Developing the Corridor Management Plan

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Kristine M. Williams

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Developing the Corridor Management Plan

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September 1998
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ABSTRACT

Corridor planning is a mechanism used by many states, to strengthen the link between transportation and land use planning. There is a pressing need for local governments and states to coordinate land use planning within and along designated future transportation corridors, to promote orderly growth and maintain the integrity of the corridor for transportation purposes. This paper presents a suggested approach for developing a corridor management plan, based upon a review of the literature and case examples of best practices in corridor (access) management planning.
DEVELOPING THE CORRIDOR MANAGEMENT PLAN

A corridor management plan goes beyond the traditional corridor improvement study to include a detailed analysis of access problems and alternative solutions. The purpose of the plan is to evaluate right-of-way and access characteristics and propose changes to medians, site access, land use, and the supporting roadway network aimed at improving the overall safety and operation of the corridor. This paper presents a suggested approach for developing a corridor management plan, based upon a review of the literature and case examples of best practices in corridor (access) management planning.

DELINEATE THE CORRIDOR

The first step in developing a corridor management plan is to determine the extent of the corridor to be studied and to map its geographic boundaries. If the corridor under consideration traverses several jurisdictions, the cooperation and agreement of each local government should be secured at the onset. The starting and ending segments of the corridor must be clearly depicted, so that the necessary data for the region can be collected. This is most effectively done using aerial photographs, as shown in this photograph of Simsbury, Connecticut as part of the Route 10 Corridor Study (see Figure 1).

Figure 1. Simsbury-Canal Street and Route 1

Source: Route 10 Corridor Planning Study
Aerials of the entire corridor can later be supplemented with a series of closer segment photos, which illustrate the more precise physical attributes of the corridor. The supporting street network should also be included in aerial photographs, although the study-area boundaries need not encompass the entire surrounding street system. The surrounding street network is included so that missing links and desirable off-system improvements can later be identified (see Figure 2). This photograph and rendering of the Woodward Avenue Corridor Study illustrates the detailed improvements planned for one portion of the corridor (see Figure 3). The overall corridor map is shown above. The plan recommends changes in adjacent land uses, and carefully considers their impacts on Woodward Avenue, in the Detroit metropolitan area.

Figure 2. Woodward Avenue Mile Segment

**Mile-Segment: 10 MILE ROAD TO 9 MILE ROAD**

Source: Woodward Avenue Corridor Study

Figure 3. Woodward Avenue Aerial

Source: Woodward Avenue Corridor Study
SECURE COOPERATION

Identify Participants and Clarify Responsibilities

Consensus among different levels of government and community agencies is an essential component of successful corridor planning projects. As such, it is important to identify the roles and responsibilities of principal agencies early in the process, as the corridor is being selected for study. It is primarily important to clarify the agency that will be chiefly responsible for developing the plan and those that will be financially responsible for the plan's implementation. The different agencies that may be involved, whose cooperation and responsibilities should be outlined, may include the local, regional, and state governments, industrial or business entities, community groups or neighborhood associations, environmental agencies, and concerned citizens. The Woodward Avenue Corridor Study team indicated each agency's role on a matrix, with different agencies being given primary responsibility for individual tasks (see Figure 4). Corridors that extend across multiple cities or counties may need a resolution by each jurisdiction that establishes mutual intentions and defines their commitments to the plan. As responsibilities are identified, the chief administering agency should also sketch out a plan to ensure adequate public involvement throughout the corridor planning process.

Figure 4. Public/Private Responsibilities

<table>
<thead>
<tr>
<th>Public/Private Responsibilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City responsibilities may include city council, city manager, planning commission, departments of public works, and other city entities. County responsibilities may include the County Executive Office, Public Infrastructure Oversight, Environmental Protection, and other county departments.</td>
<td></td>
</tr>
<tr>
<td>Date: Woodward Avenue Corridor Study</td>
<td></td>
</tr>
</tbody>
</table>

Source: Woodward Avenue Corridor Study
Intergovernmental or Interagency Partnership Agreements

One option for clarifying roles is intergovernmental agreements or interagency partnership agreements that clearly articulate the number of agency partners, and identify the team lead or administrative agent. In one example, an intergovernmental agreement between the Colorado State Department of Transportation and the City of Durango establishes their joint maintenance of segments of the highway system with stringent access controls. The agreement confirms their mutual desire to reach a “comprehensive and mutually acceptable roadway access location plan for the purpose of meeting current and future capacity demands.” It also establishes criteria to improve public safety while providing reasonable access to local planned development, given the existing and future conditions along the highway. Through signed agreement, these two agencies consent to cooperate in their efforts to regulate access along these corridors and maintain interagency consistency in all actions pertaining to transportation planning. Similar agreements should be signed and recorded by the multiple jurisdictions through which the corridor travels. Early commitment will help ensure that the alternatives and development strategies set forth in the plan will not be constrained by municipal boundaries, but instead, by the logical boundary of the area of significance.

