

Getting to Yes in Environmental Protection

DAVID T. HARTGEN AND KENNETH C. DRIGGERS

A process for negotiated solution building to defuse environmental concerns about major road proposals in the low country area of South Carolina is summarized. Using a neutral intermediary, the state highway department and citizens developed design solutions that achieved mobility needs and protected the environment. The method is being used on two environmentally sensitive highway projects, both of which involve highway widening and effects on wetlands and the economy. The projects are a section of US-17 in Colleton County and a section of US-21 in Beaufort County. In one case (US-21) a solution has been reached; in the other (US-17) discussions about alternatives continue, and progress is being made.

Perhaps no issue has had such a significant negative effect on transportation investment in the last 20 years as concern for environmental protection. Beginning in the late 1960s and 1970 with the National Environmental Policy Act, states were required to prepare environmental impact statements for highway projects likely to degrade the environment and to take appropriate mitigating actions for protection of environments. During the 1970s, transportation investment was substantially affected by these requirements. The initiation of state environmental action plans in the mid-1970s improved the process by which state highway departments and others jointly planned for mobility, but these documents did not, of themselves, increase concern about socioeconomic, energy, environmental, and other matters. The trend toward increasing regulation has continued into the 1980s and 1990s, with the Clean Air Act and its amendments, procedures for wetland mitigation, and the 1991 Intermodal Surface Transportation Efficiency Act. In all of these laws, procedures for ensuring the adequate protection of the environment while providing cost-effective and necessary mobility are continued. In addition, new issues, such as global warming and future energy constraints, although not necessarily addressed in federal highway law, increase concern about the environment. The conclusion is that concerns about environmental protection in highway investment are here to stay.

Many of the environmental issues relating to highway investment are contentious in nature and often involve legal actions if not outright court suits. This is particularly unfortunate since both highway departments and environmental organizations generally share the same goals. Both want to protect the environment. Generally, both want to maintain and improve mobility. If it is necessary, both want cost-effective mitigation. Both want the benefits of quality accessibility and

a quality environment. Differences exist, therefore, not in the goals but primarily on the means. The primary responsibility of highway departments is to maintain and improve transportation mobility, whereas the primary responsibility of environmental organizations is to maintain and protect environmental quality. Both sides, however, recognize the necessity for achieving the other's goals, and in all but extreme cases both sides are willing to work to make that happen.

The spirit of cooperation and coordination, so essential in all walks of human life, is particularly critical in highway project development today. Without it, very few highways can get built without a fight. The alternative is continuous litigation, delays in necessary improvements, considerable expenditures for fundamentally unproductive activities such as litigation, and ultimately solutions that satisfy no one.

This paper reviews several recent projects in South Carolina, which provide useful instructional examples for expansion to a national model. These examples suggest that, through the use of objective intermediaries, groups with initially diverse goals and holding different opinions about the worth of transportation projects can compromise on their positions and identify solutions that are effective. The paper describes how several road projects in South Carolina, contentious when initially proposed, were ultimately defused and are likely to pass through the environmental process relatively unscathed, even after considerable initial opposition. The result was compromise highway proposals that met both the needs of the highway department for improved mobility and the concerns of the community for environmental and community protection.

LITERATURE REVIEW

As might be expected, a great deal has been written to document both environmental impacts of highways and the process to be followed in preparing that documentation. The standard guidelines are legal, regulatory, and procedural documents issued by various regulatory agencies [1, 2, the National Environmental Policy Act (NEPA)], which specify precisely the items to be reviewed in environmental assessments and the process to be followed. Summaries of requirements are available in digests and texts (3-6). Each state [e.g., the New York Department of Transportation (7)] also has formal processes for environmental review. By their nature, these documents do not discuss simplified or alternative methods or interpret the procedures. Other studies (8,9) describe streamlined methods, including conversion of DEISs to FONISs, flexible public input, and planning-stage project development. Other studies (10) are essentially background analyses that identify and categorize impacts.

D. T. Hartgen, Center for Interdisciplinary Transportation Studies, The University of North Carolina at Charlotte, Charlotte, N.C. 28223.
K. C. Driggers, Palmetto Conservation Foundation, Columbia, S.C.

