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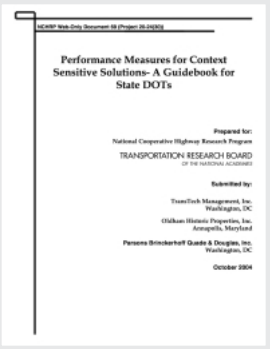

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Performance Measures for Context Sensitive Solutions- A Guidebook for State DOTs

Prepared for:

National Cooperative Highway Research Program

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Submitted by:

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October 2004

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1.0 INTRODUCTION

Around the country, groups of stakeholders[1] ranging from local elected officials to citizen activists and interest groups are working hand-in-hand with transportation agencies to create projects that incorporate community values and are safe, efficient, effective mechanisms for the movement of people and goods. Vital to the success of these efforts is a movement among state Departments of Transportation (DOTs) to strengthen holistic, collaborative and inter-disciplinary philosophies for governing the planning, design, construction, maintenance and operation of transportation infrastructure.

As a result, project development processes in DOTs commonly give greater consideration to the needs of a broad range of stakeholders concerned with community, environmental, historic, scenic, aesthetic and social values. The American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), as well as many DOTs and interest groups all endorse the growing "Context Sensitive Solutions" (CSS) movement.[2] It offers fundamental principles for guiding agency-wide changes in DOTs' project development processes.

As CSS becomes part of the way state DOTs do business, many agencies seek ways to gauge their performance in this important area. While few have yet adopted CSS performance measures, performance measurement is a management tool that many DOTs are already using to help achieve a variety of strategic goals and objectives. Context sensitive project solutions often appear deceptively simple, yet the holistic, multi-disciplinary, community-driven nature of CSS-based project delivery makes measurement challenging. CSS touches many parts of project development and every project is different. The tools that make CSS successful include, but are not limited to top-level leadership and commitment, agency-wide training, adoption of CSS in formal guidance and manuals, early and continuous dialogue with the general public and interest groups, interaction among multiple professional disciplines, and effective consideration of alternatives. This is what DOTs must seek to measure, and this guidebook provides the starting point for creating CSS performance measurement programs that can achieve this goal.

1.1. Guidebook Purpose and Organization

This guidebook is intended to help DOTs develop their own tailored and comprehensive CSS performance measurement programs. Readers are most likely to be practitioners in state transportation agencies that are actively attempting to integrate the principles of CSS within their project delivery processes. The approaches discussed in the guidebook are suitable both for

[1] Throughout the guide, the term "stakeholders" is assumed to mean a diverse group of individuals and organizations external to the DOT, but who may have an interest in one or more projects. Stakeholders may include facility users, elected officials, interest groups, affected businesses and residents, advocacy organizations, other government agencies, and others.

[2] In this guide, CSS is used in place of the term Context Sensitive Design (CSD) since it, and the guidebook, also address non-design elements of the project development process such as early project scoping, construction, and even subsequent maintenance and operations.

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agencies that are just beginning to pilot use of CSS on a handful of projects and those that are implementing CSS for all projects.

No list of individual measures is provided in the guidebook – nor do most practitioners who participated in its preparation recommend such an approach. Rather a framework for organizing measures is described, and key focus areas for measurement are discussed. Agencies are expected to develop their own individual measures that are tailored to specific needs. The four major sections of the guidebook, following the introduction, are as follows:

- **Guiding Concepts for CSS Performance Measurement Programs –** This section offers DOTs a framework for organizing measures that addresses CSS-related processes and outcomes at the project-level and organization-wide, and provides an understanding of some basic principles for measurement of CSS performance;
- **Project-level Focus Areas –** This section describes how agencies can assess performance of individual projects or groups of projects by targeting key focus areas, and gives pointers for potential performance measures in each focus area;
- **Organization-wide Focus Areas –** This section describes focus areas that agencies should target as they assess overall organizational performance, and gives pointers for potential performance measures in each focus area; and
- **Tips for Getting Started –** This section provides a few suggestions on creating and using a CSS performance measures framework.

An appendix to this guide contains a variety of relevant performance measures-related material gathered during the course of the guidebook and referenced in the body of the text.

Readers of the guidebook are encouraged to pick and choose the components of the framework and measure focus areas that make sense for their state. The guidebook should be considered as a resource for helping develop measurement programs that are tailored to individual states. Finally, the framework and focus areas described in this guidebook represent the state of current thinking among practitioners, but this is a fast evolving field and the practices described in the following pages are merely a foundation for future efforts to measure performance that build on advances in CSS implementation.

1.2. What are Context Sensitive Solutions (CSS)?

The concept and principles of CSS were first developed in 1998 at the national "Thinking Beyond the Pavement" conference held in Maryland. (See Sidebar overleaf for a description of the CSS principles developed at this conference.) Those deeply involved in CSS implementation either within, or in collaboration with state departments of transportation perceive CSS to be a cohesive philosophy embodied in basic principles that address the project development process and outcomes of project implementation, agency-wide. A transportation project that is designed collaboratively by an interdisciplinary team, which includes community and regulatory agency stakeholders and fits its physical setting by supporting community values and preserving scenic, aesthetic, historic,

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and environmental resources, while maintaining safety and mobility is a Context Sensitive Solution.

Policies adopted by AASHTO and FHWA encourage all DOTs to make CSS a way of doing business.[3] In addition, AASHTO, FHWA, and the Transportation Research Board all have task forces or initiatives to advance the practice of CSS among transportation professionals. Despite widespread support for CSS, there remains ambiguity about what constitutes CSS. Consensus about key attributes of CSS is emerging in the following areas:

- **CSS is an Agency-Wide Philosophy.** To date the principles of CSS have been applied most frequently to difficult and complex projects with major impacts, often as an intervention to get a project moving where citizen or regulatory stakeholders have halted the work due to controversy. Increasingly, however, DOTs are seeking to use CSS from the onset of project planning and in more routine projects. Context Sensitive Solutions is not a philosophy to be selectively applied to certain categories of projects, but an approach to transportation planning, design, construction and maintenance that is scalable to use on every transportation project. In some cases transportation departments begin implementation of CSS by applying it on a pilot basis, but to fully adopt the CSS approach, a DOT will eventually expect their staff and consultants to follow CSS principles on all projects.

- **CSS Relies on DOT Awareness about Different Perspectives.** Transportation leaders including Tom Warne, former president of AASHTO and former Executive Director of the Utah Department of Transportation, have said that making CSS a way of doing business for transportation projects requires DOTs to get better at acknowledging a broad range of perspectives. Good CSS depends on identifying and meeting multiple goals including transportation goals, community goals, and environmental goals. It relies on transportation professionals who use their knowledge and experience as a resource to support collaborative development of the most creative and successful solution to the agreed upon problems, opportunities, and needs of a project area or corridor.

- **CSS Starts with a Collaborative Definition of Project Problems, Opportunities, and Needs.** NCHRP Report 480 (*A Guide to Best Practices for Achieving CSS*, TRB, 2002) identifies establishing a "Problem [and Opportunity] Definition" as the starting point for a CSS-based project development process. The Problem and Opportunity Definition involves development and documentation of a comprehensive statement that defines project problems to be solved, opportunities that can be addressed, and therefore project needs. The project "Problems, Opportunities, and Needs" statement should include discussion of transportation problems to be addressed, but should also reflect a full range of public values identified through scoping and public involvement, including community issues and constraints, sensitive environmental

[3] At their Annual 2000 Meeting AASHTO's Standing Committee on Highways passed a resolution stating, "That the time is ripe to continue to institutionalize CSD/Thinking Beyond the Pavement nationwide." In 2002 FHWA adopted three Vital Few Goals to be reached by 9/30/07, one of which calls on states to adopt CSS. In may 2004 AASHTO published its "Guide for Achieving Flexibility in Highway Design."

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resources, and appropriate consideration of other factors. The statement should be based on input from all interested parties including DOT and regulatory agency staff, consultants, and citizens, and consensus should be achieved on this statement before proceeding.[4] Consensus does not mean that everyone agrees, but that all groups and individuals can live with a proposal.

Without a Problems, Opportunities and Needs statement, using performance measures to evaluate whether a project has achieved the principles of CSS is difficult. Several of the CSS principles reference important characteristics of the early planning phase of a project. Success relates to whether the project satisfies the Problems, Opportunities and Needs identified early in project planning and amended as warranted as the project develops.

Thinking Beyond the Pavement: CSS Principles

The following principles were developed at the 1998 workshop, Thinking Beyond the Pavement: A National Workshop on Integrating Highway Development With Communities and the Environment, held in Maryland:

Qualities of Excellence in Transportation Design

- Project satisfies the purpose and needs agreed to by full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as warranted.
- The project is a safe facility for both the user and the community.
- The project is in harmony with the community, and preserves environmental, scenic, aesthetic, historic, and natural resource values of the area.
- The project exceeds expectations of designers and stakeholders and achieves a level of excellence in people's minds.
- Project involves efficient and effective use of resources (time, budget, community) of all involved parties.
- The project is designed and built with minimal disruption to the community.
- The project is seen as having added lasting value to the community.

Characteristics of the Process to Yield Excellence

- Communication with all stakeholders is open, honest, early, and continuous.
- A multidisciplinary team is established early, with disciplines based on the needs of the specific project, and with the inclusion of the public.
- A full range of stakeholders is involved with transportation officials in scoping phase. The purposes of the project are clearly defined and consensus on the scope is forged before proceeding.
- The highway development process is tailored to meet the circumstances. Employ a process that examines multiple alternatives and results in consensus on approaches.
- A commitment to the process from top agency officials and local leaders is secured.
- The public involvement process, which includes informal meetings, is tailored to the project.
- The landscape, community and valued resources are understood before design starts.
- A full range of tools for communication about project alternatives is used.

The Problems, Opportunities, and Needs statement subsequently provides the basis for stakeholders to develop criteria to evaluate alternatives. The

[4] For a project that is required to address NEPA, the Problems Opportunities and Needs statement may constitute a NEPA "Purpose and Need" statement but will address not only transportation needs but also community and environmental needs. The term Problems Opportunities and Needs statement is used here intentionally to highlight the more inclusive nature of the problems and needs considered in a CSS project and to make clear that all projects merit developing a statement of problems and needs, not just NEPA projects.

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process of developing creative solutions will be aided once the team has adopted a Problems, Opportunities and Needs statement by asking the group before proceeding to develop a Vision or Goals statement that envisions how the project will operate and look 10 to 20 years in the future. Developing this statement to articulate desired characteristics of a place at a future time that addresses transportation needs, community values or aspirations and environmental values will provide a forum for communication and for building a common understanding and expectations about project outcomes. Where land use issues that go beyond the DOTs purview are involved, developing and coming to consensus on a Vision or Goals statement provides a forum to discuss managing land uses before proceeding to develop a range of project solutions.

- **CSS has an Organization-wide Focus.** At the organizational level, making CSS common practice requires a different set of tasks and performance measures than at the project level. Most DOTs begin their implementation efforts by adopting a policy statement about CSS to establish expectations among their staff and the public about their intent to make CSS their standard practice.

  Institutionalizing the CSS approach involves a review by DOT managers of policies and procedures and/or manuals to identify barriers to using the CSS principles for project delivery, then modifying these to mitigate or remove barriers and to allow and encourage flexible decision-making tailored to the specific project. At the organizational level CSS training is important, particularly in areas of project management, project development, communications, public involvement that will result in consensus, and flexibility in design. Some DOTs have also established CSS training programs for contractors and construction and maintenance staff.

1.3. Why Establish a CSS Performance Measurement Program?

State DOTs are charged with ensuring cost effective design, construction, and operation of safe and efficient multi-modal transportation systems that support the social and economic fabric and needs of the communities they cross, all while preserving or enhancing environmental quality. Most people would agree that the principles embodied in CSS are integral to this mission. Performance measurement is widespread among DOTs for some strategic focus areas such as pavement condition and safety, and it is fast becoming the norm in others such as maintenance and operations. Use of CSS performance measures, however, is uncommon.

Performance measures for CSS can help individual project managers and the project teams they lead to do their jobs better by maintaining a focus on the whole range of customer needs for transportation projects. Performance measures for CSS can also help DOT Chief Executive Officers (CEOs) and senior management achieve organization-wide strategic goals related to CSS. For most DOTs, there are a variety of compelling reasons, both at the project-level and organization-wide, to consider greater use of CSS performance measures:

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- **To Help Make CSS State of the Practice, not State of the Art.** DOTs have thousands of employees scattered across wide geographic areas and often struggle to foster positive employee attitudes toward change. Performance measurement enables CEOs or senior managers to communicate with employees about the importance of strategic priorities such as CSS. ("What gets measured gets done.") The participatory and on-going nature of creating and regularly reviewing performance measures, particularly if the process involves widespread staff participation, helps create the combination of employee buy-in and accountability needed to achieve strategic objectives.

- **To Strengthen Agency Leadership Support for CSS Principles.** Performance measure results can help demonstrate the value of CSS to DOT leadership. For example, evidence that use of CSS consistently makes project schedules more predictable, reduces the need for costly redesign and reduces the number of construction change orders may help convince skeptics of the value of the program.

- **To Maintain Focus on Strategic CSS Goals.** New initiatives such as CSS are often accompanied by early, intense effort to develop strategic direction. Once this is completed, however, there is a risk that momentum will be lost. Performance measures help continually reinforce agency priorities by communicating those priorities to employees. Strong CEO advocacy for and participation in performance measurement efforts directly influence the extent to which performance measures help maintain strategic focus.

- **To Strengthen Trust with Stakeholders and Customers.** Fostering and maintaining the trust of the public and external stakeholders such as elected officials is important. Performance measures can help CEOs or managers demonstrate their agency's priorities and gain stakeholder trust with demonstrated results in the wise use of local, state, and federal funds to support multiple community, transportation and environmental goals.

1.4. How the Guidebook was Developed

Only a few states have even attempted to develop any type of CSS-related performance measures, therefore any review of best practices is limited. The conclusions presented in this guide are based on an extensive dialogue with practitioners most involved in implementing CSS and from a diverse array of backgrounds. Participants in this dialogue included staff at state DOTs (particularly "CSD pilot" states), federal agencies, AASHTO, consultants, interest groups, and communities. Outreach included a series of 25 phone interviews with key practitioners and an invitation only, two-day workshop held in Washington, DC in Spring 2004 that was attended by over 30 people.

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2.0 GUIDING CONCEPTS FOR CSS PERFORMANCE MEASUREMENT PROGRAMS

Figuring out what to measure for CSS may seem like a difficult task. Any measurement program for assessing agency CSS performance should aim to mirror the breadth and depth with which CSS concepts are implemented. This section provides advice on assembling the basic components of a framework for measuring CSS that can achieve this goal, and some suggestions on measurement approaches.

2.1. CSS Measurement Program Framework

With so many "moving parts" involved in applying CSS principles to project development, questions of who measures what, and when may seem overwhelming. A simple set of parameters for understanding what to measure helps bring clarity to this complex topic. Whether a DOT is considering a handful of measures or dozens, a CSS performance measurement framework boils down to finding the right balance across two simple parameters, 1) measurement of project-level versus organization-wide factors, and 2) measurement of processes versus outcomes (See Figure One):

- **Balance Between Project (Micro) and Organization (Macro)-level Measures.** Application of CSS principles is rooted in how individual projects are planned, designed, built, and maintained. At a micro-scale, measures can be developed for one, or sometimes many projects and are tracked by project managers and project teams usually at key project milestones. Some measures may apply across all projects, others may be scaled to use on individual projects, and others may only be applicable on some projects. Results are generally most helpful to individual project teams and stakeholders involved in those projects, but may also provide valuable lessons for future projects.

  Macro-level, organization-wide measures provide a complement to tailored project measures. They offer insights on organization-wide trends that cannot be captured through micro-level measures implemented on individual projects. Successful CSS implementation will require organizational changes such as revised project development manuals, agency-wide training initiatives, and project management strategies. Performance measures can help address these issues or may address other organizational functions such as an agency's budget, culture, skill sets, or system outcomes. Many organizational measures may be tracked on a regular schedule, such as quarterly or annually. Organizational-level measures may be of greatest interest to senior managers and a broad group of stakeholders external to the DOT.

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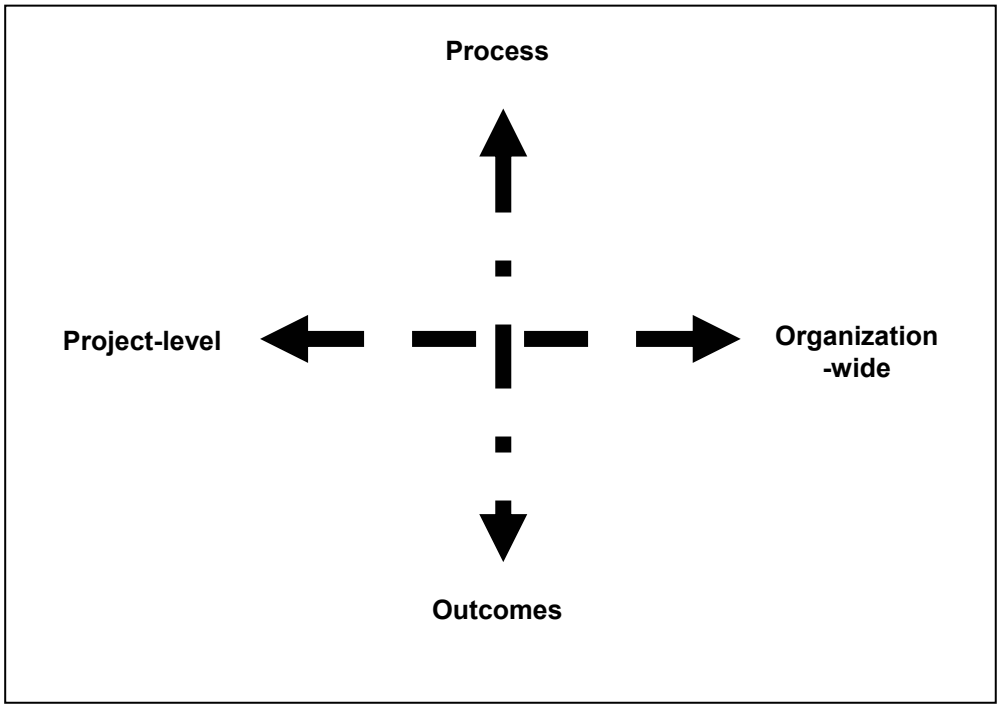
Figure One. Measurement Framework for CSS



- **Balance Between Process and Outcome-level Measures.** NCHRP Report 480 guides practitioners to think about CSS as a mix of "processes" and "outcomes;" this mindset has great validity for performance measurement too. On the process side, open, early and continuous communication with all stakeholders; multi-disciplinary input; and tailored public involvement that incorporates consensus-building are all processes that help DOTs integrate CSS into planning, designing, building, and maintaining transportation systems. Processes can and should be a major measurement focus because many elements of CSS-related processes can be measured in a timely fashion, without imposing unrealistic staff burdens, yet are closely linked to CSS policy goals.