OUTLINE THE PUBLIC INVOLVEMENT STRATEGY

A corridor study requires participation and acceptance from the public, if it is to be successfully carried out. The administering agency will be responsible for outlining a strategy for involving the public early on in the planning process. A public involvement strategy is merely a mechanism for sharing information, airing concerns, discussing issues of importance to the community or target area, and reaching consensus on the decisions at hand. In corridor planning, the objectives of the public participation plan are also to identify a common vision and generate agreement on the future direction and development of a major public investment. Considering the diverse nature of corridor planning, which can address everything from air quality and landscaping to the nature and intensity of commercial enterprise, it is important that the participation of those involved in the study be equally as diverse. It is important in any such comprehensive public undertaking to ensure a wide range of public participation, so that the input and interests of all relevant groups are given equitable consideration.

Diversify

The diversity of public participation will help shape a plan that addresses the needs of the community at large, incorporating concerns and issues from a cross-section of citizens and business interests. Community leaders, elected officials, business owners, land owners (including absentee owners), residents within or adjacent to the study area, representatives of non-profit organizations along the corridor and interested citizens should all be invited to participate. Engaging a wide variety of interested parties and considering a multitude of opinions for the future of the corridor will help shape a realistic plan, reflecting the whole community’s vision.
Meet Early and Often

Productive meetings in which information is shared, concerns are raised, ideas are devised, and solutions are identified, will keep the participants interested and coming back for more. The frequency of public meetings will depend upon the length of time it is expected to take to develop the plan and get it adopted. A three-year endeavor may require quarterly participation, whereas a corridor plan that will be completely written, staged, adopted, and ready to be carried out within a twelve-month time frame may require bi-monthly meetings. Longer projects may require the early completion of a public involvement plan or strategy that outlines the timetable for public meetings and sketches out the topic areas for consideration at different intervals in the process. The Woodward Avenue Corridor Study used a matrix to establish desired dates of completion for different tasks (see Figure 5).

In his guidebook on Involving Citizens in Community Decision Making, James Creighton recommends a periodic audit of the public involvement plan, to determine if the timeline and schedule is more than people can commit to, or if they desire more opportunities to get involved. "Even the most experienced public participation practitioners occasionally underestimate or overestimate the level of public interest. It is important to designate review points at which you reassemble the team and assess whether your plan has too few or too many public participation activities."¹

The team developing Denver’s West Corridor Study held meetings throughout the year with different neighborhood associations to interact with residents, share information, and address concerns about the community and the corridor’s impact on the local economy.² Business owners and representatives of business associations attended these meetings and participated by sharing their specific concerns and providing input and feedback on the various alternatives being considered. Active participation in these meetings, which were publicized through the local media and through mailings, helped to secure consensus and solve concerns about the corridor.

![Figure 5. Priority Recommendations](Image)

Source: Woodward Avenue Corridor Study
Consider Various Approaches

Opportunities for involving the public and interested groups in corridor planning extend beyond traditional “public meetings.” Additional options include developing a speaker’s bureau for making presentations to interested groups; establishing a toll-free information line for progress on the corridor study or to solicit feedback from those who might not be inclined to participate in regular public meetings; holding weekend workshops and information sessions throughout the study, and particularly, at key intervals; and publishing a newsletter covering progress on the study and highlighting key elements (see Figure 6). Paid service announcements or free press releases may be another option, depending on the financial backing for the plan and the availability of local media outlets.

DEVELOP THE MANAGEMENT PLAN

After the public has been adequately invited to participate in the process, development of the management plan can commence. At this stage, the boundaries of the corridor study will have already been established, and the geographic region specifically designed and mapped. The next step is to determine the needs and overall community vision for the corridor.