Measures to smooth the process of environmental review are well developed in the citizen participation literature. Yukubousky (11) and Jordan et al. (12) each describe about 50 methods to enhance citizen involvement in transportation decision making, varying from simple press/media activities to complex role playing, meetings, and surveys of opinions. In particular, Jordan et al. organize methods according to stage in the planning process, making the document useful for different clients. Citizen participation is also described fully by AASHTO (13), which focuses on the need for early open communication:

Two-way communication (between designers and citizens) is essential if communities are to view the process as legitimate and accept its results. All too often, a project is stopped after a substantial investment of time and money by the agency when it becomes clear that major alternatives and significant points of view did not receive adequate attention. Establishing a two-way communication process at the start of planning provides for a continuous constructive exchange between what could otherwise be adversaries.

A variety of models of public participation and conflict resolutions are reported in the transportation literature. AASHTO (13), for instance, identifies the essentials of effective involvement as (a) identification of citizens and actors affected, (b) two-way communication, (c) interaction, and (d) program evaluation. The role of citizen participation is to "fully inform citizens . . . and get their perspectives" on proposals, not to justify prior views of proposal worthiness or design. Meyer and Miller (6) view the decision process as muddy, confusing, and political, requiring a "bargaining process" to ensure positive outcomes. Concentrating on agency interrelationships, Schick (14) notes that very few state regulatory or highway agencies have memoranda of understanding in place for dealing with hazardous waste, preferring an ad hoc approach; there was "little evidence of teamwork" in these activities.

MODEL FOR GETTING TO YES

Figure 1(a) shows the conventional model for environmental analysis of transportation projects. In this model, departments of transportation, supported by local development groups, construction organizations, and others in the transportation sector propose improvements for transportation actions that imply by their design or location considerable negative environmental impacts. Opposition to such proposals typically comes from community activist groups initially, broadens to include elected officials and other citizens, and concludes with environmental groups taking legal action to block the project at various stages. The ultimate solution is essentially a legal "yes" or "no" answer, which prevents a compromise by its nature. If the answer is favorable to the highway department, the project is built largely as proposed and the environmental groups in the community are unhappy. On the other hand, if the result of the legal action is favorable to the environmental groups in the community, the project is typically killed and the mobility necessary for that area is often not retrievable. Essentially, therefore, both sides lose no matter what the outcome.

An alternative model is shown in Figure 1(b). In this case, rather than engage in legal confrontation, the two parties work together through an intermediary, such as the Palmetto Conservation Foundation, to develop a compromise proposal that both protects the environment and provides the necessary improvements in mobility. In this model, there is no loser, but the extent of the win is less for each side. The requirement for compromise and solution building produces a 90 percent victory for both sides, which allows each to embrace the final product.

CASES

In this section, we discuss two cases that occurred recently in South Carolina, each of which used the "intermediary" model described earlier to develop a solution to a complex problem involving trade-offs between the environment and mobility. The two cases are as follows: (a) widening of US-17 through the ACE Basin, a unique environmental coastal wetland; and (b) widening of US-21 (Sea Island Scenic Parkway) east of Beaufort, South Carolina, which had both environmental and socioeconomic impacts.

In each of these situations, we describe circumstances surrounding the project, what the transportation department and local citizen's groups initially wanted, the role of the intermediary, specific activities and steps involving projects, and finally the results of the effort.

The South Carolina low country has some of the most beautiful beaches in the country and marshlands and undisturbed forests of unsurpassed beauty. Wildlife is still abundant, as are historic plantations suggesting a life-style as old as the country itself. These attractions have prompted a development boom in the South Carolina low country. Over the past five decades, South Carolina's five coastal counties grew by 140 percent. Since 1970 alone, Horry County has grown by 106 percent and Beaufort by 69 percent. Adding to the explosion along the coast is the impact of tourism, South Carolina's second-largest industry. More than 17 million visitors augment state and local coffers with sales and accommodations taxes each year, with the coastal environment easily the number one attraction.

Balancing the development boom in coastal South Carolina with a protection of natural resources requires a high level of technical expertise. It also requires community relations techniques that promote consensus among groups with a history of adversarial relationships. Whereas this careful approach may at first glance appear to slow progress, it can actually improve the viability of many projects by avoiding community dissension and costly litigation. Nowhere is the need for a careful approach more important than in the construction and improvement of highways. The potential impact of highway projects on cultural and environmental integrity traditionally has fueled some of the most intense disputes in the public works arena. The core aspect of a highway, its ability to link communities together, can also link together groups with mutual goals to oppose it.