  Achieving CSS means generating project outcomes that reflect community values, are sensitive to scenic, aesthetic, historic and natural resources, and are safe and financially feasible. As states adopt CSS principles and complete projects that use those principles, outcomes can also be measured; they may require a greater investment in collection of new data and are often harder to track over time.

  As a practical matter, DOTs are likely to focus more on processes as they begin measurement activities and work towards comprehensive consideration of outcomes as they gain expertise with CSS performance measurement and expand the number of projects on which a CSS approach is used. Agencies should ideally seek a balance between both categories.

As an agency embarks on developing its CSS measurement initiative, it can choose to focus on project-level measures or organization measures as both are valuable. Ideally, however, it should seek to include a mix of some project-level

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and some organization-wide measures. In each of these areas, a mix of process and outcome-related measures is important.

2.2. Creating and Implementing a CSS Measurement Program

The framework described in Section 2.1 provides a foundation for creating and implementing a comprehensive CSS measurement program. A CSS measurement program that draws on process and outcome measures, and includes both a project-level and an organization-level focus may include a considerable number of measures. Given the diversity of participants and the complexity of what is being measured, measurement efforts may stall, for example because they overload staff, become mired in controversy, or simply get ignored. Awareness about appropriate tactics and approaches for measurement of CSS performance can help to anchor a successful measurement program, make it manageable, and keep it on track. This section provides advice on using the framework to create and implement measures. NCHRP Report 446 (*A Guidebook for Performance-Based Transportation Planning*, 2000) provides a good additional resource on general techniques for creating and implementing performance measurement programs.

- **Creating Measures – Leadership and Strategic Planning.** No two CSS performance measurement programs will be exactly alike, however, two key ingredients for creating a program are leadership and strategic planning.

  Strong leadership and day-to-day management are needed to place a program on the right footing. Executive management must show considerable support for the concept from the outset, or resources and commitment may run out before the work is done and performance measures are in place. Equally important, measurement programs need a day-to-day champion capable of orchestrating and managing daily activities, both during the program establishment phase and during program implementation. In the measure development phase, a working group should be created to develop measures and an implementation framework. The working group will likely include both internal participants and external stakeholders. Who to involve will depend on agency-specific political and operating environments.

  Measures for CSS should be consistent with any strategic planning efforts within an agency. Agency "vision/mission" statements generally drive a small set of broad strategic goals that are achieved by meeting multiple objectives. Performance measures are often linked to individual objectives. Agency-wide strategic planning efforts are likely to address multiple issues, therefore only a handful of objectives may relate to CSS. The detailed focus of a CSS performance measures program may necessitate development of more detailed goals and objectives to help guide the creation of individual measures.

- **Implementing Measures – A Tailored, Collaborative, Self-Assessment Approach.** An effective CSS measurement program should become an integral component of every project team's responsibilities. The principles of CSS do not apply only to large projects, and measurement initiatives should include large and small

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projects. For example, minor roadway rehabilitation projects may have other benefits to communities through which they pass if they are used as an opportunity to address community needs, as well as to ensure smooth pavement. Likewise, what seems like a minor repaving job could have a significant effect on the scenic and/or historic qualities of a road if the project includes widening shoulders or the roadway without addressing the impact on the scenic and historic qualities. Measurement efforts, however, should be tailored to project needs and depending on project conditions, a few or dozens of measures may be appropriate.

Many measures of CSS performance, particularly at the project level, are likely to rely on self-administered surveys of team members and their stakeholders. In a collaborative environment, all team members should participate in choosing individual measures that work for their project and in discussing results. External stakeholders should also be a part of these efforts. Some of the attributes of CSS for which measurement is desirable should be considered during the overall project development process. For example, criteria by which to judge alternatives can be developed to reflect concepts included in a project Problems, Opportunities and Needs statement and Vision or Goal statement. This will allow the project team and external stakeholders to judge alternatives in terms of whether they will solve the problems and meet the opportunities and needs and whether they will achieve the Vision or goals.

One or more "charrette" style sessions may be a practical strategy for arriving at agreement on measure results. A mix of measures that includes consideration of both qualitative and quantitative attributes of CSS performance is likely to be appropriate. For qualitative issues, measures can be generated by ranking responses on a graded scale (e.g. good/bad, 1 to 5, etc.).

- **Timing of Measures.** Many traditional DOT performance measures are measured on a regular schedule, such as quarterly or once a year. Organization-wide CSS measures, such as regular measurement of CSS training, fit this approach well. Project-level CSS performance measures are better suited to measurement at project milestones. Project-level processes can be measured either at project completion, or around key milestones in the project delivery process, e.g. during initial planning, after NEPA or key design phases, prior to construction, etc. Project-level outcomes are generally best measured after project completion.

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3.0 PROJECT-LEVEL MEASURE FOCUS AREAS

Project-level measures of CSS performance make sense for practitioners. The CSS principles mentioned earlier in this guide, after all, have their roots in the delivery of individual projects. Furthermore, measurement can initially be piloted on a small subset of projects. Project-level measures provide valuable feedback to stakeholders and project team members.

Project-Level Measures - Key Characteristics

- Used to assess performance of individual projects
- Address both processes and outcomes
- Work for one or many projects
- Rely on collaborative, self-assessment by project team and stakeholders
- Vital resource for project leaders/teams
- Process measures applicable at key project milestones.
- Outcome measures appropriate at project

This section provides a starting point for developing measurement techniques to assess how well individual projects reflect CSS principles. As agencies become comfortable with CSS measurement and implement CSS more widely, cumulative analysis of results from many individual projects can provide helpful insight on organization-wide performance. Areas of focus are described where measurement is both desirable and feasible, and some suggestions for specific measures are provided. Some measures may work on all projects, others may be adapted depending on the project under review, and some may only apply to a few projects.

Process and outcome measurement focus areas are discussed in this section. (See section two for an introduction to the difference between process and outcome measure categories.) For each category, core focus areas are described where the potential value of measurement is high and ways to measure are discussed. Agencies may wish to concentrate on some or all focus areas and are strongly encouraged to tailor individual measures to their needs.

Many measures discussed in this section address qualitative issues, such as satisfaction levels among team members and stakeholders on various CSS-related attributes of the project development process. Most can easily be measured using simple survey techniques. In many instances, qualitative issues can be summarized by asking survey respondents to describe their opinions in yes/no answers, or on a sliding scale (e.g. one to five, or good to bad) The key to ensuring that measure results provide value is to ensure that measures are implemented in a collaborative environment where a full range of perspectives among the project team including its stakeholders is heard.

3.1. Process-Related Focus Areas

Many DOTs that apply CSS principles to project development place great emphasis on enhancing project delivery processes so that CSS is adopted holistically as part of the way the agency "does business." Examples of processes particularly associated with the principles of CSS may include early and comprehensive consideration of project needs and impacts, earlier and more

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continuous community outreach employing techniques designed to identify common interests and build consensus on approaches, use of interdisciplinary teams, and integration of NEPA with CSS.

Measurement helps demonstrate whether project delivery processes support holistic integration of CSS principles within an agency. Note that good processes do not always guarantee great outcomes, therefore process measures should be complemented with outcome measures covered in part 3.2. of this section.

Project-level process measures can be applied at project completion; large projects, however, may take many years to complete and therefore process measures may also be applied at key project milestones as a way to get project feedback during project development.

Key process-related focus areas discussed in this section include:

- Use of multi-disciplinary teams
- Public engagement
- Consensus on project Problems, Opportunities and Needs
- Consensus on project Vision or Goals
- Alternatives analysis
- Construction and maintenance

3.1.1. Use of Multi-Disciplinary Teams. Well-managed, multi-disciplinary project teams enable a diverse array of factors that may influence project development, such as traffic flow, community needs, safety, utilities, right-of-way, and the human and natural environment, to be understood and addressed efficiently. Many agencies are adopting "cradle-to-grave," team-driven project management philosophies that bring together planners, traffic engineers, public involvement specialists, design engineers, environmental experts, safety specialists, landscape architects, right-of-way staff, construction engineers, and others to work on projects. Success in terms of CSS means not just having the right team members, but ensuring they work together to achieve the desired CSS vision.

Suggestions for Measuring

- **Were the right people on the team?** No one-size-fits-all list of team members applies to every project, in fact the size and breadth of a team should be scaled to the needs of the individual project. Disciplines commonly required on projects but typically not involved in project delivery include urban design, environmental planners, community involvement experts, and landscape architects. Team members and stakeholders may be asked to identify whether the right team of experts was created for the project. Performance measures should focus on gauging team members' and stakeholders' perceptions about whether the right team was created for the project, or whether relevant disciplines were not included, e.g. is there a team member who understands issues affecting the social heath of the involved community?

- **Did the team function effectively?** How well a team works together is vital to the success of CSS. Did the team come up through collaborative

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discussions with new ideas that would not otherwise have been considered? What percentage of the team felt that they were learning from other team members? What percentage felt they were being listened to? What percentage felt ideas came up that wouldn't have come up otherwise?

- **Focus on Context Sensitive Solutions' principles?** Were key questions asked regarding meeting CSS principles from the very start of the project?

3.1.2. Public Engagement. Public engagement has become a key component of most successful transportation projects, and serves as an underpinning for achievement of CSS principles. Effective engagement should be tailored to local needs, frequent and ongoing, inclusive, innovative, educational, supported by strong leadership, and intended to affect project results. Stakeholders in public engagement include the public, local jurisdictions, resource agencies, various interest groups as well as highway designers, environmental professionals and project managers within the sponsoring agency. There is no standardized checklist of key stakeholders or formula for counting the "right" number of public meetings or project newsletters, rather DOTs are encouraged to focus their measures on the quality of engagement. Are the needs of affected communities understood and are communities actually engaged and playing a meaningful role?

Suggestions for Measuring

- **Presence of a public involvement plan?** Was a public involvement plan created that included each phase of the project? Were public involvement techniques chosen strategically to seek input from a broad cross section of the public and to achieve consensus on key project elements?

- **Were external champions for the project created?** Team members and stakeholders can be asked whether they think project champions from the affected community were created. Did the project development process help to develop local leaders or help to build local organizations?

- **Was public input sought and used at key decisions points?** Team members and project stakeholders alike may be asked if they think public input was used appropriately as part of the decision-making process.

- **Adequacy of DOT expertise and resources?** Were adequate expertise and resources provided by the DOT to enable the community to understand the project? For example, do community members believe that issues involving technical terms and professional judgments were explained in a manner that they could comprehend and understand? Did the DOT provide a facilitator for community meetings? Were public engagement methods such as charrettes, newsletters, websites, or text translations appropriate to the scale of the project and the audiences who needed to be involved? Were visual aids (drawings, simulated photos, videos simulating the visual appearance and functionality of alternatives) used to convey clearly the alternatives under consideration?

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- **Quality of public involvement strategy**? Did the project yield a public involvement process that was deemed so successful that this agency or others adopted its approaches to use elsewhere? Was the public involvement strategy given positive public recognition or an award? Do stakeholders involved feel a pride of ownership in the project?

3.1.3. Project Problems, Opportunities and Needs. Transportation projects are usually initiated to address one or more transportation needs. Once the project team is assembled and the team has researched and come to understand the context of the project area well enough to identify a representative range of stakeholders, the team and stakeholders should develop and reach consensus on a statement of Problems, Opportunities, and Needs that the project should address. This statement should reflect both transportation needs and broader community and environmental needs. Typical transportation needs include current or future capacity concerns; better system linkages; multi-modal options; Federal, state, or local governmental mandates for action; safety problems; and roadway deficiencies such as load limits or high maintenance costs. Community needs may reflect social demands, concerns about community character and appearance, livable community and health issues such as walkability, and economic development issues such as tourism potential. Environmental protection needs may respond to impacts to sensitive habitats, wetlands, and rivers and streams.

Suggestions for Measuring

- **Support for statement of Problems, Opportunities and Needs?** Do the transportation Problems, Opportunities and Needs reflect the understandings of both the project team and stakeholders about transportation problems and needs? Does the Problems, Opportunities and Needs statement reflect the community's needs related to the project area as well as environmental issues? Was consensus reached among these parties on the statement of Problems, Opportunities and Needs?

- **Linkage of Problems, Opportunities and Needs to evaluation of alternatives?** Were objective, measurable criteria developed related to components of the Problems, Opportunities and Needs statement that can be used to evaluate appropriateness of project alternatives?

3.1.4. Project Vision or Goals. The task of creating the best solution to an identified set of problems, opportunities and needs will be aided if before proceeding to develop project concepts, the project team including stakeholders such as the public and resource agency staff can collaborate to develop a project Vision or set of project goals. A Vision or Goals statement envisions how the project will operate and look 10 to 20 years in the future. The statement should address how the transportation facility will function, how the completed project supports community values or aspirations and its environmental benefits. Developing the Vision or identifying a list of goals provides a forum for communication and for building a common understanding and expectations about project outcomes. Where land use issues that go beyond the DOTs purview are important, developing and coming to consensus on a Vision or Goals statement provides the opportunity to discuss both desired and realistic strategies to manage land uses before proceeding to develop a range of project solutions.

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Suggestions for Measuring

- **Consistency with Local Plans?** Is the Vision or Goals statement consistent with local comprehensive plans?
-
- **Consensus on project Vision and Goals?** Did the project team, including citizens and regulatory agency staff reach consensus on the Vision or Goals statement? Does the Vision or Goals statement constitute a "shared vision" by all who have a stake in the project?

- **Achievement of project Vision or Goals?** Are there Performance Measures identified for assessing achievement of the Vision or project goals?

- **Supportiveness of community needs?** If it is achieved, will the Vision or Goals support the values of the community in the project area?

3.1.4. Alternatives Analysis. Careful consideration of a set of feasible alternatives is important. Stakeholder values reflected in the Problems, Opportunities and Needs statement should be reflected in the range of alternative project solutions. Design approaches should reflect the professional creativity and expertise of all team members working collaboratively. Designers should evaluate substantive safety issues relating to actual safety performance in addition to considering nominal safety relating to AASHTO Green Book guidelines. Each alternative should be formulated to its best advantage.

Suggestions for Measuring

- **Adequacy of range of alternatives developed?** Are project team members and stakeholders satisfied with the range of alternatives considered? How many schemes were considered that didn't meet the optimum transportation goals? Was a low-build alternative included as part of the list of alternatives under serious consideration?

- **Existence of criteria for evaluation of alternatives?** Were criteria developed relating to the statement of Problems, Opportunities and Needs and to the project Vision or Goals for use in evaluating alternatives? Were representatives of the public involved in evaluating the alternatives?

- **Design considerations: Design speed**. Were alternate design speeds considered? Was the community involved in considering the design speed? Was a design speed lower than the current design speed chosen? Was this choice made to fit the transportation facility better into the context? In addition to the minimum design speed, was a maximum design speed considered so that the design elements would reinforce a maximum operating speed?

- **Design considerations: Level of service**. Were alternate level of service targets considered? Was the community involved in considering the target level of service? If the design speed or level of service target was reduced to fit the facility into the context in one area of the project, were these criteria

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reduced on other parts of the route to achieve continuity and consistency to respond to driver expectations?

- **Design considerations: Safety.** Were design decisions made to respond to safety needs demonstrated through actual accident data as a complement to designing to meet AASHTO Green Book guidelines?

- **Need for redesign.** Measure the number of major design changes made beyond the 30% mark, the 50% mark, and the 75% mark of design.

- **Multi-modal considerations**. Does the facility encourage modes of transport beyond vehicular? Are sidewalks complete (is there connectivity)? What is the average percentage of destinations within a 15 minute walk?

3.1.5. Construction and Maintenance. The interdisciplinary team assembled for a project should include construction and maintenance staff. Seeking their input early on regarding constructability issues and the long term maintainability of proposed alternatives will help steer the team toward the best solutions, secure the buy-in of construction and maintenance staff as the project progresses and help ensure follow through on commitments made. (The appendix includes a sample construction incentive agreement used by Utah DOT, that includes CSS elements.)

- **CSS related construction issues considered during project development.** Were construction staff involved with the project team at all key milestones? Was a list of commitments to stakeholders maintained throughout the planning and design phases and incorporated into construction documents prior to beginning construction? Was the project monitored to ensure that commitments were acted on? Were there many requests for change orders during construction (note: needs quantification appropriate to the agency's standard practice.)?

- **CSS related maintenance considered during project development.** Were maintenance staff involved with the project team at all key milestones? Were maintenance needs/requirements taken into consideration when alternatives were evaluated? Is a maintenance plan in place to ensure that the project investment will be maintained? As a reflection of community buy-in and support, has the local government or has a local organization agreed to maintain some portion of the project improvements?

3.2. Outcome-Related Focus Areas

Effective project processes are an important component of successful CSS, however, project outcomes are also important. Incorporation of CSS principles may influence a diverse array of project characteristics, such as adoption of a "low-build alternative," special attention to landscaping, lower design speeds, or inclusion of pedestrian features and intermodal linkages. Measurement of the success of projects, however, must ultimately focus on stakeholder satisfaction with completed projects. This may be the toughest part of measuring CSS performance! Outcome-related measures, by definition should be applied upon final project completion.

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Key outcome-related focus areas discussed in this section include:

- Achievement of project Vision or Goals
- Stakeholder satisfaction
- Quality assurance review

3.2.1. Achievement of Project Vision or Goals. A clear project Vision or Goals statement that is established early in project development and which addresses the needs of multiple stakeholders can be used to measure project outcomes against expectations. These may range from safety or mobility goals to environmental and community considerations. Using achievement of project goals as a measure requires careful consideration and documentation of project baseline conditions early on during project development. Compiling a limited amount of baseline data about the project area focused on issues addressed in the Problems, Opportunities and Needs statement and Vision or Goals statement will greatly aid in measuring performance at project completion.

Suggestions for Measurement

- **Match between original Problems, Opportunities and Needs statement and final project?** Ask team members and stakeholders whether the project successfully addresses the identified Problems, Opportunities and Needs. In the opinion of project team members from the DOT and consultants? In the opinion of community stakeholders and regulatory agency staff?

- **Tracking and adherence to project commitments**? Many DOTs are starting to use systems that track commitments made during planning and design. Were project commitments to the public and resource agencies tracked throughout the project delivery process? Were these commitments met by the completion of the project?

- **Were project Vision or Goals met**? Was the project Vision achieved or goals met at project completion? In the opinion of project team members from the DOT and consultants? In the opinion of community stakeholders and regulatory agency staff? If a sketch was done at the start of the project to illustrate the project Vision, does this exist in the community now?

- **Does the project support community values?** In the opinion of community members, does the completed project support the sense of community in the project area?

- **Are environmental resources preserved or enhanced?** Have environmental resources, scenic and historic resources and aesthetic values been maintained or enhanced by the project as completed? In the opinion of project team members from the DOT and consultants? In the opinion of community stakeholders and regulatory agency staff?

- **Did the project leverage other resources?** Did the project attract financial support from funding sources other than the DOT? Did the project serve

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as a catalyst for additional projects and/or economic development activities?

