



# Context (“Customer”) Sensitive Solutions The Business Case for CSS and Change (CSS)



A Forum on Integrating CSS in MnDOT Services and  
Scott Bradley – Director of Context Sensitive Solutions – Feb 27-28, 2012  
Programs

*Your Destination...Our Priority*





# Understanding & Responding To Context

- Interrelated conditions in which something exists
- Constraints and opportunities that you work with
- Connecting elements in more holistic or cohesive ways



What's Most Important to People ... Places ...  
Circumstances?





# Why Context is Important

## Measuring Success & Failure from Customer Perspectives

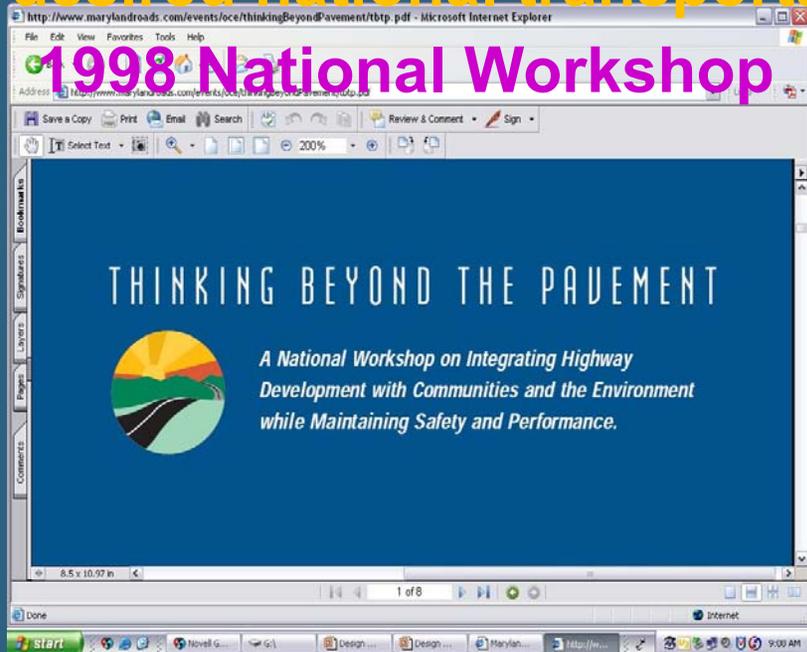
- Regulatory Compliance
- Needs, Wants & Values
- Public Health & Safety
- Public & Stakeholder Acceptance
- Community Compatibility
- Environmental Compatibility
- Social & Economic Equity
- Costs & Returns on Investments
- Functions, Performance & Longevity
- Timeliness of Responses & Deliverables
- Impacts upon Quality of Life
- Preservation of Commitments & Investments



