

CIVIL ENGINEERING STUDIES
Illinois Center for Transportation Series No. 09-041
UILU-ENG-2009-2012
ISSN: 0197-9191

CONTEXT SENSITIVE SOLUTIONS (CSS) ONLINE TRAINING COURSE DEVELOPMENT

Prepared By

James P. Hall

University of Illinois at Springfield

Susan Stitt
Illinois Department of Transportation

Research Report ICT-09-041

A report of the findings of

ICT-R27-39
Context Sensitive Solutions (CSS) Online Training Course Development

Illinois Center for Transportation

April 2009

Technical Rep	ort Documenta	tion Page
---------------	---------------	-----------

1. Report No. FHWA-ICT-09-041	2. Government Accession No.	3. Recipient's Catalog No.		
4. Title and Subtitle Context Sensitive Solutions (CSS) Online Training Course Development		5. Report Date April 2009		
		6. Performing Organization Code		
7. Author(s) James P. Hall, Ph. D., P.E. and Susan St	itt	8. Performing Organization Report No. ICT-09-041 UILU-ENG-2009-2012		
9. Performing Organization Name and Addre University of Illinois at Springfield One University Plaza Springfield, IL 62703-5407	ess	10. Work Unit (TRAIS)		
Illinois Department of Transportation 2300 S. Dirksen Parkway Springfield, IL 62764		11. Contract or Grant No. ICT-R27-39		
		13. Type of Report and Period Covered		
		Final Report		
12. Sponsoring Agency Name and Address Illinois Department of Transportation Bureau of Materials and Physical Resear 126 E. Ash Street				
Springfield, IL 62764		14. Sponsoring Agency Code		

15. Supplementary Notes

16. Abstract

A key to the successful implementation of Context Sensitive Solutions (CSS) for Illinois transportation projects is the active and informed participation of Illinois Department of Transportation's (IDOT) stakeholders. Essential to this participation is a public understanding of CSS and the procedures through which CSS is being implemented by IDOT.

The objective of this research was to develop an internet-based tutorial training course to provide information on CSS policies and procedures to affected citizens, elected officials, local agencies, interest groups, and other stakeholders of the IDOT. This course will enable these stakeholders to understand CSS and how to participate in the process

The study investigated possible approaches to the presentation of training materials in an online environment. The study also collected information on CSS web-based training in other states as well as the latest developments on CSS in Illinois. The study team and the Technical Review Panel jointly developed course content requirements and selected delivery mechanisms.

Using this information, an online training course was developed incorporating streaming audio/visual training module presentations. These presentations included an audio narrative, with corresponding visual presentation, and selected video interview segments. The use of streaming audio and video provides a more personalized presence to stakeholders and promotes understandability. The modules can also be used at public meetings as a slide presentation and as content for information pamphlets.

The major benefit of this online CSS training course is to provide knowledge of IDOT's CSS process to a wide variety of statewide stakeholders. Once developed for delivery over the Internet, the cost to the state of providing this training is minimal. Once trained, these stakeholders will be able to participate more effectively in the transportation project decision making process. IDOT will be able to obtain input from a wider variety of stakeholders for more efficient implementation of CSS.

17. Key Words		18. Distribution Statemen	t	
		No restrictions. This	document is avail	able to the public
		through the National	Technical Informa	ation Service,
		Springfield, Virginia	22161.	
19. Security Classif. (of this report)	20. Security Classif.	(of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified		28	

ACKNOWLDEDGEMENTS, DISCLAIMER, MANUFACTURERS' NAMES

This publication is based on the results of ICT-R27-39, Context Sensitive Solutions (CSS) online training course development. ICT-R27-39 was conducted in cooperation with the Illinois Center for Transportation; the Illinois Department of Transportation (IDOT); and the U.S. Department of Transportation, Federal Highway Administration (FHWA).

The research team acknowledges the financial support provided by the Illinois Center for Transportation under grant number ICT R27-39. The study team also wishes to express its sincere appreciation and gratitude for the chair of the Technical Review Panel, Susan Stitt (IDOT), and the Panel members: Sherry Phillips (IDOT), Kathleen McNeill (IDOT), Jason McMurray (IDOT), Matthew Hirtzel (IDOT), Patty Broers (IDOT), Marlene Hager (IDOT), Brad Risinger (IDOT), J.D. Stevenson (FHWA), and Scott Stitt (IDOT) for their reliable and valuable assistance and guidance through all phases of the project. The authors also wish to thank the efforts of the staff from the University of Illinois at Springfield including Deborah Antoine and Sharon McCurdy of the Office of Technology Enhanced Learning and Ralph Shank of the Office of Information Technology Services.

The contents of this report reflect the view of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the University of Illinois at Springfield, the Illinois Center for Transportation, the Illinois Department of Transportation, or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Trademark or manufacturers' names appear in this report only because they are considered essential to the object of this document and do not constitute an endorsement of product by the Federal Highway Administration, the Illinois Department of Transportation, the University of Illinois at Springfield, or the Illinois Center for Transportation.

EXECUTIVE SUMMARY

A key to the successful implementation of Context Sensitive Solutions (CSS) for Illinois transportation projects is the active and informed participation of Illinois Department of Transportation's (IDOT) stakeholders. Essential to this participation is a public understanding of CSS and the procedures through which CSS is being implemented by IDOT.