3.2.2. Stakeholder Satisfaction. Stakeholders include a diverse group of individuals and interest groups affected by a project. They include owners of property adjacent to potential or existing alignments, users of the facility, representatives of jurisdictions in which alternatives are located, neighborhood organizations, business organizations, transportation interest groups, environmental interest groups, scenic and historic preservation groups, and growth management groups. Stakeholders are those people likely to support a project as well as oppose it. Stakeholder satisfaction can be gauged at the end of a project using surveys, focus groups, or debriefing charrettes with the project team and stakeholders. They do not need to be elaborate, a few questions directed to key stakeholders may be sufficient. Some DOTs have conducted general surveys of citizens, including Connecticut DOT and Maryland SHA. Tightly focused surveys of specific groups appear to have greatest potential.

Suggestions for Measurement

- **Tailored surveys of key stakeholders.** Survey elected officials' satisfaction levels at meeting project Problems, Opportunities and Needs and meeting the project Vision or Goals. Do post project delivery customer surveys of funding partners (cities and counties) to see how well a DOT has responded to their issues and concerns. What is the percentage of concerns from resource agencies that were satisfied? Survey local planning officials to determine the project's consistency with local land use plans. Survey members of the community affected by the project to ask them if the project meets the agreed upon project Vision or Goals.

- **Achievement of consensus during project?** Ask team members and project stakeholders about the degree to which they think the DOT reached consensus with all stakeholders on the Problems, Opportunities and Needs statement, on the project Vision or Goals, and on the preferred alternative.

- **Impacts of construction**. In the opinion of community members, was the project constructed with minimal disruption to the community?

3.2.3. Quality Assurance Review. The principles of CSS call for external stakeholders to be part of project teams. They also call for teams to employ creative designs and best practices at every level to achieve excellence in meeting the project Problems, Opportunities and Needs and the project Vision or Goals. A quality assurance review (QAR) can be conducted at project completion to determine how well these and other principles of CSS are met. The QAR may be conducted by the team itself through a collaborative self-assessment approach, by a team of CSS champions within the transportation agency, or through evaluation by a peer group of experts outside the agency. A QAR can be scaled to apply to only a few projects or to all projects and may also be scaled to reflect limitations of resource expenditure. It could consist of a two hour review by 3 or 4 individuals that is then shared with the full team, or it could involve a day long interactive evaluation of the project to understand factors

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that led to success in achieving the project Vision and Goals and lessons to learn from areas where the project fell short of its goals.

Suggestions for Measurement

- **Maryland SHA Charrettes**. Maryland SHA in developing its CSS implementation plans, used a project review and evaluation format that could be used for a QAR. Project team members (MSHA and consultants), resource agency staff and members of the public held a day-long meeting to identify collaboratively what project elements had met CSS principles, which had not and why. They discussed ways to modify the project delivery process to support meeting CSS principles on future projects. The evaluation tool they used is the same one used by Connecticut DOT for the project reviews described below.

- **Maryland SHA Peer Reviews**. In developing CSS performance measure tools, MSHA developed a project performance data sheet to be used by either SHA staff or independent consultants with expertise relating to CSS principles and SHA's CSS goals to evaluate projects for best practice approaches. (See Mt. Rainier example in appendix.)

- **Connecticut DOT Project Reviews.** At Connecticut DOT, the agency is beginning to conduct post project reviews of the effectiveness of CSS implementation during project delivery. External stakeholders and DOT team members are asked to complete brief surveys on their experiences during the project. Results are tallied and documented to provide an assessment of lessons learned and project strengths and weaknesses. (See appendix for copies of Connecticut DOT's survey instruments)

3.3. Implementing Project-Level Measures

Designing, tracking, and reporting project-level measures is most likely to be the responsibility of individual project teams, led by their project managers. An agency-wide champion for CSS is likely to be of help in initial design of measures or reporting results to help guide the team and to ensure appropriate levels of consistency in measurement across projects. Some DOTs may also have staff with specialist expertise in performance measures who can be of assistance.

The measures described in this section are well suited to a collaborative, self-assessment based approach to performance measurement, in which each team member evaluates his or her own performance after participating in an interactive discussion with other team members and stakeholders. Project teams may wish to select measures in some or all of the focus areas described. An agency may choose to encourage or require measurement on a handful or many projects according to comfort levels.

For most project-level measures, collection of measurement data is likely to occur upon completion of the project or at key milestones. Much of the data can be collected using e-mail or print surveys of team members or stakeholders. Results can be used by project team members as a tool for strengthening overall project delivery. External project stakeholders may also be interested in results. Results

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may also become part of more organization-wide efforts to measure performance.

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4.0 ORGANIZATION-WIDE MEASURE FOCUS AREAS

For many DOTs, performance in program-wide areas of vital importance, such as system preservation or safety, is routinely measured using organization-wide performance measures based on data collected across the agency. Some measures may be reported using "dashboards" or other graphic techniques that provide evidence at a glance of whether performance is satisfactory, and how it varies from region to region, or over time. Other measures may offer more nuanced insights on individual aspects of overall performance, allowing managers to "drill down" from highest-level dashboard measures to understand the factors influencing performance. As agency-wide adoption of CSS principles by DOTs increases, the potential role for organization-wide CSS performance measures is growing. They enable managers to look beyond individual projects and gain feedback on overall progress towards agency-wide adoption of CSS principles.

Organization-wide Measures - Key Characteristics

- Used to assess performance of entire organization
- Fewer in number than project-level measures
- Address both processes and outcomes
- Independent of individual projects
- Rely on central reporting of data
- Vital resource for senior management
- Monitored on regular schedule

Among the strongest candidates for scrutiny using organization-wide performance measures is tracking of the staff and consultant mindset changes that must occur for CSS to be successful in DOTs. As DOTs' efforts to integrate CSS into project delivery mature, new approaches to organization-wide measurement of CSS performance are likely to make sense.

Some organization-wide measures may simply aggregate a project-level measure across many projects, others may address non-project specific issues. This section provides a starting point for DOTs to develop their own organization-wide performance measurement approaches.

4.1. Process-Related Focus Areas

Organization-wide measures can be used to address the process of achieving cultural changes in organization-wide attitudes towards CSS. Agencies bring about changes in culture through a combination of factors that start with strong leadership, but include provision of agency-wide training and guidance. Measuring organization-wide performance in these areas is a helpful surrogate for assessing changes in attitudes. Process-related focus areas discussed in this section include:

- Training
- Manuals
- Motivation
- Policies

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4.1.1. Training. Training of DOT staff and contractors is a key mechanism for strengthening departmental commitment to CSS. Training helps increase awareness about CSS and is considered by many to be a vital catalyst for successful adoption of CSS principles. It will be most successful if it focuses on developing skills needed for CSS and models the interactive interdisciplinary teamwork called for by CSS. In New Jersey, for example, training courses include DOT staff, regulatory agency staff, public officials and interest groups. In Kentucky, a CSS training program is provided to DOT staff and consultants at 2-day sessions and consultant project managers are required to have taken this course in order for their firms to bid on projects in the state. Some agencies, such as Albany MPO, have engaged multiple audiences in training to permit a dialogue among professionals. Measurement of the impact of training is more important than the volume of training.

Suggestions for Measurement

- **Quantity of training?** This can provide some basic information such as the number of staff, consultants and external stakeholder groups trained, the number of staff in specific disciplines or with different job responsibilities trained, or the number of project managers that have CSS training.

- **Focus of training?** Consider measuring the range of topics that are addressed by training programs, such as design flexibility, collaborative teamwork, consensus building, conflict resolution, and facilitation.

- **Quality of training?** Assess staff and consultant attitudes before training and after. Measure the degree to which there is a cross-disciplinary focus in training, in which people of different technical backgrounds train together. Ask "what have you learned from this training and what will you do differently as a result of this training?" Ask staff if they feel they have learned the skills needed to successfully meet CSS principles in their projects? The appendix includes a copy of Kentucky's project manager training evaluation.

4.1.2. Manuals. Manuals provide guidance that helps ensure agency staff and consultants develop projects that meet appropriate standards. In most DOTs, manuals and guidance have evolved over time, and are likely to require revisions to include components that address integration of CSS in the project delivery process. Some may even contain elements that hinder adoption of CSS principles. Incorporation of CSS into the manuals that DOTs use to detail how tasks should be completed helps institutionalize practices. Once CSS principles are incorporated in these documents they are more likely to become standard operating procedures.

Suggestions for Measurement

- **Changes in manuals?** Have you reviewed and updated your manuals to incorporate CSS principles? Are changes being made according to planned schedules?

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- **Effectiveness of manual changes?** Ask team members, and or project managers if DOT's manuals serve as barriers to meeting CSS principles in their projects.

4.1.3. Policies. Organization-wide implementation of CSS may require changes in standard policies to accommodate context sensitive solutions. For example, some DOTs have policies that do not allow project expenditures on sidewalks, or they may have restrictive cost sharing policies that need amendment to allow creative funding partnerships for projects. Once policies are made more CSS-friendly where appropriate, implementation of CSS principles may be expedited. The appendix includes copies of agency-wide CSS policies adopted by Maryland SHA and Utah DOT.

Suggestions for Measurement

- **Changes in policies?** Have you reviewed and updated your policies to incorporate CSS principles? Are changes being made according to planned schedules?

- **Effectiveness of policy changes?** Ask team members, and or project managers if DOT's policies serve as barriers to meeting CSS principles in their projects.

4.1.4. Staff Motivation Strategies. Performance measures can be used as the basis for creating awards and individual performance plans that motivate employees, build awareness, encourage changes in mindsets, and reward staff's efforts to achieve CSS principles in their projects. Two state-level programs provide good examples of how these initiatives can be used effectively:

- **NYDOT CSS awards program.** The NYDOT gives out an "Excellence in Engineering Context Sensitive Solutions Award" each year. Two separate CSS Awards are made for smaller projects under $5 Million and larger projects valued $5 million and over. Winning projects must demonstrate measurable success in improving the environment; a level of excellence in the minds of those who designed, developed and constructed them, as well as those who utilize it; and have lasting value to the people and communities they serve. (See appendix for a copy of NYDOT's CSS award criteria.)

- **Utah's management through performance plan requirements.** Utah DOT is incorporating CSS performance review elements into the individual performance plans of key staff. (See appendix for sample) Individuals are judged in part on whether they meet expectations related to CSS.

4.2. Outcome-Related Focus Areas

As with project-level measures, outcomes are more difficult to measure than processes, but can be particularly helpful in determining progress. Two outcomes closely related to CSS implementation that are of great interest in many DOTs are timeframe and budget, and stakeholder satisfaction.

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4.2.1. Timeframe and Budget. Practitioners of CSS consider the costs of implementing a CSS-based project development approach to be wholly integral to project costs and timeframe. Efforts to identify "extra" costs or time required to apply CSS principles undermine the holistic nature of CSS as part of project development; particularly if they are focused on project-by-project assessment. Use of CSS, however, can help make project schedules more predictable by reducing conflict during project development, and discovery of a low build alternative that meets stakeholders needs can generate cost and time savings. Macro-level analysis of these trends across multiple projects may be valuable.

Suggestions for Measurement

- **Timeframe.** What proportion of projects is completed on, or ahead of schedule?

- **Budget.** Program-wide, were few or no project redesigns required? Were low-build options selected? Were there added costs attributed to changes in scope mid-way through the design process? Were there cost overruns during construction attributable to changes in design during the construction phase?

4.2.2. Stakeholder Satisfaction. As noted in Section three, stakeholder satisfaction is a keystone for CSS implementation. Practitioners are encouraged to include project-level measures of stakeholder satisfaction. If data is collected consistently across projects, it may also be used to provide organization-wide measurement of stakeholder satisfaction.

Suggestions for Measurement

- **Tailored surveys of key stakeholders.** Survey elected officials' satisfaction levels at meeting project Problems, Opportunities and Needs and meeting the project Vision or Goals. Do post project delivery customer surveys of funding partners (cities and counties) to see how well a DOT has responded to their issues and concerns. What is the percentage of concerns from resource agencies that were satisfied? Survey local planning officials to determine project's consistency with local land use plans. Survey members of the community affected by the project to ask them if the project meets the agreed upon project Vision or Goals.

- **Achievement of consensus during project?** Ask team members and project stakeholders about the degree to which they think the DOT reached consensus with all stakeholders on the Problems, Opportunities and Needs statement, on the project Vision or goals, and on the preferred alternative.

- **Impacts of Construction**. In the opinion of community members, was the project constructed with minimal disruption to the community?

4.3. Implementing Organization-Wide Measures

Designing, tracking, and reporting organization-wide measures is most likely to be the responsibility of a CSS champion within the DOT. This person takes

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responsibility for initial design of measures, collection of data, and reporting results. Some DOTs may also have staff with specialist expertise in performance measures that can be of assistance.

For most organization-wide measures, collection of measurement data is likely to occur on a regularly scheduled basis. Much of the data can be collected using e-mail or print surveys of other agency personnel. Results can be used by agency leadership as a tool for strengthening overall commitment to CSS principles. External stakeholders such as FHWA may also be interested in organization-wide results. Results may also become part of broader organization-wide efforts to measure performance.

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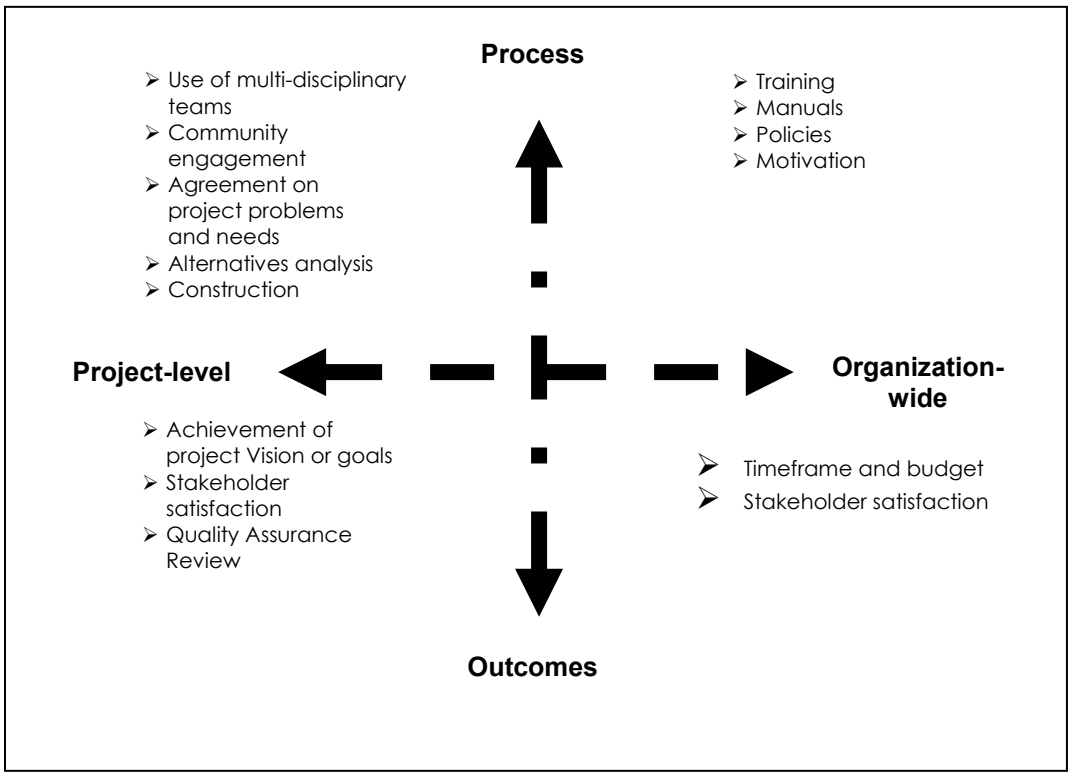
5.0 Conclusions and Tips for Getting Started

By now readers will understand that this guidebook advocates a rigorous CSS measurement framework that focuses on the processes and outcomes of CSS implementation, at both the project- and organizational-levels. Full realization of such a framework is likely to occur over time. At the outset of their efforts, transportation agencies just beginning to implement CSS may prefer to emphasize project-level measures that are directed to a handful of "pilot" projects. These measures can then be expanded to cover additional projects as implementation efforts grow. Likewise, measures that address processes may hold favor early on during implementation, before measurable outcomes are achieved.

Agencies should not ignore organization-wide measures during the outset of CSS implementation efforts. Process-focused organization-level measures that address training, manuals, and policies can be implemented alongside early efforts to measure selected projects. They will help build the way for greater use of project-level measures across many projects as training and manual changes influence staff mindsets.

The figure below shows how the CSS measurement framework introduced in Chapter 2 captures each of the focus areas described in the earlier sections of the guidebook.

Figure Two. Measurement Framework for CSS



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Following are a series of suggestions for helping agencies to begin their CSS performance initiative:

- **Create a Champion for CSS Measurement.** Ideally an agency will have a champion for CSS measurement who can guide development, implementation, and reporting of measures, and who is familiar with the CSS principles. This person may also have lead responsibility for overall implementation of CSS, agency-wide. Utah DOT for example has a "CSS Director" position. Other states rely on more decentralized approaches, and it is possible that each district office could have a champion.

- **Start Small.** Measuring CSS is challenging. Starting with too many measures on too many projects may doom a measurement program to failure as staff become overloaded and frustrated. States should avoid allowing the CSS performance measures to take over the CSS implementation efforts. Starting with a few measures, or a pilot set of projects can help to make measurement more manageable.

- **Incorporate Feedback from External Sources.** A central tenet of CSS is that a highway, by the way it is integrated within the community, can have far reaching impact beyond its transportation function. Make sure that measures incorporate feedback from those most directly affected by projects, whether they are citizens, or other stakeholders such as local officials or advocacy groups.

- **Focus on Planning and Preliminary Design.** While all areas of DOTs' project development, operations, and maintenance activities should be measured, planning and preliminary design deserve special scrutiny because they are the points in project development at which project direction can be altered to ensure consistency with CSS principles. In particular, Problems, Opportunities and Needs identification, and "scoping" are critical steps within the planning and design phases of project development. (All stages of project development and ongoing operations and maintenance are important in CSS principles, and measures should not completely ignore these issues at the expense of a focus on planning and design.)

- **Measures for Small Projects are as Important as Those for Large Projects.** Smaller projects such as routine repaving, bus shelters, or safety improvements, should be included in measurement efforts along with higher profile, larger projects. Different projects will likely require different measures.

- **Build CSS Measures into Project Development Process and Strategic Planning.** Measures of CSS should be part of overall project development processes, both as a way to help institutionalize CSS and to help improve data gathering; for example, by including stakeholder surveys as part of public involvement activities, or by setting measurable project goals.

- **Performance Measures for CSS Can Start at the Project or Organization-level.** CSS is a crosscutting philosophy that applies across many disciplines. The logical starting place for a CSS measurement program should include

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both the project and organization-level. Aggregation of data from individual projects provides organization-wide indicators. In selected areas, such as training, organization-wide measures may be more appropriate.