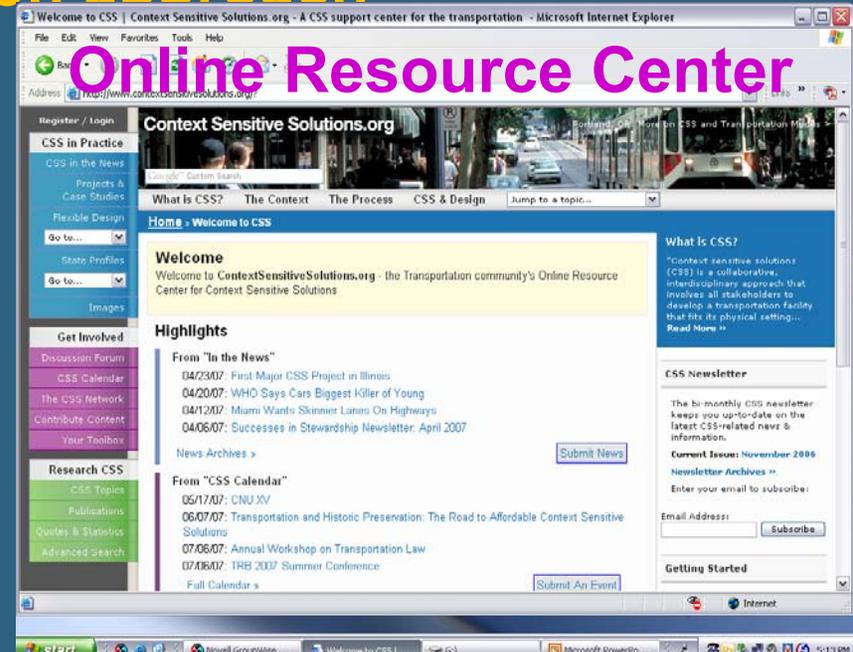


# Birth of Context Sensitive Design / Solutions

Since a 1998 Thinking Beyond The Pavement Workshop, FHWA and AASHTO have promoted Context Sensitive Design ... now Context Sensitive Solutions ... as a desired national transportation approach



1998 National Workshop



Online Resource Center

Articulated 15 Attributes  
(Principles)

www.contextsensitivesolutio  
ns.org





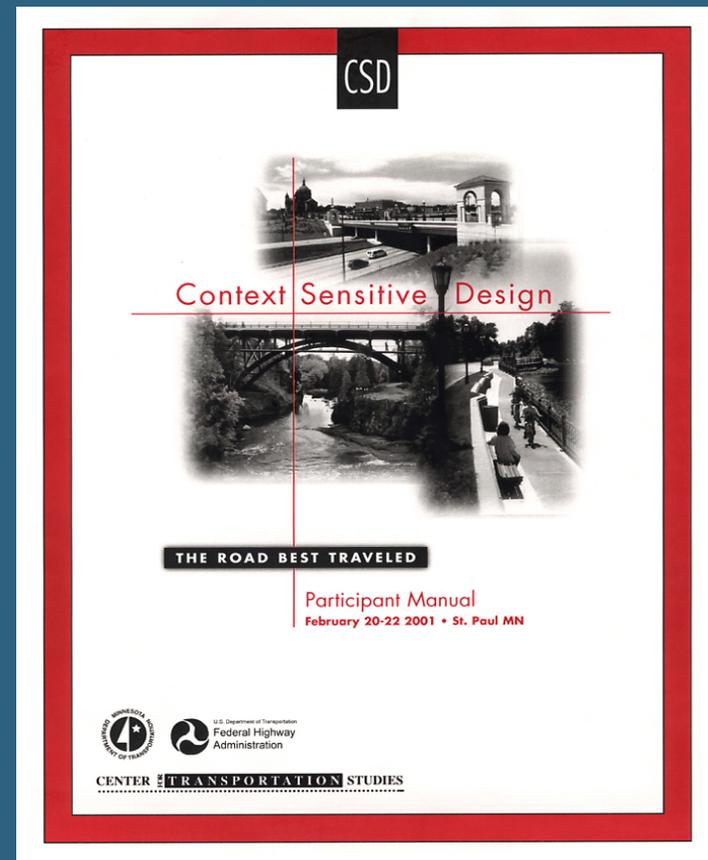
# MnDOT Positioned for Leadership in CSS

## FHWA Designation of 5 CSD “Pilot State” DOTs in 1999

CT, KY, MD, MN & UT were selected as CSD “pilot state” DOTs to further regional and national implementation and mainstreaming of CSD.

MnDOT assembled a CSD steering team and advisory group to guide the approach including development and deployment of CSD Training, Policy (Tech Memo) and Marketing in 2000 and emphasis on (6) Core Principles deemed most important for MnDOT.

As a “pilot state”, MnDOT partnered with the FHWA MN Division and the University of Minnesota Center for Transportation Studies in advancing CSD (now CSS) locally & nationally.