The objective of this research is to develop an internet-based tutorial training course to provide information on CSS policies and procedures to affected citizens, elected officials, local agencies, interest groups, and other stakeholders of the IDOT. This course will enable these stakeholders to understand CSS and how to participate in the process

The study investigated possible approaches to the presentation of training materials in an online environment. The study also collected information on CSS web-based training in other states as well as the latest developments on CSS in Illinois. The study team and the Technical Review Panel jointly developed course content requirements and selected delivery mechanisms.

Using this information, an online training course was developed incorporating streaming audio/visual training module presentations. These presentations included an audio narrative, with corresponding visual presentation, and selected video interview segments. The use of streaming audio and video provides a more personalized presence to stakeholders and promotes understandability. The modules can also be used at public meetings as a slide presentation and as content for information pamphlets.

The major benefit of this online CSS training course is to provide knowledge of IDOT's CSS process to a wide variety of statewide stakeholders. Once developed for delivery over the Internet, the cost to the state of providing this training is minimal. Once trained, these stakeholders will be able to participate more effectively in the transportation project decision making process. IDOT will be able to obtain input from a wider variety of stakeholders for more efficient implementation of CSS.

CONTENTS

ACKNOWLDEDGEMENTS, DISCLAIMER, MANUFACTURERS' NAMES	I
EXECUTIVE SUMMARY	. ii
CHAPTER 1 RESEARCH PLAN	1
1.1 BACKGROUND	1
1.2 RESEARCH OBJECTIVE	1
1.3 RESEARCH APPROACH	
CHAPTER 2 CSS ONLINE TRAINING CONTENT ASSESSMENT	2
2.1 INVESTIGATION OF CSS ONLINE CONTENT DELIVERY	. 2
2.2 FHWA CSS RESOURCE CENTER	. 2
California Department of Transportation (Caltrans)	3
Georgia Department of Transportation	. 3
Kentucky Transportation Cabinet	
Minnesota Department of Transportation	. 3
New Jersey Department of Transportation (Njdot)	. 7
New Mexico Department of Transportation	. 7
New York Department of Transportation	
Pennsylvania Department of Transportation (PennDOT)	
Utah State Department of Transportation	
Washington State Department of Transportation (WSDOT)	. 7
2.3 SUMMARY OF THE INVESTIGATION OF STATE CSS TRAINING	
WEBSITES	
2.4 IDOT CSS CONTENT	8
CHAPTER 3 CSS TUTORIAL CONTENT ACQUISITION AND COURSE	
DEVELOPMENT	
CHAPTER 4 OUTCOME AND BENEFIT TO IDOT/ILLINOIS	
CHAPTER 5 RECOMMENDATIONS	
REFERENCES	14
APPENDIX A: Script for Context Sensitive Solutions Online Training PowerPoint	
PresentationsA	\-1
APPENDIX B: Context Sensitive Solutions Training Website Frequently Asked	
QuestionsB	3-1

CHAPTER 1 RESEARCH PLAN

1.1 BACKGROUND

In 2004, legislation was enacted requiring the Illinois Department of Transportation (IDOT) to embrace the principles of Context Sensitive Solutions (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. IDOT has since adopted its CSS policy which is applicable to not only highways projects, but to those of other offices and divisions in IDOT responsible for the development of major transportation projects. These include the Division of Highways, Office of Planning and Programming, Office of Public and Intermodal Transportation and the Division of Aeronautics. These offices and divisions have adopted CSS procedures implementing the department's CSS policy. The IDOT CSS policy and implementation procedures are available at the IDOT CSS website at www.dot.il.gov/css/home/html as is a wide variety of other information regarding the Department's implementation of CSS.

Although formal training already exists for IDOT staff and external planners and design professionals, there is a need to provide general CSS information to public stakeholders to promote understanding and full engagement in the CSS process.

1.2 RESEARCH OBJECTIVE

The objective of this research is to develop an internet-based tutorial training course to provide information on Context Sensitive Solutions (CSS) policies and procedures to affected citizens, elected officials, local agencies, interest groups, and other stakeholders of the Illinois Department of Transportation (IDOT). This project is included in IDOT's CSS Strategic Plan.

1.3 RESEARCH APPROACH

A key to the successful implementation of CSS is the active and informed participation of IDOT's stakeholders. Essential to this participation is an understanding of what CSS is and the procedures through which CSS is being implemented by IDOT.

The purpose of this project is to develop an online training course of IDOT's CSS policy and procedures. The focus of this training is to educate IDOT stakeholders in a manner to enable them to more fully participate in the CSS process.

In order to accomplish the objectives of this project, the study team, in conjunction with the Technical Review Panel, performed three major tasks:

- 1) CSS Online Training Needs Assessment
- 2) CSS Training Content Development
- 3) Webinar Deployment

A description of the results of each task follows.

CHAPTER 2 CSS ONLINE TRAINING CONTENT ASSESSMENT

The purpose of this task was to perform an assessment of the content and functionality requirements for CSS online training. This was accomplished in two subtasks: (1) investigation of existing CSS online content delivery and (2) IDOT CSS functional area and training interviews.

2.1 INVESTIGATION OF CSS ONLINE CONTENT DELIVERY

The UIS study team reviewed information on existing CSS training and online content from other state transportation agencies and the Federal Highway Administration (FHWA). This investigation included such elements as CSS content areas and identifiable best practices in CSS training and information dissemination.

2.2 FHWA CSS RESOURCE CENTER

A major resource for this investigation was the FHWA's Context Sensitive Solutions resource center website accessed at http://www.contextsensitivesolutions.org/.