Two recent highway proposals in coastal South Carolina have received intense public opposition, demonstrating the need for a new sensitive planning approach. In both cases, an outside intermediary, the Palmetto Conservation Foun-

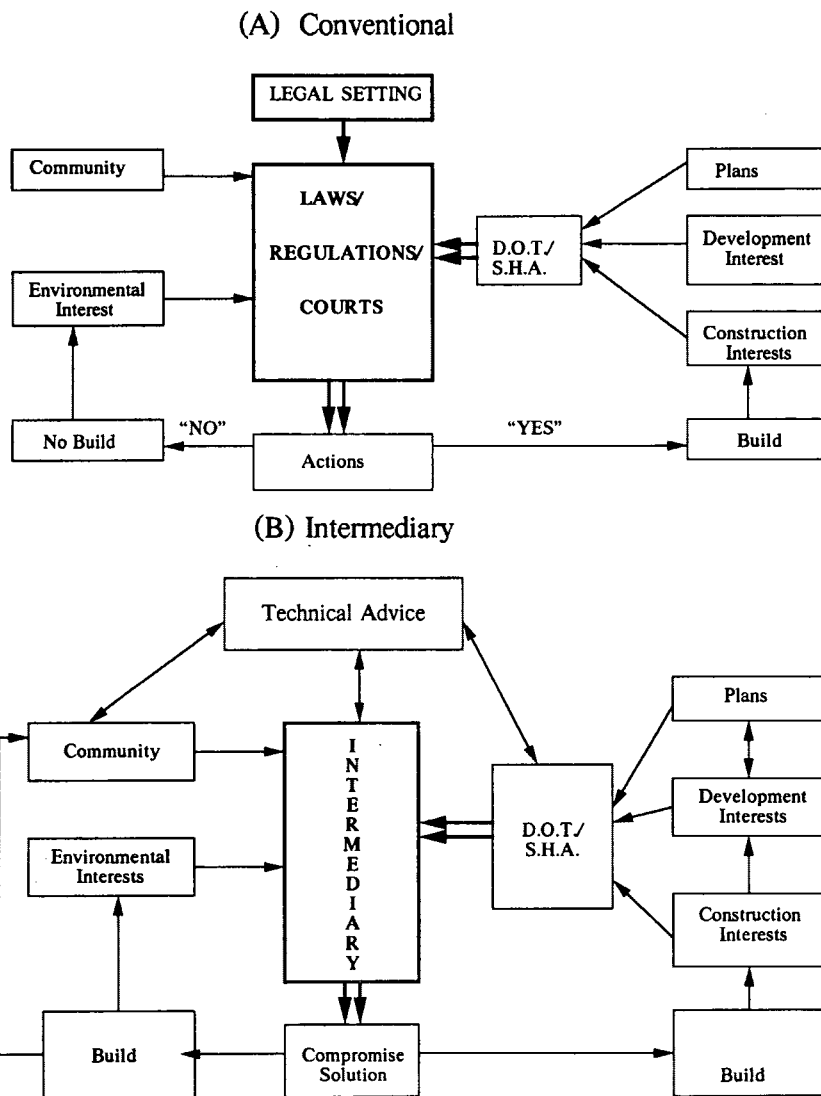


FIGURE 1 Models of environmental highway negotiations.

dation, has attempted to reach a consensus on highway improvements that not only promotes safe and efficient transportation but also respects significant environmental and cultural resources. Perhaps most important, these efforts have brought together groups that too often see each other in an adversarial light.

ACE Basin Scenic Highway

U.S. Highway 17 stretches the full length of the South Carolina coast, serving as a primary route for millions of tourists. The facility has four lanes except for a 17-mi stretch in Colleton County, a still-rural area between Charleston and Beaufort (Figure 2). The South Carolina Department of Highways and Public Transportation proposes to upgrade this remaining segment of Highway 17 by adding two additional lanes.

The proposed improvements would involve a unique natural area known as the ACE Basin. Named for three rivers

(Ashepoo, Combahee, and Edisto), the basin consists of 350,000 acres of mostly undisturbed wetlands and wildlife habitat and is the site of a nationally recognized conservation effort by state and federal agencies and nonpublic groups (Figure 3). More than 100,000 acres has been permanently protected. Plans to widen the highway have created a conflict between the goals of transportation efficiency and conservation. The Colleton County Chamber of Commerce decided a middle ground was needed on the Highway 17 debate. The chamber has recommended that the project be converted to a basin “scenic highway.” The plan has two primary focuses: first, the design for the highway is to be as sensitive as possible to the unique environment in the basin; second, the chamber plan addresses what to many is the ultimate problem with highway expansion—that rampant strip development will spoil the aesthetic quality of the area.