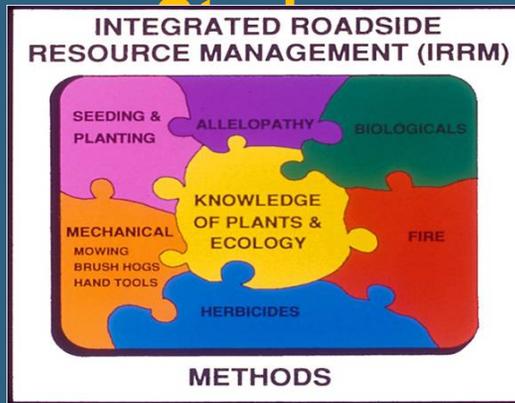


# MnDOT Positioned for Leadership in CSS

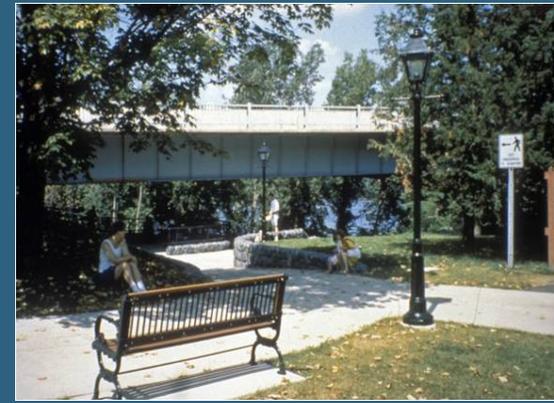
## Many Award Winning & Nationally Recognized Successes



Exemplary Project Development  
Legacy



Exemplary Resource Management  
Programs



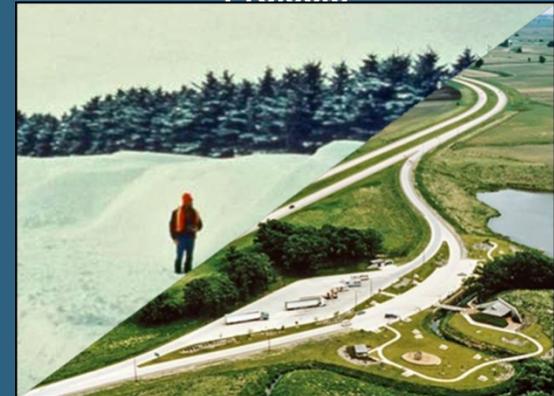
Exemplary Partnership Programs &  
Projects



Exemplary Public Involvement Efforts



Exemplary Guidance & Tools



Exemplary Safety Programs &  
Initiatives

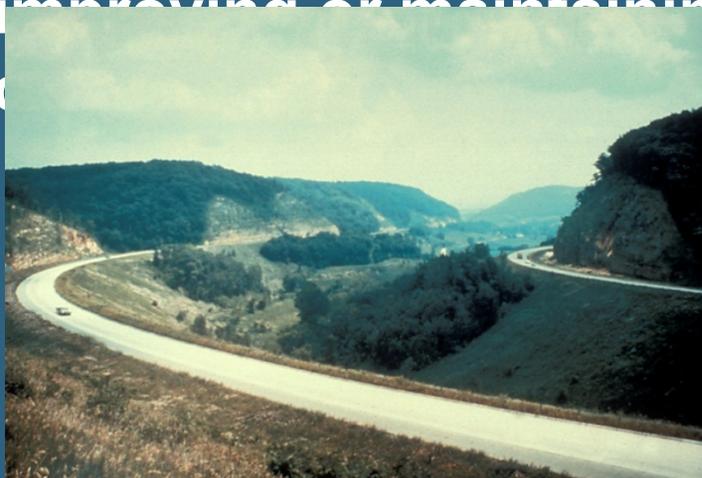




# Understanding CSS

## Current FHWA & AASHTO Definition

CSS is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources while improving or maintaining safety, mobility, & infrastructure.



I-90 Thru The Dakota Valley - SE MN



CSAH 3 Excelsior Blvd - St. Louis Park MN





# Understanding CSS

Philosophy and Principles applying to Programs, Services, Planning, Project Development, Construction, Operations, and Maintenance ...





