

CONTEXT SENSITIVE SOLUTIONS



DETAILED GUIDELINES FOR PRACTICE



Illinois Department of Transportation
Timothy W. Martin, Secretary

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INTRODUCTION

IDOT Mission Statement

The mission of IDOT is to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity, and demonstrate respect for our environment. We will accomplish our mission while making the following principles the hallmark of all our work: Safety, Integrity, Responsiveness, Quality, and Innovation. The vision of IDOT is to be recognized as the premier state department of transportation in the nation.

Definition of Context Sensitive Solutions

An interdisciplinary approach that seeks effective, multimodal transportation solutions by working with stakeholders to develop, build and maintain cost-effective transportation facilities which fit into and reflect the project's surroundings- its "context". Through early, frequent, and meaningful communication with stakeholders, and a flexible and creative approach to design, the resulting projects should improve safety and mobility for the traveling public, while seeking to preserve and enhance the scenic, economic, historic, and natural qualities of the settings through which they pass.

BACKGROUND: THE CHANGING NATURE OF TRANSPORTATION

The mission of IDOT has been changing-to encompass both connectivity and quality of life for communities.

At the conception of the Interstate system more than 50 years ago, connecting America was the agreed-upon goal of the nation's transportation officials. The Illinois transportation program, in partnership with the US Department of Transportation and the myriad local transportation agencies, has since accomplished the goal of safely and effectively connecting the citizens of Illinois with each other, and connecting Illinois to the rest of the country.

But this success has itself changed Illinoisans' views of what they want from IDOT today. Issues such as traffic congestion from home to work, suburban sprawl, preservation of scenic landscapes and historic neighborhoods, and the ability to use our transportation system to walk, bike, and access public transit are now much higher priorities in terms of what people expect from transportation policy.

Context Sensitive Solutions (CSS) aims at addressing these new concerns, and making sure that our transportation projects are designed to improve the quality of life for all who have a stake in the system. Travelers, communities, businesses, elected officials and many others are all considered "stakeholders" in our transportation system.

Since these issues can be complex, the CSS process works as a partnership between IDOT and stakeholders to come up with working solutions to Illinois' transportation needs. Stakeholders help IDOT understand their needs for, and concerns about, our transportation system. IDOT can then take this input, along with all of its other work and analysis, and use it to make planning and design decisions.

IDOT still must make the ultimate choices about a project. Safety, the integrity of the transportation system, and good stewardship of the public's transportation dollars all remain IDOT's primary responsibilities. However, thorough stakeholder involvement can contribute to these decisions, and lead to a general consensus about the choices made.

CSS policy seeks to ensure that stakeholders' views are carefully considered in the decision-making process. The "traditional" method for designing a transportation project was for transportation officials to identify a problem, design a solution, and then offer the solution to the public for approval. While this type of planning addresses the basic issues of mobility and safety, it also has the potential today to cause a great deal of concern with residents, advocates, businesses and elected officials over quality of life issues such as neighborhood aesthetics, pedestrian and bicycle safety, environmental preservation, and features with historic value to a community.

IDOT has been developing, over many years, methods for involving stakeholders in its decisions, and CSS policy looks to make this a regular process for important projects. The CSS approach would involve stakeholders early and often throughout the process, especially before major decisions are made. The information gained from partnering with stakeholders is then used by IDOT to develop an informed solution to the transportation issue. This informed solution should also represent a consensus solution, between stakeholders and IDOT.

CONTEXT SENSITIVE SOLUTIONS: BASIC PRINCIPLES

So what does “Context Sensitive Solutions” mean? It is basically an approach that uses many tools with one goal in mind: plan and design transportation projects that “fit” into their surroundings –what is known as “context.” It is an approach that incorporates the need to:

- Strike a balance between cost, safety, mobility, community needs, and the environment.
- Involve stakeholders in the decision-making process early and continuously, throughout the development of the project.
- Address all appropriate modes of transportation in the plan and design of the project, including motor vehicle, mass transit, pedestrians and bicyclists.
- Use all appropriate disciplines to help plan for and design the project.
- Apply the flexibility inherent in the design standards to fit the project into its surroundings.
- Incorporate aesthetics as part of basic “good design.”

With the CSS approach, transportation agencies reach out to and involve stakeholders in the planning and design of the project. What is a “stakeholder?” The short answer is: any person or organization that has a direct stake in the project being considered. This can be a small group of residents and businesses affected by, for instance, the redesign of a rural intersection; or, this could include thousands of individuals when, for instance, a major new roadway is being built. In the latter case, it is especially important for the transportation agency to have a systematic method of reaching out, so that representatives of all the possible individual stakeholders can be organized and can communicate clearly with the agency.

Examples of stakeholders:

- Residents and landowners near a project
- Minority or disabled communities affected by a project
- Businesses affected by the project.
- Advocates for policy, community and historic interests.
- Elected officials in whose jurisdiction the project is located.
- Governmental resource and regulatory agencies.
- Travelers who use the facility.

AND, a stakeholder may be many of these at once.

CONTEXT SENSITIVE SOLUTIONS: FORMING A POLICY

In 2003, legislation (PA 93-0540) was passed instructing the Illinois Department of Transportation to adopt CSS principles in its planning and design of major projects.

For more than a year, IDOT carefully researched and developed a set of guidelines and an approach to CSS that would work best for our unique transportation circumstances.

As a specific matter of policy, IDOT is looking to implement a standard process of stakeholder involvement that is:

- Applied to most projects. Currently, IDOT uses extensive stakeholder involvement on very large or complex projects. The goal would be to apply CSS principles on “standard” and smaller projects. However, budgetary concerns may limit the number of projects that can use the CSS approach fully, at least for the near future. The judgment as to whether a project is “major,” “standard” or “smaller” will largely depend on the extent of the work likely to be needed, as well as its cost.
- Flexible and modular. The amount and kind of stakeholder involvement should be modifiable based on the size, complexity, nature and location of the project. A large suburban project is probably going to involve more CSS work than a small rural project. Likewise, a project located through the center of a town is going to involve different issues than one that is located in a scenic landscape.
- Simple enough to create as few “new rules” as possible, to avoid adding a new layer of process to an already burdened planning and design schedule. There is much that IDOT does already that uses the principles of CSS and stakeholder involvement. As much as possible, guidelines for using stakeholder involvement for projects should incorporate current IDOT rules and practices in one centrally-located and easy-to-use manual.

FEDERAL INVOLVEMENT IN CSS

The federal government, through the Federal Highway Administration (FHWA), is encouraging states to adopt the CSS approach to transportation planning and design.

In 1997, the FHWA implemented a pilot project for CSS, using CSS techniques on transportation projects in five states across the country: Kentucky, Utah, Minnesota, Maryland and Connecticut. All of these states have since adopted the CSS approach in their transportation decision-making.

Currently, 26 states either have adopted a CSS policy or are developing one. The FHWA has set a goal of all states adopting the CSS approach by 2007.

The FHWA has also written one of the authoritative works on the CSS approach, "Flexibility in Highway Design." It is available at:

<http://www.fhwa.dot.gov/environment/flex/index.htm>

Given its emphasis on encouraging CSS policy nationwide, the FHWA has been an active partner with IDOT in developing the state's guidelines and policies. FHWA personnel from the Springfield office have been included in the internal working groups which have developed this report and other policies. FHWA also maintains a presence on IDOT's internal CSS oversight committee and has provided input on policy development.

The central office of the FHWA in Washington has published criteria to determine if a state has adopted a *bona fide* CSS policy.

FHWA CSS POLICY CRITERIA FOR STATE DOT'S

(from the 2/27/2003 CSS/CSD Game Plan)

- Criteria A - there is a written commitment or policy.
- Criteria B - technical staff is trained in CSS approach, both in field and central offices and across disciplines (planning, environment, design, right-of-way, operations, maintenance).
- Criteria C - most projects are being implemented using CSS approach, tools, and methodologies.
- Criteria D - there is early, continuing, and iterative public involvement throughout the project development process.
- Criteria E - interdisciplinary teams are involved in the process from the beginning to the end.

The plan for creating and adopting IDOT's CSS policy set forth in this report will, when complete, comply with all of the above criteria.

CSS AND STATEWIDE TRANSPORTATION ISSUES

Following are discussions of issues related to the implementation of Context Sensitive Solutions in Illinois.

MULTIMODALISM

Since ISTEA, it has been Congress' desire for states to view highway improvements in the broader context as transportation improvements. Efficiencies are gained system-wide when every mode of transportation maximizes what it does best. Understanding this, Congress provided for the opportunity to use traditional highway funds for non-highway uses. This encouraged funding of bicycle and pedestrian projects as part of the overall project improvements.

Many citizens choose not to drive, have a physical impairment or are too young to utilize transportation themselves, yet their transportation needs are equally important. The need for sidewalk and trail access to mass transit stations has grown as an attractive alternative to motor vehicle use. The use of non-motorized transportation for shorter distance trips is also becoming more significant. Because short distance trips represent a large proportion of vehicle miles traveled, eliminating even a small portion of trips can mean a significant reduction in highway vehicle miles traveled (VMT). Reductions in VMT can help reduce congestion and improve travel times, reduce crash rates, improve air quality and improve other aspects of an existing highway, thereby extending its life or reducing the size of

a new highway footprint. It is important for designers to look beyond the highway portion of the project and consider the kinds of multimodal corridors that maximize all transportation efficiencies, and just those related to highways.

In recognition of the advantage of multimodalism, policies have been developed for the inclusion of bicycle and pedestrian facilities if certain conditions are met. Chapter 17 of IDOT's design manual[m2] discusses these in detail. An example of a condition for including a bicycle facility is whether the highway or street is designated as a bike-way in a regionally or locally adopted bike plan or map. For pedestrian accommodations there must be current evidence of frequent pedestrian activity.

But we also must be ever mindful of existing constraints. We have to live within the limitations of our budget, take into account environmental requirements, realize the difficulties in acquiring sufficient land, balance conflicting desires of the public and competing interests on the means of travel.

An honest and open balancing of all these interests and constraints, and a serious search for consensus among them, is what IDOT can offer to the traveling public.

The multi-modal approach:

- IDOT will look at a full range of transportation options and how they affect mobility for all users. For each major transportation project, the department typically develops a purpose and needs statement that explains what transportation issue the project is going to address such as capacity, operational or safety concerns. As part of the process an assessment of alternative methods (modes) are reviewed to determine if a viable alternative exist that addresses purpose and need for statement of the project. The review will also consider opportunities for bike and pedestrian accommodations.
- Moving as much vehicle traffic as possible, as quickly as possible is not always the best goal for the non-inter-state system. There may be instances when adding capacity is not an option given certain limits to the surrounding area. This may lead the department to review possible operational improvements to a facility. This could include anything from turn signals and turn lanes to pavement markings to improve the free flow of traffic and to alleviate congestion. The improved facility should by its operations provide enhancement to the traveler's quality of life, by reducing travel times, enhancing safety, and improving air quality in the region.
- IDOT will seek to further coordinate efforts with public transportation agencies to determine what kinds of transportation opportunities exist for a particular project. These additions or expansions must be achieved within the budgetary constraints of the project. Examples of newer ideas in public transit/roadway integration include bus signal priority devices, bus turnouts, priority lanes, bus shelters, and providing direct access from the curb lane to sidewalks for people entering and exiting busses.