Set a Mission Statement

Establishing a mutually agreed upon mission statement can be a unifying factor which helps guide and direct the development of the corridor plan. Because there will likely be a diversity of involvement, some competing interests, and individual agendas throughout the different stages of the plan, it is important that the overall goals and intentions are common to everyone involved. The mission statement will be a focal point for the work at hand. It should clearly articulate the purpose of the plan which, in the majority of circumstances, will be to develop a set of alternatives that combine land use planning, community design objectives, and environmental considerations into the transportation planning process.

With its common goal and overall objectives clearly defined, the study team will be better able to weigh the opinions, ideas, concerns, oppositions, support, and interests of the participants within the context of the mission statement. An understanding of the mission will also bolster efforts to build consensus on each of the final decisions and recommendations in the study.
The South Front Range Corridor Assessment Study, a cooperative multi-jurisdictional effort in the Denver, Colorado region, relied on this mutual understanding when selecting among alternatives, as the plan was being developed. The study team had made the early distinction between meeting inter-regional and intra-regional needs when defining its mission. Long-range solutions for inter-regional needs would not be precluded by any of the shorter-range intra-regional improvements. The mission was tested and sustained, during the evaluation and selection phase of the plan. Of the 24 alternatives that were considered and evaluated, the ability to meet long-term inter-regional needs was a first-level consideration against which each option was weighed and eliminated.

Identify and Refine the Vision

The success of the planning effort also hinges upon community acceptance and agreement of a common future vision for the corridor. Any recommended alternatives should incorporate and reflect this articulated vision. In other words, it should address local values and objectives for the area that emerge from public involvement activities. The cooperative study team that developed the Woodward Avenue Corridor Study had a vision that Woodward Avenue would become a, “premier business and institutional location in the metro area. Surrounded by vibrant neighborhoods, it will be a vital corridor where people identify with its history and want to maintain its importance into the future. Woodward Avenue will symbolize a partnership between business owners, property owners, and local governments.” Their goal was to achieve this vision through improvements in mobility, the increased patronage of businesses, new and attractive store fronts, ease of signage, variety in the number and type of commercial establishments, and aesthetic improvements to the entire area, all of which were articulated through action statements and illustrated by photographs in the plan.

The US Highway 301 Task Force adopted a broader, more sweeping vision for the corridor with an emphasis on quality of life, reflecting a collective desire to create integrated communities where residents can live and work, without being solely reliant on automobile travel. This was an ambitious vision, considering the highly urbanized nature of the region in Maryland through which this segment of US 301 travels:

“Looking to the future, we envision that residents, workers, and businesses in the US 301 South Corridor area will enjoy a desirable quality of life and a healthy economy and environment, supported by a safe, efficient transportation system. The vision includes well-designed development, concentrated in designated areas, and would enable people to choose to live near their work and services and choose from among several types of transportation. An ever-increasing number of residents and workers could then choose to travel without relying on automobiles.”

This particular study was a coordinated effort of local, regional, state, and federal government agencies, as well as private sector participation and input. The vision for compact urban development and integrated land uses was supported by plan policies that will conserve resources, encourage a tighter jobs/housing balance, and preserve the environmental quality of the region.

Collect and Analyze Relevant Data

Any meaningful planning document must carefully consider and analyze current and forecasted conditions within the study area, in order to provide a foundation from which to develop
achievable strategies for the future. For a corridor study, the present and planned future land uses, roadway and site specifications, traffic conditions, safety data and accident statistics, and community demographics all play an interactive role in shaping the relationship between development and the transportation system.

**Land Use Characteristics**

Evaluation of land use and access characteristics along the corridor will require a thorough inventory of the following: existing zoning, planned and proposed developments, existing parcel boundaries, parking lots, building footprints, driveways, traffic signals, utilities, signage, and significant landscaping within the medians and right-of-way. The level of detail will vary depending upon the scope of the study and length of the corridor.

The study map should reflect the existing land uses including current and proposed zoning districts as well as any planned changes along the corridor. Proposed land development patterns could be overlaid onto a map of existing conditions, to visually depict the potential changes in land use and traffic patterns within the designated corridor. Color renderings could be made which depict the corridor before and after development, as was done in the Woodward Corridor Study in the Detroit metropolitan area (see Figure 7). This plan used a visual overview of the existing structures, and created detailed sections of how the region could develop either with or without a management plan in place.

