstruction and widening from Middleton west to the Dane County line to address critical safety issues. The improvements include a limited-access bypass around an existing four-lane roadway segment lined with strip commercial development, that serves as one of the City’s primary commercial areas. The City wanted to maintain a commercial identity for the “de-commissioned” roadway as well as ensure that local road access from U.S. 12 would strengthen Middleton’s nearby historic downtown. The City developed a Corridor Redevelopment Master Plan that established a concept for future land uses, roadway function and design, urban design characteristics, and non-motorized connections. The City established a tax increment finance district to pay for an off-ramp, roundabout, and local road linkages that would provide convenient access to the old highway and the downtown while slowing traffic.

Middleton also worked with the Town of Springfield – a neighboring rural community – to agree on goals, objectives, and planning strategies for the undeveloped areas in western Middleton and Springfield. “Both communities knew that with the U.S. 12 improvements, there would be change,” observes Springfield Town Clerk Cheri Endres. “Almost every day somebody was coming to Springfield and asking about the parcels along the road.” Middleton agreed not to extend its sewer system into the northwest portion of the City, thereby reducing development pressure on agricultural land. In its comprehensive plan, adopted in 2002, Springfield defined a small area in its southeastern corner to accommodate projected 20-year growth, and designated most of the rest of the town for exclusive agricultural zoning, which allows only one dwelling unit per 35 acres. The town’s plan requires approval by Dane County, and any proposed zoning changes must be approved through a minimum two-step process with the town and four-step process with the County.

Twenty miles west along Highway 12, the Villages of Sauk City and Prairie du Sac and the surrounding Town of Prairie du Sac – bucolic farming communities situated on the Wisconsin River – are anticipating longer-term transportation improvements and development pressures. An agreement between WisDOT and Sauk County precludes the widening of U.S. 12 west of the Dane County line before 2020. The communities, though, have collaborated on a study of bypass alternatives for U.S. 12 and a comprehensive plan for the Sauk Prairie area. The study recommends a preferred alternative and access points. The comprehensive plan recommends appropriate locations for highway-related development, signage and marketing strategies, and zoning and design ordinances that each community can adopt to maintain the attractiveness of downtown. Implementing these strategies will help to ensure that the villages are able to take advantage of the economic opportunities provided by traffic along the highway.

Take a long-term perspective. WisDOT’s corridor planning studies are addressing transportation and community needs at a general level, 10 or 20 years before transportation

“People came to understand that all of the communities are responsible for collectively managing the corridor.”
improvements will become a critical issue, and prior to the stage of proposing specific projects and completing environmental documentation. Corridor studies now underway are taking advantage of the opportunity provided by the State’s recently adopted comprehensive planning legislation, which means that many communities throughout the State are in the process of developing comprehensive plans – providing a critical opportunity for WisDOT to provide input to these plans. The long-term nature of the corridor studies should also help communities anticipate and plan for the impacts of proposed transportation improvements, rather than reacting to them as they are implemented.

Recognize the role of consultants in local planning. WisDOT staff note that it is important to build relationships with consultants, as well as local governments, given the supporting role that consultants often play in local plan development. Smaller communities in particular usually do not have the resources to hire a full-time planner and rely almost completely on the expertise of the consultants hired to develop a comprehensive plan. In addition to distributing the Transportation Planning Resource Guide to consultants, WisDOT staff have made presentations at conferences and professional meetings such as those sponsored by the Institute of Transportation Engineers. WisDOT notes that some consultants have been particularly good at inviting WisDOT to meetings and appreciate WisDOT’s input.

Ensure adequate staffing and technical expertise. Both WisDOT and local communities note that their land use planning efforts can be hampered by budget constraints that limit the availability of staff with the appropriate knowledge and time to dedicate to land use issues. From a state perspective, it is important to ensure that efforts to provide training and guidance are adequately staffed and that district staff are allocated sufficient time to work with communities on land use issues. From the perspective of the municipality, ongoing expertise is needed not only to develop a comprehensive plan but to ensure that it is successfully implemented. Simply hiring a consultant on a one-time basis to develop a plan, without establishing any in-house or on-call expertise or building local commitment to the plan, makes it more likely that the plan will be forgotten or ignored once development pressures arise. Small communities also may not have a clear understanding of how to implement development controls, such as conservation easements or design review, and therefore may miss critical opportunities for affecting development proposals.
Resources

**Wisconsin DOT Transportation and Land Use**
http://www.dot.wisconsin.gov/localgov/land/index.htm

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The Dallas-Fort Worth metropolitan area, or “Metroplex,” is a rapidly growing region of nearly six million inhabitants, with population forecast to increase to nine million by 2030. Aided by an extensive system of freeways and tollways, residents travel an average of 45 miles per day (69 in outlying areas with no transit service), farther than the residents of almost any other U.S. metropolitan area. The North Central Texas Council of Governments (NCTCOG), the designated MPO for the region, has for years been sounding the alarm that the region cannot continue to maintain current levels of mobility with the expected rate of population growth. The agency’s sophisticated travel modeling systems project that the percentage of regional lane-miles that are congested is expected to increase from 38 percent in 1999 to 54 percent in 2025, even with long-range plan improvements in place. Also, with a projected $3.1 billion transportation revenue shortfall by 2025, the region cannot build its way out of congestion.

These realizations have led NCTCOG to pursue other ways of maintaining mobility including managing travel demand, improving the efficiency of roadway operations, constructing rail transit, and reducing travel needs through land use strategies. In 2001, NCTCOG initiated its Land Use/Transportation Joint Venture Program, the objective of which is to promote “sustainable development” practices that reduce vehicle-travel. Through this program the agency made available $40.8 million in Federal transportation funds to local jurisdictions for infrastructure improvements that support sustainable development projects. Taken from the Congestion Mitigation and Air Quality (CMAQ) program and the Surface Transportation Program (STP), these funds are being used for street construction and reconstruction, streetscape improvements, bicycle paths, sidewalks, and other pedestrian enhancements.

According to NCTCOG program staff Jared White, the program is a true joint venture. The private sector provides the development project; local jurisdictions provide necessary zoning changes, regulatory flexibility, code enforcement, and the design and maintenance of infrastructure; the MPO provides infrastructure funding and planning assistance. The program is competitive and in its first round, 19 infrastructure projects were selected from a total of 54 project applications submitted by public-private partnerships. Projects were screened according to considerations such as pedestrian-friendly block structure and mix
of land uses, and had to meet at least one of three key goals: utilizing existing system capacity (i.e., in an infill area); improving rail mobility (i.e., located next to a commuter or light rail station); and promoting mixed use development. Funds also were used for planning activities, including a study of 10 potential rail corridors and a pilot education and outreach program run by the COG.

Joint Venture projects have supported projects ranging from high-density urban infill to large-scale greenfields development designed on new urbanist principles. The City of Plano – a northern suburb of Dallas – is one community that has benefited from the program, receiving $2.1 million in funding for sidewalks, street reconstruction, and bicycle network connections to support downtown redevelopment adjacent to a light rail transit station. Craig Ranch, an 1,850-acre greenfields development located directly north of Plano, is another beneficiary, receiving $2.0 million for local street infrastructure. Despite its far-flung location, this project differs from typical suburban projects in its connected street system, fine-grained mix of uses and housing types, network of open space and trails, and internal trolley circulation system that serves as a “taxi” for children as well as other residents traveling without a car.

In addition to funding incentives provided through the Joint Venture program, NCTCOG also has established the Center of Development Excellence, which conducts education and outreach, provides implementation resources, and makes awards to exemplary “sustainable development” projects. Addison Circle is one example of a project receiving an award from the Center. Located in a northern suburb of Dallas, this 80-acre mixed use project will ultimately include over 3,000 dwelling units intermixed with neighborhood parks, retail, and civic space at a net density of about 60 units per acre – more than twice as dense as the typical north Dallas garden apartment project.

Community Spotlight: Rail Transit Returns to Plano

The City of Plano, located 18 miles north of downtown Dallas, provides one example of a community that has benefited from Joint Venture program funding. The City is largely a built-out suburb, but at one time was the hub of a farming community. Its downtown core dates to the mid-1800s. Although once connected to Dallas by interurban rail service, service was abandoned decades ago with the rise of the freeway system. Enhancing the downtown’s prospects, in 1997 the Dallas Area Rapid Transit Authority (DART) promised to bring back rail service to Plano, designating downtown Plano as a station location on its Red Line light rail transit extension. The City seized the advantage provided by the impending transit service to boost redevelopment efforts. Public investments made in the 1980s beautified the downtown but failed to stimulate private investment. In 1991 the City prepared a plan that recommended preserving and enhancing downtown to create a compact, mixed-use district, and adopted zoning consistent with this plan. Drawing upon ideas from the downtown plan, when the DART service plan was announced the City selected a station site that could serve as the catalyst to redevelop the downtown center, conceptualizing a high-density mixed-use project directly connected to the station platform. DART assisted by giving the City excess land in return for infrastructure improvements, and by coordinating platform design and construction with the redevelopment process. The City cleared blighted properties near the station and built new street infrastructure. A committee made up of elected and appointed officials and residents selected a developer experienced in urban infill projects. The developer worked with the community on the design of a 234-unit apartment building with ground floor retail directly adjacent to the station. Construction of the project was completed in December 2001.