PLANNING AND PROGRAMMING

The following section discusses the IDOT project planning process and the transportation "Program" that results from it. This is offered to provide readers with a background and greater details on how the process works. None of the measures described are meant to be considered mandatory steps that must be taken as part of the CSS process; rather, they are set forward here in order to point out opportunities for greater public involvement, which would lead to better project outcomes.

Office of Planning and Programming

Since 1971, IDOT has used a multi-year, continuous programming process in order to meet the statutory requirement to maintain a comprehensive and integrated transportation plan for all of Illinois. The planning process –and the multi-year programs that result from it –seeks to provide the state with specific plans for preserving and improving Illinois transportation, in a way that consistently and equitably allocates transportation funds.

Typically, implementers (IDOT districts, railroads, local airports, transit operators) propose projects to the Office of Planning and Programming (OP&P) based on the availability of funds. OP&P then develops its programs based on a balance of the needs expressed and the resources available. OP&P itself simultaneously works on the planning and programming of special and system integration projects.

The Transportation Program

What is the IDOT Multi-Year Program? While “The Program” generally refers to the highway program, OP&P actually works to produce four distinct modal programs: the highway program, the airport program, the transit program, and the rail program. As a whole, these serve as planning tools that IDOT uses to look ahead and make its best estimate of both the transportation needs of Illinois and the resources that will be available to meet those needs.

Projects in the program include: road (with attendant multi-modal aspects, like pedestrian and bicycle accommodations when feasible), transit, rail and airport projects. In order to make these assessments, OP&P works with IDOT’s Office of Finance and Administration, the Division of Highways, the Division of Aeronautics, the Division of Public Transportation, the Federal Highway Administration, the Federal Aviation Administration, Amtrak, the rail industry, local transit agencies, airport sponsors, and the metropolitan planning organizations, among others.

OP&P essentially assembles the pieces of the statewide transportation program. These pieces include the known maintenance and modernization needs of the state (e.g. which roadways or bridges are in need of repair or reconstruction), upgrades to the existing system, planned expansions or new projects, and the funds that are projected to be available during the multi-year cycle.

Projects are then matched with funds. Some adjustments may need to be made from year to year depending on what the current year’s assessment of needs and funding turn out to be as well as the status of projects which are underway.

Where does CSS fit into the programming process? On major projects, CSS starts with the development of an understanding of the project’s intended purpose, through a stakeholder involvement process. Ideally, this step would be started before a project is actually programmed for engineering and construction. In metropolitan areas, Metropolitan Planning Organizations (MPO’s), through their long range planning activities, could be used to help develop a solid understanding by IDOT, local agencies, and stakeholders, of the intended purpose of the project. In other parts of the state, studies may be conducted on a case-by-case basis.

Stakeholder involvement in the (pre-programming) planning stages of a project –when even its feasibility can still be uncertain –can be conducted by IDOT and its local partners (e.g. metropolitan planning organizations, or MPO’s). Good stakeholder involvement at these stages can help IDOT and other implementers in forming and identifying a consensus for a project’s need and value. It can also give planners a better idea of how much the project is likely to cost, so that they can fit it into the overall Programs with greater accuracy.

Opportunities for Public Participation in the Planning Stages:

There are of several kinds of planning activities that may happen before a project comes into the program. The focus here will be on projects in the highway program although similar types of opportunities exist with other types of projects as well. These activities do not happen for every project –nor, given their cost, should they –but are usually employed for larger, high-impact proposals. Note that all of these types of study need not be employed for every project –some projects might only require, for example, a corridor study, especially if it is clear that a consensus already exists about the general need for the project.

These kinds of studies afford ample opportunity for greater stakeholder involvement in the planning process. The on-going statewide discussion about Context Sensitive Solutions should include methods of eliciting better and more productive stakeholder involvement during these stages.

Initial Outreach Activities: These activities are intrinsic to how IDOT does business and helps determine the extent of general interest among stakeholders in a particular transportation idea. They can be based on ideas proposed by IDOT or its partners, and can be initiated either by IDOT staff (often at the district-level), or by local agencies or officials. If done locally, agencies may ask IDOT staff to help, or may conduct the activities entirely on their own. IDOT may receive requests from the public as well for an improvement.

Public involvement at this level entails organized discussions about the general parameters of a possible project, and whether it makes sense to study it. It can involve examination of maps, long-range plans, and other general data. Specific impacts are usually not examined in great detail –that would be reserved for later studies, once the process moves forward.

The Feasibility Study: This is a study that examines the preliminary economic, social, and environmental impacts of the proposed project, to determine levels of benefit overall to the region. Public involvement at this stage focuses on potential specific impacts from the project. IDOT also conducts, or taps into, transportation needs studies, demographic information and projections, and basic environmental information.

The feasibility study develops a statement of the preliminary “purpose and need” (P&N) for the project. After this is assessed, a decision on whether to move forward with a corridor or a Phase I study (which consists of scoping and initial engineering) can be made. Many projects do end at this phase, if the feasibility studies show relatively little evidence of need for the project, that its impacts on the surrounding environment and communities would be too disruptive or that there are not enough funds to pursue the project at the time.

If it is determined that a project should proceed, then the second part of the feasibility study determines several specific options for a new transportation facility. This phase can proceed on many different levels, with broad or narrow focus, depending on the size of the proposed project and the level of impacts on communities and the environment. These studies are often folded into the initial design work on a project. The Do Not Build option is always considered throughout any studies.

Corridor Protection Study: Once a proposed project is defined as having a purpose and need, yet it will be several years before land acquisition can begin, a Corridor Protection Study may be appropriate. The purpose of this type of study is to protect a corridor of land, upon which a facility would be built, from structural development. This serves two purposes. It allows IDOT to reserve this land for a future project without impacting any new development that may otherwise occur on the land. It also allows the future development an opportunity to plan ahead in an efficient manor because developer will know where the boundaries and access will be granted to the new facility.

This kind of study generally produces several different corridors as optional “alternatives” for the project. Often, corridor studies (especially on larger or high-impact projects) produce many possible corridors. Corridors tend not to overlap, as each one is considered a unique “path,” but they may intersect. Decision-makers are able to assess the various corridor options. Environmental impacts, costs, and benefits are evaluated before a decision is made. A Stakeholder Involvement Process can be used through this study as well. If a corridor is chosen, it is then recorded so that any current or prospective property owner is aware that a roadway may potentially be constructed on the designated land.

CSS COSTS

It is usually very difficult to accurately estimate the cost of a project early in the project development process. This is especially true for large and complex projects, or for projects about which very little information is available. IDOT’s mandate is to make accurate estimates at the time of initial scoping, and have those estimates maintained through construction. Conversely, in order to be effective and timely, stakeholder involvement should start prior to conducting the engineering studies that lead to a specific design for a facility.

As a project goes through the development process and location, environmental and design issues are identified, and project costs become better defined. Continued interaction with stakeholders will result in the ability to provide early analysis of context sensitive alternatives including the addition of amenities to better define the total project cost. On a broader scale, IDOT’s highway improvement program is fiscally constrained and is updated annually based on available funding, system condition, project readiness and cost effectiveness. There are always more needs than there are funds available. This constrained environment, coupled with high needs, also creates budget limitations that prevent individual projects from expanding unreasonably. The stakeholder involvement process should not create a ‘blank check’ for additions to a project, but instead enable a cooperative dialog that works to creatively solve a transportation problem within a constrained program and project budget.

PART II – IDOT’S APPROACH TO CONTEXT SENSITIVE SOLUTIONS

The following are guidelines for IDOT to use in implementing the CSS approach to transportation projects. There are two parts to the draft guidelines: Principles of Design Flexibility, and the Stakeholder Involvement Process. The design flexibility section outlines how personnel can approach projects with an eye towards using all of the available resources to fit a project uniquely into its physical, economic, environmental and social surroundings. The Stakeholder Involvement Process (SIP) section sets out, in detail, how personnel can plan for and execute an ongoing dialogue with stakeholders, and incorporate the information learned through this exchange into agency planning and design decisions.

These guidelines apply to IDOT personnel and consultants. They are not intended to be mandates or requirements for local transportation agencies to follow. Indeed, as can be seen in the guidelines, local officials and agencies are considered an important type of stakeholder, with whom frequent consultation must be maintained. The department will work to integrate and maintain these practices for IDOT-led projects. However, should local agencies find any or all of the methods and approaches described here helpful in their own policy development, IDOT encourages their use.

These guidelines represent the next step in IDOT’s use and understanding of the CSS approach. They are not the end-point of policy development. Statewide CSS policy should be viewed as part of an ongoing conversation, and IDOT will continue to develop better and wider techniques for context sensitivity.

GUIDELINES TO DESIGN FLEXIBILITY

A key to establishing a truly context sensitive project development process is the recognition and use of the flexibility inherent in departmental design standards, and the exercise of informed judgment by experienced professional department staff. One can refer to the Federal Highway Administration (FHWA) publication, “Flexibility in Highway Design” and American Association of State Highway and Transportation Officials’ (AASHTO) “Guide for Achieving Flexibility in Highway Design” for more general and more exhaustive guidance on the background and use of geometric design criteria and the inherent flexibility included therein.

THE PROJECT DEVELOPMENT PROCESS

Stakeholders need to understand the overall process and the time frames involved to complete. For large projects, an extended commitment of time is necessary to follow a project from start to finish; stakeholders must have some degree of patience with, and commitment to, the process. In contrast, for small projects the time frames can be relatively short. This requires stakeholders be ready for quick decisions to be made by the department. The project development process has certain requirements which limit what can be done on projects, and when in the process particular tasks can be done. Stakeholders not intimately acquainted with the process may not understand these limitations or can lose interest when projects extend over a period of years. Care must be taken to explain the entire process completely and in a way in which stakeholders can understand and appreciate.

A synopsis of the project development process is instructive. The department works with a multi-year improvement program for both engineering and construction. Projects are normally “scoped” prior to inclusion in the program to determine the estimated cost of construction and the amount of engineering required. When a project is brought into the program it may be for the engineering work only, since that process can take up to 5 to 8 years to complete for large or complex projects. When completion of the engineering is achievable within a certain amount of years the department looks to bring the construction into the multi-year program. At that time there is a better handle on the estimated cost, and it is considered a priority within the program.