Trends or anticipated changes in land uses outside the designated corridor should also be analyzed to gauge their possible effects on the corridor. Such changes may include economic and policy driven forces—such as rapid commercial or industrial growth in other areas of the community or region—which could influence the jobs/housing balance within the corridor and impact current needs. In addition, the build-out scenario of the future land use plan and any proposed or planned developments should be tested against the capacity of the transportation system. This provides a basis for clarifying problem areas and exploring possible land use changes that would help to preserve the safety and efficiency of the corridor. In assessing potential build-out, the potential for redevelopment of “soft sites” (sites not developed at their full potential based upon existing zoning) should be considered. The future land use element of the local comprehensive plan may also establish local objectives for the corridor.

**Roadway and Access Design**

Careful evaluation of roadway geometrics is a critical element of developing the corridor management plan (see Figure 8). This information will help define the basis from which future design decisions will be made. Road widths are just one determining factor in selecting alternative design standards to reduce through-traffic or slow speeds. The specifications of the
driveways, lanes of travel, tapers, radii, and median design will all have a direct role in helping to
devise and evaluate among possible alternatives. The relationship between adjacent properties and
the ability of the road network to meet the current and projected future demands of each site
should also be considered carefully. The following geometric data is necessary for complete
analysis of the corridor and should be collected and illustrated on each corridor segment map:

- location and design of all streets, whether public or private;
- location and design of all service drives and frontage roads;
- location and design of all driveways;
- location and design of each intersection;
- street and lane widths;
- number of lanes in each direction;
- street, turn-lanes, and bay-taper lengths;
- dimensions of tapers;
- turning radii of each access drive;
- turning radii of all intersections (signalized or non-signalized);
- location and timing cycles of all signals;
- location and design of all medians and median-openings;

Site Design and Circulation Patterns

Site design and traffic circulation patterns of the existing developments along the corridor should
be carefully mapped and analyzed to identify existing safety hazards as well as possible trouble spots (see Figure 9). Poor circulation and inadequate attention given to site design can create a wide range of access-related hazards, as traffic is directed into and around a particular site. The location of access points in relation to sight distance and driveway spacing, should be mapped for each property along the corridor. Opportunities for joint and shared or cross access, adequate circulation for delivery vehicles, and pedestrian and bicycle pathways should also be studied. This requires that information be collected on the following characteristics:

- throat lengths of all driveways
- parking lot circulation patterns
- building footprint
- drive-through locations and pump island locations
- landscaping guidelines and aesthetics
- profile and plan view schematics to gauge sight distances
- landscaping
Traffic Data

Traffic volumes are needed to determine travel efficiency and should be illustrated graphically for each roadway segment within the corridor. Schematics should also include the traffic movements through and approaching each intersection. Data is collected on both overall through-traffic volumes (average daily trips) and turning volumes at each intersection within the study area. Speed data should be measured to illustrate the rate of travel in minutes per mile, as opposed to just the overall speed of the corridor.

Mapping crash patterns and points of conflict on individual crash diagrams in the plan can help identify relationships between poor access design and high accident frequency, or crash potential. Accident and crash statistics within the study area should be collected for a 20-year period, to portray an accurate picture of the safety of the corridor over time. Crash diagrams that depict the nature of each accident, its precise location, and the severity of the crash are best developed for at least a two-year period preceding the study. Diagrams should be included to best gauge sight-distance as a function of safety.

Careful review of crash data at different locations can make it easier to select among various improvement options. An analysis of the accident statistics at a particular interchange within Denver’s West Corridor Study suggested that nearly three quarters of those accidents occurred on one distinct leg of the interchange. Of those, most were caused by unexpected turning movements, sideswipes, and rear-end collisions, most likely attributable to insufficient spacing between intersections, poor capacity of the left-turn bays, and inadequate sight distance. This visual depiction of the Route 10 Corridor through East Granby, Connecticut, illustrates the number of different types of accidents, number of...
fatalities, and number of injury accidents for a designated segment of the corridor (see Figure 10). Visually displaying the areas of the corridor with high concentrations of accidents, different types of accidents, number of fatalities, and number of injury accidents provides compelling evidence of segments most in need of improvement.