Addison Circle, a new 80-acre mixed-use project, is over twice as dense and much more walkable than typical multifamily developments in Addison Texas.
Community Spotlight: Rail Transit Returns to Plano (continued from previous page)

Although commercial space filled somewhat slowly, apartments and live-work space leased rapidly. Following the success of this first project, developers and the City have worked together on additional mixed-use projects with a goal of establishing 1,000 new residential units and 50,000 square feet of new retail space within a quarter-mile walk of the DART station platform. The Joint Venture program is supporting the redevelopment of downtown Plano by providing $2.1 million in funding for sidewalks, street reconstruction, and bicycle connections as part of a regional “veloweb” network. Planning Director Phyllis Jarrell notes that the downtown redevelopment effort and the Joint Venture-funded improvements are reconnecting the downtown to surrounding residential neighborhoods and have been widely supported by the community. She attributes this support to close involvement of neighbors throughout the redevelopment process. “We did a lot of homework with homeowner groups – they have been big supporters of what’s been going on in the downtown,” says Jarrell.


MPOs can influence land use patterns through their ability to allocate funding for infrastructure, conduct regionwide education and outreach, and establish relationships with local jurisdictions.

Success Factors and Lessons Learned

As of summer 2004, five of the Joint Venture construction projects awarded funding in 2001 were on schedule in final design, nine were on schedule in the development phase, and one had been delayed due to the delay of light rail station construction. The two planning projects have been completed. NCTCOG has been careful to ensure that projects continue to support the program’s objectives as they move forward, and has removed funding from four projects due to unacceptable design, environmental concerns, or market feasibility problems for the development. Furthermore, NCTCOG is incorporating lessons learned from the first round of the program into a second round which will award approximately $30 million in additional funding for projects submitting applications in 2005.

Agency staff have identified success factors leading and lessons learned, including:

Sustained leadership is necessary. Ten years ago, land use was not on the MPO’s agenda as a transportation strategy. It took years of staff advocacy to include land use in the tool kit of regional transportation solutions. Michael Morris, director of transportation for NCTCOG, notes that consistency in staffing was a big factor in helping bring about this shift. Over time, staff could build trust with policy officials who in turn gained confidence in their actions. With the increasing interest in land use and development issues, the COG is now discussing the idea of a regional transportation-land use visioning process similar to that being undertaken in a number of other metropolitan areas.

Incentives can create widespread interest. Even in an area such as the Dallas-Fort Worth Metroplex, with its strong property rights sentiments, MPOs can influence land use patterns through their ability to allocate funding for infrastructure, conduct regionwide education and outreach, and establish relationships with local jurisdictions. The focus on incentives, rather than mandates, was critical to the successful acceptance of NCTCOG’s efforts in the land use arena. While the Joint Venture program may not by itself be responsible for wholesale changes in development patterns, it is making innovative projects more viable and is enhancing the pedestrian and transit infrastructure within these projects to promote alternatives to automobile travel. Morris notes that the Joint Venture program has become the COG’s most popular program, with more people coming to meetings on sustainable development than on all other programs combined.

Change must start incrementally. Although the size and number of “sustainable development” projects in the Dallas-Fort Worth region is impressive, such projects still represent only a small fraction of new development. Morris notes that the region has experienced 50 years of relatively homogeneous development that houses most of the region’s six million people. The Joint Venture program selection process was intentionally set up to pick projects from throughout the region, in order to demonstrate practices in a variety of urban and suburban contexts. Once the success of these projects is apparent and both developers and municipalities gain experience with innovative practices, these practices should become more mainstream and widespread. NCTCOG recognizes that the agency cannot...
NCTCOG recognizes that the agency cannot influence or fund every project, but instead is using its leverage to create momentum within the private sector for lasting changes to development patterns.

Timing is critical. NCTCOG notes that there is often a disconnect between public sector and private sector timeframes. Programming a project to receive Federal and state transportation funds can take a number of years and involves specific environmental and contracting requirements. On the other hand, developers need speedy approval and construction of projects in order to begin generating income - otherwise they risk losing money and may withdraw the project altogether. Developers in Joint Venture partnerships have sometimes found that they cannot wait for infrastructure funds to be programmed in order to complete their project. For the 2004 applications, the COG is requiring application partners to sign letters indicating that they understand that funds will be available for projects built within two to six years - not immediately. In the long term, COG staff suggest that more flexible contracting tools are necessary for smaller, nontraditional activities (such as bicycle and pedestrian improvements) for which contracting processes established for large-scale highway construction may not be appropriate.

### Resources

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Description

Since 1999, New Jersey DOT has worked with 10 other state agencies to implement the Transit Village Initiative. Under the initiative, communities are designated as “transit villages” based on their actions to promote compact, walkable, mixed-use, and residential redevelopment in areas within one-half mile of transit stations, including commuter rail and light rail stations, bus hubs, and ferry terminals. Designated communities receive state recognition as well as priority for state funding and technical assistance.

To be designated a Transit Village, a community must have redevelopment opportunities; an adopted plan (including zoning) that supports compact-mixed-use, pedestrian-friendly development; a strong residential component to their redevelopment plans; and an expressed willingness (committed in writing) to grow in jobs, housing and population. Other criteria that support designation include preservation of historic character, support for local arts and culture, and provision of services for commuters and residents at the transit station. As of mid-2004, 14 communities throughout the State had been designated as Transit Villages. New Jersey Transit has been an active participant in the DOT-led initiative. The initiative especially complements the statewide transit agency’s efforts to provide planning assistance to communities through its consultant-based Transit Friendly Communities Program, and through a handbook it created for communities on planning for transit-friendly land use.

The cornerstone of the Transit Village Initiative is a Transit Village Task Force which is made up of a representative from each participating agency. The task force determines the criteria for Transit Village designation and reviews towns for designation.

Following designation, task force members work with their respective agencies to provide priority funding as well as technical and planning assistance to help communities in their redevelopment efforts. Transit Village Coordinator Monica Etz notes that designation does not guarantee that communities’ needs will be addressed immediately, and the actual amount of financial assistance can be small. (NJDOT budgets $1.0 million annually
The high level of publicity attracted by the designation has in turn helped to attract developers.

from the State Transportation Fund for all communities, although additional designations for infrastructure projects have been made by the governor.) The assistance of the task force has been valuable, however, in helping communities understand and navigate the various state agency processes for planning and redevelopment assistance that can be obtained through housing, economic development, transportation, smart growth, and other programs. It also has helped communities rewrite land use and zoning ordinances to support station area development. For example, New Jersey Transit and the Office of Smart Growth provided staff time to assist Morristown in creating a district overlay zone to allow mixed-use development on the site of a parking lot and issuing a request for proposals for the project.

NJDOT’s Etz notes that the Transit Village program is as much a reward for successful planning work as it is an incentive for additional efforts. Communities highly value the Transit Village designation and the program appears to be providing an incentive to change zoning and undertake other actions to promote redevelopment in transit station areas. Officials and staff from designated communities have noted that the high level of publicity attracted by the designation has in turn helped to attract developers to the town. Redevelopment efforts have been aided by renewed interest in an urban lifestyle as well as the strong marketability of sites near transit as a way for commuters to avoid traffic congestion. A developer in Rahway — a northern New Jersey city that has undertaken significant redevelopment efforts — notes that the combination of highway and transit accessibility, a renovated train station, new city facilities, and a small-scale, walkable downtown area with attractive streetscaping were all factors leading him to undertake high-density housing construction in the downtown area.

Community Spotlight – Two Decades of Redevelopment in Metuchen

The Borough of Metuchen, located in northern New Jersey on the Northeast Corridor commuter rail line, is one community that has benefited from Transit Village designation. In 2003, the state administration provided $600,000 for pedestrian crosswalk signals, traffic calming, a pedestrian bridge, new bus shelters, and bicycle lanes and racks, all of which are improving access and safety in the vicinity of the train station. The borough also was awarded a “smart growth” planning grant from the Office of Smart Growth, which will help the borough continue to plan for future growth and redevelopment while preserving the characteristics that make the community unique and attractive to its residents.

Metuchen, population 13,000, has a 20-year history of redevelopment centered on its Main Street, directly adjacent to its train station. In the early 1980s, realizing that the commercial life was being drained from the downtown by suburban development in the surrounding township, the borough sponsored a design studio led by a Rutgers University professor to assess how the town could reposition itself. The resulting “Metuchen 2001,” published in 1981, recommended returning to a “pre-World War II” notion of downtown, where people could live above workplaces, and repositioning the retail district with restaurant and specialty uses. The borough subsequently updated its master plan and zoning to allow downtown residential and mixed-use redevelopment. The borough also streamlined its permitting process for small projects such as renovations and additions, establishing a technical review committee as an alternative to full planning board review. This technical review committee includes the zoning officer and town planner as well as representatives from the planning and zoning boards, board of adjustment, and fire department.

