

Title: Context Sensitive Solutions Strategic Plan for the Illinois Department of Transportation

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Context Sensitive Solutions Strategic Plan for the Illinois Department of Transportation

Abstract: In 2003, legislation (Public Act 93-0540) was enacted requiring the Illinois Department of Transportation to embrace the principles of Context Sensitive Solutions in policies and procedures for the planning, design, construction, and operation of its projects for new construction, reconstruction, or major expansion of existing transportation facilities. In response to this mandate from the Governor and General Assembly, IDOT developed a Strategic Plan for CSS. The purpose of this paper is to discuss how IDOT utilized the Balanced Scorecard management approach and engaged a Department wide effort to embrace the principles of CSS focusing on policies and procedures, training, program delivery, and communication. This paper is also intended to share the lessons learned by IDOT during this process. This may help other DOTs implement CSS within their organizations.

Context Sensitive Solutions Strategic Plan for the Illinois Department of Transportation

Introduction

Over the years, the mission of the Illinois Department of Transportation (IDOT) has been changing to encompass both connectivity and quality of life. 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 U.S. 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, 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.

In 2003, state legislation was enacted requiring IDOT to embrace the principles of CSS in policies and procedures for the planning, design, construction, and operation of its projects for new construction, reconstruction, or major expansion of existing transportation facilities. This paper discusses how IDOT responded to this mandate from the Governor and General Assembly and how IDOT developed a Strategic Plan for CSS.

Background

In 2003, the Illinois Legislature passed Public Act 093-0545, which provides that IDOT "...shall embrace principles of context sensitive design and context sensitive solutions in its policies and procedures for the planning, design, construction, and operation of its projects for new construction, reconstruction, or major expansion of existing transportation facilities." This is to ensure that IDOT's projects "adequately meet the State's transportation needs, exist in harmony with their surroundings, and add lasting value to the communities they serve." (1) This law became effective January 1, 2004.

During 2003, IDOT began to research and develop a CSS approach that would best fit into the transportation needs and budgetary constraints of the State of Illinois and work well within the structure of IDOT. During this time, IDOT conducted numerous meetings with stakeholders to provide information regarding CSS and IDOT's decision to develop a CSS policy. These meetings also served to solicit feedback on CSS. As part of this process, IDOT identified three important themes from the discussions with stakeholders to guide it in the development of its CSS policy:

- Transportation projects must be approached in a multi-modal scope, especially with regard to accommodating pedestrian and bicycle needs.
- Stakeholders need to be involved in transportation planning and programming decisions, and not just in the design decisions.
- A public perception exists that IDOT design standards are too rigid, and therefore a major source of stakeholder resistance to IDOT plans. (2)

IDOT also researched CSS activities taking place in other state departments of transportation in order to understand the various approaches the states have taken in forming and implementing CSS policies. IDOT contacted several CSS pilot states (Utah, Minnesota, Maryland, Kentucky) as well as others that have implemented CSS (Wisconsin, New York, and Washington).

In addition, IDOT hosted a two-day seminar on CSS for 40 upper level managers of IDOT and the Federal Highway Administration. The seminar was taught by staff from the University of Kentucky's Transportation Center. This ensured that top-level managers in Illinois statewide transportation became familiar with the CSS concepts and approach as well as the benefits of using CSS.

The result of the meetings, research, and training was a Report to the Governor and the General Assembly of Illinois Regarding Context Sensitive Solutions submitted in spring, 2004.

At the same time, IDOT developed a CSS website at <http://www.dot.il.gov/css/home.html>. (3) This site contains information regarding IDOT's policies, procedures, and activities, along with links to a variety of CSS resources. Visitors to the site can provide feedback and suggestions to IDOT regarding implementation of CSS. Materials on this site include the 2004 report to the Governor and the General Assembly.

Strategic Plan

IDOT chose the Balanced Scorecard management approach to frame and to guide the implementation of its CSS strategic plan. (4) The Balanced Scorecard is a strategic management tool which establishes long-range goals, related short-term objectives, tactical initiatives and performance measures to help direct and inform the staff about performance expectations and results.

There were several reasons for IDOT's use of the Balanced Scorecard management approach. First, IDOT staff is familiar with this tool. IDOT has completed organizational strategic plans at various levels of the Department utilizing this method. This effort involved hundreds of individuals throughout the organization. The method is considered successful and IDOT staff has responded well to its use.