**Community Demographics**

A successful corridor management plan involves a realistic assessment of the needs and desires of the surrounding community. To gauge this requires a clearly articulated vision, an understanding of the overall community composition, and an accurate portrayal of the socioeconomic trends and forecasts which influence travel behavior and affect demand within the corridor. As such, certain demographic data must be gathered and analyzed (see Figure 11). For instance, population and employment projections will be utilized to forecast future travel demand and expected travel characteristics. Changes in residential household size and location, and fluctuations in income levels will help identify the likely future tax base.

Careful evaluation of social, economic, cultural, and historic characteristics of an area will help develop realistic recommendations that will be more easily implemented. Defining the types of businesses along the roadway and assessing whether establishments cater to a motoring public or a destination-oriented clientele will help determine which roadway improvements will preserve the long-term viability of the corridor. Journey-to-work data should be collected and analyzed to help determine travel behaviors within the corridor. Merchants, property and business owners, customers, pedestrians, and residents should also be surveyed to help gauge local attitudes about the corridor. A survey can further identify current perceptions of what are the needed or desired improvements and can serve to assess the local willingness to accommodate change and participate in the improvement process.

The following is a listing of the demographic data that may be compiled for the study area:

**Population Characteristics**
- Median size of household
- Number of school-aged children
- Number of elderly
- Number of licensed drivers (or those about to become licensed)
- Extent of the transportation-disadvantaged population

![Figure 11. CRCOG Demographic Projections](image-url)
Economic Conditions
- Number of commercial establishments along the corridor
- Overall intensity of commercial developments
- Retail sales projections
- Average household income
- Median household income
- Percent of population above/below poverty line

Housing conditions
- Number of residential businesses within the corridor
- Overall density of residential developments
- Number of single-family houses within the corridor
- Number of multi-family units within the corridor
- Projected housing build-out for SF and MF districts

Additional Elements

The plan should identify (on maps) additional elements, such as sidewalk and roadway location and dimensions, as well as pavement conditions of each. Any increase in total paved area should be carefully considered when alternatives are being developed, as an increase in impervious surface could negatively affect the run-off of rain and have implications for storm-water retention. Other visual cues that pervade the environment of the corridor should be considered in the plan, such as billboards, existing and proposed signage, and utilities. The location of electrical lines (whether underground or on utility poles), the placement of street lights, fire hydrants, and public telephones, and the condition of each, should be noted in the plan.

DEVELOP ALTERNATIVES TO ACHIEVE THE VISION

As different recommendations are drafted for the corridor, the costs and benefits of each should be analyzed prior to final selection. This may include: a reduction in congestion; fewer accidents; improved access to transit; enhanced driver travel times; impacts on the economic conditions of the region; short-term costs to construct; long-term operation and maintenance costs; degree of environmental, cultural, or community impacts; level of public support; and extent of inter-jurisdictional support or coordination needed. The study group may also try to determine:

- Does the proposed recommendation advance the overall community character? Is there general consensus among residents, business owners, and citizens that the alternatives are viable and in keeping with the community’s vision? Small-scale opposition to a recommendation for the corridor should not prevent its inclusion in the final study, although wide-spread opposition to an alternative should be considered carefully.

- How well do the alternatives meet the municipality’s goals and objectives as stated in its adopted comprehensive land use plan? The recommendations in the corridor study should either advance the overall goals for growth and development outlined in the future land use element of the comprehensive plan, or the plan should be updated to reflect the changing desires of the community.
- Are the alternatives under consideration cost affordable? Major redesign strategies or projects for which no realistic funding source is available, may receive lower priority in the final corridor study. Rising right-of-way costs and state limitations on funding for off-site improvements are two factors to consider when weighing the alternatives for the corridor.

- What are the environmental impacts likely to arise from any of the suggested alternatives? This should include any increase in impervious surface area for storm-water and run-off considerations, as well as projected changes in air quality, displacement of natural or historic features, and aesthetics.

- What is the overall enhancement to the movement of people and goods throughout the corridor? Depending on the community's objectives, mobility may be defined in any number of ways, although certain baseline data can be useful in measuring the effectiveness of any one alternative. This may include a change in the number of users of the corridor, an increase or decreases in average daily trips, changes in average speeds (minutes per mile) and travel times, or mode shifts likely to result from the recommendation being implemented.