Metuchen Mayor Edmund O’Brien notes that while the private sector led some redevelopment projects in the 1980s, the pace of redevelopment increased rapidly in the mid-1990s as pioneering investors tapped an emerging market for urban living close to transit. A 1920s-era theater building, later used as a hardware store, was converted to loft apartments with street-fronting retail. Following the success of that project, the developer rehabilitated a former department store into space for three Main Street businesses with apartments in the rear. Since then, the number of small-scale infill and rehabilitation projects has grown rapidly. Developers also have taken advantage of larger opportunities, constructing the Franklin Arms new urbanist residential project on the site of a former school. These projects have added over 500 housing units to the downtown area in the past 10 years, and city officials note that upper floor rents now compete with Hoboken.

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Success Factors and Lessons Learned

NJDOT has found the Transit Village Initiative to be a low-cost way of encouraging and rewarding transit-supportive development practices. State and local experience with the program suggests a number of success factors as well as lessons learned:

Cooperation among state agencies is important. A key feature of the Transit Village Initiative has been the cooperation of the full range of state agencies involved in supporting planning and making development decisions. These agencies are mindful of how their programs and projects can support a common objective – increasing development in transit station areas. Coordination is making it easier for designated communities to obtain assistance with specific challenges involving state agencies. It also is helping the State to discuss additional objectives, such as how to promote affordable housing in station areas in a manner that is consistent with existing state affordable housing requirements and programs.

State agencies and communities should examine permitting and approval processes. For redevelopment activities to be successful, private developers need to be confident that their investments will be profitable. Long delays to obtain permits or change zoning require developers to expend more time and effort before their project can be built and begin to generate revenue, increasing the financial risk of pursuing the project. While appropriate standards and processes need to be in place to ensure environmental and community protection, state and local agencies can facilitate development by examining their processes and looking for opportunities to become more efficient, or to make it easier to approve projects that already meet certain criteria (e.g., by adopting zoning for station areas that allows mixed-use development). Agencies also need to provide adequate staffing to ensure timely review and processing of project applications.

Reward and recognition can be valuable commodities. Funding and technical assistance provided through the Transit Village Initiative have been limited, but communities nevertheless appreciate the very fact of receiving designation. New Jersey’s governor has made the program a high-profile program; NJDOT’s Etz notes that communities believe they benefit from increased attractiveness to both businesses and residents resulting from this recognition. State recognition also helps to boost confidence that state assistance to the community will remain a priority, with continued benefits to community amenities and property values.

A key feature of the Transit Village Initiative has been the cooperation of the full range of state agencies involved in supporting planning and making development decisions.

Resources

Transit Village Initiative
http://www.state.nj.us/transportation/community/village

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Community Spotlight – Two Decades of Redevelopment in Metuchen (continued from previous page)

According to O’Brien, the borough’s philosophy has been to invest in public amenities to entice private investors to put their own money into redevelopment. Over the past two decades, the borough has applied funds from sources including the Community Development Block Grant program, its own municipal capital budget, and most recently, state grants for improvements including streetlights, street furniture, trees, and sidewalk reconstruction. O’Brien also notes, though, that public investment would not have had the same impact without the visioning process and zoning and regulatory reform that Metuchen undertook in the 1980s. Planning board review is often seen as a political and contentious process that can be difficult and time-consuming to negotiate. The technical review committee, in contrast, can make decisions on small projects more quickly without getting bogged down in politics. O’Brien observes that while the planning board was initially upset by the loss of control over some projects, the philosophy of current board members supports the borough’s streamlined permitting approach. “Mom-and-pop businesses have appreciated the more business-friendly experience they get here,” he says.
Vermont, like other states, has for decades seen businesses slowly abandoning downtowns in favor of locations at the edge of town along arterial roads. In an effort to reverse this trend, in 1994 the Vermont state legislature created the Vermont Downtown Program (VDP) to provide training and technical assistance to support community revitalization efforts. The 1998 Downtown Development Act expanded the program substantially and created a designation process for “downtown development districts.” Designated downtowns became eligible for various incentives including tax credits, grants from state agencies, and financing of transportation projects under the Downtown Transportation Fund. In 2001, the legislature created the Downtown Reinvestment Fund, which has provided grants to help communities make public improvements and rehabilitate underutilized or vacant commercial buildings in designated downtowns. The program is overseen by the Agency of Commerce and Community Development (ACCD), and the total cost of the program to the State has been about $3.5 million annually, mostly through grants and tax credits.

The VDP is based on the National Main Street program, which stresses a four point approach: organizational capacity, economic restructuring, promotion and marketing, and physical design. The Vermont program does differ from the national program in some ways, especially in its rigorous designation process and the various financial benefits provided. Designations are made by a board made up of secretaries and commissioners from state agencies of transportation, commerce and community development, natural resources, labor and industry, and human services, as well as two gubernatorial appointees and a representative of the Vermont League of Cities and Towns. To be designated as a Vermont Downtown, each town must have in place a planning commitment, a community reinvestment agreement by private and public partners, funding and resources to fulfill the agreement, a capital improvement plan, and an organizational structure for carrying out the long-term revitalization program. The capital improvement plan must address at least five issues: public transit, parking, pedestrian amenities, lighting, and public space. Plans must be action-oriented and address downtown needs comprehensively – not just through design strategies. While the 18 Vermont towns designated as of 2004 represent most of the State’s potentially eligible communities, designations must be renewed every three years, providing a strong incentive for communities to continue pursuing and developing their plans and projects.

The VDP has included a significant emphasis on transportation and infrastructure improvements that support reinvestment in housing, commercial structures, and public spaces. The 1998 act created a Downtown Transportation Fund, which has committed $800,000 annually to transportation-related projects such as sidewalks, streetscaping, parking, and intersection improvements. In most of Vermont’s downtowns, Main Street is also a state highway, and VTrans participates on the state board that meets monthly to oversee the program and designate downtowns. Designated downtowns also have the
authority to post speed limits of less than 25 mph to help calm traffic and make the downtown a more pedestrian-friendly environment.

Success Factors and Lessons Learned

Over its 10-year history, the Vermont Downtown Program has helped to revitalize downtowns throughout Vermont. The migration of businesses and residents back into these centers is helping to reduce vehicle travel as well as environmental impacts from sprawl-type development. Transportation funds for streetscape and sidewalk improvements are not only helping to make the downtowns more attractive but are making it easier and safer for children, the elderly, and residents and businesses customers of all ages to walk around Vermont’s towns. Staff from the ACCD and VTrans note a number of factors supporting the success of the program.

“Prime the pump.” A key tenet of the Vermont Downtown Program has been its “self-help” approach. The state program does not provide funding for local staffing of the program; instead, operation of the local downtown organization is provided by the community as a demonstration of commitment. State project funding requires a local match, which for the Downtown Transportation Fund is 50 percent of project costs. This ensures that the community is invested in their projects and is willing to undertake other activities necessary to leverage the state-funded investments – rather than simply relying on state handouts to undertake specific projects in isolation. It also ensures that the program’s annual budget will stretch far enough to benefit communities throughout the State. In Vergennes, citizens took the initiative to obtain designation for the City and to raise funds from a variety of sources. According to VDP program coordinator Jess Besse, “Our role is to provide seed

Community Spotlight: The Rebirth of Vergennes

Vergennes, a city of 2,600 people 20 miles south of Burlington, is one community that has leveraged VDP assistance to stimulate the rebirth of its downtown. By the early 1990s, a number of the City’s downtown storefronts were empty, and the area was unattractive and poorly maintained. Efforts to turn around the downtown began when a group of citizens launched an effort to restore the town’s opera house, which had been shut for 20 years. A Transportation Enhancements grant was one of a number of funding sources the citizens procured to restore the building, which had been damaged by vibration from truck traffic on the adjacent state highway.

According to Liz Fitzsimmons, former Executive Director of the Vergennes Partnership, once people realized they could restore the opera house, they felt they could successfully achieve much more. Business and community leaders wrote grants to conduct charrettes, community meetings, and physical and economic assessments of the town. Then they developed a plan (funded by a Community Development Block Grant) with a list of recommendations and action steps. State agency staff worked with the City and its citizenry to develop this plan, and the Vergennes Partnership was formed and a director hired to implement the plan. Designation as a Vermont Downtown helped in obtaining state funding and technical assistance to rebuild infrastructure, purchase and rehabilitate buildings, and market the town to businesses, residents, and tourists.

Ten years later, the revitalization of Vergennes has been a rousing success. Almost all of its storefronts are occupied, and vacancies fill quickly. City Manager Renny Perry notes that its efforts have coincided with favorable market conditions, including renewed national interest in small town and urban lifestyles, and “tenants are finding us.” Businesses are almost exclusively owned by local residents and tend to be specialty stores – for example, a butcher, fishmonger, and natural foods café – that are not found elsewhere in the area. Transportation improvements funded through the VDP have included reconstruction of sidewalks to provide access to businesses compliant with Americans with Disabilities Act requirements, street lighting, and enhanced pedestrian crosswalks on the main street.
Successful projects build excitement so that communities are motivated to continue fundraising and investing in themselves.”

Hold communities to a high standard. While supporting important community goals through the VDP, the State also wants to ensure that its resources are put to good use. The process for being designated a Vermont Downtown is rigorous and requires that towns address a range of key issues that are critical to revitalization. The involvement of experts from different functional areas helps ensure that the actions being undertaken by communities are appropriate and comprehensive enough to leverage private sector reinvestment.