The FHWA CSS Resource Center is a repository of information related to CSS concepts and implementation for state and local transportation agencies and for community stakeholders. It is supported by multiple agencies including the FHWA and the American Association of State Highway and Transportation Officials (AASHTO).

The site has a useful summary of current state practices in CSS. This information was supplemented with further investigation of state agency CSS materials available online.

Most states have implemented some aspect of CSS. In addition, most state agencies have developed and delivered some type of CSS training; primarily for transportation planners, managers and design professionals which encompass internal staff, consultants and local agencies.

Fourteen state DOTs, including Illinois, have a CSS website (Table 1). However, none of these websites have a dedicated training module for the general public. Several sites had useful, summarized information on CSS processes and case examples of CSS applications for specific projects.

Table 1. States with CSS Websites

- California
- Georgia
- Idaho
- Illinois
- Kentucky

- Maryland
- Minnesota
- New Jersey
- New Mexico
- New York

- Ohio
- Pennsylvania
- Utah
- Washington

Source: http://www.contextsensitivesolutions.org/content/gen/state-profiles/sp-websites

As previously indicated on their website, Ohio does not have a CSS program at this time but does emphasize the incorporation of aesthetic features. This website is currently not available.

Idaho has a Context Sensitive Solutions Guide available online, but not their training programs. The Maryland CSS site provides general information on the CSS approach. It refers to CSS training information but this information is not available online but rather in paper form by request.

A brief synopsis of the major components of the other state CSS websites follow.

California Department of Transportation (Caltrans)

Website: http://www.dot.ca.gov/hq/oppd/context/index.htm

The CalTrans CSS website contains general information on the philosophy of CSS and various poicies. They also references useful material from several district offices relating to project specific CSS practices.

Georgia Department of Transportation

Website: http://wwwb.dot.ga.gov/csd/index.html

Georgia has placed their Context Sensitive Design manual online. The manual includes an effective presentation of specific project examples.

Kentucky Transportation Cabinet

Website: http://www.ktc.uky.edu/csd.html

Kentucky Transportation Cabinet, through the University of Kentucky, referenced their CSS Design Workshop training program with the ability to download presentation slides for some components. The Kentucky site also provided access to detailed information on 15 CSS case studies in .pdf, html and PowerPoint formats. The case studies effectively presented detailed CSS project-specific information.

Minnesota Department of Transportation

Website: http://www.cts.umn.edu/Education/ContextSensitive/index.html
Minnesota DOT, through the University of Minnesota, has a general information CSS
site including CSS vision and principles. It also has presentation materials from a 2005

Context Sensitive Design and Solutions National Workshop held in Minneapolis. The materials focused primarily on design and project development professionals.

New Jersey Department of Transportation (Njdot)

Website: http://www.state.nj.us/transportation/eng/CSD/

New Jersey has general information on CSS and a detailed chart for the Context Sensitive Design process. However, the site does not contain specific project or training information.

New Mexico Department of Transportation

Website: http://www.nmshtd.state.nm.us/main.asp?secid=15512
The New Mexico CSS website includes CSS best practice examples and a
PowerPoint presentation of a Simplified Guide for Context Sensitive Design and Solutions which presents their CSS process.

New York Department of Transportation

Website:

https://www.nysdot.gov/portal/page/portal/divisions/engineering/design/dqab/css
The New York CSS website is primarily a general information site with a few links to CSS projects.

Pennsylvania Department of Transportation (PennDOT)

Website: http://65.207.30.22/css/www/policy_overview.php

PennDOT has an informative and well designed general purpose CSS website. One of the unique features is a CSS tool kit focused on highway designers. The site references project-specific checklists for Planning and Programming and for a Community Context Audit. The site also contains case examples for a wide variety of projects including bicycling, signalization, pedestrian, bridges, intersections and highways, with a search feature.

Utah State Department of Transportation

Website: http://www.dot.state.ut.us/main/f?p=100:pg:954995528837463:::1:T,V:144, Utah has a formalized training program primarily for in-house personnel and consultants/contractors. The site also has general information on several case studies.

Washington State Department of Transportation (WSDOT)

Website: http://www.wsdot.wa.gov/Biz/csd/

WSDOT is developing CSS training focused on designers and planners and the CSS website has a few featured case examples.

2.3 SUMMARY OF THE INVESTIGATION OF STATE CSS TRAINING WEBSITES

Most states have CSS programs and policies, and at least 35 states have some level of CSS training. Training is primarily targeted to internal DOT technical staff and to consultants.

Fourteen states (including Illinois) have online CSS websites. A few states have detailed CSS project case descriptions available online, in particular CalTrans, Kentucky and Pennsylvania.

It appears that this project's objective of providing basic CSS training specifically for public stakeholders would be the first to do so nationally.

2.4 IDOT CSS CONTENT

The study team consulted with members of the Technical Review Panel, and other resources as appropriate, for the focus of the online training. The intended audience was identified as the "casual stakeholders" i.e. those stakeholders who become involved in CSS for specific projects, as well as interest groups. The Panel determined that training is already in place for those who implement CSS both within and outside of the IDOT.

IDOT already had materials related to CSS content on its website. To supplement this, the project team consulted with CSS Training Objective Manager Sherry Phillips, CSS trainers Kathleen McNeill, and Matt Hirtzel, and with other Technical Review Panel members, as appropriate, to determine course content and content delivery mechanisms.

A preliminary outline of CSS training elements was developed for review by the Technical Review Panel to determine the scope of the webinar content and delivery format. An outline of the training components was discussed and co-developed with the Technical Review Panel.