Second, the Balanced Scorecard encourages team-building to determine what needs to be done. The Balanced Scorecard approach establishes groups which work together to break down a mission into objectives, targets, initiatives, and measures. The group then takes the overall goal and determines steps for accomplishing that goal.

Third, because the Balanced Scorecard utilizes working teams, the work required to implement CSS is spread among many individuals. Like departments of transportation across the country, IDOT has seen a significant reduction in staffing in recent years. By spreading the work out among many people, demands placed on any one individual are reduced. Similarly, by involving many employees from all across IDOT, many more people become familiar with the Balanced Scorecard approach and strategy at hand. Thus, information regarding CSS is widely distributed across the Department. Finally, by involving employees from all areas and modes, the Balanced Scorecard encourages creativity and adds interest to the process, which also creates broader understanding among staff.

The Balanced Scorecard approach is designed to help maintain the viability and consistency of CSS implementation over the long term. First, as initiatives are achieved and targets and objectives change, the strategic plan is updated to reflect those achievements and changes. The Balanced Scorecard is a living document which can and will change in order to continue to reflect current Departmental strategies. Second, the targets and initiatives contained in the scorecard include those designed to evaluate the implementation of the process and explore and measure the achievement of the established objectives. IDOT's CSS activities are adjusted according to the levels of achievement of these objectives.

IDOT's CSS goals:

1. Adequately meet the State's transportation needs;
2. Transportation projects exist in harmony with their surroundings; and
3. Transportation projects add lasting value to the community they serve.

IDOT's definition of CSS is:

“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.”

Development of the Balanced Scorecard and work to implement the objectives of the Balanced Scorecard is guided by the CSS Steering Team. The Steering Team is made up of 16 middle to upper level managers from throughout IDOT and from FHWA. These employees represent a range of disciplines and modal units and geographic locations throughout the state.

The Balanced Scorecard is divided into four main objective areas: Policy Development, Training, Program Delivery, and Communication. Each objective is assigned a team which focuses on the implementation of that objective. In addition, several work groups have been established for tasks which require more extensive and detailed efforts. For example, a work group was established to evaluate current bicycle and pedestrian accommodation in highway projects. Another was created to examine IDOT's policy on cost sharing for sidewalks and to recommend changes. Another is focused on communications needs with regard to CSS.

Policy

The Context Sensitive Solutions Departmental Policy (D&E 21) formally adopted CSS as the official policy of the Illinois Department of Transportation. (5) This policy was signed by the Secretary of Transportation and the Directors of the Division of Highways, Office of Planning & Programming, Division of Public and Intermodal Transportation, and the Division of Aeronautics. The policy was adopted on August 1, 2005, and outlines the guidelines as IDOT incorporates CSS processes into projects.

Pursuant to this policy, CSS applies to the “planning, design, construction and operation of all projects involving new construction, reconstruction and major expansion of transportation facilities.” The objective of IDOT's CSS process as identified in the policy is to provide cost-effective transportation facilities which involve:

- A balance between mobility, community needs and the environment while keeping safety paramount.
- Involving stakeholders in the decision-making process early and continuously throughout the development of a project.
- Addressing all modes of transportation as appropriate in the planning and design of a project.
- Using all appropriate disciplines to help plan for and design a project.
- Applying the flexibility inherent in our design standards to fit a project into its surroundings and add lasting value to the community it serves.
- Incorporating aesthetics as part of basic design.

The policy also states that in order to determine project scope, elements and funding, the CSS process shall include Stakeholder Involvement Processes that are:

- Applicable to a wide range of projects.
- Flexible and modular.
- Simple enough to avoid adding another layer of process to an already lengthy planning and design schedule.

IDOT is ultimately responsible for the safety and integrity of the state transportation system and therefore must make the final decisions regarding any and all aspects of projects.

This policy is unique in that it covers not only Highways projects but also those of other offices and divisions in IDOT responsible for the development of major transportation projects. The full text of the Department's policy can be found at the IDOT CSS website

<http://www.dot.il.gov/css/home.html>. As stated, this policy provides guidelines for the modal divisions of IDOT to implement CSS as a priority in program delivery. Each office is responsible for the development of procedures to implement this Departmental Policy. Another unique feature of the CSS policy is that this Departmental Policy and its implementation are to be reviewed annually. As a result of IDOT's work with the bicycle and pedestrian interest groups in the state, the Department's policies regarding appurtenances is being reviewed.