# FHWA & AASHTO CSS Emphasis

**AASHTO/FHWA Peer Exchange:  
Context Sensitive Solutions**

September 6-8, 2006 • The Radisson Lord Baltimore • Baltimore, Maryland

Sponsored by AASHTO Center for Environmental Excellence and the AASHTO Context Sensitive Solutions Task Force in Cooperation with Federal Highway Administration

## 2006 National CSS Peer Exchange

**AASHTO/FHWA  
Context Sensitive Solutions  
Strategic Plan:  
Mainstreaming CSS**

**DRAFT Summary Report  
March 2007**

Prepared By  
Center for Transportation and the Environment  
North Carolina State University  
Box 8601, Raleigh, NC 27695-8601  
(919) 515-8893

## 2007 National CSS Action Planning





# FHWA & AASHTO CSS Emphasis

## The FHWA & AASHTO Vision Articulated For CSS

*In 2011, Context Sensitive Solutions will:*

- *Be the way of doing business throughout the life cycle of a project from pre-planning through maintenance.*
- *Result in solutions that provide a net improvement to the community and environment.*
- *Meet needs and community goals as defined by a full range of stakeholders including safety and mobility goals.*
- *Include the full involvement of stakeholders throughout decision making and in a way that is consistent with the broader vision for the community and environment.*
- *Include teams of multidisciplinary experts who all contribute to developing solutions together with stakeholders.*





# FHWA & AASHTO CSS Emphasis

## FHWA & AASHTO Articulation of CSS Philosophy / Core Strategies



- Strive towards a shared stakeholder vision to provide a basis for decisions
- Demonstrate a comprehensive understanding of contexts
- Foster continuing communication and collaboration to achieve consensus
- Exercise flexibility and creativity to shape effective transportation solutions

while preserving and enhancing community and natural environments





# Original CSD (Now CSS) Principles

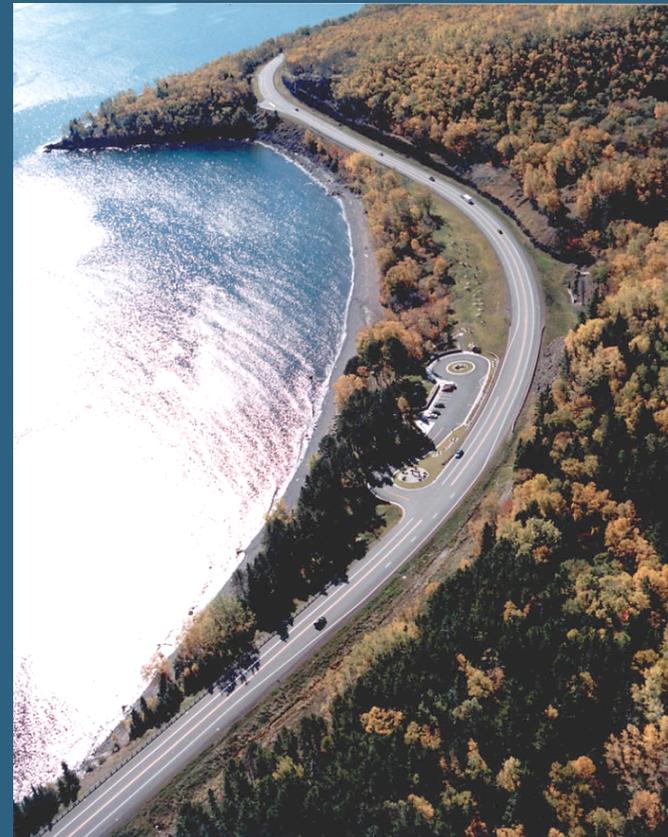
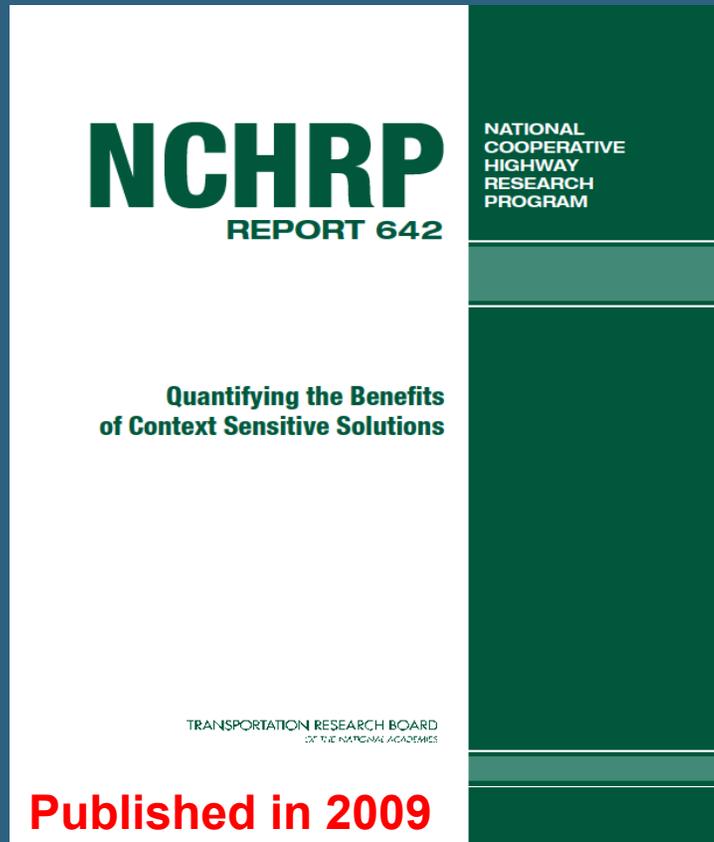
## “Paraphrased”