Each transportation project is unique. The time it takes to complete depends on its scope, complexity and available funding. A simple preventive maintenance improvement can take less than a year from initial funding to project completion, while rehabilitation or reconstruction projects requiring right of way acquisition and which impact the surrounding area can take upwards of 5 years to complete. A large and complex project involving construction of a new multilane highway and new alignments could (in some cases) take eight years of planning and development just to get to construction and another eight to ten years to complete the construction.

For large and complex projects, once funding is initiated, state and federal regulations prescribe how transportation projects must be studied before right of way can be purchased and construction plans prepared. If the project is on new alignment or of considerable length and complexity a feasibility study is often performed before preliminary engineering is done. This takes a broad-brush look at both the scope and the purpose for a project, determining whether they can be accomplished in a reasonable manner. These studies are done in concert with other public and

private entities. For small and average sized projects, these kinds of studies can be completed in less than a year; for larger projects, these studies can take more time.

Next, “corridor” and “location” studies may be initiated for larger projects. These studies examine how a proposed project would benefit and affect a more specific geographical area, between a starting and ending point. These studies investigate right of way requirements. Environmental impact studies, when warranted, can and should be conducted concurrently with the corridor studies. Environmental studies, generally, identify important resources and then evaluate the potential impacts upon them by the various transportation choices being contemplated.

The feasibility, corridor, location and environmental studies are collectively referred to as *preliminary engineering* or “Phase I”. The product of these studies is known as a “preferred alternative;” that is, the one project choice out of the many alternatives considered that was most preferred. If the Phase I activities also included studies conducted according to state or federal environmental laws (see “The CSS Process and NEPA, page 16) then a Record of Decision (ROD) and Design Approval are conferred. The Phase I process can take as little as one year for simple rehabilitation projects to as much as five or more years for large new multilane improvements.

Once a preferred alternative is chosen, and, where required, a ROD and Design Approval are obtained, the preparation of contract plans can begin. This process is generally known as *design engineering* or “Phase II”. Phase II includes the production of plans, specifications and estimates (P,S & E’s) for the actual contract documents from which each project will be constructed. These plans may cover the entire corridor for which Phase I studies were completed, or the corridor may be broken up into smaller segments based on funding availability, ease of plan preparation, constructability, and other issues. Very large and complex corridors are often broken up into many segments in order to facilitate construction. Phase II can last from one year for simple rehabilitation project to several years for large and complex improvements, particularly those which have been broken into many segments.

Many projects also require the acquisition of property to facilitate their final construction. This can, and often is, done concurrently with the Phase II work on a project. Land acquisition can take from one year on a simple rehabilitation project to two or more years on large and complex projects.

Once Phase II and land acquisition are complete, a project can be put out for bid. Construction can be completed in one construction season for the simplest rehabilitation projects to several years for the largest and most complex improvements.

The programming of improvements is not always done consecutively. That is, all phases of a given project are not always funded in an unbroken series. Often, only a feasibility study will be programmed for a major project. Similarly, only Phase I may be funded for a corridor, or the combination of Phase I and Phase II may be programmed without land acquisition or construction. Also, certain segments of a large improvement may be funded for Phase II, land acquisition and construction, while adjoining segments in the same corridor are not. Depending on the availability of funding and the relative priority of the project, there are many ways in which a project can be programmed. Thus, it can take many years for all parts of an improvement to come together for completion.

THE INTERDISCIPLINARY TEAM

Each individual project has its own context, defined by unique features, characteristics, resources and public attitudes. A fundamental principle of context sensitivity is that a comprehensive, collaborative and interdisciplinary team be used to develop the solution to any particular transportation problem. Such a team should be initially formed by considering the apparent unique aspects of each particular project’s context.

For instance, if there are considerable vegetation, trees or other botanical resources involved in a project’s location, a landscape architect would be appropriate member of the project team. If a project area may include ruins of aboriginal settlements, it would be proper to include an archaeologist. If scenic resources are an important component of project context, someone experienced in visioning and viewsapes would be a valuable member of the team. The team for each project must be tailored to its particular context, in order to define and resolve issues –as well as to introduce different perspectives from which to approach problems and solutions.

The makeup of the project team should also not be static once the process begins. It must be dynamic, as new issues and perspectives arise. As stakeholder involvement commences and continues, the team may need to adapt its roster to fit the evolving project context. Only in this way can the team truly address the purpose of the project in a context-sensitive manner, and also be perceived as doing the same.

FLEXIBILITY IN DESIGN CRITERIA

The design standards used for Illinois State highways come directly descended from the guidance given in the AASHTO publication, "A Policy on Geometric Design of Highways and Streets", universally known as the "Green Book". It has for decades been the definitive reference on highway design, not only in the United States, but around the world. It is based on the combined expertise and experience of thousands of engineers over decades of time.

The Green Book is a set of guidelines, and was never intended to be immutable standards to be applied blindly or indiscriminately. Its inherent nature is expressed in the following quote from its forward: "The intent of this policy is to provide guidance to the designer by referencing a recommended range of values for critical dimensions. It is not intended to be a detailed design manual that could supercede the need for the application of sound principles by the knowledgeable design professional. Sufficient flexibility is permitted to encourage independent solutions tailored to particular situations." Such flexibility has always resided in the Green Book, and still does so today. As a natural descendent of these guidelines, departmental design policies also exhibit the same openness to informed interpretation and use.

The Green Book gives designers a range in values of design criteria for various highway types, area types, traffic levels and other conditions. Departmental design standards have been developed by refining those guidelines for greater specificity in highway class, area type, traffic and terrain. These discrete values still remain nearly identical to those suggested by the Green Book.

Departmental Design Standards

Design standards define the design criteria used for IDOT's improvement projects. These standards are based on the designated functional classification of the facility in question, such as arterial, collector or local street. It is reasonable to expect more conservative criteria (wider lanes, flatter curvature, flatter grades, wider shoulders) to be used on higher traffic volume highways like an arterial than on a lower volume roadway such as a collector or local street. This is because the higher volume route usually carries more through traffic, with regional destinations, at generally higher speeds and typically with higher traffic volumes and less local access than on lower functional classes of routes. The more conservative criteria provide for the safer and more efficient movement of traffic on these higher volume facilities.

The standards also vary with the land use in the area surrounding each project, whether urban or rural. One should expect more conservative criteria to be used in rural rather than urban locations. This is based on the longer distances traffic travel on rural facilities, and the relative lack of constraints against impacts in rural areas, compared with more urbanized settings. Local access is also much less of an issue in rural areas, and the more conservative design criteria allow for the safer and more expeditious movement of this traffic to its farther destinations.

Design criteria are also based on the type of improvement envisioned (new construction, reconstruction, rehabilitation, or surface preservation and maintenance). New construction has the most conservative criteria, based on the notion that –when such a large investment of public resources is being made –one should establish a facility that offers the best movement of vehicles. Resurfacing, restoration and rehabilitation (3R) projects have less stringent standards, as they are meant to improve the greatest number of mileage within available funds. These projects are on facilities which have not yet reached the end of their design life, but require some improvements beyond simple surface treatments. Surface maintenance improvements such as Pavement Preservation Program (3P) and Surface Maintenance At the Right Time (SMART) projects have the lowest level of design criteria. These projects are intended only to improve the pavement surface condition until such time as a more thorough rehabilitation project is justified and can be programmed. SMART and 3P projects have essentially no geometric design criteria, but simply replace existing roadway and other elements.

Design standards are also affected by the terrain types –whether the project area contains level, rolling or mountainous regions. In level terrain, it is much easier to accommodate higher design speeds and other geometric criteria –particularly pertaining to vertical alignment. As the terrain becomes steeper, it becomes either prohibitively expensive or physically impossible to attain the higher design criteria values.

Finally, design criteria are also affected by the volume and type of design traffic expected on the facility. Less stringent values can be used in areas of lower traffic. However, higher volume routes usually require higher criteria values in order to safely and efficiently move traffic to its intended destinations.

The Intent of the Design Standards

Departmental design criteria are intended to accommodate design traffic in the safest and most efficient way possible within existing funding and other constraints. As previously stated, they are based on the AASHTO Green Book, as well as the collective experience of design professionals for over eight decades. Also considered is recent and historical research on the safety and operations of highway facilities worldwide. Designers must attempt to understand the theoretical and experiential bases of design criteria in order to be able to properly apply them to improvement projects. They must also communicate these concepts unequivocally to stakeholders. Referring to the previously cited FHWA and AASHTO flexibility guidelines, as well as the Green Book, can assist in determining the reasoning by which the value for a particular criterion was chosen. Further, there are experienced professional practitioners in the department's central office who can be quite helpful in such endeavors. Following are three controlling design criteria, and general discussions of their backgrounds.

One example of a controlling geometric design criterion is *design speed*. This is a selected speed used to determine the various geometric design features of a roadway. It is particularly important in that so many other criteria—such as horizontal alignment, vertical alignment, pavement cross-slope and sight distance—depend on it. Selection of design speed depends on functional classification, land use, terrain and traffic values. Obviously, design speeds will be higher with less restrictive conditions on a high-volume rural principal arterial in flat terrain than on a low-volume local urban street in a mountainous area. The benefits to the traveling public generally increase with higher design speeds, especially at high traffic volumes. Design speeds should be consistent with the desires and expectations of facility users.

Another controlling design element is *minimum horizontal curvature*. It is dependent upon design speed and the maximum pavement cross-slope rate. The minimum values of horizontal curvature are based on what is required to retain a vehicle safely on the pavement along curves by balancing its centripetal acceleration. These values are based on theoretical calculations which have been confirmed by historical research. Again, the benefits to the traveling public generally increase with larger radius curves with all other factors being equal—particularly at higher volumes.

Lane width is the other controlling criterion for design. It depends on functional classification, land use and design traffic. These values are based on research and experience. Historical evidence indicates the use of wider lanes increases the operational safety and efficiency of a facility with all other factors being equal, especially for higher traffic volumes.

All design criteria have been developed with two main explicit concerns in mind. First, safety of all users of the facility should be provided to the greatest extent practical. Second, the facility should provide the optimal mobility to allow all users to reach their destinations as expeditiously as possible. Cost and availability of funding is also always a consideration in the background of all design decisions.

Flexibility Within the Design Criteria

As previously stated, considerable flexibility exists within departmental design standards. Crafting optimal solutions to transportation problems requires designers to use experience and informed judgment. Once the bases on which the standards were developed are understood, they can be properly applied to solve the problem at hand. They must also be clearly communicated to stakeholders. All pertinent factors must be weighed in the solution process, particularly the context of the project. Following are discussions of the three specific controlling design criteria outlined above, with factors influencing their flexibility.

The highest practicable value of design speed is usually best for the safe and efficient movement of traffic, under ideal conditions. However, such conditions do not always exist. Designers must always keep in mind that the choice of a higher design speed implicitly encourages users to travel at higher speeds. This is appropriate and even desirable in level open rural areas with few or no constraints. However, those same speeds in a much more developed urban area can be highly undesirable. High speed vehicular traffic can negatively impact the properties abutting the right-of-way. It can also affect the comfort and safety of non-vehicular users such as bicyclists and pedestrians. The higher speed traffic can also detract from the economic viability of abutting commercial properties, especially in a downtown setting.