Take advantage of niche markets. While downtowns may have difficulty in attracting large-scale retail, such as a supermarket or department store, a significant and growing market exists in many areas for smaller-scale specialty retail and entertainment uses that are attractive to the unique and pedestrian-oriented environment of a downtown area. Examples of such uses include specialty food shops, arts and crafts stores, and cafés and restaurants. Rehabilitation or construction of upper-story residential units over businesses provides customers for these businesses, reduces vehicle transportation needs, creates new office space, and provides affordable housing opportunities, especially for singles and childless couples. Live-work units provide affordable space for small businesses. Vergennes was boosted in its redevelopment efforts by its picturesque setting amidst rolling farmland near Lake Champlain as well as its proximity to Burlington, the State’s largest city. Established communities in many locations, however, have the potential to tap into the historic character of their downtown and enhance the unique sense of place that is increasingly attractive to people.

Improvements in downtown Vergennes have helped stimulate street-level shops and restaurants while spurring the rehabilitation of upper floors for residential and professional office uses.

Resources

Vermont Downtown Program
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Money and prime the pump. Successful projects build excitement so that communities are motivated to continue fundraising and investing in themselves.”
Vision

A vision for how a transportation system, corridor, region, or community should evolve is a fundamental starting point for creating complementary transportation and land use strategies. A vision can be expressed through a regional plan, community plan, or corridor plan and should be developed with a broad base of public and stakeholder input. It provides the framework for selecting appropriate transportation and land use strategies, as well as the motivation for sustained pursuit of a plan’s objectives and recommendations.

Examples of how agencies visited have incorporated the vision concept into their plans and programs include:

• Denver’s Metro Vision plan establishes a regional framework for growth patterns, transportation systems, and protection of environmental resources;
• New Jersey’s State Development and Redevelopment Plan establishes statewide objectives for the form and location of growth, providing a framework for state transportation policies and investments;
• The foreword to New Jersey’s state highway design manual describes the goals and objectives the state DOT hopes to support through its highway design practices;
• Wisconsin DOT’s land use vision, goals, and guiding principles describe the agency’s motivation and objectives for becoming involved in land use-related issues; and
• Kentucky’s Bluegrass Corridor Management Planning Handbook calls for the establishment of a vision for each transportation corridor as a basis for developing corridor management and improvement strategies.

Critical Success Factors

Site visit participants found that state and regional transportation agencies throughout the United States are successfully working with communities to improve the linkages between transportation and land use. While each agency or jurisdiction operates in its own unique context, with its own unique issues, participants were struck by the common factors underlying successful efforts to integrate transportation and land use. These “critical success factors” include:

• Vision – A widely supported statement describing the values held within a community, region, or state, and how these values should be reflected in the transportation system and development patterns;
• Leadership – A committed champion, either within or supported by top levels of management, and willingness to sustain this commitment over time;
• Partnerships – Working relationships among different agencies and stakeholder groups, as well as among different disciplines within the same agency;
• Public Process – An open and inclusive process, involving affected communities from the early stages of planning;
• Technical Resources – Dedicated and skilled staff, training and technical assistance programs, and analysis tools to assess the impacts of different alternatives; and
• Implementation Tools – Specific policy, regulatory, and financial mechanisms that ensure that transportation and development projects occur consistent with an established vision.

Vision

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Leadership

Changing practices requires leadership, and each successful project visited had at least one committed champion. Leadership is most likely to be effective if it is supported by top levels of government – the governor’s office, the head of an agency, or the head of a department. In Kentucky, the governor took the initiative to ask the KYTC and a nonprofit advocacy group to work together to resolve differences over transportation projects and develop a mutually acceptable approach to corridor planning. High-level staff within KYTC were instrumental in following through and integrating this approach into the agency’s planning processes. In New Jersey, the commissioner of the state DOT created an implementation team to support the statewide plan which had existed since the early 1990s, leading to formalization of the context-sensitive design, corridor planning, and transit village initiatives.

Leadership needs to be sustained over many years – and across political administrations – in order to change practices on a widespread basis. In Dallas-Fort Worth, a high-level MPO staff person advocated for nearly a decade for the inclusion of land use strategies in the set of solutions to regional transportation problems. Mayors, city administrators, and planners in Lakewood, Metuchen, Plano, and Vergennes have remained in office or active within their community for years and even decades, successfully continuing to pursue and realize long-established community visions. Elected officials in Denver’s Northwest Parkway Corridor have worked for nearly two decades to forge and maintain partnerships among corridor jurisdictions.

The most effective leaders instill their values and vision in others. As staff and citizens at all levels become invested in new policies and practices, new leaders emerge and initiatives can increasingly be sustained across changing political administrations and funding cycles.

Partnerships

A common theme emerging from the site visits is that the planning and development of successful projects begins with early and frequent communication with partner agencies and other stakeholders. These stakeholders include not only the affected communities and general public, but also key agencies at the Federal, state, regional, and local levels; specific departments within these agencies, including planning, engineering, and environmental staff; and other interest groups. Working collaboratively with stakeholders to define the goals, objectives and study process – rather than the lead agency dictating these factors – helps ensure that the various parties are invested in and committed to the study.

The earlier that key stakeholders are identified and included, the greater their role in shaping the process and project outcomes, and the more they are committed to achieving a successful resolution rather than fighting the project.

Different agencies and departments often work in separate spheres. Integrating transportation and land use, however, requires close communication across disciplines, agencies, and levels of government. It requires establishing institutional arrangements, such as interdepartmental and interagency coordination teams, so that these various groups can work together. In New Jersey, 11 state agencies worked to coordinate policies, funding priorities, and technical assistance in support of the Transit Village Initiative. In Vermont, state agencies have similarly coordinated to implement the Vermont Downtown Development Act. In Lexington’s Newtown Pike Extension corridor, state and local engineers and planners have cooperated to ensure that land use planning is undertaken to leverage the benefits of transportation improvements, and that the transportation project design supports local land use objectives.

It also is important, once partnerships are established, not to neglect ongoing issues and concerns held by study partners and other stakeholders. This means periodically recontacting people who have not been able to attend meetings, to make sure they do not feel ignored or come back with “surprise” concerns later in the process. It also means assessing whether important stakeholders have been left out, and if so, how they can be invited into the process. Project
Maintaining lines of communication and stakeholder relationships takes more work up front, but pays off in the long run.

Extensive community and stakeholder involvement has been a hallmark of successful projects.

management staff contacted on the site visits generally agreed that maintaining lines of communication and stakeholder relationships takes more work up front, but pays off in the long run through a smoother process with more widely accepted results. In some cases, relationships among different agencies may be become strained or even reach an impasse. In such cases, the skills of a professional mediator may be required to help agencies to address their grievances and reestablish a positive working relationship.

Public Process

The site visits reinforced to participants the value of a strong public involvement process, using both traditional and non-traditional techniques. Participants learned about many projects that had been stonewalled for years or even decades by community opposition – meaning that important congestion and safety issues went unresolved. Ultimately the transportation agency decided to undertake a more inclusive process that more fully incorporated community feedback and values. Now, these projects are moving forward with modified designs and a consensus – or at least a compromise – between project advocates and their initial opponents. The implementing agency came to realize that instead of ignoring or fighting opponents, it needed to work more closely with them to address their concerns and to develop mutually acceptable solutions.

Extensive community and stakeholder involvement has been a hallmark of successful projects such as the Newtown Pike Extension in Lexington, the Cemetery Road project in Bowling Green, and the U.S. 2 redesign in Danville. Each of these projects is completed, under construction, or has a plan that is widely accepted both within the community and by state and local agencies. Seeing how these projects have moved forward was one of the motivations for the Kentucky Transportation Cabinet and VTrans to institutionalize changes to the way in which they approach project planning and development.

Affected communities should be involved in a meaningful way, from the early stages of the project. Solutions are more likely to be accepted by community stakeholders if they emerge from a public process. Rather than coming to the community with a specific design proposal, the transportation agency should be prepared to focus first on gaining agreement on general goals and objectives to be met, as well as identifying needs to be addressed. Public workshops can help identify problems such as unsafe pedestrian crossings or congested intersections, as well as positive community attributes that people would like to preserve or enhance. Meetings that include facilitated small-group discussions and working groups are an extremely effective means of public involvement, helping people learn from each other and reach consensus together. Facilitation skills are required, though, as a trained facilitator can mean the difference between a contentious argument and a productive working session.

One of the most challenging aspects of community involvement is determining who should represent “the community,” which is rarely a single entity speaking with one voice. Membership of advisory committees should represent the spectrum of interests or viewpoints within the community while ensuring that important minority viewpoints are put forward. When establishing committees, it is of great advantage to agency staff to have a history of working in the community so that they are familiar with the various organizations and opinion leaders – or if they do not have this familiarity, to seek out people who do and ask for their advice. Outreach efforts should work to include participation from people representing the full diversity of the affected communities – including age, race/ethnicity, income, education, mobility needs, and other considerations. A diverse agency staff can help in establishing relationships, especially with racial and ethnic minority communities.
Important technical resources include:

- Dedicated staff or consultants with skills in areas such as land use planning, community involvement, and economic development;
- Assistance for local jurisdictions that may not have adequate resources of their own; and
- Modeling and analysis tools to quantify and communicate the benefits and impacts of different alternatives.