The study team established a courseware site at the University of Illinois at Springfield (UIS) for webinar content development. The site also incorporated content for IDOT's two day CSS course and the one half day CSS Awareness course. The site was available for use by Technical Review Panel members to review course materials as they were developed.

Since IDOT does not currently deliver online training programs, the study team demonstrated online course delivery techniques and software. The study team investigated several options for structuring online training to meet the needs of IDOT and the CSS stakeholders including online courseware such as Moodle. Eventually, the Technical Review Panel decided that a general public website was the preferred delivery mechanism.

The UIS technical support staff also investigated and demonstrated to the Panel a variety of instructional mechanisms for online course content delivery including PowerPoint presentations, Audio/video streaming, and avatars.

For online audio/video presentation, Flash is very prevalent media delivery mechanism on the Internet. It is user-friendly and accessible to approximately 85% of users. Download time with Flash can be extensive depending on the internet access available. If the material is larger, streaming video was recommended.

The panel also considered the development of a type of avatar for the Frequently Asked Questions (FAQ) portion of the training to provide more interest to the material. This option was eliminated due to development time constraints.

For the purposes of this online tutorial, the Panel determined that streaming Powerpoint presentations using Flash, with scripted audio voiceovers, would be the most appropriate for internet content delivery. The Panel also decided to investigate the inclusion of video interview segments.

CHAPTER 3 CSS TUTORIAL CONTENT ACQUISITION AND COURSE DEVELOPMENT

The purpose of this task was to acquire, prepare and organize the content for the online CSS training. Content was based on the training needs assessment and the intended audience.

A primary concern was to design and structure the online training website with a professional look and feel, with an emphasis on functionality. Since CSS stakeholders will come from a wide variety of backgrounds and internet access capabilities, it is important that the content is both understandable and accessible.

UIS technical support staff developed prototype graphic, video, and audio components for the online webinar for evaluation by the Panel.

Proposed training outlines were developed for assessment by the Technical Review Panel. After a series of meetings the following specific elements were identified as critical components for the training.

The training should begin with the basics: What is CSS?; with a discussion of the old way of project delivery versus the CSS method. This training should also include a general project timeline. There should be emphasis on the importance of stakeholder involvement in the process. A specific project should be showcased. As part of that showcase, a stakeholder video interview should be included in the training. An IDOT staff member who was involved in a CSS project should also be interviewed.

In general, the purpose of this online training course is to provide information to stakeholders on the Context Sensitive Solutions (CSS) process. The online training should consist of a series of modules on the specific aspects of CSS, including how the CSS process works and the benefits of using CSS. The site should also include "quick answers" on how CSS works in practice.

To facilitate content development, a focused Work Group was formed consisting of Susan Stitt, Sherry Phillips, Kathy McNeill, and Matt Hirtzel from IDOT; Deb Antoine from the UIS Office of Technology Enhanced Learning; and Ralph Shank from the UIS Office of Information Technology Services and James Hall. This Work Group developed training materials and content for inclusion in the prototype website and assessed training functionality.

The content for the scripted PowerPoint presentations was organized in the following CSS Training Modules

- Introduction to CSS
- What is CSS?
- Why Apply CSS to Transportation Projects?
- Who is Involved in the CSS Process?
- How Does the CSS Process Work?
- What Does the CSS Process NOT Do?
- What are the Benefits of Using CSS?

The work group distributed the draft PowerPoint materials to be included for the CSS online training to the full Technical Review Panel and to IDOT management for review. The team then developed a final written script to develop the audio of the PowerPoint presentations. The script was recorded by IDOT staff at UIS recording facilities to provide the voiceovers for the PowerPoint presentations. Appendix A contains the script for the modules.

UIS and IDOT staff conducted video interviews with Ron Jost of OSF Medical Center in Peoria and Sherry Phillips of IDOT for inclusion in the website.

Ron Jost, Vice President of Strategic and Facility Planning at OSF St. Francis Medical Center in Peoria discussed his CSS experience on the Interstate 74 reconstruction project in downtown Peoria. His presentation covered the following topics:

- Background
- Communication
- Advice
- Role
- Skepticism

Sherry Phillips, Plans Project Engineer for District 7, IDOT, also provided video responses to the following questions:

- What is CSS?
- What are the benefits of CSS?
- What is the definition of a Stakeholder in CSS?
- What kind commitment is involved in CSS
- Can you describe a CSS project example?

The Panel also developed a list of answers to Frequently Asked Questions. These are in Appendix B.

A prototype CSS training website was developed, incorporating the components identified in Chapter 3, for review by the Technical Review Panel and IDOT management. Components included website design/layout, streaming PowerPoint presentation with audio, video interviews and a Frequently Asked Questions segment. Another feature of the website is a "Contact IDOT" link.

The purpose of the website prototype was not only to display the course content but to demonstrate the look, feel, and functionality of the webinar. Based on the panel's and IDOT's management review, the content of the website and the training modules were further modified.

Figure 1 shows the layout of the CSS Training website. All of the website materials were provided to IDOT for deployment on their Internet site.