Use of a higher design speed also increases other related criteria, such as the minimum radius for a horizontal curve. Under perfect conditions, the largest attainable curve radius is generally most desirable for safe and efficient

movement of traffic. However, other factors often impact a project's development. The use of a large radius curve can often cause an unacceptable impact to a natural or man-made resources, or it can cause the unnecessary demolition of adjacent commercial or residential properties. A large radius curve can encourage the traffic on the facility to travel at higher speeds –which is also not always desirable. On scenic routes the use of large curves may be in conflict with the existing topography.

It is usually preferable to provide wider lanes for the safer and more efficient movement of motor traffic, under the best circumstances. However, wider lanes can again encourage higher travel speeds –with the potential for negative impacts already outlined. They can also increase the “footprint” of a facility, which can be very problematic in areas with sensitive abutting environmental resources or when right-of-way is impossible or prohibitively expensive to acquire. Wider lanes can preclude the establishment of accommodations for non-motorized users such as bike lanes in tight corridors. They can also have a negative impact on parking in some commercial areas, particularly in downtown settings.

Two keys to the use of design flexibility are identifying the context of a project and understanding how the criteria will affect it. Once the underlying bases and intent of the design standards are understood, designers can make appropriate decisions informed by experience and judgment. It takes no thought, ingenuity or creativity to blindly follow arbitrary decrees. Context sensitivity requires consideration of any and all factors in order to develop solutions all stakeholders recognize as excellent.

THE USE OF DESIGN CRITERIA AND DESIGN EXCEPTIONS

Safety

Safety of all users and those in the area of departmental facilities must be a paramount concern. This must never be far from the mind of designers. However, the safety effects of various design decisions have not always been easily quantified. They still often are not. Designers must use judgment and experience in determining which values of various design criteria can be expected to result in an acceptable safety performance, while considering the totality of a project's context. The relatively recent concepts of *nominal* and *substantive* safety can be useful in these efforts.

Nominal safety is generally defined as the extent to which a particular design complies with established design standards. From the beginning of highway design programs, this was the primary method by which safety was considered in highway design. It has allowed this country to construct a surface transportation system with the safety and mobility that is the envy of the world. This will, by necessity, remain the chief way safety can be considered, at least for the near future. However, designers should be aware that technology will be increasingly allowing them to tie more closely design elements to the their actual safety effects.

Substantive safety is generally defined as the expected safety performance of a design element, or set of design elements, based on empirical evidence of past performance. In recent years, technological progress has allowed the beginning of such relationships to be established and quantified. Further progress is expected along these lines, until the expected safety consequences of the magnitude of any design element can be reasonably predicted.

The department will be closely following the advance of these efforts, and will be modifying design standards as such research indicates is prudent. These groundbreaking developments will also advise the way in which design is approached and perceived. Individual designers should also try to be aware of the documented real-world consequences of design decisions, as these are developed.

Design Exceptions

The flexibility inherent in departmental design criteria has manifested itself for many years in the use of exceptions to design criteria. This will continue within the context-sensitivity process. Any exception to design criteria must be documented and justified through a formal departmental process. Departmental staff are given much latitude in design decisions.

Great emphasis should be placed in endeavoring to provide the highest reasonably achievable design criteria routes expected to carry more vehicles on longer trips, such as arterials. The impacts of design exceptions on the safe and efficient movement of that traffic can be much greater than on the lower-type routes. Facilities such as collectors and local streets carry lower traffic volumes at lower speeds over shorter distances; their purpose is also in part to provide access to abutting properties and serve as feeders for the higher-type routes. The users of collectors and local streets also tend to be more familiar with the routes. Experience shows designers can generally be more open to exceptions on lower classes of routes.

The traditional design exception process generally uses justifications based on safety and operational analyses. Often, a design exception allows a designer to avoid adverse impacts to resources adjacent to or affected by a facility. Cost comparisons can also be part of the justification for exceptions. A context-sensitive stakeholder involvement process (SIP) can help provide documentation and justification for design exceptions. There are certain values and resources of which only the stakeholders may be aware. Designers should give due consideration to such stakeholder input when considering whether an exception is warranted. Also, stakeholder input can augment the more traditional technical justifications for exceptions.

Many think the use of context sensitivity will increase the number of design exceptions used on Department projects. This is not necessarily so. For example, Kentucky's signature CSS project, the Paris Pike, was designed with a great deal of flexible and non-traditional elements, but did not require any actual design exceptions. Project staff instead used the inherent flexibility found in the Kentucky's design standards, guided by information gained from extensive stakeholder involvement, to fit the project into its full context.

The CSS approach can be used to better tailor project design to the needs of stakeholders by using the flexibility found within the design standards. Certainly, many exceptions have been granted over time, and this will continue; should an exception be necessary, the CSS approach can help to develop the best-functioning and most justified kind. Designers should still strive to use their own experience, judgment, ingenuity and creativity to develop solutions within existing design criteria.

Impacts of Design Decisions

The impacts of various design decisions are quite varied. They can affect the design, construction, land acquisition or maintenance costs. They can also involve damage to various environmental resources, natural or man-made. They can produce changes in more intangible factors such as the character, aesthetics or "feel" of the area surrounding a project. Many, if not most, impacts cannot be quantified monetarily. Designers must work with stakeholders in order to find a balance of all pertinent factors in order to develop solutions which meet the project's agreed-upon and stated purpose. The available budgetary resources must also be considered in this process.

Non-Motorized and Public Transportation Users

Non-motorized users such as bicyclists and pedestrians have always been valid users of state highway facilities. Their safety, comfort and mobility must be duly considered in the designs of improvements. The context and input of stakeholders will direct designers in the proper consideration of the needs of these users. Design staff should also be mindful of bus and other transit routes in the area of the project, and consult public transportation operators early in the project to determine if there are particular design or traffic features that could facilitate better use of these services.

Aesthetics

Aesthetics is a very important component in the comprehensive design of transportation facilities. This should not be considered as an add-on to traditional design, like landscaping or decorative lighting. The totality of the aesthetic value of the project must be considered, including but not limited to the concepts of *project theme*, *gateways*, *streetscapes* and *viewsheds*. Stakeholders are key to identifying these factors, and designers must work with them from the beginning to fit their vision of design excellence to the physical and economic needs being addressed, and within the budgetary limits of the project. Specialized professionals should also be involved and consulted during the development of the project.

Mobility

Mobility must be maintained and enhanced, even in the context sensitive world in which designers work. This means that movement of all traffic, motorized and non-motorized, must be supported as much as possible while considering all other factors discussed here.

Stakeholders, policymakers and the public should keep in mind that most of the department's facilities are arterial roadways –higher speed and higher volume routes which carry people making regional trips. Because of this, the mobility of motorized traffic on such facilities should not be arbitrarily or unreasonably reduced. That being said, designers should consider the reasonable use of non-motorized traffic, and the likely contact and conflict points between that and motorized traffic, in their design considerations.

Conclusion: the Nature of Context Sensitivity

Even with the use of the CSS approach, the Department remains ultimately responsible for planning and design decisions. The jurisdiction of these facilities remains with the state. Because of this, decision-making authority remains with the department. The purpose of CSS is not to open project decisions up to a vote. Rather, context sensitivity fosters and encourages stakeholder involvement so that people can communicate their priorities, needs and preferences to design personnel (and designers can communicate other, balancing interests to the public). Using this very valuable information, designers can ensure that projects will reflect constant and informed input, gain broad public support, and ultimately achieve design excellence and pride in the project.

The movement for contextual design began in the wake of the substantial completion of the Interstate Highway System. The mandate given by the National Interstate and Defense Highways Act of 1956 was to build a new national highway system which would move large volumes of traffic safely and expeditiously at the highest design standards. By any measure, that effort succeeded beyond anyone's wildest expectations. However, that era is over.

Most future highway projects will involve reconstruction and rehabilitation of existing facilities in established locations. Consensus began to form around the concept that the surroundings of such projects should be explicitly and systematically considered on an equal basis with the traditional imperatives of traffic safety, mobility and cost. The process of systematic consideration of these non-technical factors is the true nature of context sensitivity, and it is the way IDOT must do business from now on.

ENSURING DESIGN EXCELLENCE

THE FLEXIBLE DESIGN APPROACH

IDOT staff should be informed but open-minded, displaying for stakeholders both an understanding of the engineering behind the design decisions, and an understanding of the many areas where flexibility is feasible. It is imperative that highway designers working in a context sensitive environment demonstrate an understanding of the functional, operational and safety bases behind the department's design criteria to enable flexible, creative decisions. Designers need to be receptive to alternative methods of achieving the same design goal.

IDOT staff should research and use new ways of solving the transportation problems presented, without falling back on the "we've always done it this way" reason for making a decision. Designers have the flexibility to use expertise and judgment when designing projects that fit into the natural and human environments, while also functioning efficiently and operating safely. Each situation must be evaluated to determine which possibilities are appropriate for a particular project. Designers should explore options, constraints, and flexibilities. The need to employ imagination, ingenuity, and flexibility comes into play when providing a better final product.

Staff should expect to find a greater desire for flexibility in community settings, due to the uniqueness of those areas and the social context of design decisions in these areas. The designer should be sensitive to a project's surrounding environment. Context and location should be considered carefully to help determine physical constraints, potential opportunities, and appearance of the project when completed. Projects which impact communities are likely to capture the attention of a broad range of interested citizens. Generally, projects will have impacts and benefits that serve as an impetus for the involvement of the public. There will be a greater demand to integrate the transportation facility within the community and the surrounding environment.

THE MULTI-DISCIPLINARY APPROACH

In order to bring to the design process all of the possible options for a transportation project, IDOT project managers must consider consulting with professionals from other disciplines, as appropriate. For most projects, other than simple rehabilitation, it is best for project managers to put together a multi-disciplinary team to work on the design and planning issues as part of the technical staff. A determination of which disciplines should be consulted should be made at the beginning of the process, and should be part of a manager's Stakeholder Involvement Plan.