Creating a set of performance measures for CSS implementation will be a learning experience, and states can expect that the set of measures they adopt initially will evolve over time. No single set of measures will work for every state, and no set of measures should stay the same in any state. This guidebook deliberately avoids making detailed recommendations on the mix of measures that should be used to address CSS performance. Instead, practitioners are encouraged to think in terms of processes and outcomes, and in terms of project-level measures and organization-wide measures. Within these parameters, a wide range of measures in 12 or more focus areas is possible, and states should develop measures that fit their circumstances.

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APPENDIX

Project-Level Performance Measures-related Materials

- Connecticut – Stakeholder CSS survey tool
- Connecticut – Project team CSS survey tool
- Maryland SHA – Outline of data collection tools for performance measurement
- Maryland SHA - Sample Peer Review
- Arizona – SR 179 Project Evaluation Criteria
- Kentucky – Communicating All Promises (CAP) plan
- Utah – Sample construction contractor performance incentives plan

Organization-wide Performance Measures-related Materials

- Utah – "Final Four" strategic goals
- Maryland – CSS Policy Description
- Kentucky – Project manager training effectiveness self evaluation form
- Utah – Sample employee performance evaluations (Region Deputy Director, Senior Project Manager)
- New York – CSS award criteria

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Connecticut
Stakeholder Questionnaire

1. With regards to this project, your interests are as a…(Please check ALL that apply)

__Project Task Force Member
__Area Resident
__Business Owner
__Bicycle Advocate
__Historic Preservation Advocate
__Other _____
__Elected Official/ Local Government Official
__Property/Adjacent Property Owner
__Pedestrian Advocate
__Disabled Person
__Transit User

2. How did you find out about the project? (Please check ALL that apply)

__Newspaper
__Task Force
__Council Meetings
__Other_____
__Mailing
__Community Meetings
__Neighbor

3. Were you aware there was a Task Force to guide the development of this project?
__Yes __No

The following questions ask you about the project before ConnDOT began construction, during construction, and after construction was completed. Please circle the answer that applies. For those questions that ask you to use a scale of one to five, the numbers represent:

1	2	3	4	DK
Poor	Fair	Good	Excellent	Don't Know

Prior to Project Construction

Please rate whether adequate project information was provided through mailings and public meetings.
1 2 3 4 DK N/A

How well did you understand the purpose of the project?
1 2 3 4 DK N/A

Did you attend any public meetings about the project?
Yes No N/A *(If YES, please continue; if NO, skip to the next section)*

Were the displays clear?
1 2 3 4 DK N/A

Were the displays at the meetings informative?
1 2 3 4 DK N/A

Was ConnDOT staff courteous and helpful?
1 2 3 4 DK N/A

Please use the following space to describe any problems or issues BEFORE THE PROJECT CONSTRUCTION BEGAN

_____

_____

During Construction of the Project

Was adequate notification given of construction activities (detours, road closures, etc.) during the project?
1 2 3 4 DK N/A

How would you rate pedestrian access through the construction site?
1 2 3 4 DK N/A

How would you rate vehicular access through the construction site?
1 2 3 4 DK N/A

How well were alternate paths marked (pedestrian and/or vehicular paths)?
1 2 3 4 DK N/A

Did the contractor perform his operations in a safe manner?
1 2 3 4 DK N/A

Were the construction workers courteous and helpful during construction of the project?
1 2 3 4 DK N/A

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How well do you think ConnDOT minimized the inconvenience to you and the community during construction?

1 2 3 4 DK N/A

Please use the following space to describe any problems or issues related to the project DURING CONSTRUCTION

_____

_____

Now that the Project is Completed……

Were you informed of the expected beginning and end dates of this project?

Yes No DK

Was the project completed in a timely manner?

1 2 3 4 DK N/A

How well did the project meet its stated objectives? Please rate the following improvements:

-*Traffic Operations/ Safety*

1 2 3 4 DK N/A

-*Landscaping/Beautification*

1 2 3 4 DK N/A

-*Pedestrian Access*

1 2 3 4 DK N/A

-*Handicapped Access*

1 2 3 4 DK N/A

-*Drainage*

1 2 3 4 DK N/A

-*Traffic Signing*

1 2 3 4 DK N/A

-*Bicycle Compatibility*

1 2 3 4 DK N/A

-*Accessibility*

1 2 3 4 DK N/A

Do you believe the project adds value to the surrounding community?

1 2 3 4 DK N/A

How well has the project been maintained thus far?

1 2 3 4 DK N/A

Please indicate any specific comments you have regarding maintenance in the project area:

_____

_____

Do you believe that this project has spurred other community improvements, e.g. redevelopment, repairs, etc.?

1 2 3 4 DK N/A

Please rate your OVERALL experience with the project, using a scale of one to ten, one representing poor, ten representing excellent.

1 2 3 4 5 6 7 8 9 10

Please use the following space for additional comments with respect to the PROJECT OVERALL.

Thank you for your participation!

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Connecticut
Project Team Performance Evaluation Tool

CONTEXT SENSITIVE SOLUTIONS
Project Evaluation Form

Please rate the quality and characteristic criteria listed on the attached evaluation form using the scale shown below.

Evaluation Scale:
1. Does not meet characteristic or quality. Requires explanation.
2. Meets some aspects of characteristic or quality.
3. Fully meets characteristic or quality.
4. Exceeds characteristic or quality.
5. Extraordinary steps were taken. Far and above characteristic or quality. Requires explanation, include the innovative techniques which were utilized.

Stakeholder:
A "stakeholder" is anyone who has something at stake in a specific policy or particular project. This includes any entity who uses, regulates, or is affected by the facility.

Optional:
In our effort to evaluate this tool, it would help us if you identify your position and/or office.
Position: _____ Office: _____

Comments on this Evaluation Tool:
We would welcome any comments you have on using this evaluation tool. Are the descriptions sufficiently clear? Did you have enough information about the project to respond to these questions? Or are there other comments you would like to make?

_____

_____

_____

_____

_____

_____

_____

_____

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Characteristics:

1. Establish a multi-disciplinary team early with disciplines based on the needs of the specific project and include the public. ***Was a multi-disciplinary team formed at the beginning of the planning and/or design process (to develop a design program to include needs, goals and objectives)? Was representation from the public included? Were appropriate team members added as work proceeded in response to project requirements? Were regular project meetings held where all team members were expected to attend and project issues were reviewed by all in a comprehensive manner?***	**Does not meet:** No multi-disciplinary team was established. **Meets some aspects:** A multi-disciplinary team was established but it was done late and/or important specialists or the public were not included or the team did not meet on a regular basis throughout the project. **Fully meets:** A multi-disciplinary team was established, all specialists and the public were included, and the team met regularly to determine questions of process and product. **Exceeds:** A multi-disciplinary team was established, all specialists and the public were included, extra team building steps were taken to insure that the team functioned well, allowing, for example, team members other than the project leader to take important roles in representing the project to review agencies, elected and agency officials and the public. **Extraordinary steps were taken:** _____ _____
2. Seek to understand the landscape, the community, and valued resources before beginning engineering design. ***Did the project team initiate the planning and/or design process with a comprehensive site evaluation informed by the opinions of all stakeholder groups?***	**Does not meet:** No effort was made to perform a comprehensive site evaluation. **Meets some aspects:** Some effort was made to perform a comprehensive site evaluation and opinions of some stakeholders were sought and reflected. **Fully meets:** The team performed a comprehensive site evaluation and sought and reflected opinions of all known stakeholders. **Exceeds:** The team performed a comprehensive site evaluation, sought out resource data beyond that readily available and sought out and reflected a broad range of stakeholders' opinions. **Extraordinary steps were taken:** _____ _____
3. Involve a full range of stakeholders with transportation officials in the scoping phase. Clearly define the purposes of the project and forge consensus on the scope before proceeding. ***Were all stakeholders identified and involved early on in developing the scope of the project? Was a written design program developed that identified specific needs, goals and objectives for the project? Did all parties (project team members and other stakeholders) reach consensus on the design program? Consensus is an opinion which is held by all or by most; not all have to agree, but all have to be able to live with it.***	**Does not meet:** No design program was developed or it was developed without stakeholder input. **Meets some aspects:** The design program developed lacks detailed goals and objectives or was developed without full stakeholder involvement. **Fully meets:** A design program with a clear needs statement and detailed goals and objectives was developed with full stakeholder involvement and consensus was achieved on this program before proceeding. **Exceeds:** A detailed written design program was developed with consensus achieved and the program was used by all stakeholders throughout the planning and/or design process. **Extraordinary steps were taken:** _____ _____

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4. Tailor the highway development process to the circumstances. Employ a process that examines multiple alternatives and that will result in consensus on approaches. ***Was the highway development process evaluated and adapted to the particular circumstances of this project? Were multiple alternatives identified and evaluated with the involvement of all stakeholders and did the team and stakeholders reach consensus on the chosen alternative?***	**Does not meet:** The highway development process may have been adapted but multiple alternatives were not developed and consensus was not reached.
	Meets some aspects: The highway development process was adapted and multiple alternatives were developed but consensus was not reached with other stakeholders.
	Fully meets: The highway development process was adapted and multiple alternatives were developed. Consensus on an alternative was reached within the project team and with other stakeholders.
	Exceeds: The highway development process was adapted, multiple alternatives were developed and consensus within the team and other stakeholders was reached; the project design of the chosen alternative met and even exceeded the goals and objectives of the design program.
	Extraordinary steps were taken: _____ _____
5. Secure commitment to the process from top agency officials and local leaders. ***Were top agency officials and local leaders consulted at appropriate milestones throughout the project for their review, input and written approval? When positions changed, was the new individual's commitment secured in a timely manner?***	**Does not meet:** No attempt was made to secure commitment from top agency officials and local leaders.
	Meets some aspects: Some attempt was made to secure commitments but these may not have been written or may have included agency officials but not local leaders or vice versa.
	Fully meets: Written commitment was secured from both top agency officials and local leaders and when positions changed, new official's and leader's commitments were secured in a timely manner.
	Exceeds: Written commitments were secured from agency officials and local leaders; newly appointed or elected individuals were brought into the process quickly and their commitments secured in a timely manner. Extra steps were taken to insure continued commitment as the project evolved.
	Extraordinary steps were taken: _____ _____
6. Communication with all stakeholders is open and honest, early and continuous. ***Did all stakeholders including project team members and the public receive regular communications articulating project issues and decision points? Did the multi-disciplinary team recognize that communication needs to be two-way, e.g. listening as well as telling?***	**Does not meet:** Communication within the project team was not open and honest, early and continuous. Communication with the public was also spotty.
	Meets some aspects: Not all information was communicated and communication was intermittent or may have been within the project team but not with all stakeholders.
	Fully meets: Communication within the project team and with all other stakeholders was open and honest, early and continuous. The project team met regularly throughout the project.
	Exceeds: Communication was open, honest, early and continuous within the team and with other stakeholders and extra steps were taken to get feedback from stakeholders on how well the communication process was working.
	Extraordinary steps were taken: _____ _____

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7. Tailor the public involvement process to the project. Include informal meetings. ***Was the public involvement process customized to get the best input possible from the public? Was the process too extensive, insufficient, or just about right.***	**Does not meet:** There was little or no attempt at public involvement.
	Meets some aspects: The public involvement process was adapted to the project but included only formal meetings.
	Fully meets: A public involvement process tailored to the project was conducted, including formal and informal meetings.
	Exceeds: A public involvement process tailored to the project was conducted, including formal and informal meetings, and extra steps were taken to involve people not initially aware of the project and to get feedback from the public on how well the process was working.
	Extraordinary steps were taken: _____ _____
8. Use a full range of tools for communication about project alternatives where applicable (e.g. visualization). ***Did the tools and techniques used effectively, communicate/illustrate project alternatives? Was a creative range of techniques used such as 3D visualization, role playing, web sites, etc.***	**Does not meet:** Communications of concepts was primarily verbal and with engineering drawings.
	Meets some aspects: Some color graphics and explanatory boards were used.
	Fully meets: A full range of 2D and 3D illustrations of the alternatives along with explanatory information such as graphics, video, etc. were easily available to interested stakeholders by request or at frequent intervals.
	Exceeds: A full range of 2D and 3D illustrations of the alternatives along with explanatory information such as graphics, video, etc. were easily available to interested stakeholders at their convenience through a web site or store front office.
	Extraordinary steps were taken: _____ _____

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Qualities:

1. The project satisfies the purpose and needs as agreed to by a full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as warranted as the project develops. ***This quality relates to characteristics #3 and #4. Was the project designed/built to meet the statement of needs, goals and objectives as articulated in the design program? Were the goals and objectives modified as necessary as the project progressed and was continued support gained from stakeholders?***	**Does not meet:** The project addresses the identified needs but meets few of the goals and objectives agreed upon or meets some goals and objectives of the project team but few goals and objectives of other stakeholders. **Meets some aspects:** The project meets some of the initially identified goals and objectives, but goals and objectives were not modified as the project developed. **Fully meets:** In the opinion of a full range of stakeholders, the project meets the goals and objectives as initially identified and then amended through the project development. **Exceeds:** The project not only meets the goals and objectives as initially identified and amended, but meets community or project goals not formally included in the scope of the project. **Extraordinary steps were taken:** _____ _____
2. The project is a safer facility both for the user and the community. ***Is the facility viewed as safe by a full range of stakeholders?***	**Does not meet:** The project has worsened safety. **Meets some aspects:** Safety is increased in some areas but other safety problems remain. **Fully meets:** The project team and the community view the project as safe. **Exceeds:** Project safety has been accomplished in a manner that also enhances other project values such as scenic, historic, aesthetic and environmental concerns. **Extraordinary steps were taken:** _____ _____
3. The project is in harmony with the community and preserves environmental, scenic, aesthetic, historic and natural resource values of the area, i.e., exhibits context sensitive solutions. ***Does the project derive some of its qualities from the community's sense of its own identity and the physical attributes of the community, e.g. historic resources or landscape qualities of the community?***	**Does not meet:** The project ignores the environmental, scenic, aesthetic, historic and natural resources of the area surrounding the project. **Meets some aspects:** The project preserves some resources in the surrounding area. **Fully meets:** The project preserves the community's environmental, scenic, aesthetic, historic and natural resources and reflects their qualities in some project design elements. **Exceeds:** The project both preserves and enhances the community's environmental, scenic, aesthetic, historic and natural resources and uses them as an inspiration for many project design elements. **Extraordinary steps were taken:** _____ _____

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4. The project involves efficient and effective use of resources (time, budget, community) of all involved parties. ***Did the project meet or exceed its budget? Was the project completed within the agreed upon timeframe? Was redesign of part or all of the project required? Was involvement of the public designed in a manner to fit individuals' abilities to offer time?***	**Does not meet:** The project encountered substantial delays, due either to the late identification of significant resources or the exclusion of certain stakeholder groups from the initial setting of project goals and objectives or for some other reason.
	Meets some aspects: The project encountered some delays, due either to the late identification of significant resources or miscommunication with stakeholder groups or for some other reason.
	Fully meets: There was efficient execution of work, on time and on budget, with effective participation from stakeholders. The project team worked from the inception toward the generally acceptable solution.
	Exceeds: There was quick and efficient execution of work, on time and on budget and with coordinated involvement of all stakeholders from inception through construction.
	Extraordinary steps were taken: _____ _____
5. The project is designed and built with minimal disruption to the community. ***Were the needs of business, residents and the travelling public considered throughout design and construction of the project?***	**Does not meet:** There was major community disruption during construction
	Meets some aspects: There was some community disruption during construction.
	Fully meets: There was person by person coordination with adjoining property owners and coordination with all affected parties to minimize disruption to the community.
	Exceeds: In the views of members of the community construction disruption was avoided to the extent possible and everything reasonable was done to mitigate its effects.
	Extraordinary steps were taken: _____ _____
6. The project is seen as having added lasting value to the community.	**Does not meet:** The community is not satisfied with the project.
	Meets some aspects: The community is satisfied with some parts of the project but not with others.
	Fully meets: The community is satisfied with all aspects of the project.
	Exceeds: The community is pleased with all aspects of the project and describes it to other communities as a model project of its type.
	Extraordinary steps were taken: _____ _____

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7. The project exceeds the expectations of both designers and stakeholders, and achieves a level of excellence in people's minds. ***This quality incorporates all of the other qualities for an overall evaluation of the project. Its measure may be the sense of pride that project team members have in their accomplishments, or the pleasure taken by citizens in the beautification yet functionalism of the project area, or the recognition of the project through awards or citations of its success.***	**Does not meet:** The project does not meet expectations of either designers or other stakeholders.
	Meets some aspects: The project meets expectations of designers and other stakeholders in many areas.
	Fully meets: The project exceeds expectations of both designers and other stakeholders and is cited by both as an example of excellence in ConnDOT's work.
	Exceeds: The project exceeds expectations of both designers and other stakeholders, is used as a model by SHA for future work, and is cited by citizens as an example of the best of ConnDOT's work.
	Extraordinary steps were taken: _____ _____

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Project - Maryland

Maryland State Highway Administration
Thinking Beyond the Pavement Program
Performance Measurement Tools and Measurement Strategy Summary

DATA COLLECTION TOOLS

Post Construction Survey

Tool: Mail-back survey submitted to project stakeholders and members of the project task force.

Timing: 6-12 months post-construction

Contents/Measures:

Measure	TBTP Goal Area
General public satisfaction with project outcomes	Community Satisfaction
Project task force satisfaction with project outcomes	Community Satisfaction
Public perception that project "harmonizes" with/adds value to community	Community Satisfaction
Public perception of how well SHA addressed community disruption during construction	Community Satisfaction
Perceived safety of a facility for all potential users	Mobility and Safety Community Satisfaction
Perceived mobility of new facility for a range of potential users	Mobility and Safety Community Satisfaction
Perception that SHA has left the natural and built environments better off than before they came in	Environmental Stewardship Community Satisfaction
Project task force member satisfaction with the process	Project Delivery Process
Was the project scope developed with input of a wide range of stakeholders?	Project Delivery Process
Quality/frequency of communication during project delivery process	Project Delivery Process
Perception of economic investments in the community in response to the project	Economic Impact Community Satisfaction

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Project Team Survey

Tool: Survey/checklist that is filled out by members of the project team during the delivery process. Much of it is to serve as a process checklist to encourage application of TBTP tools and principles during project delivery. Also, the RESI results and the data collected after the project can be checked against the perceptions of the Project Team.