**SELECTING AMONG ALTERNATIVES**

Selecting among alternatives will require careful evaluation of specific criteria, used to determine the effectiveness of one alternative over another. Established criteria could be assigned a numeric weighting, and the alternatives ranked accordingly, to help define actions for the corridor that reflect the priorities of the residents, property owners, merchants, customers, and community as a whole. The project alternatives being considered for inclusion in the corridor plan may be evaluated against several factors. These may include the extent to which the alternatives: impact or encroach into the natural environment, contribute to the relocation or displacement of businesses or homes, impact historical or cultural resources, support objectives within local or regional transportation or land use plans, improve the safety of the corridor, or the extent to which they are financially feasible.

The Route 10 Corridor Study developed a hierarchical approach to developing its evaluation measures and selecting its alternatives. It first identified five levels of transportation problems, and next structured measures to appropriately solve them in order of low cost to high cost. For example:

- Reduce travel by eliminating the need for some trips entirely, through urban design, land use, or lifestyle changes, and/or by reducing the length of trips;
- Shift trips from auto to walk, bike, or transit, thereby reducing dominance of the auto and its resulting problems
- Shift remaining trips into non-single occupant autos by implementing measures to encourage ridesharing;
- Optimize highway system performance through operational improvements, such as better traffic signal timing or construction of preferential lands or buses and carpoool;
- Build more single-occupant auto capacity.

The project alternatives being considered for inclusion in the corridor plan may be weighed against either qualitative or quantitative evaluation criteria. Determining the effectiveness of the solutions and proposed recommendations may require consideration of both. For instance, the
Route 10 Study weighed the alternatives for reducing automobile dependency while increasing alternative mode use against such quantifiable criteria as: the total number of added sidewalk miles and total increase in length of multi-use trails, as well as against qualitative criteria, such as an increased number of park-and-ride lots, improved bus service by reduced headway, and changes in the mode split at specific locations.

**Structure the Implementation Plan**

The primary actions needed to carry out the recommendations in a corridor management plan typically include:

- providing information to property owners
- phasing the recommendations
- coordinating the activities of each corridor segment
- protecting the environment
- achieving inter-jurisdictional cooperation
- monitoring implementation progress

To ensure that improvements are planned, scheduled, and implemented in a systematic manner, an implementation schedule must be developed as a final component of the corridor management plan. The plan may have immediate "rapid response" components, in which smaller-scale recommendations can be easily accommodated, or it may incorporate major capital improvements, and require private contributions to carry out plan proposals. Full implementation of recommended improvements in the corridor plan could take several years and be dependent on availability of local, state, or federal funding, as well as on support and action by different levels of governments.

Corridor plans that offer primary recommendations to amend existing land use policy, and suggest fewer recommendations for complex design changes and reconstruction plans, will have a less rigid implementation schedule. In these cases, the implementation schedule may simply outline overall policy objectives and offer sample regulatory language. The final recommendations of the Transportation Study Task Force, which focused its efforts on a 50-mile stretch of the US Highway 301 Corridor through Maryland, was such a plan, and its emphasis on land-use policy recommendations was made clear through its broad implementation strategies which aimed to:

- Direct development to designated growth areas where infrastructure exists or is planned, to reduce the costs of the alternative – urban sprawl – and minimize environmental impacts;
- Attract and focus compact, mixed-use development around interchanges and transit stations to build ridership that can support mass transit and other viable modes of transportation;
- Increase the number of jobs in the vicinity of the residential areas in Southern Maryland to improve the jobs/housing balance and minimize congestion;
- Control access along US 301 to improve safety and extend roadway capacity, with an emphasis on addressing high accident locations first;
- Preserve right-of-way immediately, to ensure the viability of future transportation options.
In any case, once final alternatives have been selected and funding sources for the improvements have been identified, the steps to carry out the improvements should be scheduled. An implementation schedule and timeline could be established to phase the improvements, systematically planning:

- Preliminary engineering and NEPA documentation for projects needing federal funds;
- Design and construction of other committed or essential projects, such as those identified as needed for immediate improvements to safety;
- Design and construction of road, driveway, or median projects;
- Design and construction of pedestrian, bicycle, or transit improvements;
- Design and placement of visual amenities, including signs and landscaping features;
- Correction of deficient urban design features (detracting characteristics such as poorly maintained lots, yards, vehicles or areas not adhering to code); and
- Comprehensive zoning or land-use amendments and development policy changes.