Typical disciplines to be brought in as technical staff may be:

- **Community Outreach Professionals.** When a project is likely to involve a large and diverse number of stakeholders, outreach professionals can plan for and run the various forms of stakeholder involvement (meetings, media, updates, websites, etc.) that would be required for such projects. This leaves the district staff to focus on overall management and engineering questions. Such staff may not be necessary to a project which is going to directly impact only a few individual homeowners or a small cluster of businesses. In such cases, stakeholders can be consulted with individually or with a single meeting with project staff, and such activities can be coordinated by project staff and internal public affairs personnel.
- **Landscape Engineers and Architects.** For most new or rehabilitation projects, and many smaller-scale ones as well, questions of design and aesthetics will emerge. It is therefore important to have the input of design professionals who work with aesthetics, since the point of CSS is to make the project “fit into the context” of its surroundings. Such professionals should be full members of the technical staff.
- **Historical Preservation or Archaeological Specialists:** For the select projects that are likely to have an impact on historically significant features and structures, a specialist should be on hand as part of the project team. Archaeological specialists would also fall under this category, if such resources are found to be affected by the project.
- **Environmental and Resource Specialists:** IDOT maintains a regular system for project review by the state and federal resource agencies, but for complex jobs project managers should consult early with members of these agencies. This should be done for projects that are likely or known to have multiple and complex environmental and resource issues. This not only saves response time, but such personnel can also provide contemporaneous input in order to come up with creative solutions to problems, rather than merely responding to requests for input.
- **Public Transportation Agency Staff:** Many projects can have an effect on the public transportation system in the area. If the scope of the project is likely to involve a public transportation system (subway, bus, etc) then it is very important to consult early with a representative from the relevant public transportation agency. These professionals can bring a wealth of information and expertise about how to improve the flow of traffic in the project’s area, and in analyzing multi-modal transportation options.

THE STAKEHOLDER INVOLVEMENT APPROACH

IDOT Personnel should seek to learn about an area from its residents and recognize the validity of their opinions about how the area’s transportation works from a user’s perspective.

Local communities have much to offer—ideas, values, creativity, and strategies for success. The public, local elected officials, and local agency staff will quickly bring to light project constraints and opportunities. We must listen carefully to them. These people will have to live with the results of any project. Designers should pay attention to conflicting values respectfully, and seek a shared set of values for the project. Consider carefully stakeholder opinions about the aesthetics of various design options, and how these options best fit in with the project’s surroundings. Aesthetics is an important component in a comprehensive design of transportation facilities. The aesthetics and visual impact of a project are likely to be the most common portion of the stakeholders’ experience of a project, once it is complete.

Does an affected area have unique historic or scenic characteristics? The designer should recognize this and take it into consideration with the approach to a project. Often, it is the details of a project (traffic barrier, bridge rails, treatment of overpasses, medians, sidewalk treatments and landscape development) which are most noticeable to the public. Because of the visibility of these details, treatment of such is a critical element in good design and should not be left to the end or left out entirely. The intent of the design team should be to achieve a project which is in harmony with its surroundings, and design elements for the project which are in harmony with each other.

PRINCIPLES OF STAKEHOLDER INVOLVEMENT

EARLY STAKEHOLDER INVOLVEMENT

IDOT project management teams will begin projects with a discussion of stakeholder involvement and develop a specific plan for that process. This should occur prior to or very early in the programming process. Varied levels of involvement will be needed depending on the project.

It will be necessary on more complex projects to go to the stakeholders with a “blank slate;” identifying the area of concern and soliciting ideas on possible solutions and, in some cases, input on what the problems are. This will aid

in the development of an understanding of the project's purpose (and also the drafting of any Purpose and Need statement for the project, if used) and make the estimated cost of the project more accurate. In all cases, IDOT must meet with the stakeholders prior to developing a solution or design.

Development and design staff should include Stakeholder Involvement Plans in their work product, for at least their more complex projects. Such a plan would outline (1) who needs to be contacted, (2) how they will be contacted, and (3) a rough timeline for stakeholder involvement.

Of course, such an outline will be subject to change depending on ongoing circumstances. For example, if it is discovered that a group of stakeholders was not included in the original stakeholder involvement plan, but should have been, the plan should be modified to incorporate input from this group, and any additional efforts to gather such input should be included in the record.

IDOT will, as part of its training course for personnel, develop a template for that staff can use for planning a Stakeholder Involvement Process for each project.

PROBLEM SOLVING

Designers should approach a project as a transportation problem to be solved, not as a solution to be sold. Input from the stakeholders for any given project is necessary to make sure that all of the problems and potential solutions have been identified.

The CSS approach has been, in part, a national response to a perceived tendency among state departments of transportation to receive a mandate for a particular form of transportation project and then attempt to deliver a rationale for making that improvement. With the CSS approach, department staff instead should approach a project as a transportation problem (e.g. unacceptable traffic congestion and accidents in an area) that needs solving, without an initial assumption about which solution is best. Staff should approach stakeholders and engage them in discussing the problem and all possible solutions. The important point is for both staff and stakeholders to focus on addressing the underlying transportation problem.

SEEKING INPUT & INVOLVEMENT

Local officials: Involve elected officials and use their help to understand what stakeholders are saying. Elected local officials are the best place to begin the context sensitive solutions process. They can identify problems, solutions and make recommendations about who the other stakeholders might be. Coordination with them is necessary on any project that affects their community.

Other Agencies: Stakeholder input is one of many inputs; IDOT personnel also should coordinate regularly with other agencies. In much of the national literature on CSS, governmental resource agencies –such as environmental protection agencies, natural resource agencies, and historical preservation agencies, to name a few –are treated as “stakeholders.” In Illinois, these bodies are already part of a process to garner input on project decisions.

There are two standard ways that input from resource agencies is sought and included in IDOT project decisions. First, each district holds regular coordination meetings with representatives of resource agencies to discuss upcoming projects. For the larger and more complicated projects (for which an individual Section 404 permit is required by federal rules), the Department also holds “NEPA/404 Merger Process meetings,” when enough such projects accrue in the program to warrant discussion. The mandate for these types of meetings is set forth in the BDE Manual, Ch. 22-5.01(c).

Beyond continuing and encouraging such interagency coordination, IDOT staff should also consider inviting appropriate agency representatives onto project teams, or at least to outreach and stakeholder involvement meetings. As part of planning for these meetings, IDOT staff should look to whether issues important to that agency are likely to be part of the meeting agenda, and invite the appropriate personnel. If this is done, it is also strongly recommended that IDOT staff contact agency invitees and discuss these issues before-hand.

IDOT maintains the final word: IDOT is the agency responsible for the safety and integrity of the state highway system and local agency routes built or improved with state or federal funds. As such there will be considerations which can not be compromised. There will be many different stakeholders, such as local elected officials, environmentalists, other agencies, special interest groups, property owners and the general public, for each project; each will have differing views and interests. Although conflict resolution is a tool to resolve these differences, IDOT is held ultimately responsible and therefore makes the final decision.

THE STAKEHOLDER INVOLVEMENT PROCESS (SIP)

This section outlines in detail how, at a practical level, project management can work to hear and understand the voices of stakeholders in a meaningful way. This is called the Stakeholder Involvement Process (SIP).

The purpose of setting down a detailed SIP in this report is to provide guidance for both IDOT staff and stakeholders. Therefore, the process set forth below should not be followed blindly. Project teams should look at the needs for a particular project, its timetable, and its budgetary limitations and put together a plan for involving stakeholders that fits the complexity of the project. For example, a rehabilitation of a rural roadway, or the reconstruction of an intersection, may not require a long or detailed SIP because there are not that many stakeholders being affected; also in such cases, time is often of the essence. For larger and more complex projects, where it can be reasonably anticipated that there will be many stakeholders and issues, a more thorough SIP may be planned. *The process set forth here is a suggested model, and should be reasonably tailored to the needs of a project.*

To reflect these realities, the SIP model contains the complementary concepts of “omission points” and “halting points.” The “omission points” show where and why certain activities may be omitted from an SIP for a particular project. The “halting points” show under what conditions certain activities, if undertaken, can be considered completed. Of course, decisions made for each of these points may be found in a plan for a particular SIP, where certain activities are excluded as unnecessary, while others are continued until a result is reached. Project staff should individually tailor an SIP to the needs of a particular project and its stakeholders.

IDOT considers the stakeholder involvement process to be most appropriate for large or more complex projects, where the nature of the facility is being significantly changed (or a new facility added which significantly affects transportation in the surrounding area). Thus, it is usually not appropriate to spend department time and resources to conduct a SIP for maintenance or resurfacing projects, since these are short-term activities not likely to affect the nature of the transportation system in the area. It is for the more extensive projects, such as rehabilitation, reconstruction or especially new alignments, that the SIP is appropriate; it can also be considered a rule-of-thumb that the larger or more complex project, the more extensive an SIP should be. Again, staff should use their discretion to determine what the appropriate level of stakeholder involvement should be.

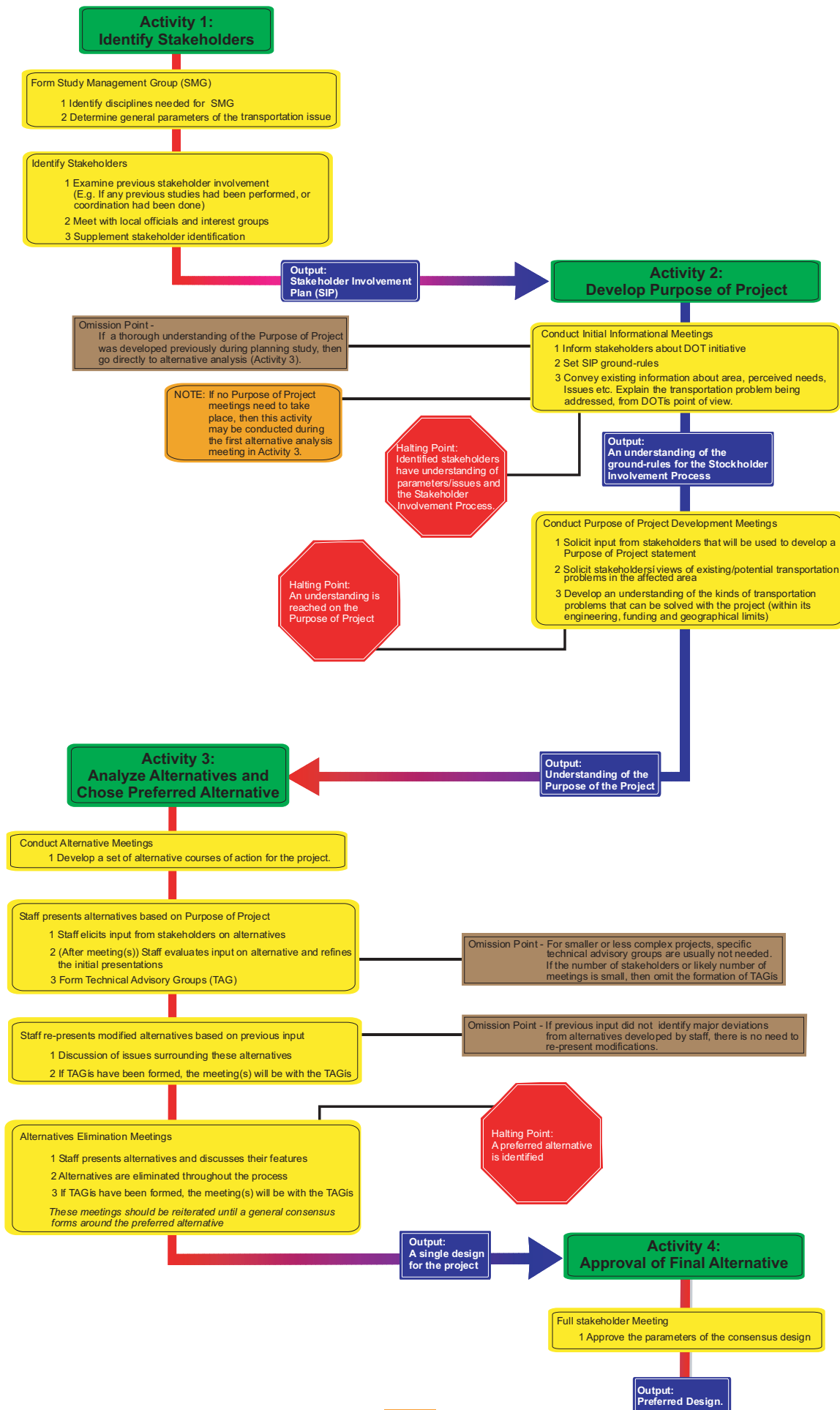
THE CSS PROCESS AND NEPA

The National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) requires the Federal Highway Administration (FHWA) and other transportation agencies examine and avoid potential impacts to the social and natural environment, when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, FHWA must take into account the transportation needs of the public, as well as consider input from the public, other federal agencies and outside parties in reaching a decision that is in the best overall public interest.