The foundation set out to influence the department’s design for the highway by first conducting its own analysis. This independent analysis placed local groups on sound footing in



FIGURE 2 Location of study area (source: South Carolina Department of Highways and Public Transportation).



FIGURE 3 *Top*, Cumbahee River Bridge, US-17, South Carolina. *Bottom*, US-17 at Green Pond, South Carolina.

working with the department, a position many environmental interests have difficulty reaching. The department agreed to a series of meetings to discuss the project and address local concerns. The foundation represented the chamber of commerce with lawyers, engineers, and landscape architects to counterbalance the department's expertise. The give and take at the meetings proved productive as problems were seen from new perspectives.

The result of the meetings was a highway design acceptable to many of the groups concerned about the highway. The department was able to limit clearing, realign the corridor to protect vegetation, and reduce the slope of the highway. Scenic pulloffs and a wetlands interpretive center were added to the proposal. Perhaps more significant, an undisturbed buffer to the corridor is to adjoin the highway through a Scenic Highway Protection District ordinance. Its effect is to protect the scenic integrity of the corridor by limiting development to a series of commercial nodes around existing small towns. These "rural villages" will be encouraged to provide the commercial activity needed to support the tourist industry. Sign control, landscaping requirements, and vegetative buffers are also integral parts of the regulations.

The ACE Basin Scenic Highway will efficiently move traffic along the coast in an environment of natural beauty. This project protects the scenery and environment of the low country and adds a tourist amenity. One can imagine a visitor to the coast traveling between Historic Charleston and the Beaufort Sea Island via the natural beauty of the ACE Basin Scenic Highway. This drive is more than a trip between two destinations; it is a journey into the beautiful and historic South Carolina low country.

The highway department attempted to meet many of the local concerns about the highway. After experiencing difficulty in gaining the necessary wetlands permits, the department realized that cooperation was its best policy. Its willingness to cooperate put a new face on the project and reduced the tension that was building between the department and environmental groups. It also led the way for an effort by the local government to limit the impact of the roadside development on the ACE Basin.

Sea Island Scenic Parkway

A national monthly magazine recently called Beaufort, South Carolina, one of the 10 best small communities in the United States. The small town has an excellent historic district, abundant recreational opportunities, and an unsurpassed charm. The magazine also referred to Beaufort's proximity to the relatively undisturbed native culture, the Gullah on St. Helena Island, as the primary feature that makes Beaufort unique. The growing development on St. Helena Island led the South Carolina Highway Department to propose improving the main transportation artery, U.S. Highway 21, from two to five lanes (Figure 4). These improvements, however, will significantly disturb the resources that make the culture unique, specifically wildlife-supporting wetlands (Figure 5), the historic native community, and the Emancipation Oak, the site of the freeing of Sea Island slaves. Once again, the conflict between

progress and community integrity came to a head over a highway. A group of Beaufort citizens organized the Sea Island Coalition, promoting an alternative to the five-lane proposal that would not only move traffic but unite the community through bike and pedestrian paths. The citizens made it clear that they did not oppose highway improvements outright but that a five-lane facility was not acceptable.

Once again, the Palmetto Conservation Foundation served as an outside intermediary on behalf of the citizens group. The intermediary tactic came at an excellent time in the process—the draft environmental assessment had not been finalized, and the project was in the design phase. After careful review of the traffic data, the foundation noted that the plan as proposed would probably not pass review for the necessary permits, especially in light of the public opposition. However, it also realized that no one's interest would be served by time-consuming and costly litigation. It offered an alternative to the department's plan, the Sea Island Scenic Parkway, that would serve the most immediate transportation needs and satisfy local opposition to the highway. Amenities such as bike and walking paths were added to the proposal. Most significantly, the alternative plan is more likely to pass environmental review, moving the project forward and easing confrontation. The highway department cooperated in the preparation of the alternative, making its data available to the foundation. Care was taken not to cast the alternative in a way that would be critical of the department. Rather, the stance was, Can we work together to solve this problem? The