Smaller communities, in particular, may have limited or no professional planning staff resources, and can benefit from outside technical assistance provided by state or regional agencies, universities, or nonprofit groups. For example, DRCOG provides staff assistance to local jurisdictions to develop and implement plans consistent with the Metro Vision regional plan. The Vermont Downtown Program plays a critical role by providing state resources and technical expertise to communities that have demonstrated a commitment to revitalizing their downtown. In New Jersey, the Transit Village Initiative provides communities with a direct point of contact at 11 state agencies to assist them in identifying and taking advantage of Federal and state funding opportunities, and to help them navigate state development approval processes and identify technical assistance resources.

Modeling and analysis tools can assist the public as well as decision-makers in understanding the implications of different alternatives or strategies. Visualization methods are emerging as an especially important tool to illustrate the implications of different land use decisions or transportation design choices. Visualization methods can be as simple as using photographs of existing, similar developments, or can include sophisticated computer simulation techniques. Kentucky’s Bluegrass Corridor Management Planning Handbook places a strong emphasis on communicating desired corridor concepts through conceptual drawings and illustrations. Computer simulation techniques were used in Danville to show how the redesigned U.S. 2 would look through the center of town. Modeling the congestion and safety impacts of alternatives also can be instrumental in helping convince decision-makers of the viability of different alternatives. For example, a university professor’s simulation of traffic along Euclid Avenue in Lexington showed that reducing the number of through lanes, while adding a turn lane, would have little or no detrimental effect on traffic conditions – helping to convince engineers of the validity of the design proposal.

For a region or community, it is rarely enough simply to develop a land use and transportation vision, or even a plan that describes the vision in more depth. Implementation tools, including specific policy, regulatory, and financial mechanisms, are needed to ensure that both development and transportation projects occur consistent with the vision or plan. State and regional transportation agencies have a variety of implementation tools at their disposal, ranging from agency policies to design standards to funding programs. Implementation tools also are required at the municipal level to ensure that development and capital improvements occur consistent with a locally or regionally adopted plan or vision. State and regional agencies can assist local jurisdictions in identifying and applying appropriate tools. The following section discusses specific implementation tools in more detail.
Implementation Tools for Transportation Agencies

The site visits identified nine implementation tools that state, regional, and local transportation agencies can apply to more closely link transportation and land use decision-making. These tools have successfully been applied by agencies throughout the country:

- **Agency policies** – Adopting policy statements that state how the agency will address land use and related community issues in various aspects of its planning, programming, and project development processes;
- **Design guidelines and standards** – Revising roadway and other facility design guidelines or standards to allow designs to better support land use and community objectives;
- **Planning activities** – Conducting planning studies such as a statewide, regional, corridor, or area plan that encompass land use issues;
- **Investment policies and funding programs** – Establishing program priorities, project selection criteria, and designated programs to support land use objectives;
- **Staffing** – Hiring staff with expertise in specific areas related to transportation and land use;
- **Training** – Conducting internal and external training on topics that relate transportation and land use, such as context-sensitive design, secondary and cumulative impact assessment, and community involvement methods;
- **Technical assistance** – Making staff available to support local jurisdictions or other partner agencies in developing and implementing plans and projects;
- **Interagency coordination** – Entering into formal or informal relationships with other agencies to coordinate plans, programs, review processes, etc.; and
- **Process streamlining** – Revisiting transportation project development and land use permitting processes to expedite or reward projects supporting particular objectives.

Agency Policies

**Description**

Agency policies explain how an agency will address land use and related community impacts in various aspects of its planning, programming, and project development processes. Examples include the New Jersey DOT’s context-sensitive design policy, embedded in the foreword to the state highway design manual, and the Wisconsin DOT’s land use vision, goals, and guiding principles. Examples of other policy topic areas receiving considerable attention in recent years include environmental justice and environmental stewardship.
Such policies represent the agency-level equivalent of a “vision” that is established to guide the development of a community, region, or transportation corridor. They communicate to all agency staff, as well as to external stakeholders, the values that the agency espouses. Finally, they provide a framework for more specific actions.

Implementation

The concept of the policy statement should be supported by (and in fact, may initiate from) the agency head, or even the head of the jurisdiction (such as the State’s governor). The policy statement should be developed with input from high-level agency staff from all departments whose programs or activities may be affected by the policy. The involvement of selected staff at the program level can help raise any significant barriers that may be encountered to implementation of the policy. Ultimately, once the policy is adopted, outreach should be conducted to ensure that staff, consultants, and other stakeholders understand the policy and how they will be expected to implement the policy.

Agency Policies

Examples of This Tool Include…

- Agency mission statement, vision, and goals
- Policy on agency role in land use
- Policy on community objectives to achieve through roadway design or investment decisions
- Policy to support a statewide or regional growth plan
- Policies on public involvement in the planning and project development process

Questions to Ask when Deciding if This Tool is Appropriate Include…

- How do agency staff view their roles in working with communities on land use issues?
- Does my agency have a policy explicitly stating its role in land use planning and decision-making? If not, what is its implicit policy?
- What other agency policies (design standards, investment policies, etc.) may affect how we work with communities on land use-related issues?
- Would a policy statement help to establish a clear and consistent approach within the agency?

Design Guidelines and Standards

Description

In many states and municipalities, existing roadway design standards may not contain the flexibility to support community land use objectives when roads are being built, reconstructed, or restriped. The experience of Kentucky, New Jersey, Vermont, and other states adopting context-sensitive design practices has shown that state transportation agencies can indeed continue to meet mobility and safety objectives while applying roadway designs that reduce community impacts, environmental impacts, and even construction costs.

Implementation

Revising state design standards is likely to be a multiyear process involving an interagency team of project design engineers, planners, policy staff, and safety and environmental specialists. An agency policy may first be required to establish the need for revising design standards and the intended objectives in doing so. The involvement of outside interests – such as representatives of bicycle and pedestrian groups and accessibility advocates – is important to ensure that these groups’ concerns are reflected in the design standards. Once the standards are adopted, extensive internal and external training is required to assist agency staff and consultants in applying these standards.

Local standards for both road design and development (as expressed through zoning and subdivision ordinances) also are important in creating mutually supportive transportation systems and land use patterns. Standards such as excessively wide street widths can lead to higher infrastructure costs. Guidelines promoting cul-de-sacs can lead to neighborhoods that are not conducive to pedestrian travel or transit use. Low-density and single-use zoning may require automobile use even for short errands. State and regional agencies...
can support local agencies in revising their standards by conducting education, outreach, and technical assistance. Examples include the development and dissemination of a model set of local street design standards or a model subdivision ordinance.

**Design Guidelines and Standards**

**Examples of This Tool Include…**
- State roadway design standards
- Local street design standards
- Zoning and subdivision regulations
- Model codes, standards, and ordinances

**Questions to Ask when Deciding if This Tool is Appropriate Include…**
- Do the agency’s existing transportation design standards permit the application of context-sensitive principles?
- Are local transportation standards consistent with state standards? If not, are they more or less restrictive?
- Do local ordinances support or hinder development patterns that minimize transportation investment needs?
- Are local jurisdictions interested in receiving assistance with changing zoning or design standards?

**Planning Activities**

**Description**

Developing a statewide, regional, corridor, or area plan that addresses land use as well as transportation issues is the first step in crafting and undertaking more specific implementation actions. Agencies such as the Kentucky Transportation Cabinet have expanded the scope of their transportation corridor planning activities to more fully consider land use issues and solutions. Agencies such as the Denver Regional Council of Governments have developed completely new plans, such as the regional Metro Vision, that jointly address transportation and land use.

**Implementation**

A good plan is developed with a broad base of stakeholder and public input. It is the lead planning agency’s responsibility to identify and reach out to key stakeholders, and to create a public involvement process that fully incorporates feedback from affected communities. To assist in this process, the lead transportation agency should hire staff with planning skills and allocate sufficient resources to the planning process. Having skilled planners working together with engineers and environmental staff is important in bringing land use strategies and impacts into consideration, and also brings important outreach and facilitation skills to the table.

Agencies should work together to ensure that land use planning occurs in coordination with the transportation planning and project development process. This helps communities anticipate and plan for the development pressures brought about by the transportation improvements, rather than operating in a reactive mode after the project is built. Corridor planning studies in Colorado, Kentucky, and Wisconsin have initiated discussions of potential growth-inducing impacts well in advance of actually constructing the highway improvements, allowing local communities adequate time to adopt protective ordinances. For the Newtown Pike Extension project in Lexington, the city conducted land use planning simultaneous with project development.

A plan is only as good as its implementation commitments. A plan should result in a set of recommendations as well as specific action steps, roles and responsibilities, funding sources, and a timeframe for implementation. The broader the base of stakeholders involved in plan development, the more likely that these stakeholders will take responsibility for implementing the plan’s recommendations, whether they include changes to policies or regulations, specific projects, or other actions.
Investment Policies and Funding Programs

Description
State and regional transportation agencies can wield significant influence through their control over the programming of Federal and state transportation funds. General policies guiding how a transportation agency makes its investments can help support statewide or regional land use and growth objectives. These policies may include geographic and modal funding priorities. They also may include project selection criteria based on consistency of the project with stated statewide or regional land use objectives. For example, the New Jersey DOT has shifted the vast majority of its program funds away from capital expenditures for new roadway capacity, consistent with the objectives of the State Development and Redevelopment Plan, and into system preservation, operations, and other modes. DRCOG has established TIP project selection criteria that evaluate the sponsoring jurisdiction’s land use policies for consistency with the regional vision plan.