There are three types of NEPA-based studies that can be done, depending on whether or not an undertaking would significantly affect the environment. These three levels are: the categorical exclusion determination (CE); preparation of an environmental assessment (EA), with the possibility of a *finding of no significant impact* (FONSI); and preparation of an *environmental impact statement* (EIS).

An undertaking may be categorically excluded (CE) from a detailed environmental analysis if the FHWA has determined, based on its criteria, that the project would have no significant environmental impact on the area. FHWA has developed lists of project types that are normally categorically excluded from environmental evaluation under their NEPA regulations.

Stakeholder Involvement Process



If the project is not eligible for a CE, a written environmental assessment (EA) is prepared to determine whether or not a federal undertaking would significantly affect the environment. If the answer is no, the FHWA issues a “finding of no significant impact” (FONSI). The FONSI may address measures that FHWA will take to reduce (mitigate) potentially significant impacts.

If the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an environmental impact statement (EIS) is prepared. An EIS is a more detailed evaluation of the proposed action and alternatives. As with all levels of analysis, the public, other federal agencies and outside parties may provide input into the preparation of an EIS. They also have the opportunity to comment on the draft and final EIS (DEIS and FEIS) once approved by the FHWA.

If the FHWA anticipates from the beginning that a federal undertaking may significantly impact the environment, the agency may choose to prepare an EIS without having to first prepare an EA.

After a final EIS is prepared and at the time of its decision, FHWA will prepare a public record of its decision (ROD) addressing how the findings of the EIS, including consideration of alternatives, were incorporated into FHWA's decision-making process.

How CSS Will Work With NEPA

The CSS process is not meant to replace the NEPA process. CSS methods should be used with an eye towards making sure that the outcomes of stakeholder involvement can be used in a NEPA review, should one become necessary. In this way, rather than use two separate processes, CSS results should be “fitted” into the NEPA process.

Both professionals and public participants should keep in mind that it is often the practice of IDOT project managers to conduct NEPA-level reviews of a project, even when it is not certain whether that project will actually receive federal funds. This practice ensures that should it be decided that federal funds will be used on a planned project, a new and duplicative NEPA review does not need to be made. Again, where there is a likelihood that NEPA may apply to a project, managers should conduct CSS activities in ways that ensure that they will be counted in a NEPA review.

IDOT and the FHWA will work to provide practitioners with guidance to ensure that CSS activities mesh with NEPA requirements. For now, CSS practitioners should keep abreast of NEPA requirements and bring in, as early as possible, resource agency personnel to the CSS process.

DETAILED EXPLANATION OF THE SIP:

Activity 1: Stakeholder Identification

A typical highway project can originate from various sources. In the first part of stakeholder involvement, personnel should determine where the transportation issue first originated, and what the problems and needs should be addressed. Was the issue identified by the FHWA, IDOT Central Offices, IDOT District Office, local officials or metropolitan planning organizations to name some possibilities. Project staff should research correspondence recommending the initiation of the project and start making a list of stakeholders (which can grow into an issue list or project mailing list).

Forming study management groups: Once all communications have been reviewed and the issue(s) identified, the District staff needs to set up a study management group to determine how or when IDOT should proceed with a proposed project to take care of the issue/problem. This group may consist of the following:

- District Staff
- FHWA
- Office of Planning & Programming
- Central Bureau of Design & Environment
- The appropriate Metropolitan Planning Organization
- County Engineers

Note that if there are likely to be bicycle and pedestrian issues pertaining to the project, the district's bicycle and pedestrian accommodation coordinator should be part of the SMG.

Geographic Interests

- Adjacent Property Owners
 - > Residential
 - > Commercial
 - > Industrial
 - > Institutional –education, religious, government, non-profit
- Adjacent Property Renters
 - > Residential
 - > Commercial
 - > Industrial
 - > Institutional
- Transportation Service Providers
 - > Public Transportation Agencies
 - > Airports
 - > Marine Ports
- Neighborhood Organizations
 - > Homeowners Associations
 - > Local Interest Groups

Local and Regional Officials

- Local jurisdiction elected and appointed officials
 - > Mayors
 - > Aldermen/City Council
 - > County Board Members
 - > County Commissioners
 - > Township Boards
 - > Planning Commissions
- Local jurisdiction transportation or technical professionals
 - > Public Safety Officials
 - > Public Works Directors
 - > Traffic Engineers
 - > Planning Directors
- Permitting Agencies
 - > Corps of Engineers
 - > Environmental Protection Agency
 - > Ill. Environmental Protection Agency
 - > Coast Guard
 - > US Fish and Wildlife
 - > Ill. Historic Preservation Agency

Transportation Professionals

- Regional Transportation Professionals
 - > Metropolitan Planning Organization transportation planners
 - > Council of Government Planners
 - > Transportation Management Associations
- State Transportation Professionals
 - > State DOT Highway designers
 - > Traffic Engineers
 - > Environmental Planners
- Federal Transportation Professionals
 - > Federal Highway Administration
 - > Federal Transit Administration

Interest Groups

- Facility users
 - > Commuters
 - > Truckers
 - > Business Customers
 - > Major Regional Employers
 - > Tourists
- Transportation Interest Groups
 - > Transit
 - > Bicycle
 - > Pedestrian
 - > Highway
- Business Organizations
 - > Local and Regional Chambers of Commerce
 - > Economic Development Agencies
 - > Industry Associations
- Environmental Interest Groups
- Historic Preservation and scenic conservation groups
- Growth Management Interest Groups
- Traditionally underserved communities:
 - > Local advocacy groups for people with disabilities
 - > Local advocates for low income facility users
 - > Local racial and ethnic minorities advocacy groups

Once the study management group has made the determination to proceed with a preliminary engineering study, the stakeholder identification process is initiated. The study management group should aid the District in starting a list of known stakeholders (individuals, organizations, agencies, etc... that are on record as supporting or opposing a proposed improvement concerning the transportation issue). This list of initial stakeholder should expand as the preliminary engineering study continues.

Once the preliminary study and stakeholder involvement process is started, other disciplines should be added to the SMG. In order to bring to the design process all of the possible options for a transportation project, IDOT project managers must consider consulting with professionals from other disciplines, as appropriate. For most projects, other than simple rehabilitation, it is best for project managers to put together a multi-disciplinary team to work on the design and planning issues in conjunction with technical staff. The disciplines to be consulted should be determined at the beginning of the process, and should be part of a manager's Stakeholder Involvement Plan.

Identify Stakeholders: Unless previous records or contact lists already exist, the best way to begin stakeholder identification is to meet with the elected officials and agency representatives for the area in which the project is being considered. Ask them about the groups and types of people who are likely to be affected, and also identify any organizations through which these stakeholders can be contacted. For more complex projects, it may still be wise to supplement your stakeholder identification with other sources.

Following is a list of stakeholder types. Not all of these types of stakeholders will be affected by any single project. Additionally, a group of stakeholders may belong in more than one category.

This outline is to help planners and designers think about developing their contact lists. It is not meant as an exhaustive checklist that must be followed in strict order.

Each District should have an ongoing mailing list of concerned citizens, public officials, organizations, agencies and others that want to be involved or informed on transportation issues in their areas. The District should determine, from this list, the possible stakeholders that may desire to be involved in helping the department proceed with a preliminary engineering study on the transportation issue and add those names to the list of stakeholders. The stakeholder list will be expanded as information is gathered from contacting or meeting with local officials, chambers of commerce, planning commissions, affected property owners, environmental resource agencies, the general motoring public and special interest groups. Local media can also be used to reach out to the general motoring public in the immediate proposed improvement area.

After a good preliminary list of stakeholders has been completed, steps should then be taken to set up and complete preliminary information meetings. These meetings should seek input from all possible stakeholders in the proposed improvement. This initial information meeting will help identify the transportation problem, which will support the project for funding and through possible environmental impact that may end up being associated with the improvement, and also allow stakeholders to give their suggestions on how to resolve the issues at hand.

Also at this time, the SMG should develop a Stakeholder Involvement Plan, which identifies who the stakeholders are, how they are going to be reached, and a rough schedule of meetings. This plan need not be extremely detailed, and can be modified as the process develops. The plan also need not be time or date driven, but rather could be linked to milestones or decision points that occur throughout the course of a study.

Any transportation project will affect people in many different ways. For this reason a cornerstone of any study is a comprehensive, responsive public involvement program. Through public meetings, newsletters, or a website, people and groups in the study area will have an opportunity to learn about the project, interact with IDOT, have their voices heard, and participate in the corridor location process.

Activity 2: Developing Purpose of Project

The first contact with stakeholders is meant to introduce the project to the public, exchange information and identify sensitive areas. This contact starts the process of coordinating with the public so they can begin to understand that their involvement is vital to the development of the project.

Note here that this kind of contact can take the form of one comprehensive meeting, or as a set of meetings, if the project is large in scale and affects a great many stakeholders of varied interests. When a project affects many communities and interests, the department has found it helpful in such situations to conduct a set of many meetings with coherent groups of stakeholders (united by, for example, issue or geography). These smaller meetings would be informal in nature, designed to learn about each group's issues and to educate the group on IDOT's procedures and reasons for considering the project. At the end of a multi-meeting process, it is then recommended that a full public meeting on the project's purpose be held.