For the Division of Highways, CSS implementation procedures can be found in BDE Procedure Memorandum 48-06. (6) The subject of this procedure memorandum is "Design Flexibility and the Stakeholder Involvement Process for Context Sensitive Solutions (CSS)", issued on March 1, 2006. The procedures in the memorandum are extensive and are applicable to all State highway projects. The procedure is intended to clarify IDOT's position on the use of the flexibility that is inherent in the design criteria, and to incorporate provisions for development and implementation of an effective Stakeholder Involvement Process tailored to each project's circumstances under the principles of CSS. The provisions for the implementation of the Stakeholder Involvement Process are emphasized and include an extensive discussion of potential approaches to stakeholder involvement and consensus building as well as the identification of stakeholders. The Stakeholder Involvement Process portion of the procedures are written in a form that is user friendly with examples that provide guidance to IDOT staff. The Community Context Audit is also an area of focus of these procedures. The remaining signatories to the Departmental Policy are developing similar processes for their planning, design, construction, and operation activities as applicable.

Training

IDOT had began work on the development of a CSS training program prior to the adoption of the Departmental Policy. A training cadre was developed and includes instructors from all IDOT regions and the FHWA. IDOT also formed a partnership with the American Council of Engineering Companies to bring their particular perspective and experience to the development of the CSS training program. Similar to the CSS Steering Team, the CSS Training Cadre is made up of individuals from across the State of Illinois and from a wide variety of disciplines and modal units including engineers, transportation planners, landscape architects, bicycle advocates, and attorneys, among others. The training program consists of three classes – an Awareness Class, an Approach Class, and a Local Agency Class. All classes include information about IDOT's CSS policy with an emphasis on early and continuous stakeholder involvement, design flexibility, and multi-modalism.

In order to determine the number and location of these CSS classes, a survey of training needs was performed. Approximately 800 IDOT staff and 200 local agency representatives identified a need for CSS training.

The CSS Awareness Class consists of a half day class intended for senior staff and supervisors who will be involved in the CSS process. The class provides a background on CSS, the basic concept and principles, and an understanding of IDOT's CSS policy and how the CSS process is addressed in all phases from planning through operations.

The CSS Approach Class is a two-day hands-on class intended for all employees involved in the CSS process during project development as well as employees in the Bureau of Construction and Bureau of Operations. This class provides basic knowledge and skills to collaboratively develop transportation projects by addressing the needs of a broad range of stakeholders. The class includes case studies of Department-specific projects. Specific CSS class modules are: the history, definition and guiding principles of CSS; federal and state involvement in CSS; planning and program

development; identification of stakeholders and the development of the stakeholders involvement plan; what is context; flexibility in design standards; land acquisition, design, construction, and maintenance; aesthetics; and tort liability and documentation. Development of this class took place over a year and a half and involved over two dozen IDOT and FHWA employees as well as more than a dozen consultant staff members. In response to comments provided by the Department's stakeholders, bike and pedestrian considerations are included throughout the class modules.

The Local Agency Class is a half-day class taught by instructors from IDOT's Bureau of Local Roads and Streets and the Office of Planning and Programming. The class discusses the Department's CSS Policy and is geared toward information that is of interest to local agencies. Much of the focus is on the role of local agencies as stakeholders and the potential use of CSS by local agencies.

Manuals have been developed for all three CSS training classes. These manuals and the classes also emphasize the flexibility inherent in the design criteria and the creativity which may be necessary to allow for meaningful stakeholder involvement. Bicycle and Pedestrian interest groups were involved with the development of these manuals and are supportive of their content.

In addition, many IDOT staff members have participated in outside training opportunities. Members of the training cadre attended the 2005 Midwest Region Context Sensitive Design and Solutions workshop held in Minneapolis. During February 2006, the training cadre as well as numerous other employees of IDOT and various Metropolitan Planning Organizations also attended the Federal Highway Administration's Community Impact Assessment course hosted by IDOT and led by the Center for Transportation and the Environment from North Carolina State University. Another of these courses with similar attendees was held in October, 2006.