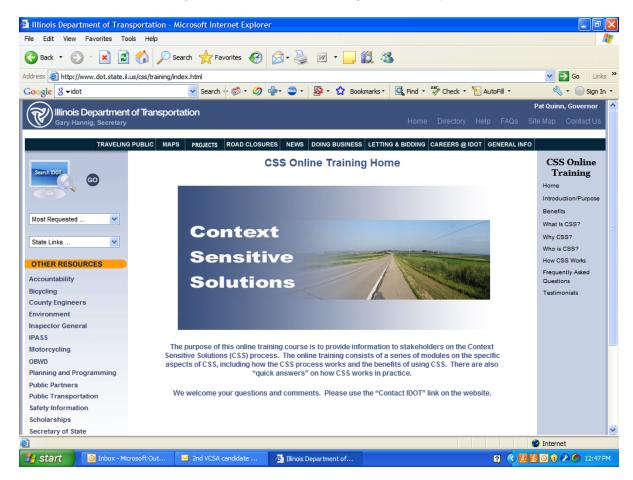


Figure 1. IDOT CSS Training Website Layout

CHAPTER 4 OUTCOME AND BENEFIT TO IDOT/ILLINOIS

Central to CSS is the early and continual involvement of stakeholders in the transportation decision making process. In order for these stakeholders to be involved, they must understand IDOT's CSS policy and procedures.

The major benefit of this online CSS training course is to provide knowledge of IDOT's CSS process to a wide variety of statewide stakeholders. Once developed for delivery over the Internet, the cost to the state of providing this training is minimal. Once trained, these stakeholders will be able to participate more effectively in the transportation project decision making process. IDOT will be able to obtain input from a wider variety of stakeholders and CSS should be implemented more efficiently. The use of streaming audio and video provides a more personalized presence to stakeholders and promotes understandability.

CHAPTER 5 RECOMMENDATIONS

Although the online webinar is functional, the following are recommendations for future efforts to improve CSS the training capabilities and use.

IMPLEMENTATION

The study team recommends that IDOT test deployment on a sample of users, before full deployment, to ensure functionality, especially for the general public.

One advantage of delivery of training over the Internet is the ability to capture input from stakeholders accessing the training to test the functionality and content of the training. The panel recommends that IDOT continuously capture these comments and make changes as necessary to enhance the usability of the training site.

WEBSITE ENHANCEMENTS

Introduction

In developing the Introduction module for the course, the panel considered having the IDOT Secretary provide audio for the course opening. Time constraints precluded this from becoming a reality, but it should be considered as a future enhancement.

Additional Case Studies

The selective inclusion of case studies of CSS in practice can raise the level of understanding of the application of CSS principles. Since the impact of CSS can vary widely by such factors as project type, size and location, a variety of case studies would help stakeholders visualize how the CSS process works. The study team recommends that IDOT continue to gather CSS case project information to include, as appropriate, on the webinar site.

ONLINE TRAINING

IDOT effectively provides on-ground CSS training for internal staff and to consultants, planners, and local agencies. It may be possible to move some of these course components to internet delivery to enable more flexible access for transportation professionals. It is also possible to incorporate testing and certification in an online environment.

REFERENCES

California Department of Transportation, "Context Sensitive Solutions," Last Revised March 8, 2005, http://www.dot.ca.gov/hq/oppd/context/index.htm (Accessed August 25, 2008)

Federal Highway Administration, "Context Sensitive Solutions.org" http://www.contextsensitivesolutions.org/ (Accessed August 25, 2008)

Georgia Department of Transportation, "GDOT Context-Sensitive Design Online Manual, Section 3. Leading with Best Practices" Last Revised April 23, 2006, http://wwwb.dot.ga.gov/csd/projects/proj_index.html (Accessed August 25, 2008)

Georgia Department of Transportation, "GDOT Context-Sensitive Design Online Manual," Last Revised April 23, 2006, http://wwwb.dot.ga.gov/csd/index.html (Accessed August 25, 2008)

Idaho Transportation Department, "Context Sensitive Solutions," Last Revised June 28, 2007, http://itd.idaho.gov/planning/css/> (Accessed August 25, 2008)

Maryland Department of Transportation – State Highway Administration, "Context Sensitive Design/Thinking Beyond the Pavement," Last Revised June 18, 2008, http://www.marylandroads.com/events/oce/thinkingbeyondpavement/thinking.asp (Accessed August 25, 2008)

New Jersey Department of Transportation, "Context Sensitive Design," Last Revised December 16, 2003, http://www.state.nj.us/transportation/eng/CSD/ (Accessed August 25, 2008)

New Mexico Department of Transportation, "Infrastructure Division – Context Sensitive Solutions Unit," http://www.nmshtd.state.nm.us/main.asp?secid=15512 (Accessed August 25, 2008)

New York Department of Transportation – Engineering Division – Office of Design "Context Sensitive Solutions,"

https://www.nysdot.gov/portal/page/portal/divisions/engineering/design/dqab/css> (Accessed August 25, 2008)

Ohio Department of Transportation http://www.dot.state.oh.us/aestheticdesign/ (Last Accessed July 2, 2008)

Pennsylvania Department of Transportation (PennDOT), "Context Sensitive Solutions," http://65.207.30.22/css/www/policy_overview.php (Accessed August 25, 2008)

University of Kentucky - Kentucky Transportation Center, "Context Sensitive Design," http://www.ktc.uky.edu/csd.html (Accessed August 25, 2008)

University of Minnesota - Center for Transportation Studies, "Context Sensitive Design – The Road Best Traveled," Last Revised June 21, 2007, http://www.cts.umn.edu/Education/ContextSensitive/index.html (Accessed August 25, 2008)

Washington State Department of Transportation "Context Sensitive Solutions," http://www.wsdot.wa.gov/Biz/csd/ (Accessed August 25, 2008)

APPENDIX A: Script for Context Sensitive Solutions Online Training PowerPoint Presentations

INTRODUCTION TO CSS SEGMENT

Slide 1

Introduction to Context Sensitive Solutions.