This process should be simple and deal with broad, problem-defining issues. Staffing should be adequate enough so that people don't have to wait too long to get questions answered; have experts in various areas available to respond to specific questions on likely subject. The District's Local Liaison staff and public affairs-media staff can assist in putting together this outreach. They have the contacts and expertise in media and public relations to get the word out to stakeholders, and to get them interested in participating. For larger projects, public affairs consultants may be involved in this type of outreach instead of or in addition to internal staff.

After the meeting, staff must assemble the comments (and the staff's own experience interacting with stakeholders) and determine what kinds of issues the stakeholders have with the project. Categorize the comments as much as possible into whatever issues were discussed. Pay special attention to issues that impact project purpose directly (as opposed to, for example, land acquisition, which is more appropriate later, when design parameters are being concretely discussed.)

Staff should look for trends in the issues discussed which highlight problems identified by the various stakeholder communities. What current problems in the area's transportation do these stakeholders feel need to be solved? Do they think this project would help alleviate any of these problems? If solutions are suggested that are technically or financially unfeasible, what are the underlying problems that these suggestions were attempting to solve, and is there a feasible way within the project's anticipated scope to address them?

These problems should then be translated into a planning and design context, and incorporated into the project's purpose. These statements, of problems to be solved, can be used to develop project purpose (and later design) in the same way as issues brought up by resource agencies are used.

This information (along with other analyses) will go into creating the alternatives to address the transportation needs.

Omission Point: This meeting can be omitted from the project's Stakeholder Involvement Plan if this kind of analysis (or a Purpose and Need statement, as part of the NEPA process) has already been conducted. This can happen when, for example, a Purpose and Need statement (P&N) was issued as part of a corridor study prior to the project being added to the transportation program. However, the project manager should undertake some initial, informal investigation and outreach to determine if the facts and conditions behind the P&N are still operative; if, for example, it has been many years since the P&N activities were conducted, or if a new issue has come up, more work might be warranted.

Halting Point: This activity is finished when an understanding as to the purpose of the project is arrived at by both the agency and stakeholders. It can also be concluded if the general consensus is for not building the project.

Developing the purpose of the project is the first, fundamental step in an overall project development process. Central to this concept is the understanding by all stakeholders that a transportation problem has been identified, and an agency is committing resources to address that problem. At the onset, outreach should be focused on understanding community attitudes about the nature of transportation issues associated with the identified problem. Outreach should also focus on finding out the specific values associated with the local context.

The point of this outreach is to assure congruence between the agency's assessment of the problem(s) to be addressed and those recognized by the community. If these views are different, it can become very difficult for stakeholders to agree to making trade-offs during the planning and design process. The absence of general endorsement of the problem's definition at this point is a strong indication that the process is not ready to proceed to the next step. A clear understanding has been reached between stakeholders and the agency regarding a transportation need, including what transportation issues and problems are to be addressed, is needed for progress toward solving the transportation problem.

Activity 3: Defining Alternatives

The intent of this activity is to develop project alternatives or options and ask for input into the development process of the preliminary alternatives worked out for study. Concerns identified from Activity 2 would be discussed.

On larger projects, this is usually the appropriate time to form “technical advisory groups” (or one group). Such groups are composed of stakeholders who volunteer to be in ongoing contact with design personnel, over and above the full public meetings that take place, and will work on analyzing alternatives generated during this time. For larger projects, several groups would be created and would each be responsible for analyzing the alternatives according to a particular subject matter (e.g. economic development, aesthetics, etc.) For smaller projects, a single group that handles all relevant subjects could be convened instead.

Again, staff should use the resources of the Local Liaisons and Public Affairs offices to keep track of and coordinate information on stakeholder groups, and communicate with them before the meeting(s). On larger projects, consulting staff can assume these responsibilities, overseen by IDOT project staff and the local liaisons or public affairs staff.

Staff should again approach suggestions from stakeholders in an effort to determine what problems and issues are being addressed. If proposals are made that are either technically or financially unfeasible (or both), explain this plainly and respectfully. Staff should work with stakeholders to determine what the underlying issue is and try to determine alternative solutions that would address their concerns within the engineering and budgetary constraints. Input obtained from this meeting will result in revisions to the alternatives considered at this time. Based on the comments received, the results of preliminary surveys and the design analyses conducted to date, the ideal step in the process at this time is to eliminate some of the alternatives to be retained for further studies.

Halting Point: Once several alternatives have been produced, and all issues that are reasonably related to the project have been identified, the process can move on to the alternative elimination stages.

Omission Point: The process can proceed directly to alternative elimination if at the initial meeting(s) stakeholders did not identify any significant differences, or issues omitted, from previously developed alternatives.

Defining alternatives: For all but the smallest or least complex of projects, several meetings analyzing alternatives are likely to be necessary. The purpose of follow-up “alternative analysis” meetings is to present the refined alternatives for improving a transportation facility generated from the first round of alternative meetings, and to begin to reduce the number of alternatives. Concerns from previous meetings, along with any current conflict resolution results, are discussed. If concerns cannot be incorporated, staff must indicate why and attempt to offer solutions that address the issues underlying these concerns.

Technical advisory groups, if formed, would continue their analysis and help make the presentation at the full meeting (or meetings). In fact, subsequent alternative analysis meetings are best conducted with the TAG’s themselves, since this saves time, space and budget; indeed, a smoother alternative analysis process represents the purpose of creating TAG’s. Generally, full public meetings during this stage should only happen if a new issue emerges, or an issue not previously considered relevant becomes important.

There may need to be several rounds of meetings, each ending with eliminating some alternatives, if the project is large and/or complex. If the project is simple, elimination of alternatives can occur in one meeting. Again, staff should use the resources of the Local Liaisons and Public Affairs offices to keep track of and coordinate information on stakeholder groups, and communicate with them before the meeting(s). On larger projects, consulting staff can assume these responsibilities, overseen by IDOT project staff and the local liaisons or public affairs staff.

Halting Point: Meetings are reiterated until a preferred alternative is reached.

Activity 4: Approval of Final Alternative.

This is the last activity during initial design, and its intent is to finalize the consensus with the public. In order to have reached this point, all reasonable concerns should have been addressed and all serious conflicts resolved, and the preferred alternative should reflect that.

The purpose of this meeting is to formalize the agreed-upon consensus for project scope. The watchwords should be: “no outstanding issues” and “no surprises.” Staff should carefully determine whether issues remain unresolved or unidentified. If so, more rounds of alternative definition, analysis and selection should be conducted before a final public hearing is scheduled.

A good goal to work toward, throughout the entire stakeholder involvement process, is the creation of a consensus document outlining (1) purpose of the project, (2) project scope, and (3) design elements, with which each stakeholder group and the department feel comfortable approving at this end-point. If staff does not feel that the process has reached such a point, outstanding issues should be dealt with before scheduling this final meeting.

WORKING TOWARDS STAKEHOLDER UNDERSTANDING

The activities outlined above should lead to greater integration of stakeholder ideas and opinions into project development. These activities should be aimed at providing stakeholders, most of whom are not going to be transportation or engineering professionals, with a good understanding of the issues, limitations and purpose of the project being considered. Staff should not feel that the process outlined above is a rigid checklist of activities that must be followed to the letter; rather, staff should use their own judgment to determine how best to contact and engage stakeholders.

Following are additional considerations that can guide staff in planning a constructive stakeholder involvement process.

CHOOSING AN APPROACH

For most of the stakeholder involvement activities detailed above, the “open house” format of stakeholder meeting is generally considered to be the most conducive towards public understanding and input. However, specific public involvement activities with stakeholders may utilize a number of other formats in providing information to and receiving input from stakeholders.

There are many types of meetings and activities that can be used to either help plan for or follow-up a large-scale stakeholder meeting. It is important to reach a wide variety of stakeholders during the planning or design process and create an atmosphere to encourage the free and open exchange of information. Following are brief descriptions of several stakeholder involvement techniques that can be used to achieve this end:

- **Group briefings** are informal meetings with stakeholders. They can be a very effective for circulating factual information on various issues and gaining valuable input.
- **Workshops** are meetings where participants are given basic transportation requirements and various constraints related to a problem, and are then asked to study the problem and suggest a solution. In a workshop format, participants are requested to analyze the provided information, identify impacts that may have been overlooked, work with other participants, and offer solutions and explanations of their suggestions.
- **Advisory committees** identify key stakeholders and organize them into a community resource council as an advisory group to the study team. They provide input and response, and serve to focus the views, concerns, and values of the communities.
- **Technical advisory groups** are a specific and structured form of advisory committee. They are assembled to review specific planning and design materials and advise the study team at key milestones, before the information is finalized.
- **Elected officials meetings** basically serve to brief the elected officials on the issues at hand and solicit input from them. Elected officials represent a variety of constituents and therefore, provide a unique perspective into the issues or problems being discussed.
- **Interest group meetings** target a wide variety of groups such as service clubs, city councils, county boards, chambers of commerce, homeowners associations, local and regional planning agencies, farm bureaus, state officials, environmental organizations, and minority organizations. Each of these groups provides a unique perspective into the issues being discussed, such as access, loss of property, job creation, impacts to environmental resources, and economic development.

- **Focus groups** are a tool to gauge public opinion. They consist of a small group discussion with professional leadership that is intended to solicit sample opinions on a single topic involving a few specific questions. The emphasis is on gathering perspectives, insights, and opinions of participants through conversation and interaction.
- **Charrettes** are meetings to resolve a specific problem or an issue. Within a specified time limit, participants work together intensely to reach resolution. A leader is used to bring out all points of view from the various stakeholders and participants.
- **Speakers' (or listeners') bureaus** are groups of specially trained representatives who can speak about a process or a program. They can be community people or agency staff. They meet with public and private organizations and provide information, listen to concerns, answer questions, and seek continued participation and input.
- **Newsletters** should be issued regularly throughout the project development process to announce new developments, upcoming public involvement opportunities, and the results of involvement activities.
- **Information hotlines and websites** can be used to provide a way for interested citizens to gain information from the study team, get questions answered, and provide input and feedback.

It must be made clear none of the above activities are intended to produce immediately any final project decisions. Rather, they will provide a forum for discussion and comment on various project-related issues to assist the IDOT and other decision-makers. Final decisions will be made during the final acceptance hearing (Activity 4). Throughout the process, stakeholder mailing lists should be maintained to include all citizens who have had a contact with the study team, whether by attending a meeting, calling in, leaving a comment on-line, or sending in a letter.

Follow-Up

For the meeting activities described in the preceding section, prompt and open follow-up to issues raised during these meetings is necessary. The appropriate type of follow-up will partially depend on public or stakeholder attitudes at the public involvement activity. If the public has been generally supportive of the material presented at the meeting, it is probably not necessary to initiate a large-scale follow-up; it may suffice to write individual letters to those who asked questions which were not answered and to release information to the news media, via project newsletters, or through updates on the project web site on any changes that were made as a result of the stakeholder input.