Agencies also can fund programs with specific objectives, using the funds to build specific types of projects, or as an incentive for local agencies and the private sector to undertake specific actions. Examples include NCTCOG’s Joint Venture program and Vermont’s Downtown Program. These programs can serve the important functions of demonstrating the viability of innovative or nontraditional projects, as well as leveraging local funds for improvements supporting land use objectives.

Implementation
A first step in establishing investment policies and programs is to have a guiding set of principles for what these policies and programs are to achieve, which may come from a statewide plan, a regional plan, or an agency-level policy statement. Establishing workable investment policies and project criteria is usually not a one-time activity, but requires iteration and refinement over multiple funding and project selection cycles. It can be tricky to strike a balance between supporting established land use objectives while also satisfying other concerns such as geographic equity and the interests of different stakeholder groups. A process is important that achieves buy-in for the underlying goals and objectives and connects the funding policies and criteria to these objectives. Agency leadership must realize that while some compromises are required, it may not be possible to satisfy all constituents.

A champion at a high level is needed to envision new funding programs, especially those with nontraditional objectives, and to build support within the agency’s policy board or the state legislature for the program. Careful thought is required as to how best to structure the program to achieve the desired changes and improvements. The Vermont Downtown Program, for example, includes a rigorous designation process for eligibility that requires cities and towns to take a “self-help” approach rather than simply relying on state handouts – leveraging the use of limited state funds. Regular evaluation of the project selection process as well as the overall impacts of the program is also important.
NCTCOG is incorporating lessons learned from the first round of Joint Venture awards, provided in 2001, into the 2005 project selection cycle.

**Investment Policies and Funding Programs**

**Examples of This Tool Include…**
- TIP project selection criteria
- Modal funding priorities/budget allocation
- Priority funding areas
- Regional Transportation Plan priorities
- Targeted funding programs

**Questions to Ask when Deciding if This Tool is Appropriate Include…**
- Is there a statewide or regional plan that establishes land use/growth objectives that transportation investments should support?
- Do project selection criteria currently reward projects supporting these land use and growth objectives?
- If so, have the criteria been successful at influencing the projects nominated and/or selected for programming?
- Is the agency’s current funded project mix (e.g., geographically, modally) consistent with statewide and regional land use objectives?
- Is there a need to demonstrate innovative or nontraditional types of transportation or development projects?
- Can Federal and state transportation funds be used as an inducement for local governments and the private sector to change practices?

**Staffing**

**Description**
Agencies and local jurisdictions have hired and assigned dedicated staff with skills in areas such as land use planning, community involvement, and economic development. The skill sets of a professional planner, for example, are an important supplement to engineering skill sets when designing and implementing effective methods to incorporate stakeholder and public input within the transportation project development process. Hiring staff costs money in the short run, but in the long run has the potential to save money by facilitating the development of projects that are more widely accepted by the community, more expeditiously implemented, and will reduce infrastructure investment and maintenance costs.

**Implementation**
Improving staffing capabilities may mean creating new staff positions, or it may mean ensuring that existing positions are staffed by people with the right skills. Specialized skills required only for the short term may be provided by consultants, although it is often more advantageous for the agency to develop internal staff expertise on topics that will require consistent attention. Long-term staffing commitments mean that people can build relationships and can carry projects and knowledge across political administrations. For smaller agencies or jurisdictions without the resources to hire their own staff, consultants committed to the community also can provide long-term expertise and relationships critical to helping the community implement its vision.
Training

Description
Especially for state transportation agencies, which typically have hundreds or even thousands of staff, a formal training program is critical to implementing practices to link transportation and land use. Training sponsored by NJDOT on context-sensitive design, KYTC on corridor planning, and WisDOT on considering land use issues in transportation planning reached hundreds of staff, consultants, and other interested stakeholders. A well-designed training program includes hands-on activities that engage participants in understanding why the topic is important, not just how to apply a new set of policies or practices – for example, taking participants out in the field to experience context-sensitive roadway design from the perspective of an elderly pedestrian.

Implementation
When developing the content of the training course, it is important to obtain feedback from potential participants to make sure that the level of material is appropriate to the target audience and that key questions related to their responsibilities are adequately addressed. Outside experts may be needed to supplement internal expertise, and the trainers should themselves be trained in teaching methods. It is important to continue training programs over time, to ensure that new staff receive the same background as current staff, and to continue to reach out to consultants working for the DOT and local agencies.

Questions to Ask when Deciding if This Tool is Appropriate Include...
- Is the agency lacking in key skills necessary to better integrate transportation and land use?
- Are existing staff with these skills overworked?
- Is it worth developing or expanding in-house skills in these areas, rather than relying on outside expertise?
- Are the long-term benefits of these staffing positions significant enough to warrant reprioritizing resources or finding new resources?

Staffing
Examples of This Tool Include...
- Land use planners
- Public involvement specialists
- Trained facilitators
- Economic development specialists
- Municipal transportation engineers and planners

Questions to Ask when Deciding if This Tool is Appropriate Include...
- Has the agency introduced new policies or practices that people should be familiar with?
- Are there existing policies or practices that need reinforcement?
- How effective have our training programs been at reaching the entire target audience (both internal and external)?
- How long has it been since a training program was last conducted on this topic?
Technical Assistance

Description
State and regional agencies can make staff available to support local jurisdictions or other partner agencies in developing and implementing plans and projects, as well as to support their own district-based staff. They also can develop printed or Internet-based materials and provide technical assistance, especially to smaller local jurisdictions that may lack the resources to hire dedicated staff or research issues on their own. Examples of technical assistance include the State of New Jersey making agency staff available to designated Transit Village to assist with funding, regulatory, or permitting issues; and DRCOG assisting local jurisdictions with making comprehensive plan updates consistent with the Metro Vision plan. The Wisconsin DOT’s Transportation Planning Resource Guide is an example of a document designed to assist local agencies with incorporating transportation issues into comprehensive planning.

Implementation
If staff technical assistance is provided, existing staff with the required technical skills can be designated as a point of contact, or new staff may be hired for the purpose. Guidebooks and Internet resources should be developed with feedback from potential users to make sure that their needs are met. Outreach programs are needed to ensure that recipients of the technical assistance know of its availability and know whom to contact.

Interagency Coordination

Description
To facilitate development or implementation of a plan or project, different agencies may wish to establish agreements describing the roles and responsibilities of each entity. A formal intergovernmental agreement, such as that established between CDOT and RTD, may be necessary when working relationships between agencies are limited, or when specific legal issues are at stake. A less formal mechanism such as a memorandum of understanding, which is set in writing but not legally binding, may be adequate in other cases. Coordination also may be informal – for example, agencies may agree to allow each other to participate in and comment on each others’ planning process and results. WisDOT’s participation of district staff in local comprehensive plan updates is an example of informal coordination.

Examples of topics benefiting from coordination include:
• Consistency of local growth/development policies, land use plans, and transportation plans and among neighboring jurisdictions;

Questions to Ask when Deciding if This Tool is Appropriate

Examples of This Tool Include…
• Central point person/point of contact for questions and assistance
• Designated technical resource staff
• “Circuit rider” planner
• Guidebook/handbook
• Internet-based toolbox/resource center

• Do state agency staff need assistance on specific topics such as working with communities or implementing design practices?
• If the agency currently has experts on a topic, do people know who these experts are and how to get in touch with them?
• Are local jurisdictions missing key planning and/or engineering skills, hindering the implementation of a state-supported plan (e.g., a corridor management plan)?
• Would local jurisdictions welcome assistance on topics such as revising development regulations or applying land preservation or access management tools?
• Consistency between local comprehensive plans and regional and statewide land use and transportation plans;
• State and local development and driveway permitting processes that support access management objectives;
• Project development and environmental review process requirements by different state and Federal agencies; and
• Development of transportation corridor and project plans in conjunction with land use planning covering the surrounding area.

Implementation
The first step is to identify the various agencies whose processes should be coordinated, and the persons within those agencies responsible for the process. Stakeholders should then meet to discuss the current flow/timeline for each agency’s process, steps at which coordination can be introduced, and any changes to processes required to facilitate coordination. They also should agree on the need for any formal coordination agreements to be established, including consideration of applicable state rules and regulations.

Interagency Coordination

Examples of This Tool Include…

• Intergovernmental agreement
• Interagency agreement
• Memorandum of understanding
• Coordinated development or driveway permit review process
• Cross-acceptance of plans

Questions to Ask when Deciding if This Tool is Appropriate Include…

• Are uncoordinated processes hampering the implementation of policies or plans to coordinate land use and transportation investments?
• Does the existing state and municipal legal framework support the coordination of these processes?
• Will all of the various agencies or jurisdictions involved benefit from the coordination of these processes?