Slide 2

The Illinois Department of Transportation has developed this site to introduce you to a new method of project development, used at IDOT, called Context Sensitive Solutions or "CSS" for short.

Slide 3

During the 1950s, the Interstate Era, the public wanted mobility. The focus was on getting people from one place to another. So, the highway workers lined up the bulldozers to clear the path. As the roadway network grew and more people used it, safety became an added focus.

During the 60s, the public began to change their way of thinking. The started to put values on the environment and resources around them and became much more interested in protecting these resources. At the same time, the transportation professionals were using the DAD model - "Decide Announce Defend" - where the engineers decided what was best - announced their decisions - and then often had to defend those decisions.

During the 70s, transportation official started to realize that the process needed to be more open. In 1969 the National Environmental Policy Act was passed. NEPA requires that the public and local officials have an opportunity to review and comment on public transportation projects. With this, IDOT started to allow the public review and comment. However, this was still happening later in the process after some key decisions had already been made and the customer dissatisfaction with the process did not go away.

The 80s rolled in and the public began to look for more collaboration with local officials and the public through advisory committees. IDOT started to use these methods, but there was a real tendency to hang on to the old way of doing things for the majority of the projects.

In the 1990s, society's evolution of thinking influenced events and helped craft legislation that pushed IDOT in the direction of CSS.

In the 2000s, CSS was mandated by law for the State of Illinois and IDOT began applying the principles of CSS to designated projects.

The CSS method seeks to ensure that stakeholders are involved in the decision-making process. The "traditional" method for developing a project was for transportation officials to identify a problem, design a solution, and then offer the solution to the public for approval. While this may have worked back when mobility and safety were the primary issues on the public's mind, these days this kind of planning has the potential to cause a great deal of concern with residents, advocates, businesses and elected officials. Many of the pure engineering solutions devised to solve a particular transportation problem can greatly affect

issues such as quality of life, environmental preservation, and features with aesthetic or historic value to a community.

Slide 4

We need to avoid the old method of making decisions. We need to avoid having to defend and redesign - which results in delays.

Slide 5

There is growing interest in our transportation projects and the decisions made in developing them. Along with this has come a growing public mistrust for the industry making decisions in what they see as a vacuum.

Litigation has become an increasing problem causing project delays and increases in project costs.

In some cases the Department has had to redo project designs adding to delays and costs due to duplicative efforts. Good Design takes time and money. Bad Design takes longer and costs more.

An acceptable design could mean the difference between getting a project built or not built.

Slide 6

With Context Sensitive Solutions, the Department's goal is to listen to the community to hear what your values are, then we design only after we have a good understanding of the setting in which our project will exist. This helps the Department to build the project without delays.

The CSS process is used throughout the entire project.

Slide 7

The context sensitive solutions method of public participation means:

- Communicating early and often
- Promoting cost effective projects
- Improving safety
- Recognizing community values
- Developing public trust

WHAT IS CSS? SEGMENT

Slide 1

What is Context Sensitive Solutions?

Slide 2

Context Sensitive Solutions, or "CSS," is a new method of project development.

CSS is more than just presenting solutions to the public.

Slide 3

Context Sensitive Solutions 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." This will be done 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.

INTERDISCIPLINARY encompasses many different areas of expertise, including but not limited to engineers, landscape architects, urban planners, community leaders, and environmental experts.

MULTIMODAL means different modes of transportation, not just highways, including rail, air, mass transit, pedestrians and bicyclists.

STAKEHOLDERS are anyone who has a stake in the outcome of a project.

COST EFFECTIVE means that there are still economic limits to the projects that IDOT can build.

Context is the "environment that will be affected by the outcome of the project."

Slide 4

Every project has context as defined by Transportation needs, the natural environment, and the human environment. These components together make up the values for a community.

Through early communication with stakeholders, IDOT will identify and embrace a community's values.

WHY CSS? SEGMENT

Slide 1

Why Apply Context Sensitive Solutions to Transportation Projects?

Slide 2

While several states use Context Sensitive Solutions principles, Illinois was the first state to pass a law mandating that CSS be used.

In 2003, a Public Act was passed that instructed IDOT to "embrace the principles of CSS in its policies and procedures for the planning, design, construction, and operation" of major projects.

The major projects are defined as new construction, reconstruction and major expansion. These types of projects must use CSS principles by law.

In addition, the officials at IDOT may choose to use CSS for other projects if they feel it would benefit the outcome of the project.

CSS is the right thing to do for IDOT, for the communities, and for the citizens of Illinois.

Slide 3

Once the law was passed, IDOT officials wrote and signed a Departmental Policy, interpreting the meaning and outlining how to follow the law.

Slide 4

New Construction is where a new road would be built where there are no existing roads. For example, a new by-pass around a community.

Reconstruction is where the existing road is removed and replaced in the same location. For example, reconstructing a highway due to deterioration.

Major Expansion would be a significant increase in capacity such as adding additional lanes. For example, changing a two-lane highway into a four-lane expressway.

In other words, CSS must be used on all large projects. The IDOT officials may also use the CSS process on smaller projects if there is controversy or if there is a major impact to the community. For example, a project replacing a small bridge in a downtown area may benefit from using CSS.

WHO IS INVOLVED WITH CSS? SEGMENT

Slide 1

Who is involved in the Context Sensitive Solutions Process?