A greater amount of follow-up is required when a particular meeting has not resolved the issues to a reasonable degree. If there was opposition or a lack of understanding regarding what IDOT is trying to accomplish with the project, a more extensive follow-up program is appropriate. In this case, additional follow-up stakeholder meetings are an effective means of achieving better stakeholder understanding of issues at hand. These meetings can range from large-scale community briefings to one-on-one discussions with a particular stakeholder.

WORKING TOWARDS STAKEHOLDER UNDERSTANDING

“Purpose of project” discussions involving the community should focus on providing the community with background on known traffic safety, congestion and operational problems, traffic forecasts, and their anticipated effect on future traffic conditions. These help explain the agency’s perspective on problems and needs, and set the stage for discussions about potential solutions. Agency staff should take advantage of any and all methods and opportunities to interact with the local citizens, public officials, and any other identified stakeholders. Efforts should focus on gathering data, developing a rapport and good working relationship with the local community, and obtaining a sense of what solutions to the identified transportation needs are in the context of the involved community.

Consensus Building Efforts

It should be noted that more than one of the meeting types listed above may need to be used and may require repetition, depending on (1) the number of stakeholders or stakeholder groups involved, (2) the scope of the problems and issues discussed, and (3) the positions and views of the stakeholders on the various issues. Keep in mind the “halting points” outlined in the SIP flowchart; if a reasonable resolution of these issues has not been achieved, then further meetings are probably necessary. Many DOT officials may find this frustrating or time-consuming, and many elected officials may feel this at even a stronger level. However, problems and issues raised by stakeholders do not go away if left unaddressed. Often relatively minor problems can become major impediments to progress if ignored or left unattended.

Throughout the stakeholder involvement process, agency staff should seek out activists and other participants with differing viewpoints from the team members, and engage in good faith discussions with them. An important component of conflict resolution is full disclosure of all information and discussions needed to manage and resolve conflicting values of stakeholders. When parties disagree, it is sometimes due to a misunderstanding or lack of information. It is important that both sides disclose relevant information to resolve or at least manage conflict between competing values.

Stakeholder Understanding of the Alternate Solutions

The CSS approach can vary as to how this step is approached by IDOT. In one approach, the agency can develop a range of alternatives that meet identified needs and consider identified concerns. These are then reviewed in a public outreach process. New alternatives or variations on the original alternatives can be suggested by the stakeholders and should be analyzed or addressed by the agency.

In an different approach, alternatives can be developed during the various stakeholder meetings and activities. Alternatives developed in this manner are refined and analyzed by agency staff and presented broadly for public review and comment. This approach often fits best in situations involving a new facility, a significant change in the nature of the facility, or where a variety of configurations are possible for the project.

Project management teams should consider the issues involved along with the time and resources available, in order to make a choice about the proper approach to take. Stakeholders can be involved in the screening and evaluation of alternatives in many ways. Agency analysis results can be shared broadly with the stakeholders for review and comment. Stakeholders can also be involved in conducting screening and evaluation. For example, stakeholders can be asked to conduct an exercise where they rate project criteria and then weigh alternatives. Technological tools are available for conducting this kind of interactive analysis. Using such tools can give both the department personnel and the stakeholders a much clearer view of everyone's preferences.

A major problem in soliciting stakeholder input as it pertains to technical issues is how to convey a large amount of technical data to the public in a manner and language that they can understand and in a relatively short time. The majority of citizens involved in these processes do not have the time to become conversant in the technical language and engineering concepts that are typically used by team personnel in studies of particular issues. Visualization aids –especially newer, computer-assisted visual renderings — can significantly improve public understanding, enabling stakeholders to quickly analyze the information being presented. As a result, the use of effective visualization techniques can be a major asset to the successful implementation of public involvement activities.

Stakeholder Understanding of the Recommendation

If honest and open communication with stakeholders has occurred during the alternatives analysis stage, a stakeholder understanding of the benefits and impacts of various transportation solutions should clear the way to a consensus option. Results of effective stakeholder involvement may include agreement that further study is needed, support for a solution or approach, revision of design right-of-way or construction details, or even the delay, postponement, or cancellation of the project. A true measure of the success of a stakeholder involvement program, regardless of the solution implemented, is the degree to which the community at large, and each stakeholder, can feel a sense of involvement and even ownership of the recommended solution.

PART III –NEXT STEPS

The methods and approaches outlined above represent only the first part of the continuing conversation that is CSS policy. IDOT considers a clear system of stakeholder involvement, coupled with a statement of design flexibility, to be the most needed products at this time. IDOT has, for many years, been using many portions of the approaches outlined in this report to solicit opinion from and involve the public on many projects statewide. However, these methods have never been put in one easily referenced place. That has been the purpose of these guidelines.

Now that a quick reference guide is available for both the public and professionals, IDOT must look to future portions of the CSS conversation. Some are suggested here. Input from consumers of these guidelines, in the form of critiques, suggestions, or other topics needing attention, is welcomed.

TRAINING

Another reason for the creation of a Design Flexibility and Stakeholder Involvement Guideline was to establish a baseline policy from which a training program for IDOT staff could be developed. If CSS principles and methods are to be followed well, IDOT staff must be able to receive training in the latest approaches and techniques. No single statement or report can substitute for good instruction and mentoring.

In the coming months, IDOT will develop a CSS course for its internal training program. Such training should encompass the following themes:

- General instruction regarding the public involvement guidelines, when to use them, and what they require.
- Training in how to determine who an appropriate stakeholder is, how to contact them, and at what point they should be brought into the planning process, in order to ensure that they provide the most helpful information.
- A set of techniques for public outreach and involvement, to be used in the appropriate occasions, to ensure that meetings between IDOT and stakeholders are productive.

While IDOT may not have the resources to provide uniform training for the staff of consulting firms, these guidelines outlined above should provide firms with a solid understanding of IDOT's approach. Since this CSS guide has been based in great part on nationally developed CSS concepts, firms should be able to use existing training programs to meet with the expectations for good CSS work outlined here.

FURTHER DEVELOPMENT

IDOT will continue to engage the professional, business and advocacy communities to address issues and concerns not yet addressed by this report. Possible issues include:

- **Improvement of IDOT's cost-sharing policies for bicycle and pedestrian accommodation.**

The SIP guidelines above, and the design flexibility approach, certainly necessitate project managers and designer to consider early and seriously the needs of non-motorized transportation users, and how these needs integrate with the highway and mass transit systems. IDOT personnel have been taking such considerations into account in planning and designing transportation projects. However, concerns exist that current cost sharing policies IDOT maintains with local agencies may discourage the full use of multi-modal options when transportation projects are created.

IDOT has been working with the community of multi-modal users to identify problematic areas in its cost sharing policies, and will continue to do so. Any changes, however, must take into consideration current funding constraints. The creation of a prioritization process for multi-modal decisions would be very helpful.

- **Consideration of how to integrate more public involvement in the initial project conception and planning.**

While the early portions of the Stakeholder Involvement Process set forth above do imply the development of an understanding of the purpose for a project, the bulk of the SIP at this stage of CSS policy development focuses on the design process. Determining how to best use the CSS approach when forming long range regional transportation plans needs to be addressed. At these stages, before a project has become part of IDOT's multi-year program, there are many groups, governmental bodies and elected officials involved in making planning decisions. How better public involvement can be fit into this process is a topic for continued study.

- **Development of regular courses and training on CSS in the state's engineering schools.**

Training in Context Sensitive Solutions should, in the long run, begin in the engineering schools. In order to understand and use the context sensitive approach to project development best, Department engineers and other planning and development staff should have a chance to receive training and instruction during their education. The Department will work with both the state and national engineering organizations to develop such standardized courses, and encourage their inclusion in the engineering programs at Illinois' colleges and universities.

- **Development of an excellence in design award for outstanding project achievements.**

IDOT should work to establish an annual award for projects that exemplify the best practices in using the CSS approach, and the best results in safe, efficient and beautiful design. Other state departments of transportation, such as New York State's, have developed such award programs. This would give due recognition to the agency staff and consultants who put in the hard and creative work to design and build transportation projects that benefit Illinois' communities.

IDOT looks forward to continuing dialogue with the people of Illinois. Together, we can maintain the long tradition of excellence in transportation for which Illinois is famous.

REFERENCES AND FURTHER INFORMATION

Publications

NCHRP (National Cooperative Highway Research Program) Report 480 "A Guide to Best Practices for Achieving Context Sensitive Solutions" Available on the web at http://gulliver.trb.org/publications/nchrp/nchrp_rpt_480.pdf

Peaks, Hayes, "Building Roads in Sync with Community Values," PUBLIC ROADS, vol. 62, no. 5, March/April 1999, <http://www.tfhr.gov/pubrds/marapr99/flexdsgn.htm>

"Thinking Beyond the Pavement" Conference Report, available on the web at <http://www.fhwa.dot.gov/csd/mdbroch.pdf>

Federal Highway Administration, "Flexibility in Highway Design," available on the web at <http://www.fhwa.dot.gov/environment/flex/index.htm>

State CSS Websites

Illinois

<http://www.dot.state.il.us/css/home.html>

California

<http://www.dot.ca.gov/hq/oppd/context/>

Maryland

<http://www.sha.state.md.us/Events/OCE/thinkingBeyondPavement/thinking.asp>

Minnesota

<http://www.cts.umn.edu/education/csd/index.html>

New Jersey

<http://www.state.nj.us/dot/csd/>

New York State

<http://www.dot.state.ny.us/design/css/css.html>

Utah

<http://www.udot.utah.gov/esd/CSS/CSSMain.htm>

Washington State

<http://www.wsdot.wa.gov/biz/csd/>

CSS-Oriented Websites

AASHTO - American Association of State Highway and Transportation Officials

http://environment.transportation.org/environmental_issues/context_sensitive_solutions/overview.htm

Federal Highway Administration

<http://www.fhwa.dot.gov/csd/>

Kentucky Transportation Center

<http://www.ktc.uky.edu/ktctmb.html>

Project for Public Spaces

<http://pps.org/CSS/cssonline.htm>

Endnotes

¹ "A Policy on Geometric Design of Highways and Streets," American Association of State Highway and Transportation Officials, 2001. This guidebook, commonly known as the "Greenbook" has, since 1950, been the national statement of design standards for federal, state and local transportation departments. However, many agencies, like IDOT, maintain their own set of standards for certain portions of geometric design or other policies.

² AASHTO is set to publish their CSS guidelines in Spring of 2004. The version used by IDOT personnel in developing state CSS policies was a "final draft" version, and it is not anticipated that major changes will be found in the published version. Changes that may affect the approaches detailed in this report – if any – will be examined and taken into account as IDOT continues to develop CSS policies.

For more information regarding IDOT's development of CSS policy, please contact:

Kathy Ames (Deputy Director)
Office of Planning and Programming
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764 • (217) 782-6332



Illinois Department of Transportation