Process Streamlining

Description
Both state and local agencies can revisit transportation project development and land use permitting processes to expedite or reward projects supporting particular objectives. Transit-oriented and sustainable development projects in Dallas-Fort Worth and New Jersey underscore the importance of considering private-sector timeframes when linking infrastructure improvements to development projects. For example, Dallas’ experience suggests that funding, environmental, and contracting processes for small infrastructure projects may need to be made more flexible and responsive to support specific development projects. New Jersey’s experience suggests that state and local agencies may need to work together to expedite review and permitting of development projects supporting mutually held objectives for transit-oriented development.

Implementation
When streamlining processes, it is important not to compromise important objectives served by these processes. The development approval process, for example, should not preclude opportunities for community input or compromise state and local environmental review. On the other hand, ways can often be found to reduce the number of steps required or conduct some steps simultaneously, reducing the cost and risk to developers. Projects supporting specific objectives – such as those in designated transit service areas, meeting nominal density and design criteria – may be given priority compared to other projects not meeting these criteria. Small projects (such as building renovations) may not need the same level of review as larger projects such as new construction. Having a predictable
process and consistently applied standards can be just as important to developers as obtaining speedy approval. In some cases, it may be necessary to increase agency staffing levels in order to reduce a backlog of projects.

Process Streamlining

Examples of This Tool Include...
- Expedited development permit review
- Simultaneous permitting processes (e.g., by state and local agencies)

Questions to Ask when Deciding if This Tool is Appropriate Include...
- Are excessively lengthy permitting processes causing developers to back out of projects, or not to propose projects at all?
- Do projects supporting local and regional growth and development objectives currently have an advantage or disadvantage over other projects in the permitting process?
- If permits from multiple agencies or departments are required, can they be processed in parallel rather than sequentially?

Community Spotlight: Local Implementation Tools

Implementation tools also are required at the municipal level to ensure that development and capital improvements occur consistent with a locally or regionally adopted plan or vision. While many of the communities visited had taken the initial step of developing a vision that relates transportation and land use goals and objectives, successfully carrying out this vision requires sustained effort. Examples of tools applied by communities in the six states visited include:

- Regulatory controls over development through zoning and subdivision ordinances;
- Development design review authority and standards;
- Expedited permitting and design review;
- Revised local road design standards;
- Policies regarding the extension of sewer and water utilities;
- Open space strategies such as transfer or purchase of development rights, conservation easements, and land acquisition funds;
- Intergovernmental agreements addressing land use in multi-jurisdictional corridors;
- Infrastructure finance strategies such as tax increment finance districts, developer agreements, and bonding;
- Rehabilitation and revitalization of properties through grants, low-interest loans, and loan guarantees; and
- Establishment of special taxation districts to finance ongoing upkeep and maintenance.

The state and municipal legal framework can vary significantly, influencing the set of feasible actions. The effectiveness and acceptability of different tools also will vary depending upon the local context. Therefore, it is not possible to establish a single recipe for success — instead, municipalities must develop a set of implementation tools most appropriate to local conditions and needs.
The Federal Role

FHWA, FTA, and other Federal agencies play an important role in helping to improve the linkage between transportation and land use. Some of the ways in which Federal programs and actions have aided state, regional, and local agencies visited include:

**Transportation funding eligibility and flexibility.** Federal-aid Highway Funding sources, including Metropolitan Planning (PL), the Surface Transportation Program (STP), the Congestion Mitigation and Air Quality Improvement Program (CMAQ), and State Planning and Research (SPR) have supported many of the programs and projects described in this report – including planning studies as well as infrastructure construction in support of regional and local land use objectives. Federal transit funds also have supported specific transit investments such as the light rail extension to Plano in Dallas.

**Land use- and community-specific programs.** The Transportation and Community and System Preservation Pilot Program (TCSP), administered by FHWA, was created specifically to help state, regional, and local agencies improve the linkages between transportation and land use. TCSP helped fund the Kentucky Bluegrass Corridor Planning Management Handbook and planning studies related to the Western Vermont Transportation Corridor. Other Federal programs, such as the Department of Housing and Urban Development’s Community Development Block Grants (CDBG), have played an important role in revitalization initiatives in communities such as Lexington, Metuchen, and Vergennes.

**Support for nontraditional projects.** Federal and state policies and regulations provide the framework for how Federally funded projects are undertaken – but there is often room within this framework to advance nontraditional projects. FHWA and FTA, through their Division and Regional offices, can help state and local agencies advance projects that differ from standard practice, assuming that the projects meet established safety, environmental, and other requirements. For example, the FHWA Kentucky Division office worked with KYTC to develop the “road diet” design for Euclid Avenue. In New Jersey, FHWA approved the reprogramming of MPO funds to support an alternative, lower-cost roadway investment approach in the U.S. 202/SR 31 corridor.

**Coordination and streamlining of the project development process.** Similarly, there is often room within Federal and state regulations to move project development studies forward in an expedited manner, to support growth objectives or other opportunities. FHWA and FTA, through their Division and Regional offices, can take the lead in providing regulatory flexibility to help move projects forward, while ensuring that adequate oversight is provided. For example, to expedite Denver’s T-REX project, FHWA and FTA signed an inter-agency agreement establishing an environmental documentation process that satisfied both agencies’ requirements for transportation project development.

**Training, technical assistance, and information-sharing.** The provision of training, and technical assistance, and information through Division and Regional offices and Resource Centers, publications, conferences, training courses, and other methods plays an important role in helping agencies learn about and adopt effective practices demonstrated in other areas.
Appendix A:  Locations Visited and Topics Discussed

Table A.1 lists the locations visited, agencies visited, topics discussed, and persons met with. A brief description of each topic is provided below.

Kentucky

The Kentucky Transportation Cabinet’s (KYTC) Bluegrass Corridor Planning Management Handbook was published in 2000 in response to citizen desires to preserve the character of the Bluegrass countryside in central Kentucky, while meeting mobility needs through highway improvement projects. The handbook emphasizes community participation and the incorporation of land use issues into the transportation corridor planning process. KYTC has been working to implement and institutionalize these principles in corridor planning and project development studies in the Lexington region, Bowling Green, and elsewhere in the State.

In the Cemetery Road project in Bowling Green, KYTC worked with affected residents and with the city to undertake land use planning, realign the roadway, and add pedestrian and bicycle access while widening this suburban arterial near a freeway interchange. The results ensure that the road will be protected from strip development, preserving capacity and safety and protecting the character of this gateway to the city.

A KYTC-led corridor study of U.S. 25 in Fayette and Scott Counties is examining options for widening this busy two-lane highway between Lexington and Georgetown to improve capacity and safety. KYTC is working with the counties and corridor stakeholders to minimize aesthetic impacts, craft land use strategies to manage future growth, and protect important community assets in the corridor.

The Newtown Pike Extension project in Lexington is a planned new roadway alignment through an urban, low-income neighborhood. Working closely with KYTC, the city has led a joint project development and land use planning study with extensive community input addressing roadway design, redevelopment needs, and environmental justice and affordable housing issues.

Euclid Avenue in Lexington is the first example of a “road diet,” or reduction in the number or width of lanes, applied in Kentucky. This state-owned urban arterial, near downtown Lexington and the University of Kentucky, was originally proposed to be restriped from four to five lanes. An alternative design with three lanes plus bicycle lanes was ultimately implemented, improving safety and travel conditions for pedestrians and bicyclists while creating little or no additional traffic delay.

New Jersey

New Jersey’s State Development and Redevelopment Plan has been in place since the early 1990s to direct growth into urban centers and reduce infrastructure costs and environmental
impacts related to new development. Especially within the past five years, the New Jersey Department of Transportation (NJDOT) has worked to reexamine its policies and programs and undertake new initiatives in support of the state plan.

The NJDOT has undertaken ten corridor pilot studies for integrating transportation and land use planning, focused on corridors ranging from two to 30 miles in length. NJDOT is working with local jurisdictions to develop strategies such as access management, local street networks, pedestrian and transit infrastructure, and mixed-use development to reduce demands on the state highway network.

In a joint partnership with New Jersey Transit and nine other state agencies, NJDOT has undertaken the Transit Village Initiative to focus planning and capital improvement resources in communities with transit stations. NJDOT is taking the lead on designating communities, selecting projects, and providing funding for transportation improvements. To be designated as transit villages, communities must demonstrate that they have undertaken specific actions, such as zoning changes, to spur higher-density, mixed-use redevelopment near their transit stations.

NJDOT is recognized as a leader in context-sensitive design, adopting an agencywide policy in 1999 and providing training since that time to over 600 state and local staff and consultants. State Route 71 in the borough of Avon-by-the-Sea is an example of a recently completed context-sensitive design project. The road, rebuilt within its existing right-of-way, was narrowed from four traffic lanes to two traffic lanes with bicycle lanes, a median/left-turn lane, and enhanced pedestrian crossings and streetscaping.

Vermont

In 1997, the Vermont Agency of Transportation (VTrans) adopted flexible design standards that allow state roads to be improved while maintaining and enhancing the character of Vermont’s historic villages and town centers. The design standards are leading to innovative applications in small towns located on the National Highway System (NHS). In a pioneering approach on U.S. 2 in Danville, VTrans worked in partnership with the Vermont Arts Council and local residents to develop a community-sensitive design for the road that improves vehicle and pedestrian safety while strengthening the historic character of the community.