- Use interdisciplinary teams
- Involve your stakeholders
- Seek broad public involvement
- Use a full range of communication strategies
- Seek consensus in determining purpose and need
- Address alternatives and all modes of transportation
- Seek safe facilities for all users
- Address community and social issues
- Address aesthetic concerns and integrations
- Utilize a full range of design choices and flexibility
- Document project decisions
- Track and meet all commitments
- Use agency resources effectively





# CSS Benefits Research



Based Upon 33 Case Studies From Across the United States



Like MN TH 61 Reconstruction (North Shore of Lake Superior)



# CSS Benefits - Agency Emphasis

## Correlated To Applying CSS Principles (NCHRP Report

642)

01. Improved predictability of project delivery
02. Improved project scoping and budgeting
03. Improved long term decisions and investments
04. Improved environmental stewardship
05. Optimized maintenance and operations
06. Increased risk management and liability protection
07. Improved stakeholder / public feedback
08. Increased stakeholder / public participation, ownership & trust
09. Decreased costs for overall project delivery
10. Decreased time for overall project delivery
11. Increased partnering opportunities





# CSS Benefits - User Emphasis

## Correlated To Applying CSS Principles (NCHRP Report

642)

12. Minimized impact to human and natural environments
13. Improved mobility for users
14. Improved walkability and bikeability
15. Improved safety (vehicles, pedestrians, and bicyclists)
16. Improved multi-modal options (including transit)
17. Improved community satisfaction
18. Improved quality of life for community
19. Improved speed management
20. Design features appropriate to context
21. Minimized construction related disruption
22. Improved opportunities for economic development





# Mn/DOT's Strategic Vision & Plan

## How Does CSS Fit In?

### Strategic Directions (SMILT)

- Safety
- Mobility
- Innovation
- Leadership
- Transparency

**Minnesota Department of Transportation**  
 Dear citizens of Minnesota,  
 When the Governor offered me the Minnesota Department of Transportation Commissioner position, I viewed it as a calling, a calling to serve Minnesota in a different capacity. It's here to serve the citizens of Minnesota. I am here to serve you.  
 I have a vision for transportation. As your commissioner, I have two prime objectives: one, build the trust and confidence in Mn/DOT and two, regenerate a spirit of innovation and creativity in the department. Minnesota has a longstanding tradition of being innovative and creative in transportation. We have great potential to take Mn/DOT to a higher level of performance.  
 The document in Mn/DOT's strategic vision, it conveys our vision, mission, values and strategic objectives. It defines our framework for success and hope for the future. YOU are a part of that hope. YOU are a part of our success.  
 Your commissioner,  
 Tom Sorel