Timing: Throughout planning and design –

- Very beginning and throughout for process questions
- Environmental process and design for environmental questions

Contents/Measures

Measure	TBTP Goal Area
Project scope is developed in collaboration with a full range of stakeholders	Project Delivery Process
Quality and frequency of communication during project delivery	Project Delivery Process
Use of a public involvement plan during all phases of project delivery, including planning, design and construction.	Project Delivery Process
Responsiveness to commitments made to the public and other project stakeholders as evidenced through an SHA Commitments and Decisions document.	Project Delivery Process Community Satisfaction
CSD best practices checklist – list of best practice techniques from the SHA Environmental Responsibilities brochure and previous TBTP Design Checklist that can be used to protect against impacts to the built and natural environment.	Environmental Stewardship

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Project - Maryland

Project Performance Data Sheet

Tool: Data collection sheet that is used by a team of SHA staff to collect data regarding a TBTP project before and after a project is completed. Not all measures will necessarily be applicable to each project. Data selected, particularly for mobility measures, should best address the project goals and the purpose and need.

Timing: To provide an adequate baseline for comparison of mobility data in particular, there may be the need to collect traffic counts and data on travel times before construction begins.

Comparative data collection should be initiated 6-12 months post-construction. For programmatic trend analysis, data in some categories may be collected at assigned intervals, such as 3 years, 5 years or 10 years post-construction.

Contents/Measures:

Accident data broken down by type of accident (fatal, injury, total) and user types (pedestrians, bikes, truck, total)	Mobility and Safety
Travel speeds at the 85th percentile	Mobility and Safety
Level-of-Service (peak and non-peak hour, as appropriate)	Mobility and Safety
Peak Hour Vehicle Throughput (Vehicles/hour/lane during peak hour)	Mobility and Safety
Travel time (multimodal) – (origins and destinations, time of day and day of week assigned as appropriate)	Mobility and Safety
Environmental enhancements – evaluation of efforts to enhance the built and natural environment of a project study area. For expert analysis using the Environmental Council	Environmental Stewardship
Bike, Ped, Transit, ADA design – evaluation of techniques used to enhance mobility. For expert analysis using in-house expertise.	Mobility and Safety
Project budget - a comparison of the final construction cost against the cost budgeted in the first CTP the project is listed in.	Project Delivery Process

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Economic Analysis Data Sheet

Tool: Economic analysis document that defines the economic status of study areas before, during and after project construction and over time using the same sets of indicators. An optional space is provided to collect anecdotal evidence through interviews with key economic stakeholders such as representatives of local chambers of commerce, business owners or other key stakeholders depending on the specific economic needs/objectives of the project study area. Economic analyses will only be conducted on selected projects.

Timing: Similar to mobility measures, a baseline of comparison for assessing the economic impact of a project will need to be established. Baseline data need to be collected six months prior to the start of construction. Beginning at that time, the same data need to be collected annually from the same sources. Data will also be collected during construction to determine if there are negative impacts during construction.

Contents/Measures:
The following measures will be selected from, as warranted by the Purpose and Need and project goals.

- Number of building permits issued
- Assessed value of property
- Number and value of property sales (commercial and residential)
- Number of vacant and underutilized buildings
- Number of business establishments
- Number of employees
- Annual payroll

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Project Description: **MT. RAINIER**

Thinking Beyond the Pavement Program Evaluation
Project Performance Data Sheet

Introduction: This form is to be used by SHA staff or an independent consultant to compile data for Thinking Beyond the Pavement quantitative measures.

TBTP CRITERIA	MEASURE	RANKING[1]	
		Rank 1-4	Explain
Environmental Enhancement	**Evaluate efforts to enhance the environment through implementation of enhancements in the following categories, as applicable. See footnote for ranking categories.**		
BUILT ENVIRONMENT			
Community Preservation/ Land Use	Transportation infrastructure enhances access to key community destinations.	3	Division of the community by "asphalt sea" is reduced. Crossing Rt. 1 is much improved although it could improve even more.

[1] Rankings are as follows: 1: Poor; 2: Fair; 3: Good; 4: Excellent. N/A is not applicable, meaning environmental mitigation or enhancement in a given area was not required. Explanations should be provided to document the reasons for the ratings, noting the required mitigation, the extent of environmental investments, and factors influencing decision making on the investments made.

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Performance Measures for Context-Sensitive Solutions - A Guidebook for State DOTs

Project Description: **MT. RAINIER**

TBTP CRITERIA	MEASURE	RANKING[1]	
		Rank 1-4	Explain
Design Aesthetics	• The project has positively contributed to the physical appearance of the community it serves. • Project uses street furniture and lighting that are compatible and/or enhance the appearance of the surrounding community • Project results in minimal "sign clutter".	4+, 4, 2	I would give different ratings to the different elements of this topic. **4+** for the contribution of the physical appearance of the community. **4** to the use of street furniture and lighting. **2** to the issue of design aesthetics regarding sign clutter and use of signs altogether. There are many signs. Some could likely be eliminated, others could be reduced in size. Fred Sissine (former Mayor) tells me that people don't see the yield sign coming from the MD side, because it is the 3rd sign in a row where the 1st sign (international island with arrow) may not be needed, 2nd (pedestrian crossing) comes when you are upon the pedestrians, and the 3rd (yield) gets missed.
Landscaping and Vegetation	Landscaping is used to enhance the physical appearance of the project, including the street, median, berms, fencing, retaining walls, inside and outside of the right-of-way as appropriate.		Major concern with this new streetscape requires perpetual maintenance; currently it requires maintenance/attention.
Noise Barriers & Lights	Avoid and minimize of the negative impacts of noise and lighting on surrounding communities through project design and mitigation.	3+	The lighting was a significant concern of the community. SHA did not agree to the fixtures the city wanted (which were more energy efficient & probably more expensive) but the lighting is much improved. However, the island design hear the bus turnaround lanes seems too tight (or the drivers need to change their speed habits) and it is evident the light poles are getting hit. Lighting is also discussed in the aesthetics section

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Performance Measures for Context-Sensitive Solutions - A Guidebook for State DOTs

Project Description: **MT. RAINIER**

TBTP CRITERIA	MEASURE	RANKING[1]	
		Rank 1-4	Explain
Storm Water/Flood Management	Project has developed storm water management measures.	3	Drainage was improved over existing conditions through grading and the installation of a new inlet at 34th St. on the high side of the roundabout. The new inlet captures flows that used to run down the street, and pipes them into the existing storm drain system down-gradient. The pipe adjacent to the new inlet was cleared of debris that had been obstructing the flow. Increased green space has reduced runoff.
Sediment Erosion Control	Project employs appropriate sediment control measures to mitigate against adverse soil erosion.	N/A	This is a curb and gutter system. No erosion is evident. Storm flows are captured by the inlets.
Cultural Resource Avoidance and Protection	The project design is consistent with and/or enhances the community setting and cultural features of the surrounding area and community.	2.5	Project's secondary and accumulative effects may put development pressure on other elements of the Historic District (i.e. the demolition of a block of non-historic adjacent buildings for an art facility). Demolition of other historic structures or insensitive new construction can erode historic fabric and character. Induced commercial and residential development can result in "gentrification", forcing out local residence and business (the community representative noted that this was already a problem). Project related private development could have significant impacts – not covered by State or Federal regulatory processes.

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Performance Measures for Context-Sensitive Solutions - A Guidebook for State DOTs

Project Description: **MT. RAINIER**

TBTP CRITERIA	MEASURE	RANKING[1]	
		Rank 1-4	Explain
Archaeological Resource Avoidance and Protection	• The design of infrastructure is consistent with or enhances the historic integrity of the surrounding community, including historic districts, individual buildings, and their context included within boundaries listed or determined to be eligible for the National Register of Historic Places. • The integrity of archeologically significant structures and sites is preserved.	3	SHA project review to assess potential impacts to archeological resources identified Mount Rainer project area as High Potential area. Project records are unclear if archaeological investigations were carried out or if the project design was altered to avoid or minimize potential impacts. Area of significant disturbance appears to be limited to the road right-of-way and the City Hall plaza, both already heavily disturbed. Some site features - planter boxes and on-site stormwater control system would reduce the limits of soil disturbance and potential archaeological impacts.
Historic Resource Avoidance and Protection	• The design of infrastructure is consistent with or enhances the historic integrity of the surrounding community, including historic districts, individual buildings, and their context included within boundaries listed or determined to be eligible for the National Register of Historic Places. • The integrity of archeologically significant structures and sites is preserved.	3.5	Project occurred within the Mount Rainer Historic District (Maryland Inventory of Historic Properties and National Register of Historic Places). Project does not appear to have had a direct Adverse Effect on any adjacent historic properties. Project did help to reinforce the "sense of place" of the community, providing a focal point at the City Hall plaza. Development of the plaza area helped to better blend the transit facility into the community. Project included architectural features that incorporated historical themes (design of shelters and the representation of the original trolley tracks in the plaza pavement).

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Performance Measures for Context-Sensitive Solutions - A Guidebook for State DOTs

Project Description: **MT. RAINIER**

TBTP CRITERIA	MEASURE	RANKING	
		Rank 1-4	Explain
Historic Resource Avoidance and Protection	• The design of infrastructure is consistent with or enhances the historic integrity of the surrounding community, including historic districts, individual buildings, and their context included within boundaries listed or determined to be eligible for the National Register of Historic Places. • The integrity of archeologically significant structures and sites is preserved.		Some architectural enhancements were incorporated sensitively into site landscaping (relief art panels on planters). The major sculptural works (although ultimately an expression of community spirit and sense of history) did not "blend" as well into the historic character of the community.
Construction	• Environmentally sensitive construction techniques used to both minimize waste products and to recycle existing building materials. • The project uses materials and designs that facilitate energy conservation in operations.	N/A	The construction, operation and maintenance of this project was not evaluated. The information needed for this evaluation was not available. It would be easier to get the information if the projects were recently completed and appropriate personnel was available
Operations and Maintenance	Road design includes: enhanced durability (extended productive life), minimal salt/de-icing requirement, and reduced maintenance requirements.	N/A	

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Project Description: **MT. RAINIER**

	TBTP CRITERIA	MEASURE	RANKING[2]	
			Rank 1-4	*Explain*
Environmental Enhancement		**Evaluate efforts to enhance the environment through implementation of enhancements in the following categories, as applicable. See footnote for ranking categories.**		
		NATURAL ENVIRONMENT		
	Existing Vegetation	Project imposes minimal impacts on existing vegetation, including mature trees, grasses and other absorptive plants and vegetation that would act as a natural screen or barrier to the built environment, including but not exclusively the transportation project.		The new landscaping material (trees and tree lawn panel) definitely contributes in a positive manner to this new streetscape.
	Project Team Comments	• There is no indication whether or not adequate soil volumes were provided for the tree plantings. • Unfortunate lack of coordination between the bus shelter and proposed tree planting adjacent to the municipal building. • Columnar trees should be planted, or tree grates removed and paving filled in. • Design detail: A number of the up-lighting fixtures extend above the plaza surface (3/4 inch +) and created tripping hazards. • Design detail: The regulatory sign posts are both tubular and "U" Channel and should have all been square for design connectivity. • Design detail: The coordination of bas-relief artwork and expansion joints could have been better. • Design detail: Elm tree planted beneath a utility line: future maintenance issues.		

[2] Rankings are as follows: 1: Poor; 2: Fair; 3: Good; 4: Excellent. N/A is not applicable, meaning environmental mitigation or enhancement in a given area was not required. Explanations should be provided to document the reasons for the ratings, noting the required mitigation, the extent of environmental investments, and factors influencing decision making on the investments made.

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Project Description: **MT. RAINIER**

TBTP CRITERIA	MEASURE	ASSESSMENT
PROJECT DELIVERY PROCESS – Does the project maintain its original budget? What are the final costs relative to the budget?		
Project completed within budget	*Project cost listed in 1st CTP listing:* **$200,000 PE Underway** *Final project cost:* **$1,676,000** **FY 98 – 03 = $ 200,000** **FY 99 – 04 = 1,100,000** **FY 00 – 05 = 1,384,000** **FY 01 – 06 = 1,300,000** **FY 02 – 07 = 1,302,000** **FY 03 – 09 = 1,676,000**	*Percent difference between CTP list and final bid:* **Bid amount as listed in the April 2000 project fact sheet was $1,219,910.** *Is the final cost more than 5% of the first listed price?* **YES** *Factors that may have influenced cost differences:* **The project changed scope.**

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Project Description: **MT. RAINIER**

	TBTP CRITERIA	MEASURE	RANKING[3] Rank 1-4	RANKING[3] Explain
Mobility and Safety		**How well does the project design serve the mobility and safety needs of a variety of roadway users, including motorists, bicyclists, pedestrians and persons with disabilities, as appropriate?**		
	Pedestrian/ADA mobility and safety	• Pedestrian facilities provide continuous mobility to and from logical activities, including across intersections and on both sides of the street, as appropriate. • The road is designed to slow the speed of traffic in areas with high pedestrian traffic. • Crosswalks are highly visible to autos and pedestrians. • Crosswalk lights provided with adequate or priority timing. • Crosswalks provide access to persons with disabilities. • Sidewalk widths and designs are used to provide a comfortable walkway for pedestrians and persons with disabilities, appropriate to the traffic volumes and speeds of the adjacent roadway.		At the point of entry for vehicles, the roundabout has two 25' lanes as compared with at least a 6 lane cross-section at a conventional suburban intersection on a four lane roadway (4 through lanes, left turn lane, free right turn lane, sometimes more). Crosswalks at the roundabout allow pedestrians to cross one direction of traffic at a time, with a 6' wide refuge in the splitter/diverter island. Roundabouts function as a very effective traffic calming device, slowing drivers to 15-18 mph in the roundabout, thus reducing the likelihood of a pedestrian crash, and significantly lowering the injury severity should a crash occur. Slower drivers are much more likely to stop for pedestrians in the crosswalk.

[3] Rankings are as follows: 1: Poor; 2: Fair; 3: Good; 4: Excellent. N/A is not applicable, meaning the project did not require emphasis in a given area. Explanations should be provided to document the reasons for the ratings, including the reasons why a project does not include attention to a given mode.

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Project Description: **MT. RAINIER**

	TBTP CRITERIA	MEASURE	RANKING[2]	
			Rank 1-4	*Explain*
	Transit facility access	Street crossings and sidewalks to and from transit facilities are designed to provide direct connections with major destinations or activities, such as shops, libraries, schools, and other civic sites.		Bus transfer station on the north side of the roundabout appears to be an excellent feature of the project and created some added benefits for pedestrians. The buses can trigger a signal that allows them to enter US 1 to travel south or northbound. This signal does double duty as a pedestrian signal when activated by pedestrians. While engineering principles might argue against a signal within 50 feet of a roundabout, in practice it works fairly well. The signal indicates flashing yellow until a bus or pedestrian activates the signal. Even without a signal, the location of the transit station would have created a strong desire for pedestrians to cross mid-block, and in any event, a way was needed to let buses into the roadway

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Project Description: **MT. RAINIER**

	TBTP CRITERIA	MEASURE	RANKING[2]	
			Rank 1-4	*Explain*
	Transit facility access	Street crossings and sidewalks to and from transit facilities are designed to provide direct connections with major destinations or activities, such as shops, libraries, schools, and other civic sites.		Other aspects of the roundabout installation enhance pedestrian safety and access. The side street that intersect the roundabout (34th Street) has curb extensions that narrow the street at each inlet to the roundabout, reducing speeds on side streets that approach the roundabout and providing pedestrians with a shorter distances to cross. In the case of one leg, Perry Street on the west, the crosswalk is only one lane wide, as the street has been converted to one-way only into the roundabout.
	Bicycle mobility and safety	• The project includes appropriately scaled bicycle facilities relative to demand. • The project includes appropriately scaled bicycle facilities relative to the volume, speed and direction of auto traffic. • Curb cuts are available for easy access to transit stops and stations, where appropriate. • Bike facilities provide safe and direct access to major activities.	2.5	Typical roundabout design does not provide for separation from bicycle traffic and motorized vehicle traffic. Bicycles are required to share the travel lanes. This project complies with that typical design. The roundabout design is relative to traffic volumes, speed and direction. The design of the roundabout slows motorized traffic enough to allow bicycle traffic to share the road (with motorized traffic) and negotiate the roundabout itself.

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Project Description: **MT. RAINIER**

	TBTP CRITERIA	MEASURE	RANKING[1]	
			Rank 1-4	*Explain*
	Bicycle mobility and safety	• The project includes appropriately scaled bicycle facilities relative to demand. • The project includes appropriately scaled bicycle facilities relative to the volume, speed and direction of auto traffic. • Curb cuts are available for easy access to transit stops and stations, where appropriate. • Bike facilities provide safe and direct access to major activities.	2.5	Roundabouts provide a good alternative to standard intersection design. They slow traffic and typically reduce accidents or reduce the severity of the accidents when they do occur. While roundabouts may be safer than standard intersections, they are more difficult and uncomfortable to negotiate while riding a bicycle. Alt. US 1 is a major link for cyclists traveling from Maryland into the District. The roundabout does little to improve conditions for those cyclists.

TBTP CRITERIA	MEASURE AND ASSESSMENT
MOBILITY– project improves mobility for all affected users	

Define physical parameters of the study area.

The study area includes US 1 (Rhode Island Ave.) from Eastern Avenue (DC Line) to 37th Street. US 1 is a four-lane divided highway, running through a commercial area in the center of Mt. Rainier. There is a roundabout at 34th St/Perry St and signalized intersections at Eastern Avenue, 37th St, and just north of the roundabout.

Define conditions of the study, including peak/non peak hours, specific hours and days of week tested, number of tests, and all other pertinent data.

Spot Speed data was collected along US 1 Southbound, between 37th Street and the roundabout, by using a standard data collection machine. Data was collected on Tuesday July 8th and Wednesday July 9th, 2003. Average speed, as well as 85th percentile speed (accepted basis for speed limit) was determined for this segment. Additionally, average travel speeds entering, negotiating, and exiting the roundabout were also collected by conducting trial speed runs. This was done by following typical motorists along the corridor, and recording their speeds. Delay times for the other approaches to the roundabout were provided by SHA.

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Project Description: **MT. RAINIER**

PERFORMANCE OBJECTIVE	BASELINE DATA – collected 6-12 months prior to initiation of construction	POST-CONSTRUCTION DATA – 6-12 months post-construction
Reduce travel speeds	Pre-construction travel speed, 85th percentile: No baseline or pre-construction data available for travel speeds. Dates, times and locations of data collection:	Post-construction travel speed, 85th percentile: Machine Based Travel Speeds: AM: Average Speed: 28.7 MPH 85th Percentile: 31 – 35 MPH PM: Average Speed: 29.3 – 30.1 MPH 85th Percentile: 36 – 40 MPH Travel Speeds: US 1 NB (Eastern to 37th – 6 Trials): Entering Roundabout: 34.7 MPH Inside Roundabout: 18.8 MPH Exiting Roundabout: 36.3 MPH US 1 SB (37th to Eastern – 6 Trials): Entering Roundabout: 37.3 MPH Inside Roundabout: 19.0 MPH Exiting Roundabout: 34.5 MPH Dates, times and locations of data collection: Data Collected on Tuesday June 8th and Wednesday June 9th, 2003. Travel Speed data was not available for the baseline case (before construction), so a comparison of before and after is not possible.
Reduce road congestion (Levels of Service)	Peak Hour Level-of-Service: No baseline or pre-construction data available for level of service analysis.	Peak-Hour Level of Service: No post-construction data available for level of service analysis.