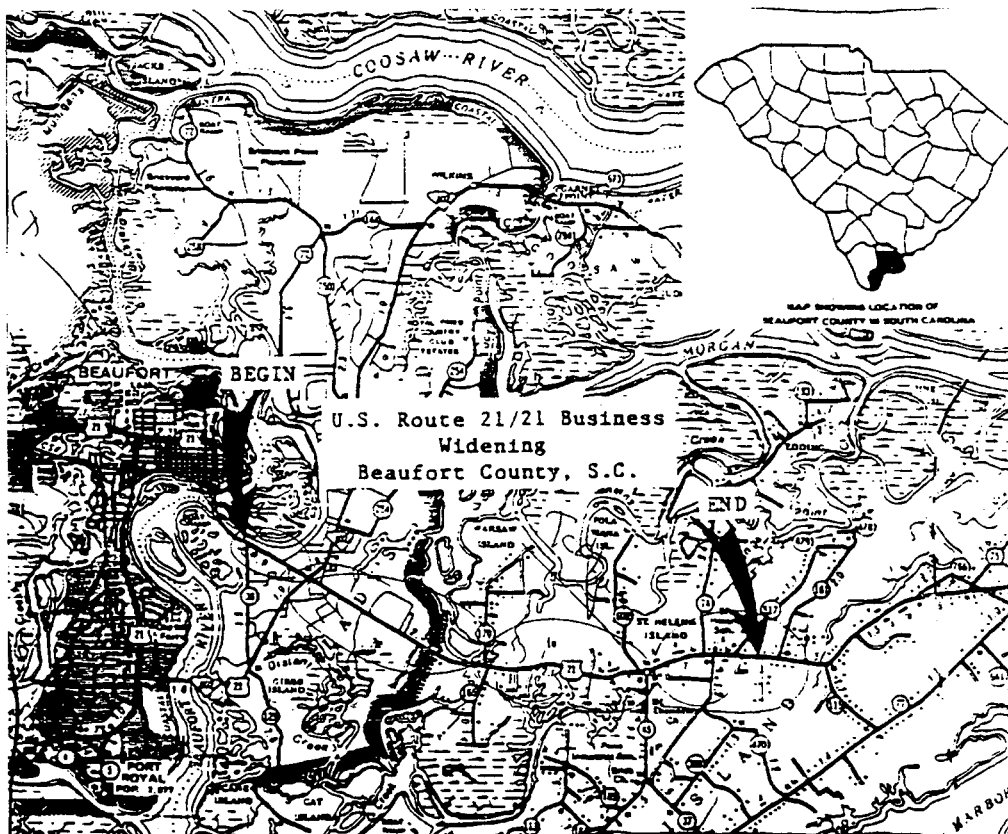


FIGURE 4 US Route 21/21 Business widening, Beaufort County, South Carolina.



FIGURE 5 *Top*, US-21 (South Carolina). *Bottom*, wetlands along US-21 (South Carolina).

Beaufort County Council carefully considered the alternative proposal and decided the best approach was to downsize the highway along the lines of the foundation's recommendation, because it offered the best chance for immediate implementation. The highway department has reviewed the proposal and is willing to bring its final plan toward the alternative. Many of the alternative plan recommendations are now part of the official project.

Efforts at compromise on the ACE Basin Scenic Highway and Sea Island Parkway demonstrate that highway planning in sensitive areas need not be a "bloody, winner take all" proposition. If both sides consider competing perspectives and slow down the process before confrontation reaches crisis proportions, reasonable and mutually acceptable solutions can be reached. Negotiation before confrontation is always the best policy.

OBSERVATIONS

These cases provide useful principles that may apply in other circumstances. Getting to yes in environmental protection is generally in the best interest of highway departments and environmental groups. Waging public battles over infrastruc-

ture programs not only slows progress on needed projects but also erodes public confidence in government's responsiveness to citizen concerns. Building an early consensus on the need and scope of projects can avoid costly litigation and community divisiveness.

Going Slow To Go Fast

Little is to be gained by rushing through an environmental review in the highway design process if, when released, that review or process is successfully challenged and the highway proposal is stopped by environmental opposition. A more sensible process is one in which the project proceeds slowly at first, gathering extensive information from the community on what kind of mobility improvements are needed and how best to protect the environment in the course of providing them. Citizen participation methods in transportation planning are extensive and well documented, and numerous methods have been used in a variety of environmental settings. The principle of open slow communication initially, gaining support for the need for mobility improvement as well as the need for environmental protections, is critical to later solution building.