Slide 2

Who is involved in CSS? IDOT and a wide variety of stakeholders all have a role to play in a CSS project.

Slide 3

Who is a Stakeholder?

A stakeholder is simply anyone who has a "stake" in the outcome of a project.

Stakeholders can include:

- Home Owners
- Business Owners
- Commuters
- Environmental groups
- Opposition groups
- Bicycle groups
- Trucking companies
- Emergency Services
- Elected Officials

Slide 4

IDOT's role begins by identifying which projects use CSS. IDOT will schedule meetings, notify participants, and take meeting notes.

IDOT will participate openly and honestly and will truly listen to the stakeholder's issues.

All final decisions are made by IDOT. They are responsible for building and maintaining the highway system, and they must ensure that the safety of the traveling public is never compromised.

They will make the decisions in a clear and transparent manner and inform stakeholders why decisions are made.

Slide 5

The stakeholders are expected to attend the meetings as much as possible. They are expected to participate openly and honestly. If a stakeholder has a hidden agenda, the entire process is compromised.

A stakeholder usually has a personal interest in the outcome of a project. They are expected to protect the community they are representing, not just act on their own personal interest. This is an opportunity for individuals to influence the outcome of a project for future generations.

HOW DOES CSS WORK? SEGMENT

Slide 1

How does the Context Sensitive Solutions Process Work?

Slide 2

The CSS process begins when a project is identified in the multi-year plan. The stakeholders will be identified and contacted at the onset of the Feasibility Study or Phase I step. Sometimes projects will begin with a Feasibility Study, other times, projects begin with the Phase I preliminary engineering. The same Community Advisory Group, which will be described later, will be used throughout the next steps – Design, Construction and Maintenance. New members can be added as the project moves along. Usually, a project can take anywhere from 5 years to 20 years to get from the multi-year program to construction.

The multi-year plan is announced every spring, and usually includes upcoming projects for the next 5 to 7 years. Sometimes, only the phase I engineering study is identified during that time, and the design and construction will be added in later years.

Slide 3

The steps for a CSS project include:

Step 1. Form Project Study Group (PSG)

Step 2. Develop Stakeholder Involvement Plan (SIP)

Step 3. Hold Kick-off Meeting

Step 4. Form Community Advisory Group (CAG)

Step 5. Hold Workshops with the CAG

Step 5 includes establishing the ground rules, conducting the context audit and writing the problem statement.

Step 6. Define / Evaluate Alternatives

Lets go over these steps in more detail....

Slide 4

The Project Study Group is made up of IDOT technical personnel and may include design, bridge and construction engineers, environmental experts, and landscape architects to name a few. This group is doing the work behind the scenes. They will prepare for the public involvement meetings, facilitate the meetings and use the information from the public to move the project along. The Project Study Group will adhere to the design and construction criteria that must be followed.

Slide 5

Once the Project Study Group is formed, their first step is to figure out who the stakeholders are, and how to get them involved. To identify the stakeholders, the PSG will research the community, ask the local elected officials for names, speak to civic groups, post fliers, and advertise through the media or billboards. The Project Study Group will use a variety of methods to get the word out that a project is starting and now is the time to get involved.

The project study group will then develop a written stakeholder involvement plan. This plan will include the contact information for the project study group, names of the identified stakeholders, and how they will be included in the project development.

The public will be allowed to review and suggest modifications, as needed, to the Plan.

This plan will be used throughout the life of the project, and stakeholder information can be updated as needed.

Slide 6

The PSG will then hold a kick-off meeting (or several meetings if the project encompasses several communities), where the public is invited to meet the team and sign up to get involved. Each kick-off meeting will be unique for that project. Some may use workshops to get feedback, while others may do formal presentations.

Slide 7

At the end of the kick-off meetings, the PSG may have a comprehensive list of people from the community who will work with them for the duration of the project.

The Department will invite these interested people to future meetings – to be a member of the *Community Advisory Group* or CAG. This group will advise IDOT's Project Study Group throughout the project.

Slide 8

Once a Community Advisory Group has been established, the Project Study Group will schedule a meeting to set the ground rules and discuss a timeline of what to expect. Later, the CAG will be asked to participate in a Context Audit, which is a questionnaire asking

about specific issues of concern. Then the groups will work together to write a problem statement. The problem statement is the cornerstone for the rest of the project development. Every alternative must satisfy the problem statement.

Slide 9

Here is an example list of ground rules. The Community Advisory Group will be given the opportunity to review and comment on the ground rules before they are adopted and used. A copy of the adopted ground rules will be available at every meeting thereafter.

Slide 10

Here is an example outline and timeline of what the CAG can expect. The flowchart illustrates the steps that the Community Advisory group will follow to eventually get to a preferred alternative.

This example also identifies a general timeline, beginning in the winter of 2006 and ending by the winter of 2007. This is just an example, and will vary depending on project size.

This example also ends the process with a phase one decision. The CSS process will continue throughout the next phases – design, construction and maintenance – of the project. The CAG will be included throughout the next phases, and the CAG membership may change as the project goes through the different steps.

Slide 11

The meetings between the Project Study Group and Community Advisory Groups will comply with the environmental regulations such as the National Environmental Policy Act which outlines the steps that IDOT must follow.

These meetings will seek consensus on all main decisions. The goal of using CSS on major projects is not to make everyone happy. However, hopefully, those who are not happy with the outcome will understand why and how the decisions were made.

All meetings and decisions will be documented in writing.