Whatever the nature of the corridor-specific recommendations, establishing an oversight mechanism through creation of a multi-departmental group or through intergovernmental agency agreements, will help ensure and monitor the progress of the plan’s implementation. The US 301 Task Team recommends that a working group be established to oversee the efforts being undertaken to implement the plan. The appropriate local, regional, and state agency representatives, as well as interested group representatives were suggested to comprise the group, and assist in the monitoring of efforts. The group would help structure a realistic schedule through which priorities could be phased and through which long- and short-term objectives could be met. Also stressed in its implementation strategy was the need to ensure that all possible consideration would be given to minimize or avoid impacts to environmental resources, including air and water quality.

In its phased implementation plan, the East Corridor MIS recognized that full implementation of the recommended corridor investments would occur over a multi-year period, and that improvements should follow a logical sequence. Recommended projects were staged over a defined funding cycle to best address the most pressing mobility needs while minimizing shorter-term traffic problems and impacts. The study indicates that each facet of the recommended corridor investments would be subjected to the NEPA process, with its required public involvement procedures, to gauge specific environmental impacts and determine appropriate mitigation measures.

**Devise a Capital Improvements Plan**

Capital improvement programming will not only necessitate that precise improvement costs are calculated, but also that the present and expected values of land, right-of-way, and off-roadway improvements are adequately addressed and considered (see Figure 12). An important issue that must be carefully considered in the financing and capital improvements plan is that off-roadway improvements related to circulation, paving, landscaping, and so forth, are often necessary to best carry out the recommendations within the designated corridor. Capital costs should also include necessary funding for such off-roadway improvements that emerge as changes are made within the corridor. Some states prohibit highway spending on improvements outside the corridor, although other areas may allow funding for specific improvements that fall with a given distance. In some
cases, improvements within ½ mile of the designated corridor segment may be allowable, if such improvements will help improve the safety of the principal corridor.

Even under best case scenarios, project funding for improvements to the corridor is not always available. It is also difficult to predict the economic benefits to be derived from major infrastructure projects with a strong degree of accuracy, which could otherwise enhance the public appeal for funding a particular project. A multi-state corridor study had, as one of its primary considerations through a segment in Kansas, the proposal for a toll facility. Financial assessments of the project eventually determined that the proposed project was “not financially feasible as a toll facility, not self-sustaining, and not capable of approaching feasibility, even through the application of innovative financing options.”

Consider Incentives

Funding constraints are one of the barriers to achieving desired corridor management objectives. The time frame for completion of major capital improvements is typically five or more years, from concept to construction. During that time, property owners or developers may act to initiate development within the rights-of-way. This may be done to avoid perceived negative impacts from corridor proposals, or to maximize potential returns on the land, when the purchase price is eventually negotiated in advance of construction. Increasing right-of-way costs, business and severance damages, and legal fees associated with transportation improvements within the corridor can seriously impede the fulfillment of necessary improvements. The capital improvements portion of the implementation strategy should address these issues by devising several different incentives which can be offered to property owners. Sample incentives may include:

- allow a deduction of appreciated property
- enhance estate tax incentives for donation of conservation easements
- allow donation of easements for up to two years after a donor’s death.
- delay capital gains taxes of farmland if agricultural use continues after sale.

Execute Agency Agreements

One of the last stages of corridor management planning is to conduct a final public hearing to present the completed plan to the public, and make recommendations for its approval. At that time, with public agreement and acceptance of the final document, the local government body can move to adopt the corridor management plan. If multiple jurisdictions have been involved, final intergovernmental agreement should be secured and the plan should be formally adopted in each jurisdiction. Such intergovernmental agreements serve to reestablish each locality’s responsibilities for carrying out the action statements within the plan. It may also be appropriate within the context of the highway construction funding process to enter into an agreement regarding the capital improvements intended for the corridor, and develop necessary intergovernmental ordinances that confirm multi-jurisdictional commitment to the projects. Agency agreements should be signed and included with the completed plan, to reinforce the ongoing commitments and support of the agencies that have helped to shape the plan.
An update of local regulatory codes and ordinances may be necessary, to adopt specific corridor zoning requirements, or corridor overlay districts that apply additional controls on land uses within the corridor. Appendix A highlights selected case examples of areas which have updated their local codes and plans or adopted special corridor overlay planning districts to apply special design or development guidelines and ensure the appropriate future development of their high priority corridors.
CASE EXAMPLES

ROUTE 10 CORRIDOR IMPROVEMENT PLAN

Capitol Region Council of Governments (in Connecticut) — CRCOG — has undertaken several intergovernmental transportation studies of three high priority corridors in the Greater Hartford area. Of these, the 22-mile stretch of the Route 10 Corridor is the longest, and links four separate municipalities. CRCOG’s Route 10 Corridor Improvement and Management Plan was written through the cooperative efforts of a lead consultant, the staff of the Connecticut DOT (serving as the technical review committee) and by each of the different municipalities (serving as a corridor advisory committee) located along the corridor. This collaborative approach to studying the corridor involved a comprehensive analysis of existing conditions, development of alternative concepts, and formulation of specific strategies to best achieve the community’s long-range vision for the corridor.