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Project Description: **MT. RAINIER**

PERFORMANCE OBJECTIVE	BASELINE DATA – collected 6-12 months prior to initiation of construction	POST-CONSTRUCTION DATA – 6-12 months post-construction
Increase roadway capacity (Throughput)	Pre-construction traffic counts: ADT: N of Eastern Avenue: 21,173 Dates, times and locations of data collection 48 Hour Tube Count taken February 16th – 18th, 1999. Location 0.2 mi North of Eastern Ave. Calculated peak hour volume/hour/lane: AM: NB – 187 vphpl SB – 660 vphpl PM: NB – 649 vphpl SB – 289 vphpl	Post-construction traffic counts: ADT: N of Eastern Avenue: 21,790 Dates, times and locations of data collection 48 Hour Tube Count taken August 13th – 14th, 2002. Location 0.2 mi North of Eastern Ave. Calculated peak hour volumes/hour/lane AM: NB – 181 vphpl SB – 550 vphpl PM: NB – 438 vphpl SB – 294 vphpl

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Project Description: **MT. RAINIER**

PERFORMANCE OBJECTIVE	BASELINE DATA – collected 6-12 months prior to initiation of construction	POST-CONSTRUCTION DATA – 6-12 months post-construction
Define study parameters of the travel time/travel delay runs: **These parameters should be used for all modal mobility analyses unless specified otherwise. Attach original data sheets and calculations.**		
Improve (reduce) travel times by all relevant modes	Average Auto travel time: # of test runs: Times of day: Days of week: Travel time results (range): Times/causes of delays:	Average Auto travel time: # of test runs: 6 PM Peak Times of day: 4:00 PM Days of week: Wednesday Travel time results (range): Time/cause of delays: Delay only occurs at the signal at the bus stop immediately north of the roundabout. The signal displays yellow flash and only displays a red signal when preempted by WMATA buses. This delay averages 20 – 35 seconds, however, buses occasionally sit at the station longer, causing multiple pre-empts of the signal by a single bus.
Pedestrian Mobility – travel times and delays		No Pedestrian Travel Time Runs were conducted.
Bicycle Mobility – travel times and delays		Average Bicycle travel time: No bicycle travel time runs were conducted.

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Performance Measures for Context-Sensitive Solutions - A Guidebook for State DOTs

SR 179 Project
Final Evaluation Criteria, Related Core Values and Performance Measures

Ranking	Evaluation Criterion	Related Core Values: Scenic Beauty	Public Safety	Environmental Preservation	Multi-Modal	Character	Walkability	Multi-Purpose	Context Sensitivity	Regional Coordination	Economic Sustainability	Roadway Footprint	Mobility	Performance Measures*
						The Corridor Experience								
1	Minimize the disturbed area and contours within the corridor, including disturbance of habitat and waterways.	■	▒	■	□	■	▒	▒	■	▒	▒	■	□	Area (acres) permanently disturbed by the project** *Estimated extent (width and height) of cut/fill disturbance*** Number and extent of modifications to existing rock outcrops** Amount of potentially impacted habitat (acres)for each sensitive species *Assessment of potential disturbance to watercourses* *Assessment of encroachment on Oak Creek*
2	Retain and enhance the natural appearance of the landscape, and ability to enjoy scenic views from the corridor.	■	■	■	■	■	■	■	■	▒	■	■	▒	Using the Visual Impact Map, to assess the Existing Visual Condition scale --Number of sensitivity placed and sited scenic pullouts Number of new scenic vistas available Using the scenic Viewing Opportunity Map to assess and retain appropriate scenic Viewing Opportunity Potential
3	Minimize right-of-way requirements.	■	▒	■	□	■	▒	▒	■	▒	■	■	▒	Additional right-of-way required to be purchased for the project (acres) by land use** Number of potential displacements of residences and businesses** Number of displaced parking spaces that cannot be replaced on- or off-street** *Impact on man-made features considered sensitive or of unusual importance*
4	Provide safe vehicular and emergency access to, from and across the corridor.	▒	■	▒	■	▒	▒	■	▒	▒	■	■	■	Number of safe crossings Number of locations on the mainline with left turn storage Number of acceleration and deceleration lanes Number of "right-in, right-out" ingress/egress locations Number of mainline entry locations** Number of access points converted to right turn in/right turn out (order of magnitude) Potential to reduce the severity of injury accidents
5	Provide safe pedestrian crossings and circulation.	▒	■	▒	■	■	■	■	▒	▒	■	■	■	Number of safe pedestrian crossings Number of intersections with enhanced pedestrian/bicycle treatments, including traffic calming Linear feet of pathways/sidewalks (by segment)^ Number of trailheads directly accessible on foot from the corridor^ Number of key destinations in the corridor accessible via a connected pedestrian system^
6	Provide safe bicycle crossings and circulation.	▒	■	▒	■	▒	▒	■	▒	■	■	■	■	Number of safe crossings Number of intersections with enhanced pedestrian/bicycle treatments, including traffic calming Linear feet of bike pathway (by direction), shoulders, curb lanes, or multi-use path meeting appropriate guidelines for bicycle accommodation Number of pullouts and other locations suitable for bicycle parking facilities Number of key destinations in the corridor accessible via a connected bikeway system^
7	Provide a distinctive corridor identity and a unique experience for the user.	■	▒	■	■	■	■	▒	■	▒	■	■	■	*Opportunity for artistic and landscape amenities^* *Opportunity to preserve and interpret architectural and cultural themes of the Sedona/Red Rock area^* *Opportunity for design creativity to contribute to the corridor identity*
8	Provide motorists with a reliable transportation system and reasonably predictable travel times, within the constraints of the external transportation network (e.g., Uptown Sedona).	□	■	□	■	▒	▒	■	▒	■	■	■	■	Average daily intersection delay (minutes) to motor vehicles using the corridor at project completion and in the year 2028 compared with existing conditions** Average peak period travel time (minutes) for motor vehicles, from MP 304.5 to SR 89A at project completion and in the year 2028 compared with existing conditions**
9	Minimize light pollution of the night sky.	■	■	■	□	■	▒	□	■	▒	■	▒	▒	Number of intersections and other locations requiring lighting according to applicable design guidelines** *Opportunity for safe use of low-intensity, shielded lighting designed to preserve the night sky* *Degree of compliance with all local Dark Sky ordinances*
10	Provide accommodations for wildlife.	■	■	■	□	■	▒	▒	■	▒	▒	■	▒	Number of properly placed, grade-separated wildlife crossings with appropriate channelization ^
11	Minimize noise impacts in a context sensitive manner.	■	□	■	▒	■	▒	□	■	□	▒	■	▒	Number of noise-sensitive receivers within 64 dBA noise contour at project completion and in the year 2028 compared to existing conditions.** Square feet of potential noise abatement necessary to mitigate noise levels over 64 dBA.**
12	Provide effective and attractive wayfinding aids (signage and informational features) for tourists and others who may be relatively unfamiliar with the corridor.	■	■	■	■	■	■	■	■	■	■	□	■	Total number of sites for wayfinding information^ *Opportunities for context-sensitive wayfinding signage visible from the roadway and pathways^* *Opportunities to provide access to new USFS Ranger District Office and other connecting facilities^*
13	Accommodate a public transit system.	▒	■	▒	■	▒	■	■	▒	■	■	■	■	Number of pullouts usable for transit stops^ Number of other amenities/accommodations for transit service^ Number of safe bicycle and pedestrian crossings within one-fourth mile of destinations likely to attract transit users
14	Constructibility	Inherently related to all core values												Number of utilities requiring relocation** *Impact to construction schedule* Number of agencies from which funding would be needed** *Number and complexity of required interagency partnerships^*
15	Provide accessibility and longevity for maintenance (ADOT, other agencies, utilities).	■	■	▒	▒	▒	□	▒	▒	■	■	■	■	*Ability to maintain traffic flow while performing maintenance activities* *Longevity of improvements (minimize future maintenance problems)*
16	Minimize air quality impacts. (a) Motor vehicle emissions (b) Dust impacts	■	■	■	▒	■	▒	▒	▒	▒	▒	▒	▒	Average daily intersection delay (minutes) to motor vehicles using the corridor at project completion and in the year 2028 compared with existing conditions** (a) Area (acres) permanently disturbed by the project** (b) *Level of non-motorized transit opportunities provided*
17	Provide ease in transfer between transportation modes.	▒	■	▒	■	▒	■	■	▒	▒	■	▒	■	Number of opportunities for park-and-ride lots at strategic locations Number of other locations (e.g., pullouts) suitable for off-road transit stops, pedestrian/hiker access and bicycle parking

SR 179 Project
Arizona Department of Transportation

ADOT

Overriding Project Constraint Criteria
- Accessibility for Emergency Response
- Concept Project Cost
- Project Construction Schedule
- Environmental Assessment (EA) Mitigation Measures

LEGEND: ▒ Strongly relates; ■ Relates; □ Does not relate

*Italicized performance measures are non-quantitative and will require a constructed scale. Non-italicized measures are quantitative with a natural scale.
**Indicates that a low number is better than a higher number.
^Indicates types of corridor improvements that may require agency partnerships.

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Kentucky
"Communicating All Promises" Plan

PROJECT DEVELOPMENT MEMORANDUM

No. 1-2003

TO: Chief District Engineers
Design Engineers
Active Consultants

FROM: Kenneth R. Sperry
Deputy State Highway Engineer for
Project Development

DATE: June 16, 2003

SUBJECT: **CAP** IMPLEMENTATION

The "CAP" is the umbrella under which we will capture commitments and promises made in the Project Development Phases of a project to the Construction & Operation Phases. How we track and communicate these through the life of a project is critical. Promises are to be accumulated in the PRECON database system. A PRECON subsystem "CAP" has been created to allow the entry of:

A description of the promise.
To whom the promise was made.
The date of the promise was made.
Location of work or activities to fulfill the promise

All project reports/documents prepared in the planning phase shall contain a CAP list as a separate listing. The Project Manager shall enter the promises from the planning report into the PRECON-CAP system and will remain the keeper of the CAP for each individual project. All subsequent project promises are to be communicated to the Project Manager, endorsed by the Project Team, and only then officially logged into the CAP system by the Project Manager.

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The extent to which project promises can be made by other individuals is to be determined by the Project Manager. The Project Manager shall retain the responsibility for ensuring that all promises (roadway features, environmental, right of way, utilities, structure design, etc.) are ultimately brought to reside in the system. This system is designed to not permit deletions. If a promise is to be changed or countermanded an additional entry will be required to document this change. The Project Managers should keep in mind the goal is not necessarily to increase the number of promises that are made, but to insure that we deliver on the promises that are made. Accordingly, it is important to remember the old adage "don't make promises you can't keep" or in this case "don't make promises WE can't keep". This level of accountability is necessary to ensure that these promises are clearly recorded and communicated.

The Project Manager should use the report function that is included in the PRECON-CAP system to aid in creating a CAP report. This report shall be included in the documents submitted to PS&E for letting. The CAP report shall be included in the bid package and shall remain a part of the contract document. The capture and recording of promises on all new project starts and all projects that have not yet had Right of Way authorized should begin immediately. All projects to be let after July 1, 2003 shall have a CAP report included in the contract documents.

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Utah
Sample Construction Incentives Plan

22—INCENTIVES AND PRICE REDUCTIONS

22.1 Incentives

22.1.1 Purpose and Amount of Incentive Award

General. The incentive program was established to provide the Design-Builder the opportunity to earn awards commensurate with superior performance in certain components of the Project. The program is designed to encourage and reward excellent achievement of both technical specification and administrative program requirements. The Incentive Award will be earned only by clear and constant superior performance over the term of the Contract. It is the Department's desire that the Design-Builder perform in such a superior manner as to ultimately earn the maximum possible Incentive Award.

Total Incentive Award. The maximum pool of the Incentive Award under this Contract is one million two hundred and twenty-five thousand dollars ($1,225,000). This amount will not be increased if work is added to the Project, but may be reduced if work is deleted. Incentive Awards not earned because of less than superior performance in any measured period will result in reduction of the Contract Price.

Incremental Award Earnings. The Incentive Award may be earned by the Design-Builder in whole or in part, based upon the Department's periodic evaluations of the Design-Builder's performance. This program allows incremental portions of the Incentive Award to be earned and paid monthly. The IQF and Department personnel will compile performance records based on IQF documentation from the measurement of Project components as the basis of all Incentive Award payments.

Incentive Criteria. The incentive criteria established herein are objective, definable, and quantifiable, and will measure the actual achievements of the Design-Builder. The various incentive criteria are predefined and weighted appropriately to encourage Design-Builder achievements in the Project elements that are the most critical to the Department.

For planning purposes, the first planned Incentive Period will be the first full month following NTP.

22.1.2 Project Measures

Key Measures. All Incentive Award payments will be based on the key measures and maximum possible award shown in Table III-41 (Allocation of Incentive Award Among Key Measures). The Key Measures have been divided into two groups: Department Evaluation and CCC Evaluation. The Department will evaluate the categories that are in the Department group; representatives of the stakeholders will evaluate the categories that are in the CCC group. See Section 17 (Public Involvement) for further explanation of the role of the CCC.

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TABLE III-41
ALLOCATION OF INCENTIVE AWARD AMONG KEY MEASURES

Key Measure	*Maximum Possible Award*
Department Evaluation	
Construction Quality	**$380,000**
Community Coordination Committee Evaluation	
Public Involvement	**$100,000**
Maintenance of Traffic	**$125,000**
Subtotal	$605,000
Project Schedule Section 1.3 (Limitations of Operations)	
Phase 1 – 1300 West to 265 West	**$300,000**
$10,000/day (Max. 30 days)	
Phase 2 – All work except landscaping	**$320,000**
$10,000/day (Max. 32 days)	
Subtotal	$620,000
TOTAL	**$1,225,000**

22.1.2.2 Public Involvement Program

General: The Department will evaluate the Design-Builder's public involvement activities and pay to the Design-Builder a performance-based award of up to $100,000 as an incentive to optimize its public involvement program. The payment of incentive awards is contingent upon compliance with contractual requirements and performance that exceeds the minimum standards specified in this Section.

Evaluation. The Design-Builder will be evaluated every three months on the performance of the previous period. The total Incentive Award for CCC evaluations will be divided by the number of evaluation period for the Project.

Criteria for Public Involvement Evaluations: The portion of the Incentive Award allocated to the Community Involvement Program is $100,000. This is the total value that can be earned from all community involvement program criteria combined. The $100,000 is divided equally between all five Community Involvement program criteria. The Community Involvement criteria are listed below in Table III-44 (Incentive Awards and Criteria for Community Involvement Program). These criteria will be evaluated by the CCC in determining the percentage of Incentive Award allocated to the Design-Builder for the period.

Determination and Payment of Incentive Fee for Public Involvement.

Design-Builder's Responsibilities: Within 10 Working Days after the end of each evaluation period, prepare a concise, factual written Incentive Fee Self-Evaluation Report covering the public involvement performance relating to the criteria in Table III-43. Include in the report, at a minimum, supporting facts and discussions of each evaluation factor, identification of areas of noteworthy performance, and the percentage, including any and all justification, of the Incentive Award the Design-Builder feels entitled to for that period. At the Design-Builder's option, also address other factors affecting performance. Submit the report to the CCC and the Department. Make an oral presentation to the CCC identifying successes and areas that need improvement, as well as justifying the percentage requested in the self-evaluation report.

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TABLE III-43
INCENTIVE AWARDS AND CRITERIA FOR COMMUNITY INVOLVEMENT PROGRAM

	Criterion	*Maximum Possible Award*
A.	Calls received on the Project Hotline are responded to effectively and efficiently with no more than two negative calls about the Design-Builder's public involvement effort per period, as determined by the Department	$12,500
B.	Valid repeat calls to the Project Hotline are minimized (no more than one repeat call per period)	$12,500
C.	Exceeding the Public Involvement Plan Objectives, as determined by the Community Coordination Committee	$25,000
D.	Exceeding the Business and Residential Impact Mitigation Plan requirements, as determined by the Community Coordination Committee	$25,000
E.	Valid issues forwarded from the Community Coordination Committee are resolved effectively (allowable number Is zero)	$25,000
Total Maximum Award:		$100,000

Community Coordination Committee: Within ten (10) Working Days of receipt of the report, the CCC will convene to consider the Incentive Fee Self-Evaluation Report and any other pertinent information, including the oral presentation. The CCC will determine the amount of a fair and reasonable Incentive Fee and submit its written recommendations, along with supporting information, to the Department within ten (10) Working Days. The CCC may also make recommendations regarding evaluation criteria, incentive fee administrative procedures, and allocation of the elements of the Public Involvement Incentive Award. The report may also identify areas of performance that need improvement.

Department Engineer: Within ten (10) Working Days of receiving the CCC report, the Department Engineer will review the findings and recommendations of the CCC and other pertinent information and will determine the amount of earned Incentive Fee. The Department Engineer also may approve changes to the evaluation criteria, incentive fee administrative procedures, and allocation of the elements of the Public Involvement Incentive Award that were recommended by the CCC. Within 15 Working Days of receiving the CCC report, the Engineer will notify the Design-Builder in writing of the amount on the incentive fee.

If no appeal is filed by the Design-Builder, the Engineer's initial determination shall be considered the final incentive fee determination for the preceding period.

22.1.2.3 Maintenance of Traffic

General: The Department will evaluate the Design-Builder's public involvement activities and pay a performance-based award of up to $125,000 to the Design-Builder as an incentive to optimize its MOT program. The payment of incentive awards is contingent upon compliance with contractual requirements and performance that exceeds the minimum standards specified in this Section.

Evaluation. The Design-Builder will be evaluated every three (3) months on the performance of the previous period. The total Incentive Award for CCC evaluations will be divided by the number of evaluation period for the Project.

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Criteria for Maintenance of Traffic Evaluations: The portion of the Incentive Award assigned to MOT is $125,000. This is the total value that can be earned from all Maintenance of Traffic program criteria combined. The $125,000 is divided and allocated between criteria listed in Table III-44 (Incentive Awards and Criteria for Maintenance of Traffic program). These criteria will be evaluated by the CCC in determining the percentage of Incentive Award allocated to the Design-Builder for the period.

TABLE III-44
INCENTIVE AWARDS AND CRITERIA FOR MAINTENANCE OF TRAFFIC PROGRAM

	Criterion	*Maximum Possible Award*
A.	The number of valid MOT-related issues reported to the Project Hotline is not more than two per period, as determined by the Department	$15,000
B.	Valid repeat calls to the Project Hotline are minimized (no more than two repeat call per period), as determined by the Department	$15,000
C.	Exceeding the Maintenance of Traffic Plan Objectives, as determined by the Community Coordination Committee	$80,000
D.	Valid issues forwarded from the Community Coordination Committee are resolved effectively (allowable number is zero)	$15,000
Total Maximum Award:		*$125,000*

Determination and Payment of Incentive Fee for Maintenance of Traffic.