Too often, highway planners fail to recognize early in the process that not every interest group in a community is going to welcome new highway projects. This realization is particularly important in areas with sensitive resources like wetlands, historic districts, or protected land. Slowing the process early in the design phase to register citizen concerns can bring many groups into the discussions and help demonstrate that a project is needed and can be accomplished in a sensitive manner. More often than not, local groups have substantial problems with a project as proposed. After all, they often have a defined vision of how they want the community to develop and what resources are important in achieving this vision. In working on projects likely to arouse public concern, highway planners are well advised to bring as many interest groups into the process as possible. This negotiation process needs to take place well before the first design has been drawn and any concept released to the public. Conservation groups, historic preservation advocates, and community organizations should be made to feel part of the design team. The time required to extend the planning process will be well spent if it avoids intense confrontation at a later date.

Nonconfrontational Data Review

Initially, information concerning the project will be limited and often open to challenge. Environmental groups typically challenge highway projects on the basis of conformity with legal process, less successfully on justification or need. This is because federal law and most state laws do not require that projects be justified in a technical sense, but only that the process for highway project development be followed carefully. As a result, much less attention is paid to the numbers underpinning the need for the project or its appropriate design than to the process by which the project has moved forward. Data review, focusing on technical assumptions underpinning the project, often will produce a recognition on both sides

that the need for the project is different, not necessarily less, than initially articulated. Careful review of project need is almost always an essential step in determining a good project solution. Essentially, when project need is firmly established, solutions can be found. When project need is not firmly established, proposed solutions often look unnecessary.

To begin the search for an alternative acceptable to many diverse groups, a professional review of the information justifying the project should be undertaken. If this information becomes available first in the draft environmental assessment, the rallying cry to defeat the proposal has usually been sounded by this point. A wise move is to offer the information earlier in the process to get any possible disagreements on the table before extensive time and money have been spent. This review of the data should avoid confrontation. Highway departments should recognize that all information belongs to the public and deserves fair review. Citizen groups should respect reasonable time frames and the professionalism of the highway planners. In short, the data should not cause dispute, only conclusions drawn from it.

Thorough Technical Analysis

Closely related to the preceding point is the requirement that technical assessments for projects, with respect to both need and impact, be thorough and accurate. These assessments need not be precise, however, since in many cases it will be impossible to determine the effect of a particular proposal on the environment with great certainty. Once again, open and objective assessment in a nonadvocacy setting is likely to yield the greatest value for information provided by either side initially.

Neutral Review

We have found that it often helps to have both parties work with an independent and neutral reviewer. The reviewer may be from out of town or out of state or may occasionally be local, but it is particularly important that the reviewer not have a stake in the outcome of the study. An unbiased view is too often missing in the highway location process. Governmental officials naturally feel an ownership of their plans and are skeptical of outside interference in their domain. Citizen groups too often lack the expertise to professionally critique plans or offer alternatives. This schism is often the cause of the two sides' inability to negotiate an acceptable policy. Skepticism is pervasive.

An outsider's perspective can help promote an acceptable compromise. This individual or group should assist both sides in a potential dispute, speaking in terms of mutual understanding and clearing away the mistrust that too often surrounds these situations. Highway planners too often fail to grasp the community's vision. Local citizens can be mystified at the engineering principles and design regulations that direct construction of a highway. An outside professional can get the participants working together toward a solution of the problem. Who is to play the role of the outsider is key. The outsider should be a true outsider, who not only has no direct interest in the outcome but also can confront unpopular de-

isions. The outsider must be professional, with an understanding of highway design, state and federal regulations, and community planning techniques. Most of all, the outsider must possess the talent to negotiate good-faith answers to tough problems. Because a great deal of professional competence and mutual trust is needed, careful attention should be given to the selection. Going slow in making this selection and giving the outsider a chance to negotiate can make the difference between a highway welcomed by the community and a major confrontation.

Know Your Stuff

It is particularly important for the intermediaries to become familiar with the issues surrounding the project in detail. Essentially, they must develop and maintain the credibility of both sides. This means that the intermediaries must have a thorough understanding of the project and its impacts and of the views of the various parties concerning the value of the project. (The value of the project is not the same as information concerning its actual impacts.) Virtually nothing substitutes for this technical knowledge since, without it, the credibility of the intermediary is reduced. It goes without saying that an intermediary must be impartial throughout the process, encouraging both sides to work together to develop a solution that they can each accept. The intermediary is not an arbitrator or an imposer of solutions, but rather a facilitator of communication.

Firm but Polite

Respect is most easily gained and maintained if the intermediary takes control of the process, but not the project itself. The project must remain the property of both sides; otherwise there will be failure to negotiate in good faith. The intermediary responsibility includes organizing and hosting meetings, maintaining decorum and professionalism, and ensuring that all groups continue to work in a spirit of cooperation. This may require a firm but subtle grip on the tiller.