**Minnesota Department of Transportation Strategic Vision**

Safety • Mobility • Innovation • Leadership • Transparency

Your Destination... Our Priority  
12-15-08

Global leader in transportation committed to upholding public needs and collaboration with internal and external partners to create a safe, efficient and sustainable transportation system for the future

**Mission**  
 Provide the highest quality, dependable multi-modal transportation system through integrity, innovation, efficiency and accountability.

**Critical Issues/Responses**

- Aging infrastructure**
  - Preserve the state's assets and implement effective improvements
  - Build trust by applying smart and sustainable solutions
- Environmental concerns**
  - Model responsible stewardship with a Green approach to transportation
- Diversity and demographics**
  - Maintain a workforce that reflects the communities we serve
  - Promote an atmosphere where the entire workforce participates and contributes to the success of our organization
- Digital change and mobility**
  - Develop innovative methods to ease congestion and improve mobility
  - Provide a results oriented work environment that supports flexible work schedules and telecommuting
  - Expand multi-modal transportation to create alternative means of travel
- Fiscal responsibility**
  - Ensure that future investments are well-planned and transparent to all stakeholders
  - Explore innovative financing opportunities
  - Maintain a high standard of fiscal accountability and responsibility

**Core Values**

- Maintain safety as a priority
- Enhance trust with transparency and accountability
- Promote collaboration, respect and innovation
- Value diversity and cultural capital through inclusion and opportunity
- Commit to employee well-being, growth, growth and success
- Recognize that employees are integral to Mn/DOT's success

**Strategic Directions**

- Safety** - Preserve and maintain a safe, reliable and modern transportation system
  - Reduce transportation-related fatalities and injuries through the use of new and improved technology and safety measures
  - Monitor the condition of existing infrastructure to order to maintain a reliable and safe transportation system
- Mobility** - Increase access and enhance the movement of people and freight
  - Ease congestion, reduce commute times and improve the quality of life and economic well-being of all Minnesotans
  - Provide more transit and use all modes for improving mobility and accessibility in the Metro and in Greater Minnesota
  - Maximize operational efficiency of Interregional Centers
- Innovation** - Promote a culture of innovation in the organization
  - Foster innovation and collaborative partnerships within the transportation community in delivering 21st century transportation solutions
  - Develop ground-breaking, multi-modal transportation practices that will accommodate the diverse needs of all individuals and communities
  - Encourage research and best practices to develop, implement and sustain solutions that balance preservation needs and address congestion issues
- Leadership** - Revitalize the transportation leader and employer of choice for Minnesota's diverse population
  - Mobilize to foster talent, public input and external partnerships to deliver value to the public
  - Value service, excellence and diversity to be an employer of choice
  - Provide development and advancement opportunities for all employees
  - Empower all employees to be leaders and ambassadors for Mn/DOT
- Transparency** - Build public trust in Mn/DOT
  - Develop a simple, yet comprehensive tool for measuring performance across the state that is efficient, accurate, cost effective and will show accountability to the public
  - Build relationships with local communities and encourage public involvement in developing transportation solutions
  - Be effective in the state through Mn/DOT's transparency transportation plan, strategic plan and investment plan, working in an ethical compass for decision making at all levels





# CSS & MnDOT's Strategic Vision & Plan

## CSS Elevated as a Flagship Initiative in December 2009

The CSS Flagship Initiative:

*Seeks to integrate CSS in Mn/DOT as a business model to improve our processes and to balance competing objectives while enabling Mn/DOT to achieve more of the benefits that are now correlated with applying CSS philosophy and principles*