Slide 12

After the CAG has assisted the PSG with the problem statement, the groups will meet again to brainstorm solutions to the problem. The ideas will be discussed and those that solve the problem will be carried forward for further study. The engineering staff will take the ideas back to the office and work out the engineering viability of each idea. They will evaluate the safety, constructability, cost, and impact to the environment.

Over the course of several meetings, the technical staff will explain the pros and cons of each alternative, and allow the CAG the opportunity to comment on the various impacts to their community.

The PSG will continue to work with the CAG to identify a preferred alternative. The bottom line is the solutions must meet IDOT's safety requirements, be a reasonable expense for the taxpayers, and avoid or minimize harm to the environment.

WHAT DOES CSS NOT DO? SEGMENT

Slide 1

What Does the Context Sensitive Solutions Process Not Do?

Slide 2

CSS does not:

Abandon safety

Or Abandon good engineering.

Slide 3

CSS does not create a democracy.

IDOT is still responsible for all major project decisions.

Slide 4

CSS does not allow an open checkbook.

Slide 5

CSS does not seek unanimous support for projects. It seeks consensus and a sense of being considered

Slide 6

CSS is the right thing to do.

WHAT ARE THE BENEFITS OF CSS? SEGMENT

Slide 1

What are the Benefits of using Context Sensitive Solutions?

Slide 2

By working with the community, the Department can develop a solution that considers the goals and values of the community.

IDOT does a better job of protecting a project's surroundings - the environment and other important assets that the community values.

Projects look better and fit into their physical settings better.

Slide 3

CSS helps protect the community's assets. The assets may be the people, businesses, and/or important historic or natural areas.

Slide 4

CSS focuses the Department's attention on satisfying customers.

CSS builds and strengthens positive relationships with stakeholders, including resource agencies.

CSS develops partners; not opponents.

CSS generates public trust and support! CSS builds community support and reduces public opposition to projects.

Slide 5

CSS helps save time and money by reducing the "rework" cycle.

Slide 6

Being involved in a CSS project allows an opportunity to leave a legacy!

APPENDIX B: Context Sensitive Solutions Training Website Frequently Asked Questions

WHAT IS THE DEFINITION OF CONTEXT SENSITIVE SOLUTIONS?

Context Sensitive Solutions 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." This will be done 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.

WHO IS A STAKEHOLDER?

A stakeholder is simply anyone who has a "stake" in the outcome of a project.

Stakeholders can include:

- Home Owners
- Business Owners
- Commuters
- Environmental groups
- Opposition groups
- Bicycle groups
- Trucking companies
- Emergency Services
- Elected Officials

ON WHAT TYPES OF TRANSPORTATION PROJECTS IS CSS USED?

The CSS process must be used large transportation projects such as new construction, reconstruction, and major expansion. IDOT officials may also use the CSS process on smaller projects when controversy exists or if there is a major impact to the community.

WHAT ARE EXAMPLES OF PROJECTS WHERE THE CSS PROCESS IS TYPICALLY NOT USED?

Simple resurfacing projects and rural bridge projects.

CAN THE CSS PROCESS BE APPLIED TO LOCAL AGENCY TRANSPORTATION PROJECTS?

Local agencies are not required by law to do CSS on their projects. However, IDOT strongly encourages local agencies to apply CSS on applicable projects. Additionally, local agency

projects that request future state and/or federal money may be required to apply CSS to those projects as determined by the department.

WHAT IS THE DEPARTMENT'S PROJECT STUDY GROUP?

The Project Study Group is made up of IDOT technical personnel and may include design, bridge and construction engineers, environmental experts, and landscape architects to name a few. This group is doing the work behind the scenes. They will prepare for the public involvement meetings, facilitate the meetings, and use the information from the public to move the project along. The Project Study Group will adhere to the design and construction criteria that must be followed.

WHAT IS THE COMMUNITY ADVISORY GROUP (CAG)?

A Community Advisory Group (CAG) is an established group of interested stakeholders who provide feedback and advice to IDOT through the life of the project. The Department hosts a kickoff meeting for each CSS project to describe the transportation project and to solicit members for the CAG. CAG members are then invited to attend meetings during which they will share their views and experiences as members of the community.

The CAG may be limited to certain numbers of members for ease of facilitation. For example, on a very large project three or four homeowners may be selected to represent all homeowners, and three or four business owners may be asked to represent all businesses, etc. These representatives are then asked to keep their members up-to-date on the project and provide feedback to the rest of the stakeholders. The CAG will be tailored to each project to ensure the best outcome for the communities while maintaining the project schedule set forth by the Project Study Group.

WHO SHOULD NOT BE A MEMBER OF A COMMUNITY ADVISORY GROUP (CAG)?

The media should not be a member of the CAG. They may interview CAG members and attend meetings as observers; however, they should not influence the outcome of the project. In certain cases, elected officials in a community should not be a part of the CAG either. If the project is controversial, and the local elected officials have taken a position, the general public may not feel their opinion counts.

HOW DOES THE DEPARTMENT APPLY FLEXIBILITY IN DESIGN IN THE CSS PROCESS?

The Department utilizes the flexibility inherent in all IDOT design policies to meet requirements identified in the CSS process. IDOT also uses judgment and creativity to craft the optimum solution for each project.

HOW IS CSS APPLIED DURING AND AFTER PROJECT CONSTRUCTION?

All major decisions made during the early CSS stages must be followed in construction and maintenance. The original Community Advisory Group should be maintained (if possible) and kept informed during the design and construction phases. New members may be added as necessary.