In addition to these classes, IDOT staff is also working with the engineering departments at various universities in Illinois to determine how best to incorporate CSS into their curricula. In order to ensure that CSS truly becomes the "way of doing business" in the transportation industry, it is essential that young engineers receive training in this area.

Program Delivery

The Program Delivery objective includes targets and initiatives designed to achieve effective organization-wide implementation of CSS. It further includes monitoring CSS implementation as well as providing examples of CSS implementation throughout IDOT. Both internal and external awards are being developed for outstanding CSS project achievements. These awards will recognize both IDOT personnel and outside agencies and consultants for outstanding performance in CSS implementation.

The state's Secretary of Transportation is provided an annual report regarding CSS implementation efforts. As part of this effort, ongoing evaluations of CSS implementation including both internal and external communications are taking place. Further, IDOT continues to keep members of the Illinois General Assembly informed regarding its CSS activities and is committed to regular meetings to provide that information and receive feedback from legislators and their constituents.

Finally, work groups established under the CSS Balanced Scorecard continue to focus on implementation and provide assistance in this area. One such work group was established to monitor CSS implementation across IDOT. Already IDOT has been actively incorporating CSS into major projects such as the South Suburban Airport and the Prairie Parkway and several projects on the most recent Consultant Professional Transportation Bulletins include CSS activities as part of the projects.

Another group was formed to explore and define innovative solutions to transportation issues that balance mobility, community, and the environment, while keeping safety paramount and identify successful practices, policy and activity updates. Still another group is charged with monitoring CSS research and development efforts, including what other state departments of transportation and others are doing with regard to CSS.

Communications

Communications is at the heart of CSS. It is imperative that IDOT inform its employees and its stakeholders regarding its CSS efforts statewide. As a starting point, IDOT's CSS efforts have involved individuals from throughout IDOT, FHWA, and several transportation consultants. This broad involvement has served to help spread the message of CSS throughout IDOT.

As previously referenced, IDOT has a CSS website (www.dot.il.gov/css/home.html) which includes information about IDOT's CSS vision, definition and implementation. It is updated regularly and provides a wide variety of information regarding both IDOT activities and CSS resources throughout the country. For example, IDOT's CSS policy was made available on this website on August 2, 2005, one day after it was formally adopted. It also serves as a mechanism for stakeholders to provide IDOT with comments regarding its CSS activities. In addition, IDOT has websites regarding specific projects which provide a wealth of information about those projects including public meetings, timelines, and project photos.

IDOT's CSS website provides significant information to assist employees in the implementation of CSS. Included on this website are IDOT's CSS policies and procedures, samples of successful CSS projects, links to nationwide resources, training schedules, conference listings, and other articles or information which may assist CSS implementers.

IDOT personnel have made numerous presentations before a variety of organizations throughout the state regarding its CSS policy and activities. Some of these groups include state and regional planning agencies, the Illinois Municipal League, the Illinois Society of Professional Engineers, Women in Planning and Development, the Transportation and Highway Engineers Conference, and the American Society of Civil Engineers Annual Conference in October. Many of these meetings and conferences provide training opportunities and their attendees receive continuing education credits. These presentations provide an opportunity for IDOT to inform others about its CSS activities and to obtain feedback regarding its implementation.

IDOT held two statewide general stakeholder meetings in Spring 2006. The purpose of these meetings was to provide stakeholders with information regarding IDOT's CSS efforts and to discuss issues and suggestions for the future. The feedback obtained from stakeholders at these meetings is being used to help shape IDOT's future CSS activities. These meetings will be held at least annually.

IDOT's communications focus during this developmental period has been on both external communication with its stakeholders and internal communications with its employees. One of the keys to the internal communications effort is the IDOT CSS Sharepoint website. This intranet site helps employees involved in CSS development activities to work together more efficiently. The Sharepoint site contains libraries of policies, documents, presentations, photos, meeting minutes, training materials, references, calendars, notices, and many other relevant materials. The site has enabled employees from across the state to work together on common documents and communicate without having to hold countless meetings. The CSS Sharepoint site is a critical part of the CSS development effort.