Design-Builder's Responsibilities: Within ten (10) Working Days after the end of each evaluation period, prepare a concise, factual written Incentive Fee Self-Evaluation Report covering the MOT performance relating to the criteria in Table III-45. Include in the report, at a minimum, supporting facts and discussions of each evaluation factor, identification of areas of noteworthy performance, and the percentage, including any and all justification, of the Incentive Award the Design-Builder feels entitled to for that period. At the Design-Builder's option, also address other factors affecting performance. Submit the report to the CCC and the Department. Make an oral presentation to the CCC identifying successes and areas that need improvement and justifying the percentage requested in the self-evaluation report.

Community Coordination Committee: Within 10 Working Days of receipt of the report, the CCC will convene to consider the Incentive Fee Self-Evaluation Report and any other pertinent information, including the oral presentation. The CCC will determine the fair and reasonable Incentive Fee and submit its written recommendations, along with supporting information, to the Department within ten (10) Working Days. The CCC may also make recommendations regarding evaluation criteria, incentive fee administrative procedures, and allocations of the elements of the Public Involvement Incentive Award. The report may also identify areas of performance that need improvement.

Department Engineer: Within ten (10) Working Days of receiving the CCC report, the Department Engineer will review the findings and recommendations of the CCC and other pertinent information and will determine the amount of earned Incentive Fee. The Department Engineer also may approve changes to the evaluation criteria, incentive fee administrative procedures, and allocation of the elements of the Maintenance of Traffic Incentive Award that were recommended by the CCC. Within 15 Working Days of receiving the CCC report, the Engineer will notify the Design-Builder in writing of the amount on the incentive fee.

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If no appeal is filed by the Design-Builder, the Engineer's initial determination shall be considered the final incentive fee determination for the preceding period.

17.4 Advisory Committee

Community Coordination Committee Formation. Separate Community Coordination Committees (CCC) shall be formed for Draper City and Riverton City. Develop a list of candidate members from various entities including, but not limited to, the local communities, businesses, and churches. These members will represent the interests of and provide input from Project stakeholders. Include Committee members from areas throughout the corridor. The number of members will depend upon the number of businesses, organizations, neighborhood groups, etc., but shall be a minimum of 12 members per CCC. Submit the names and affiliations, as appropriate, of the proposed committee members to the Department for review and approval.

In order to focus responsibilities, each CCC meeting shall follow items as specified on an agenda.

Community Coordination Committee Meetings. Meet monthly with the CCC to ensure that the Project meets local needs.

Community Coordination Committee Responsibilities.

Address final design and access issues; specifically, aesthetics, landscaping, access, and MOT.

Prioritize the budget for landscaping and aesthetics.

Evaluate Design-Builder's performance on MOT operations.

Evaluate Design-Builder's performance on public involvement activities.

Participate in determining the incentive awards to the Design-Builder.

Certain individual members also shall represent the CCC at subcommittee meetings to facilitate communication.

Subcommittees. With input from Draper City and Riverton City and from the Department, establish subcommittees to deal with more specific issues. Hold subcommittee meetings monthly until approval is reached on the specific topics. Include at least the following topics:

Detention basin (Draper City and Riverton City)

Location and aesthetic treatment of pedestrian overpasses (Draper City, Riverton City, and Jordan School District)

Design and access issues

Architectural treatments of the Draper City entrance from 12300 South (Draper City)

Streetlight and wall design parameters

Aesthetic treatments of the bridge over the Jordan River, UPRR structure, noise walls, and the I-15 structure

Potential impacts on recreation facilities and mitigation of them

Traffic calming measures

Type, number, and location of trees in median, park strip, and other areas

Advance notice of all construction activities

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Public Meetings. At all public meetings, detail the input of the CCC and subcommittees, and the responsiveness of the Design-Builder to concerns raised in these committees and during presentations to the city councils of Draper and Riverton.

Meeting Support. Provide notification, agenda items, presentations, meeting spaces, refreshments as appropriate, all staffing, and minutes of the meetings. Within two (2) Working Days of the meeting, make these minutes available to the general public and mail them to all attendees.

17.5 Involvement of Stakeholders

General. Maintain high stakeholder satisfaction by keeping them well informed and educated throughout the duration of the Project, as well as on a daily basis, as appropriate, so they may see the end-product benefits and avoid unnecessary delays. Keep the public informed about precautions taken for safety, MOT strategies, the ultimate benefits of the Project improvements, and any direct financial impacts on them or their businesses. Increase the satisfaction of the stakeholders by keeping them informed.

The following are Project stakeholders:

The Cities of Draper and Riverton

Salt Lake County representatives

State legislators

The Federal Highway Administration (FHWA)

The Wasatch Front Regional Council (WFRC)

The Department

Public and nongovernmental organizations

Local businesses

Residents and neighborhood groups

Jordan School District and potentially impacted schools

Churches

Members of the general public, including commuters potentially impacted by the interchange reconstruction

Infrequent travelers and visitors

CCC and subcommittee representatives

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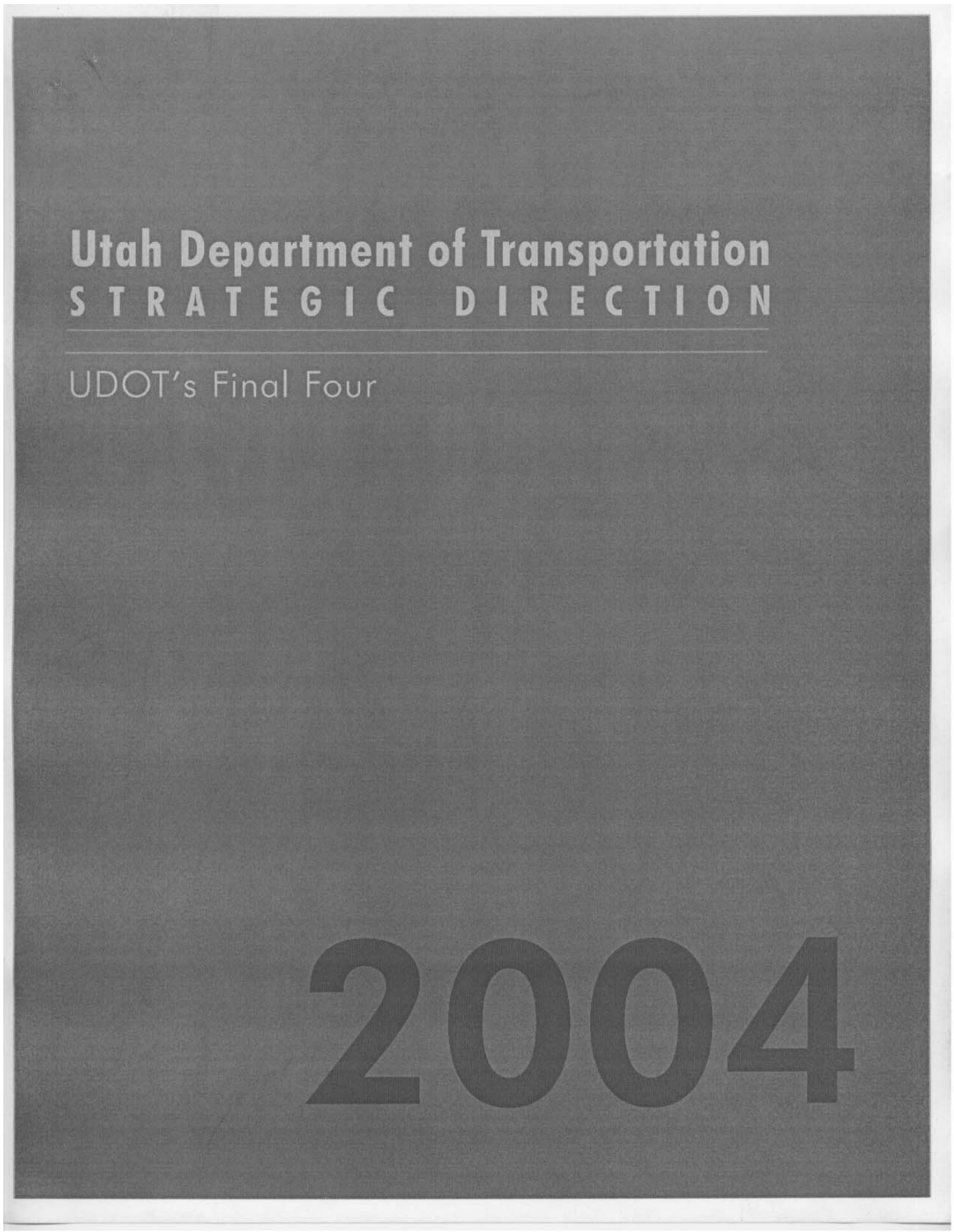

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Questions

The Utah Department of Transportation (UDOT) annually works to identify strategic goals and focus areas in a plan for the coming year. This plan drives the department's overall performance. This year, UDOT, has not only worked to fine tune and evaluate its strategic goals and focus areas, but to make them a focal point for employees and stakeholders.

Transportation plays an integral part in sustaining economic vitality and in maintaining the quality of life Utahns deserve. Although surrounded by a climate of reduced budgets and an unpredictable economy, UDOT remains committed to maintaining the quality of life its customers are accustomed to. This commitment lies in the department's 2004 strategic goals and focus areas.

To better understand UDOT's new direction, it is helpful to answer the following questions:

1. Who Are We?
2. What is Our Focus?
3. What Do We Do and How Do We Do It?

STRATEGIC DIRECTION

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What is our focus?

Values

Employee Centered

Individually and collectively, we are the department's most valuable resource.
We trust each other and treat each other with the respect we deserve.
We do right things right.
We value and use the expertise and creativity of those around us and willingly help each other.
We believe in the importance of identifying and recognizing the outstanding efforts of teams and individuals we work with, and we are committed to personal development.
We are dedicated to maintaining a safe work environment.

Customer Focus

We provide quality leadership to meet and balance Utah's transportation and related challenges.
Complete customer satisfaction is our primary goal.
We initiate and encourage open communication and active partnerships with our customers.
We value and respond swiftly to customer input and feedback.
We are dedicated to saving lives, time and resources.

Quality Service

Quality and continuous improvement are built into everything we do.
We are committed to providing exemplary customer service.
We continually evaluate and adjust performance standards and adopt best quality practices from other organizations to meet today's changing needs.

Great Performance

We lead the field in providing constantly improving, cost-effective services using new technologies.
We strive to make UDOT an effective and responsive organization.
We reinvent ourselves to meet changing needs and circumstances.
We optimize the use and equitable distribution of our available resources.
We use innovation, performance management and measurement to continually improve our performance.

STRATEGIC DIRECTION

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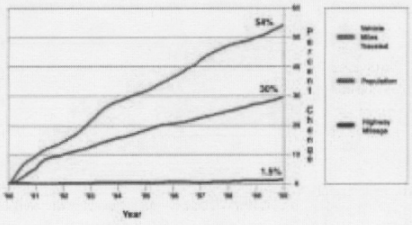
The challenge

Transportation needs

Over the last decade, Utah has enjoyed economic prosperity and growth. At the same time, our growth and prosperity have brought challenges for the highway system.

In the last 10 years:

- Highway mileage (lane miles) on the state system has increased about 1.5%
- Population has increased almost 30%



- While travel, measured by Vehicles Miles Traveled (VMT), has increased almost twice as fast as the population at 54%

The rise in travel is a national trend. The Federal Highway Administration forecasts that travel will increase another 50 percent over the next 20 years. We expect to see that same trend in Utah.

In recent years, as travel has increased, revenue has not kept pace. In Utah, and the rest of the nation, revenues have been flattening for the last few years.

The impact of these travel trends on Utah are:

- Increased congestion. There are currently 100,000 hours of delay each day along the Wasatch Front. In 30 years, it will be nine times worse with 930,000 hours of delay.
- Increased user costs. Congestion costs each traveler about $600 a year in lost time and wasted fuel.
- Decreased economic growth and productivity. Time lost in congestion results in lost productivity and decreased economic growth as delivery of freight and goods slows down, decreasing business profits.
- Faster deterioration of highways. Increased traffic means more wear-and-tear on pavements and bridges, accelerating the deterioration of our highways.

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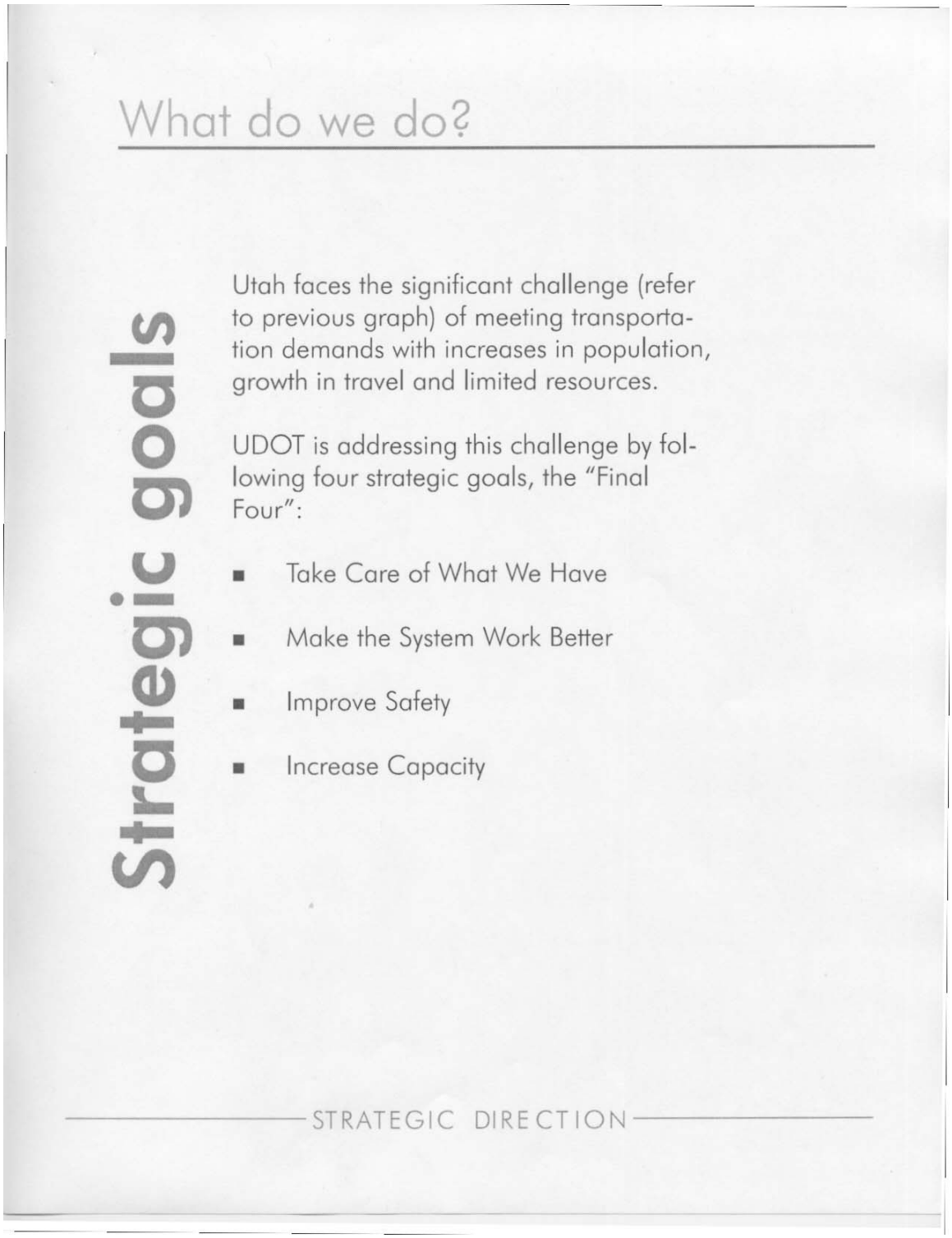

What do we do?

Strategic goals

Utah faces the significant challenge (refer to previous graph) of meeting transportation demands with increases in population, growth in travel and limited resources.

UDOT is addressing this challenge by following four strategic goals, the "Final Four":

- Take Care of What We Have
- Make the System Work Better
- Improve Safety
- Increase Capacity

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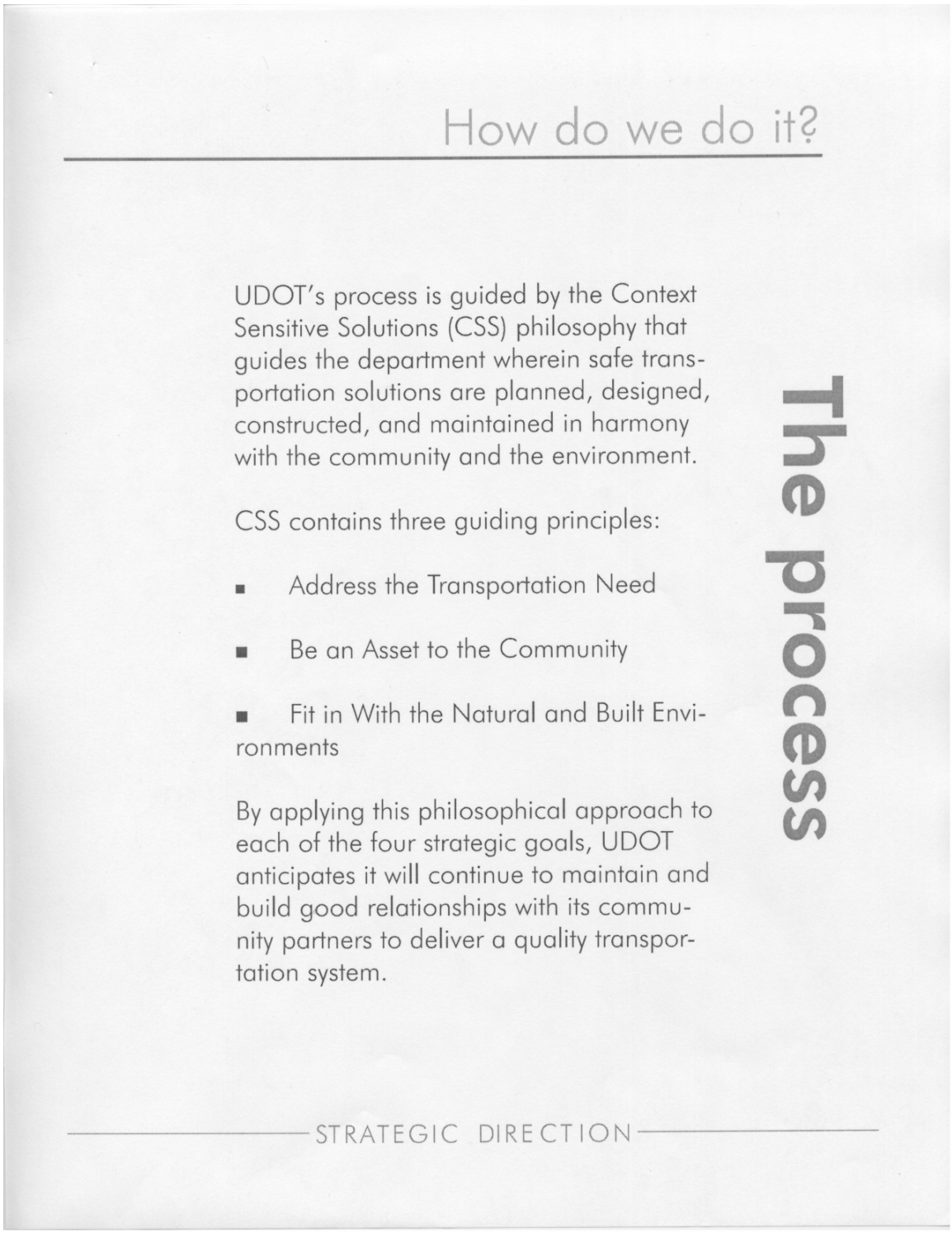

How do we do it?