The Western Vermont Transportation Corridor is a collaboration among state and local agencies and private interests to plan for and improve intermodal freight access in western Vermont. Potential improvements include a rail yard relocation, mainline capacity improvements, rail spurs, and improvements to connector roads between the NHS and rail yards. The improvements are intended to stimulate economic development without requiring major highway expansion, free up underutilized industrial land for downtown redevelopment, and remove truck traffic from streets running through existing town centers and residential areas.

The Vermont Downtown Program provides about $3.5 million annually in state funding, including $800,000 in state transportation funds, to support downtown redevelopment. While modeled after the national Main Streets program, it is noteworthy for its multiagency oversight committee and for its rigorous designation process for towns hoping to benefit from the program. Transportation funds in Vergennes and other communities have supported improvements to sidewalks, streetscaping, and lighting as important components in helping attract businesses and residents back to the State’s downtowns.

Texas

The North Central Texas Council of Governments’ (NCTCOG) Land Use/Transportation Joint Venture Program awarded Federal transportation funds to public-private partnerships to support sustainable development projects throughout the region. Funds are being used for local street infrastructure, sidewalks, streetscaping, and bicycle path connections in three types of developments – transit-oriented development, mixed use, and infill.
In the City of Plano, funds are being used to support street and sidewalk reconstruction in the downtown area, adjacent to a new light rail station and mixed-use residential/retail developments.

NCTCOG’s Center of Development Excellence is an outreach program to promote sustainable development principles. As part of this program, NCTCOG annually gives awards for development projects. One of the award winners was Addison Circle, a new mixed-use town center built at twice the density of typical garden apartment developments in the north Dallas area.

Since launching a regional light rail system in the 1990s, the Dallas Area Rapid Transit Authority has actively worked to attract transit-oriented development to station areas. The agency also has worked with local jurisdictions such as Plano to identify development strategies and to design stations to provide access to development opportunities.

Colorado

The Metro Vision plan, adopted in 1997 by the Denver Regional Council of Governments (DRCOG), is the Denver region’s plan for future growth and development. Metro Vision is an integrated plan addressing transportation, land use, water supply, open space, and other environmental issues. While establishing a framework of regional principles, it leaves communities with the flexibility to make their own decisions to preserve their unique characteristics and their quality of life.

In an approach that may be unique to Colorado, the Colorado Department of Transportation (CDOT) and the Denver Regional Transit District (RTD) are undertaking joint highway-transit corridor planning and project development studies in the Denver region. This approach is made possible by interagency agreements among CDOT, RTD, FHWA, and FTA establishing common objectives and allowing environmental processes to be coordinated. The joint project development process has helped facilitate transit-oriented development and ensure multimodal access within various corridor projects.

One example of Colorado’s joint planning approach is the Transportation Expansion (T-REX) Project, a design-build project involving the reconstruction of I-25 and I-225 southeast from central Denver and the simultaneous construction of light rail along the alignment. The T-REX project team has worked with local jurisdictions and developers to make CDOT and RTD-owned property available for development and to ensure that the project design supports development opportunities, as well as pedestrian and transit access, in station areas.

The City and County of Denver (a single entity) recently adopted its Blueprint Denver transportation-land use plan. Blueprint Denver identifies “areas of stability” and “areas of change,” where areas of change are located in areas with high transportation capacity and are slated for higher-density, mixed-use redevelopment. Consistent with the"areas of change” designation, the city has been working to facilitate transit-oriented development in sites, including T-REX light rail station areas. Blueprint Denver also introduces a new street classification system to relate street functions and designs to surrounding land uses.

The Northwest Parkway, a privately constructed and operated toll road completed in 2003, provides a circumferential link on the northern fringe of the Denver metropolitan area. Communities in the corridor, including Broomfield, Boulder County, Louisville, and Lafayette, cooperated not only to initiate the toll road project but also to plan for growth in the parkway corridor. Over 4,000 acres of land in the corridor were protected through open space acquisition. Development capacity has been transferred to more dense, urban clusters, including “transit villages” located with existing or planned regional transit system access.

Belmar is a major mixed-use “new urbanist” development constructed on the site of an obsolete shopping mall in the City of Lakewood, immediately west of Denver. One of Metro Vision’s designated growth centers, Belmar is part of a new cultural and commercial district that the city is developing which will serve as its downtown.
The Wisconsin Department of Transportation (WisDOT) has provided internal guidance and training for its staff on participation in local comprehensive planning. The agency also has developed a Transportation Planning Resource Guide to provide guidance for local jurisdictions on integrating comprehensive planning with local and statewide transportation planning. WisDOT district staff are working collaboratively with communities on land use and transportation issues, including access management, local road networks, and land preservation and zoning, within the communities’ comprehensive planning processes as well as within the State’s corridor planning activities. WisDOT has worked with communities in the U.S. 12 corridor to support land use planning and environmental mitigation in conjunction with improvements to U.S. 12 west of Madison, and is applying a collaborative approach in long-term planning studies for corridors such as State Route 26 in southeast Wisconsin and State Route 21 corridor in east-central Wisconsin.

### Table A.1: Locations, Agencies, Discussion Topics, and Persons Met With

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<th>Location</th>
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<tr>
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<td>Mr. R. Craig Ashby, KYTC – District 7</td>
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<td>Mr. Stuart Goodpaster, KYTC – District 7</td>
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<td>U.S. 25 Corridor Project (Fayette and Scott Counties)</td>
<td>Ms. Vickie Griggs, KYTC – District 7</td>
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<td>Mr. Greg Rawlings, Community Planner, Federal Highway Administration</td>
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<td>Mr. Brent Sweger, Office of Multimodal Programs, KYTC</td>
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<td>Mr. Joseph Van Zee, KYTC – District 7</td>
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<td>Mr. Brian Cash, Project Manager, American Consulting Engineers, PLC</td>
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<td>Ms. Dorothy Coleman, Neighborhood/Community Liaison, Newtown Pike Extension Project</td>
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<td>Mr. Doug Greene, Administrative Officer, LFUCG, Division of Planning</td>
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<td>Mr. Keith Lovan, Engineer, LFUCG</td>
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<td>Mr. Joss Besse, Vermont Downtown Program, Vermont Agency of Commerce and Community Development</td>
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<td>Mr. David Craig, Chairman/CEO, Craig International Mr. Joel Mallard, Consultant Contract Management, TXDOT Mr. Wes McClure, Special Services Engineer, TXDOT Mr. Jared White, NCTCOG Mr. Jack Wierzenski, Director, Economic Development and Planning, Dallas Area Rapid Transit</td>
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<td>Mr. Bill Haas, Planner, FHWA, Colorado Division Ms. Lizzie Kemp, Regional Transportation Planner, CDOT Mr. Larry Mugler, Planning Services Coordinator, DRCOG Mr. George Scheuernstuhl, Director, Metro Vision Planning and Operations, DRCOG</td>
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<td>Mr. Moe Awaznazzad, Project Engineer, CDOT Mr. David Backhouse, Community Planner, FTA Region 8 Mr. Jim Bumanglag, Technical Support Services Leader, CDOT – T REX Mr. Bill Haas, Planner, FHWA, Colorado Division Mr. John Muscatell, Region 6 Director, CDOT Mr. Jerry Nery, LRT Engineering Manager, RTD – T REX Mr. Dave Shelley, Manager, Corridor and Regional Planning, Denver RTD Mr. Bill Van Meter, Senior Manager, Systems Planning, Denver RTD Mr. Jeff Wassenaar, Resident Engineer, CDOT</td>
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<td>Wisconsin DOT</td>
<td>DOT Participation in Local Comprehensive Planning, Transportation Planning Resource Guide</td>
<td>Mr. Will Fleissig, Continuum Partners, Mr. Frank Gray, Planning Director, City of Lakewood, Mr. Alan Albers, Traffic Engineer, City of Lakewood, Ms. Sandra Beaupre, Planning Director, WisDOT, Ms. Jeanette Cavanaugh, Planner, WisDOT, Ms. Jonquil Johnston, Planner, WisDOT, Mr. Kenneth Leonard, Deputy Administrator, WisDOT, Ms. Tanace Matthiesen, Policy Advisor, WisDOT, Mr. Casey Newman, Section Chief, WisDOT, Mr. Marshall Quade, Planning Supervisor, WisDOT, Ms. Patricia Trainer, Policy Advisor, WisDOT, Ms. Kassandra Walbrun, Program and Planning Analyst, WisDOT</td>
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<tr>
<td>Middleton</td>
<td>City of Middleton</td>
<td>Land Use Planning and U.S. 12 Corridor Improvements</td>
<td>Ms. Eileen Kelley, City Planner/Zoning Administrator, City of Middleton, Ms. Cheri Endres, Clerk/Treasurer, Town of Springfield</td>
</tr>
<tr>
<td>Sauk City</td>
<td>Village of Sauk City, Village of Prairie du Sac</td>
<td>Land Use Planning and U.S. 12 Corridor Improvements</td>
<td>Ms. Vicki Breuning, Village Administrator, Village of Sauk City, Mr. Shawn Murphy, Village Administrator, Village of Prairie du Sac</td>
</tr>
</tbody>
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Kentucky Transportation Cabinet – p. 30.

New Jersey Department of Transportation – p. 17.