The CSS effort is assisted by the open support of IDOT's Secretary of Transportation. The Secretary included CSS as a major theme of his annual visits to IDOT's District and Central Offices during Summer 2006 as well as presentations before other groups. In addition, the Secretary recorded a video statement supporting CSS which is utilized as part of IDOT's CSS training classes. Finally, the Secretary supports the participation by IDOT employees in national CSS efforts such as committees, conferences and workshops.

Lessons Learned

The Balanced Scorecard management approach has provided a framework to guide CSS implementation. This framework includes development of teams to work on various initiatives. All team members have information regarding the CSS Strategic Plan, i.e, specific tasks, who is responsible for the various tasks, and timeframes. This shared information allows work to progress

concurrently on tasks rather than consecutively so that the implementation of CSS can move forward more expeditiously.

As with all new initiatives, senior management support is essential to successful implementation. The Secretary of Transportation pursued the development of a CSS Department Policy and is a strong advocate for CSS which has helped to reinforce the importance of CSS to the agency's employees. In addition, the CSS Departmental Policy has been essential for applicable offices and divisions to define more specific procedures to implement CSS.

In the area of training, the utilization of a large number of people in a variety of disciplines has provided a strong basis for the development of training courses and materials. The training materials and manuals contain a wide variety of case studies taken from the experiences of the trainers. In addition, this broad involvement in the training cadre has provided a means to spread the word about CSS throughout IDOT.

Continuous assessment of the implementation of CSS by IDOT is a key component of the Balanced Scorecard. The Balanced Scorecard provides measures against which CSS implementation can be evaluated. It also provides a structured means for making changes to the Scorecard as IDOT learns from these measurements.

Just as communication is the key to the understanding of CSS, communication is the key to the development of a good CSS program as well. This has been true both within IDOT and with its stakeholders. Within IDOT, the broad participation of employees from throughout the agency both geographically and by specialty area has served to spread the message about CSS. This has enabled IDOT to move forward effectively with CSS implementation. In addition, the widespread involvement in CSS development has allowed for a variety of perspectives to be tapped resulting in a more creative and well rounded approach to CSS implementation.

Ongoing communication with stakeholders, including representatives of the General Assembly, local agencies, consultant firms, and interest groups, have helped to provide input for the development of the CSS program. In addition, it has also helped reassure those outside groups that IDOT is serious about CSS and is moving forward with this important program.

Finally, both the internal Sharepoint website and the external CSS Website have proven critical to the implementation of CSS by providing all parties with access to information and a means to effectively communicate and work together.

Conclusion

The implementation of Context Sensitive Solutions has become a major priority for the Illinois Department of Transportation. This is evidenced not only by the extensive activities that have taken place over the last few years, but by the large number of employees throughout IDOT who have been involved in this effort. But this is only the beginning.

While IDOT has worked hard to begin implementation of CSS throughout the department, many goals remain to be accomplished. Final implementation procedures are being drafted for the Office of Planning and Programming, Division of Aeronautics, and the Division of Public and Intermodal Transportation.

Project level implementation of CSS will expand. This implementation will continue to be monitored to identify and highlight successful examples of CSS implementation and to also identify areas needing improvement. As part of the Balanced Scorecard approach to CSS, IDOT will continue to monitor implementation of CSS in order to learn from its experiences and to improve CSS implementation. The Balanced Scorecard contains measures by which IDOT can evaluate its performance in the implementation of CSS.

Communication will continue to be evaluated and improved. IDOT's CSS website continues to be expanded and updated. More meetings with stakeholders will be held to obtain input and IDOT's CSS processes will be changed as appropriate.

IDOT, like government agencies throughout the country, is continually being asked to accomplish more with fewer resources. Costs continue to rise. Budgets continue to shrink. Our

citizens are better informed than ever before and expect more from their government. CSS will help IDOT respond to these competing demands. By bringing transportation stakeholders into the development of IDOT projects early and maintaining that involvement throughout the life of the project, stakeholder issues, desires, and concerns can be discussed and addressed before they become major issues. By bringing a variety of stakeholders together to discuss a transportation issue, a variety of talents and perspectives can be accessed to develop a solution to the issue resulting in better decisions. All of this will ultimately save IDOT time and money and result in projects which are assets to the local communities and to the State of Illinois.

The Balanced Scorecard management approach has helped to frame and facilitate the implementation of CSS at IDOT. It is hoped that this paper will assist other states in learning from the approach which IDOT has taken.

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