UDOT's process is guided by the Context Sensitive Solutions (CSS) philosophy that guides the department wherein safe transportation solutions are planned, designed, constructed, and maintained in harmony with the community and the environment.

CSS contains three guiding principles:

- Address the Transportation Need
- Be an Asset to the Community
- Fit in With the Natural and Built Environments

By applying this philosophical approach to each of the four strategic goals, UDOT anticipates it will continue to maintain and build good relationships with its community partners to deliver a quality transportation system.

The process

STRATEGIC DIRECTION

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Strategic goals and focus areas

The Final Four

Strategic Goal #1: Take Care of What We Have

The department maintains more than 6,000 miles of roadway worth tens of billions of dollars.

In order to preserve the quality of life and to improve the economic vitality of our state, UDOT and its employees are committed to taking care of the existing system.

With increased travel demand, population growth, and wear on the system, preservation efforts are critical.

Focus Areas:

- Pavement Preservation is similar to regularly changing the oil in your car. By applying treatments and other technologies to the pavement, we can extend its lifetime.

- Bridge Preservation can help ensure the lifetime, stability and safety of our bridges. Examples of this type of preservation include routine inspections, sealing treatments and deck pavement projects.

- Maintenance efforts such as plowing snow, maintaining drainage, improving roadway markings (striping/signs), pothole patching, and guardrail repair will extend the life of and improve the safety of our roadways.

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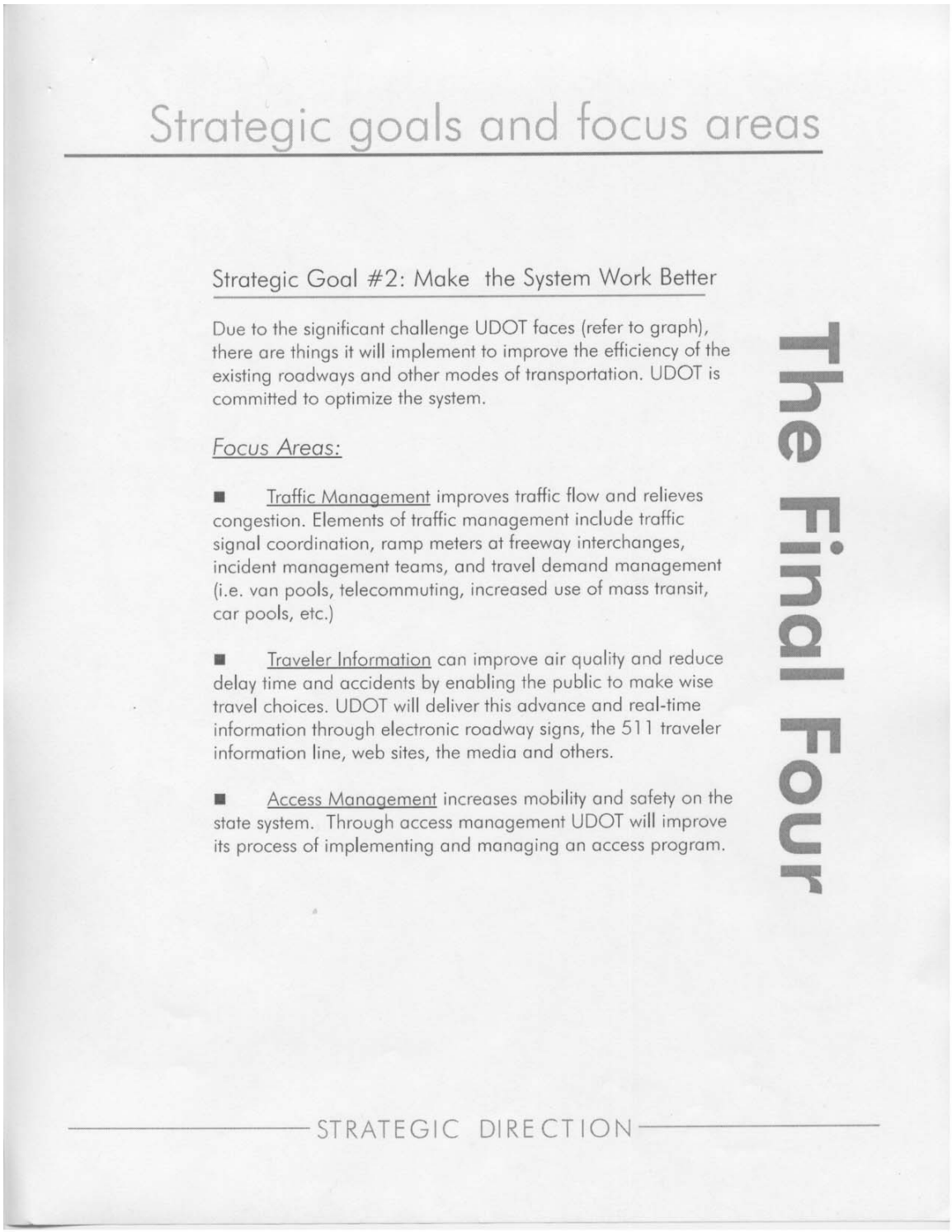

Strategic goals and focus areas

Strategic Goal #2: Make the System Work Better

Due to the significant challenge UDOT faces (refer to graph), there are things it will implement to improve the efficiency of the existing roadways and other modes of transportation. UDOT is committed to optimize the system.

Focus Areas:

- Traffic Management improves traffic flow and relieves congestion. Elements of traffic management include traffic signal coordination, ramp meters at freeway interchanges, incident management teams, and travel demand management (i.e. van pools, telecommuting, increased use of mass transit, car pools, etc.)

- Traveler Information can improve air quality and reduce delay time and accidents by enabling the public to make wise travel choices. UDOT will deliver this advance and real-time information through electronic roadway signs, the 511 traveler information line, web sites, the media and others.

- Access Management increases mobility and safety on the state system. Through access management UDOT will improve its process of implementing and managing an access program.

The Final Four

STRATEGIC DIRECTION

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Strategic goals and focus areas

The Final Four

Strategic Goal #3: Improve Safety

Annually, more than 300 people lose their lives on Utah roadways, with some of these deaths occurring in UDOT work zones.

Making Utah a safer place to live, travel, do business and recreate is a top priority.

Focus Areas:

- Roadway Safety includes public awareness campaigns, improved design, high-visibility signs, rumble strips, new paint striping technologies, intersection improvements, and maintenance safety activities. UDOT will continue to focus on these efforts to deliver people safely to their destination.

- Work Zone Safety is a balance between mobility and safety. UDOT will continue to improve that balance and maintain public awareness and employee training.

- Pedestrian/Bicycle Safety includes public education, school zone safety, trail enhancements and signal improvements.

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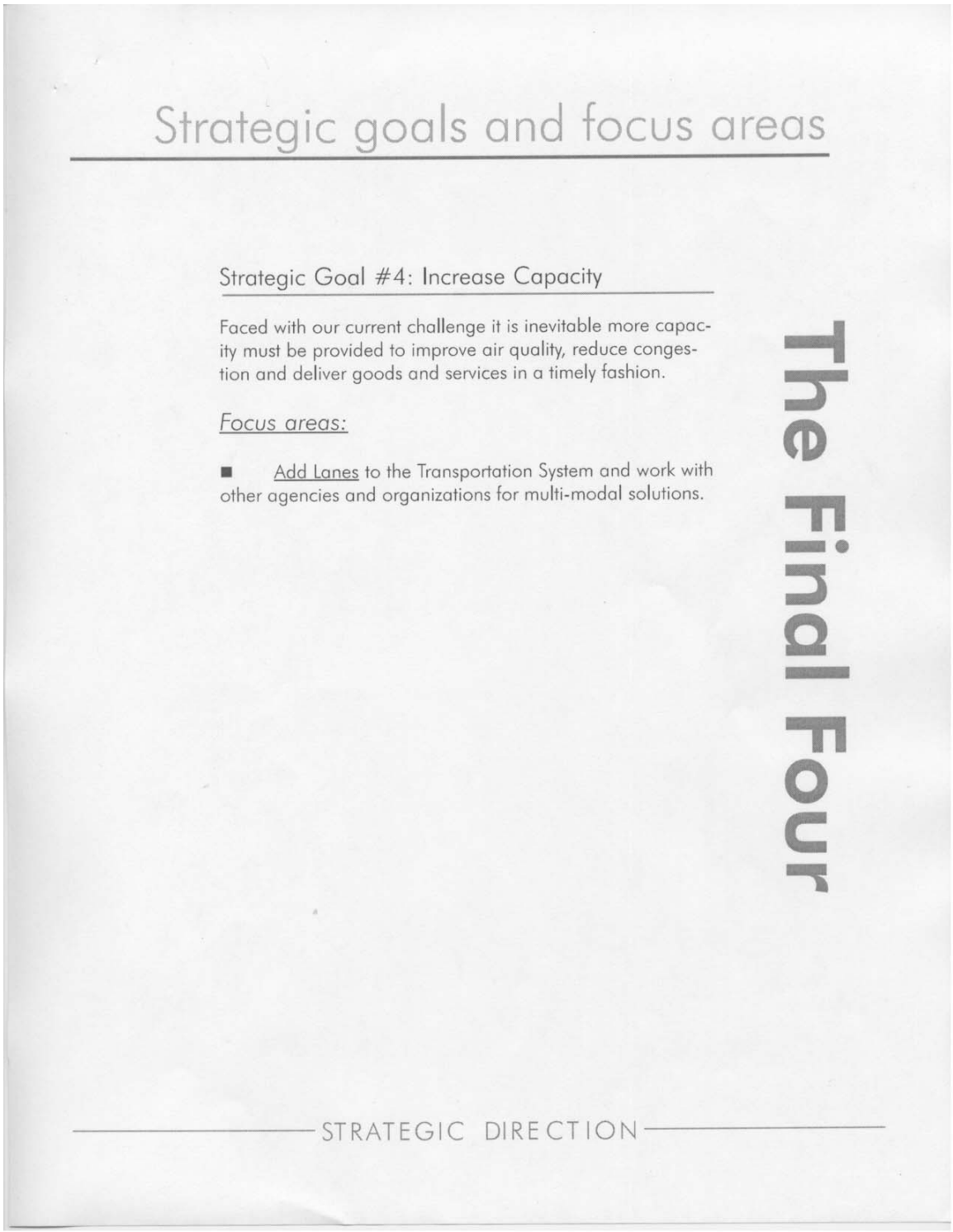

Strategic goals and focus areas

Strategic Goal #4: Increase Capacity

Faced with our current challenge it is inevitable more capacity must be provided to improve air quality, reduce congestion and deliver goods and services in a timely fashion.

Focus areas:

- Add Lanes to the Transportation System and work with other agencies and organizations for multi-modal solutions.

The Final Four

STRATEGIC DIRECTION

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Maryland
Context Sensitive Solutions Policy Description

CSS is a collaborative, interdisciplinary approach to developing and implementing transportation projects, involving all stakeholders to ensure that transportation projects are in harmony with communities and preserve and enhance environmental, scenic, aesthetic, and historic resources while enhancing safety and mobility.

Goals for CSS

Community Satisfaction
SHA will develop projects that are deemed by the community to meet community transportation needs, contribute to community character and values, and are seen as having lasting value to the community to the extent reasonable.

Mobility and Safety
SHA will develop projects that enhance mobility and safety of all users of all modes

Environmental Stewardship
SHA will develop projects that protect and enhance all aspects of the natural and human environment, including the scenic, aesthetic, historic, and natural resources of the area.

Project Delivery Process
SHA will deliver projects in collaboration with a full range of stakeholders to establish and achieve transportation, community, and environmental goals within the programmed budget. The process will be tailored to each project and the transition between phases, from planning to construction, will be seamless.

Economic Impact
SHA will develop projects that have positive economic impacts on the surrounding community and as a part of a regional economic development strategy.

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Kentucky
Project Manager Training Effectiveness Self-Assessment Tool

Objective	
I am committed to the fact that the project manager is: • ***Involved in the planning phase,*** • ***Responsible during preconstruction, and*** • ***A consultant during construction.***	Circle one: 1—I'm not at all committed to this 2 3 4 5—The jury is still out on this 6 7 8 9 10—I am totally, 110% committed to this Comments:
I am living by the above at work.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand the purpose, characteristics, and potential of project teams. I assume/assign the team roles that are needed and accept my responsibilities as leader. I continue to develop/encourage the skills and sense of cooperation needed for project teamwork.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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I create agendas for each of my meetings, I chair the meetings, I use facilitation skills to keep interaction healthy, I use ground rules to keep focused, I assign a note taker/recorder for each meeting, I end each meeting with a review, and I follow up between meetings to assure that commitments are being kept.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand how critical a project manager is to project success, and feel comfortable that I recognize the skills for successful project management.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand and can put together Work Breakdown Structures and accompanying Gantt charts.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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I understand how to be involved in project planning, and I <u>AM</u> involved in project planning.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I recognize the importance of planning documents and rely on them during pre-construction.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I recognize the importance of major project decision points—such as selecting the road alignment—and accept the fact that as decisions are made they become the basis on which the project proceeds.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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I believe that Right-of-Ways and Utilities are part of project development, and I am responsible for them as a project manager.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand the importance of Oracle records. The Oracle records for my projects are current, complete and accurate.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I recognize that risk is inherent in project development and that flexibility in design is not an option, it is a requirement. I search for alternatives in project development and recognize that all options have risks associated with them.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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I define the goals of public involvement in advance, and I develop a plan for how I am going to solicit and use public input.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I use the media as a resource to proactively communicate.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I use active listening to identify options and meet project needs.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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I treat consultants as key workers to achieve a successful project, and focus on a successful project while managing the consultant contract.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand the legal processes associated with property condemnation, and I am comfortable with my liability as a project manager.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:
I understand and use a diverse set of persuasion techniques to influence the public and project team members to bring about a successful project.	Circle one: 1—Not at all 2 3 4 5—I'm trying, but struggling 6 7 8 9 10—Absolutely, no doubt about it Comments:

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Organization-level Performance Measures Materials

Utah
Staff Performance Plan Samples

Utah Department of Transportation

PERFORMANCE PLAN and REVIEW

Employee Name	Employee Id. Number	Title
		Region Deputy Director
Group/Region	**Div/Sec/Unit**	**Review Period**
	Preconstruction	2003-2004
Evaluator Name	**Overall Evaluation**	
	__ **Met Expectations**	__ **Did Not Meet Expectations ***

Strategy: MAKE THE SYSTEM WORK BETTER

Objective:

Use CSS and Public Involvement/Information in the following areas.

- Document the CSS process on the 3500 South project.
- Complete a public involvement plan on all construction/design projects.
- Measure CSS success by such activities as surveys, contractor bonuses, and City visits.
- Use the recently developed Construction Project Public Involvement/Information check list.
- Develop Preconstruction Project Involvement/Information check list.
- Implement the Region Two Public Involvement Construction Tool Box—See Appendix G. complete Tool Box for Construction and Design phase.
- Ensure use of the Region Two MOT Activity. Work with Project Development to incorporate into ePM.
- Identify CSS champions in each Region division
- Document CSS collaboration
- Continue education on CSS principles

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

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Look for ways to implement some of the benefits of Design Build without doing D. B. (i.e.- provide only what the Contractor wants in a design package, Right-of-Way Acquisition, Accelerated Construction time, etc.)

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Continue improving Transportation Technician Program. Investigate reasons for high turnover.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Update Region Performance Measures twice a year—July and December.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Use both informal and formal partnering on all projects. Work on developing relationship with the Region Director, RCE and Contractor management.

Performance Measure:

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Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Strategy: TAKE CARE OF WHAT WE HAVE

Objective:

Meet target dates for projects outlined in the Executive Business Plan: Region Two Purple Book Projects, Road Minor Rehabilitation Projects, Corrective Bridge Replacement Projects, other Bridge Replacement Projects, Corrective Bridge Projects, Orange Book Projects—See Appendix A and Appendix B.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Strategy: TAKE CARE OF WHAT WE HAVE

Objective:

Meet target dates for projects outlined in the Executive Business Plan: Region Two Purple Book Projects, Road Minor Rehabilitation Projects, Corrective Bridge Replacement Projects, other Bridge Replacement Projects, Corrective Bridge Projects, Orange Book Projects—See Appendix A and Appendix B.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Complete all Personal Development Plans by November 30, 2003. See Appendix F for copy of outline developed by staff.

Performance Measure:

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Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Continue Random Visits with employees—See Appendix E for summary of comments to date.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Each group in the region should operate within approved budgets.

Performance Measure:

Results: (completed by employee and leader)

Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

Objective:

Refine existing workload analysis in Construction and Preconstruction for the next three years. Project budgets should be used to manage resources. Develop format for budgets including labor, equipment and materials.

Performance Measure:

Results: (completed by employee and leader)

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Evaluation: (completed by leader) __ **Met Expectations** __ **Did Not Meet Expectations**

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New York
2003 Context Sensitive Solutions Award
Selection Criteria

		A. Relative Weight	B. Rating (0-4)	C. Score (AxB)
Category 1: Technical Content (50%)				
A	The constructed project addresses both transportation needs and community issues	25		
B	Specific design elements were used or modified to meet both transportation needs and community issues	15		
C	Creative solutions were used in the planning, design and construction of the project.	10		
	Subtotal Category One			
Category 2: Public Involvement (35%)				
A	Extent of early, continuous and proactive public involvement throughout planning, design and construction	20		
B	Extent of partnerships with stakeholders (such as municipalities, state/local agencies, other organizations)	7.5		
C	Project received positive community and/or media feedback either post-design or postconstruction	7.5		
	Subtotal Category Two			
Category 3: Environmental Improvement (15%)				
A	Project features benefit the natural environment, above and beyond permit or minimum design requirements	7.5		
B	Project features benefit the constructed environment, above and beyond permit or minimum design requirements	7.5		
	Subtotal Category Three			

Was this project recognized or celebrated within the region ?

Total	

0 = Poor or not applicable
1 = Fair
2 = Good
3 = Above average
4 = Excellent

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