An aggressive outreach campaign which involved the public was instrumental in helping to develop the different alternatives for addressing the traffic, safety, and future development needs of this north-south arterial corridor. The ongoing involvement of the local citizens helped shape the fundamental vision for the region, which stressed the preservation of the historical nature of the Route 10 Corridor — a feature that was not to be compromised in exchange for higher levels of service on the roadway. In other words, temporary and reasonable levels of traffic congestion were acceptable to the public, rather than accommodating the impacts of large-scale transportation improvement projects which would disrupt the small-town character and community feel of the area. The plan notes that, “Each of the Route 10 corridor towns will need to revise their respective plans of development to accommodate the plans and programs recommended in this study.”

One of the main objectives of the study was to maintain the rural character of the corridor and devise strategies to accommodate future development and travel needs, while refraining from having to widen all of the facility to four-lanes, to meet expected demand. Select roadway reconfigurations and realignments are recommended in each of the municipalities within the planning area. These are primarily recommended where reconfigurations will minimize driver confusion and improve the safety of turning movements. Some additional recommendations are made for the different municipalities to consider in the future, but which are not part of the Corridor Study Recommendations. These include the utilization of special paving materials which will contribute to the effectiveness of the traffic calming devices, which are recommended in the study.

K-150 CORRIDOR STUDY, OVERLAND PARK, KANSAS

Consistency and a strong degree of advocacy for corridor management along the K-150 Highway enabled planners in the City of Overland Park, Kansas to overcome local political pressures to waive certain access controls for a development site within its designated corridor. The K-150 Highway Corridor is a principal arterial linking three municipalities within the Kansas City, Missouri metropolitan area, and extending west into Kansas from the state line. Nearly fifteen years ago, the corridor was largely undeveloped, although it was clear from existing growth trends that this corridor location would be highly desirable for commercial and residential development pressures. To ensure future capacity of the thoroughfare at its development potential, a moratorium on rezoning and development permits was passed, to give local officials an
opportunity to adopt access controls along the corridor. Subsequent controls included a restriction on turning movements to right-turn-only, the institution of medians with breaks at half-mile intervals, and a system of parallel access roads.

As residential uses gradually began to pepper the corridor, new pressures for commercial developments arose. While the City has exhibited some measure of flexibility, adapting its access controls for development projects when extenuating circumstances dictate such need, its objective has been strict adherence to the controls identified in the corridor study. In one particular instance, a developer who sought additional access drives along K-150 employed an aggressive public-information campaign to solicit citizen support for the project and the additional driveways, asserting that, "failure of the City to approve the additional driveway would result in a large amount of additional traffic passing by their homes on the parallel access road." The result was strong public support by some residents to waive the access controls and allow the variance.

In its recommendations to the City Council to deny the waiver, the staff utilized aerial photography of the corridor, presented visual documentation of the earlier findings of the corridor study, and demonstrated the need to maintain controls, from a very consistent, well-researched position. This strong and unified approach contributed to the City Council’s ultimate decision to deny the waiver. By reviewing and defending the recommendations of the K-150 Corridor Study in its presentation, the staff also helped to reeducate members of the City Council on its goals, and its successes thus far. It also helped to enlighten those elected officials who had taken office after the study’s adoption. The staff presentation gave compelling, and visually supported arguments, which enabled the City to remain consistent in its decision to deny the waiver, despite select political pressures. This consistency, in turn, was likely a contributing factor in the decline in future requests for variances.

ENDNOTES

2 West Corridor Major Investment Study: Draft Final Report, Regional Transportation District BRW, April 1997.
5 West Corridor Major Investment Study: Draft Final Report, Regional Transportation District, BRW, April 1997.
REFERENCES


West Corridor Major Investment Study: Draft Final Report, Regional Transportation District BRW, April 1997.