**Tying more key pieces together**





# CSS & MnDOT's Strategic Vision & Plan

## The CSS Business Case and Approach Supports

- Improving our customer & stakeholder relationships  
(building confidence and trust)
- Improving our performance and efficiency  
(reducing costly delays and rework cycles)
- Improving our ability to balance competing objectives  
(optimizing benefit to cost ratios & flexibility in decision-making)
- Reducing our cost of doing business  
(delivering collaborative & right-sized solutions)
- Achieving more desired agency & user benefits  
(benefits correlated by research to applying CSS principles)





# Focusing On This CSS & Customer-Centered Integrating CSS in MnDOT Services & Programs Forum

Importance of this Next Step and Rationale for the Topical Themes Emphasized ...

•To date, CSS outreach, training and integration efforts have resulted in more emphasis, knowledge and skill building related to project planning, development, design, construction, operation and maintenance activities. **This Forum is a critical kick-off and emphasis toward understanding and addressing the challenges, opportunities and critical next steps in further integration of CSS across all MnDOT functions, services and programs. The Customer-Sensitive focus (both internal & external) is a good approach toward understanding and applying CSS across the Department.**

•**The first (3) Topical Themes selected for emphasis in the Forum (Diversity & Demographics ... Rapid Change & Technology ... Fiscal Responsibility & Risk Management) were selected because they represent 3 of 5 Critical Issue / Response areas identified in MnDOT's Strategic Vision and are (3) areas and hot topics that are equally critical to every function, service, program & employee across the Department.**

•**The 4<sup>th</sup> Topical Theme (How We Move Forward with CSS) was selected because it's the objective of the Forum and the "tying more things together" objective of the CSS Flagship Initiative and business model.**





# A CSS Case Study With Universal Applicability

## 1990s Improvements in MnDOT's Landscape Program & Services

Forget the subject is MnDOT Landscape Programs and consider how CSS strategies, principles & benefits can apply to any MnDOT functions, programs and services as well as the following thoughts ...

*“Even if you’re on the right track, you’ll get run over if you sit there.”* (Will Rogers)

*“We are what we repeatedly do. Excellence is not an act but a habit.”* (Aristotle)





# A CSS Case Study With Universal Applicability

## 1990s Improvements in MnDOT's Landscape Program & Services

In the 1990s, following decades of increasing challenges and erratic inconsistencies, MnDOT Landscape Program staff engaged a broad range of internal and external stakeholders and interdisciplinary expertise (industry-wide) to collaboratively identify problems and opportunities and to inform and sanction program, service, quality and cost-effective improvements through consensus decision-making.

Many joint MnDOT - Industry Issues & Procedures Workshops were hosted by MnDOT and proved to be very effective toward enabling and sustaining change management

MnDOT's Landscape Program and Services were dramatically improved in the 1990s with an approach that reflected the core strategies and principles and many of the benefits that are now correlated with CSS.





# A CSS Case Study With Universal Applicability

## 1990s Improvements in MnDOT's Landscape Program &



### Mn/DOT Certified Landscape Specialist

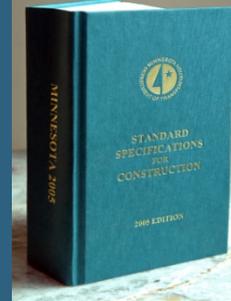
The bearer of this card has been tested and certified as a landscape specialist. Certification expires on the date shown on the back of this card.

*Leo Holm*

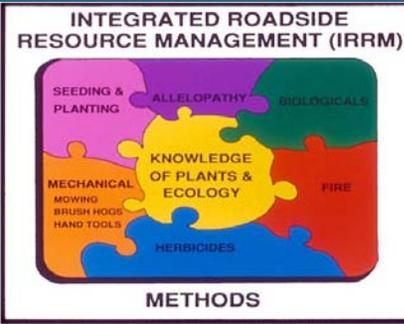
Mn/DOT Forestry Erosion Contr. Sect. Dir.