It is easy for each side of a highway dispute to see the other as obstructionist. But it is important for each side to respect the integrity of the other. Citizen groups must recognize that highway planners are seeking to accomplish a valid public goal in moving traffic efficiently and safely. On the other hand, citizen groups have a right to push for their solutions. Conservation is also a valid public purpose, and one too often missed in the rush toward progress through infrastructure expansion.

The need for mutual respect should not be taken too far. Old habits need to be reexamined, and this often does not occur unless aggressive tactics are used. Citizen groups need to make highway planners understand from the beginning that they intend to pursue all available options at their disposal. Public input is good for the process and should be as aggressive as necessary. But the worst possible approach for a citizen group in seeking to influence a highway design is to respond in purely emotional terms. "We just don't want the highway" is not an acceptable attack against professionally prepared plans. This leads highway advocates to think that opposition

is coming from emotion and too often elite interests that resist all attempts at progress. Responses should be based on rational analysis that searches for a better way to solve a problem. Emotional responses are also not fair to highway planners. Fulfilling the maze of highway design requirements, not to mention securing necessary funding, is at best a difficult job. To ask a highway planner to respond to every individual memory of how the landscape used to be would slow the process beyond an acceptable limit. Good arguments, based on hard data, should be presented to influence highway design.

Highway Design Process

Whereas highway design may appear from the outside to be rigid and federally mandated, it is in fact a combination of art and science without imposed federal guidelines. Most state highway departments use the AASHTO Design Manual as a basis for their own highway design manuals. Within highway design manuals, there is almost always room for compromise and flexibility in design and in the specifics of design. In addition, highway designs change over time, typically becoming more stringent for roads of particular functional classifications. Thus, at any given time, there may be certain elements in a highway project that are substandard with respect to design but that are at the same time functional and safe. It may be ideal to improve all such elements at the time of construction, but it is not always necessary and certainly not always required. Understanding that design is flexible is the key to proposing solutions that are effective from a mobility point of view and also satisfactory to the community. Willingness to compromise on highway designs without compromising safety or mobility will usually produce a considerably lower-cost solution. Another example of flexibility in highway design would be in the calculation of the number of lanes required to provide a certain capacity for a projected road. Assuming that agreement has been reached on forecasts of traffic, the capacity required to serve it must be estimated using a host of different factors involving peak-hour rates, design-hour volumes, directional flow, traffic mix, and other factors. Virtually all of these are unknown and open to question. It is not surprising, therefore, that the use of slightly different but nevertheless reasonable assumptions concerning input parameters may result in a different design for a given need than was originally proposed by either side.

Communication

Frequent meeting and communication are the key to improving trust and reaching compromise. It is impossible to compromise without communication. Therefore the intermediary's role is to ensure that communication between both sides is frequent and polite, either directly or through the intermediary. Whereas projects can and sometimes do get into an "over-meet" situation, we have found that more rather than less discussion and meeting are generally good for project development.

No compromise is easy, and negotiations take time. The time to achieve meaningful compromise should be built into the process as surely as design and right-of-way acquisition.

Any time used to build consensus will be compensated for by the lack of litigation and public battles. Open communication must be based on trust. This trust can only be developed through good-faith, face-to-face negotiations. Small problems can often be settled before opposition becomes intense when they are talked through by both sides.

Low Media Profile

Perhaps nothing is as detrimental to the process of negotiation as extensive external coverage. This is not to say that such negotiations should go on in secret. On the contrary, open meeting laws and numerous other constraints in most states prevent that from happening, and even if such activities could go on in secret, we do not believe that they should. On the other hand, there is a difference between conducting meetings openly and in a spirit of cooperation as opposed to a series of meetings in which the media are invited to attend and participate every step of the way. We have found that in generally low-key meetings, the media are the most productive. In the event that media issues get in the way of the project, openness is generally the best approach. Often media will respond positively to the argument, "Look, we're trying to work this out and we are at a particularly sensitive stage right now, so we would very much like to have your cooperation in helping us to reach these solutions in an uncharged manner."

Willingness To Compromise

Of course, no cooperative solution will be possible if either side is unwilling to move from its initial stated beliefs or positions. The fundamental underlying assumption of the process is that both sides recognize the need to achieve, in whatever degree, some of the goals of the other side. That will normally be the case, since environmental groups and transportation planning and development agencies typically have similar goals, even if they may have different weights. We have generally found that both environmental and transportation investment organizations understand the importance of compromise in achieving mutually acceptable goals.

POLICY APPLICATIONS

As NEPA did in the 1970s, the 1991 ISTEA and the Clean Air Act Amendments of 1990 are likely to have significant negative effects on transportation investment in the 1990s unless transportation investment agencies and environmental organizations begin to work together to overcome barriers to achieving their mutual goals. Highway development is not dead, nor is it dying, but it is at risk. Transportation investment agencies need to understand that business as usual is no longer possible and that new mechanisms for cooperation are necessary. Environmental organizations are not antihighway, by and large, but proenvironment. Similarly, highway development agencies are not antienvironment but promobility. If the attention is placed on the common reality of both goals,

that is the intersection rather than the diversions of their paths, each can be comfortable with the responsibilities of the other.

Transportation agencies need to open their environmental processes much earlier, typically, than they do now. Environmental review should start not when projects are moved into the pipeline for TIP funding or similar state-level activity, but rather when projects are initially proposed for consideration. Environmental review, including the identification of likely environmental impacts, should be conducted as part of the initial scoping of project proposals, even those beyond the range of the TIP and indeed occasionally beyond the range of the 20-year horizon (15).

Traditionally, the federal government's position on environmental analysis has been to wait and review formally submitted documents for consideration with the intent of issuing a FONSI or requiring a full EIS. In our view, this position encourages litigation because it places the federal government in position of decider. Essentially, if the environmental community loses the battle in the request for a FONSI, it has no recourse except to the courts. In our view, the cause of highway development would be much better served if FHWA expanded its involvement in project selection and development early in the process, both requiring and encouraging citizen involvement in particular projects and in the process by which projects are developed. It is not necessary for FHWA to take positions on individual projects; the time for that is at the end of the environmental review, but that step is not all under environmental planning. If compromise is explored and reached early in environmental review, the federal government's review will be considerably less charged.

We agree with those analysts who believe that the relatively calm waters of highway development are likely to get considerably more stormy in the next decade as further regulations are imposed. We do not agree, however, that they need toss the boats around. By combining two small boats, each on stormy waters, into one larger craft, both environmentalists and highway investment agencies can weather the storm together in safety.

REFERENCES

1. *Guidance for Preparing and Processing Environmental and Section 4(F) Documents*. T6640.8A. FHWA, U.S. Department of Transportation, Oct. 30, 1987.
2. *Environmental Impact and Related Procedures*. *Highway Law, CFR 23.771*, 1984.
3. *The Application of NEPA to Federal Highway Projects*. *Legal Research Digest*, No. 15, TRB, National Research Council, Washington, D.C., 1990.
4. *Authority of State DOTs To Mitigate the Environmental Impact of Transportation Projects*. *Legal Research Digest*, No. 22, TRB, National Research Council, Washington, D.C., 1992.
5. *Legal Aspects of Historic Preservation*. *Legal Research Digest*, No. 20, TRB, National Research Council, Washington, D.C., 1991.
6. Meyer, M., and E. Miller. *Urban Transportation Planning: A Decision-Oriented Approach*. McGraw-Hill, 1984.
7. *Environmental Action Plan: Transportation Development Process*. New York State Department of Transportation, Albany, Oct. 1978.
8. Lemer, A. C. *Guidelines for Assessing the Environmental Impact of Public Mass Transportation Projects*. UMTA, 1979.
9. *The Flexibility Document*. FHWA, U.S. Department of Transportation, May 2, 1986.
10. Hamilton, H. R. Identification and Ranking of Environmental Impacts of the US Interstate Highway System. In *Transportation Research Record 1166*, TRB, National Research Council, Washington, D.C., 1988.
11. Yukubousky, R. Community Interaction in Transportation Systems and Project Planning—A Framework for Application. In *Transportation Research Record 481*, TRB, National Research Council, Washington, D.C., 1974.
12. Jordan, D., et al. *Effective Citizen Participation in Transportation Planning: Vol. I: County Involvement; Vol. II: Techniques*. U.S. Department of Transportation, 1976.
13. *Guidelines on Citizen Participation in Transportation Planning*. AASHTO, Washington, D.C., 1978.
14. Schick, J. R. Cooperation Between State Highway and Environmental Agencies in Dealing with Hazardous Waste in the Right-of-Way. In *Transportation Research Record 1312*, TRB, National Research Council, Washington, D.C., 1991.
15. *Carolinas Parkway Feasibility Study*. Parsons, Brinckerhoff, Quade and Douglas, July 1992.

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