### INSPECTION and CONTRACT ADMINISTRATION MANUAL for



### Mn/DOT LANDSCAPE PROJECTS 2008 Edition





# A CSS Case Study With Universal Applicability

## 1990s Improvements in MnDOT's Landscape Program &

Some key outcomes from collaboratively informed & sanctioned efforts:

- Total revamping of MnDOT's landscape standards, procedures, specifications, and construction details with clear, flexible and measurable criteria for all decision-making.
- Introduction of monetary incentive and disincentive based performance accountability and requirements for training certification and competency testing.
- Development of an "illustrative" Inspection & Contract Administration Manual tied to the standard specifications as acceptable minimum & maximum criteria for all decision-making.
- Development of a volunteer-based and highly acclaimed MnDOT Community Landscape

Partnership Program as another implementation tool in the toolbox

- Development and deployment of a highly acclaimed and interactive hands-on training

program and video to serve all internal and external stakeholders and



# A CSS Case Study With Universal Applicability

## 1990s Improvements in MnDOT's Landscape Program & Services

Some key benefits from the collaboratively informed & sanctioned efforts:

- **Consistency in landscape project outcomes & cost-effectiveness was markedly improved.**
- Landscape projects with 90% plus success rates became common for the first time.
- **Available funding was stretched farther in covering many more projects and improvements**
  - as hundreds of **Community Landscape Partnership Program** projects were implemented
  - around the state at roughly **1/3 the cost** of traditional landscape contract projects while
  - community partners also took on the responsibility for maintaining the investments.
- Surveys indicated that more than 90% of the transportation users of the

Plant Selection



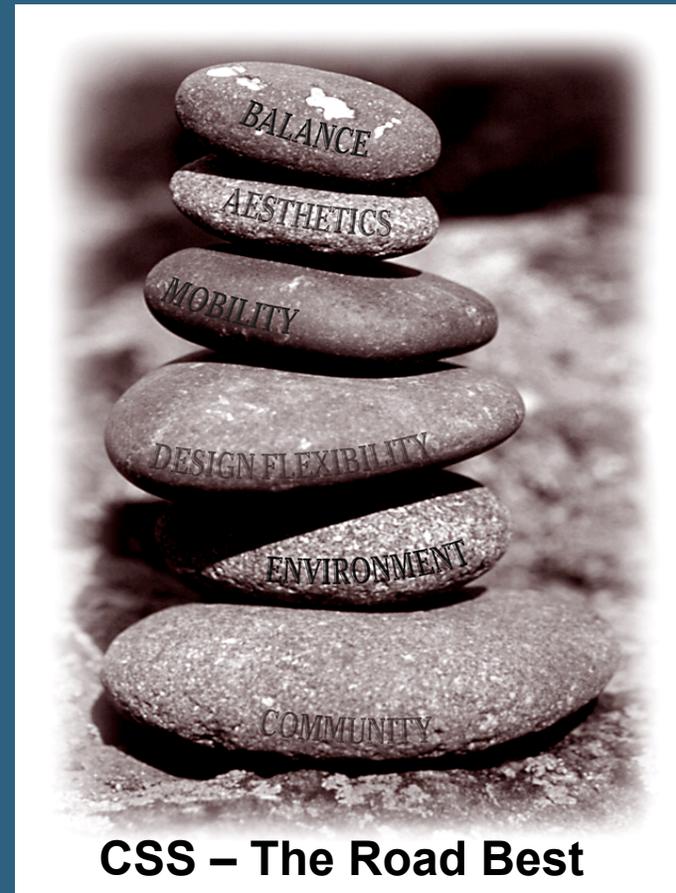
Expert System improved their knowledge, proficiency, consistency and



## For Questions & More Info:

Scott Bradley – Mn/DOT Director of  
CSS

[scott.bradley@state.mn.us](mailto:scott.bradley@state.mn.us)



**CSS – The Road Best  
Traveled**

*Your Destination... Our Priority*

