

Pilot Project on Performance Measurement in Context Sensitive Solutions

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Context Sensitive Solutions Program

Performance Measures Pilot Study

Conducted in August 2003

Purpose of Study

_"Lessons learned" from projects

_Consistent and Understandable measures for the *State Highway Administration Business Plan*

_Provide performance information to MDOT and legislature

_Ensure that SHA is meeting the expectations of project stakeholders affected by SHA projects

The Pilot Projects

The four projects selected as pilots for this study are:

_Mount Rainier (US 1) round-a-bout, Prince George's County, MD

_Loch Raven Boulevard (MD 542), Baltimore County, MD

_US 40 Alternate, (Frostburg), Allegheny County, MD

_MD 235 at Lexington Park, Saint Mary's County, MD

Our CSS Policy Framework

CONTEXT SENSITIVE SOLUTIONS POLICY FRAMEWORK

Context Sensitive Solutions 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.

CSS Areas of Emphasis

- Community Satisfaction
- Mobility and Safety
- Environmental Stewardship
- Project Delivery Process
- Economic Impact

The Measures

Customer Measures

- _ General public satisfaction with project outcomes
- _ Perception that the project “fits” with the character or values of the community
- _ Project task force satisfaction with project outcomes
- _ Perception of community disruption during construction
- _ Perception of how well a project met its stated objectives
- _ Perception of improvements made to protect the natural environment
- _ Perception if SHA has left the built environment better off than before they came in

Mobility and Safety Measures

- _ Perception of mobility for a range of modal users
- _ Speed of traffic at 85th percentile or average speed
- _ Level of Service
- _ Peak Hour Throughput
- _ Travel Time and delay-auto
- _ Travel Time and delay-bicycle
- _ Travel Time and delay-pedestrian

- _ Reported Accidents
- _ Perception of safety for all modes

Environmental Stewardship Measures

- _ Post-construction assessment of environmental and other best practices
- _ Whether environmental and other best practices were used to meet CSS objectives

Project Delivery Measures

- _ CTP programmed cost vs. final bid price
- _ Percent of project task force members satisfied with project process
- _ Project scope is agreed to by a full range of stakeholders
- _ Is the public involvement plan developed and followed for planning, design and construction?
- _ Quality of communication with the public throughout project delivery
- _ % of commitments accommodated by project

Economic Measures

- _ Change in vacancy rates in commercial areas
- _ Number of new commercial investments in a given area
- _ Number of property sales
- _ Change in property values
- _ Business Growth
- _ Job Growth

The Data Collection Tools

Post-Construction Customer Survey

- β Two surveys:
 - β General public-within a certain distance from the project
 - β Additional questions for Project Task Force
- β Done by mail
- β Questions in areas of customer satisfaction, mobility, safety, project delivery and economic impact.

Project Team Survey

- “Best practices” checklist for project team to complete on the implementation of CSS Principles such as:
 - β Stakeholder collaboration and communication
 - β Continuous Public involvement
 - β Meeting project commitments
 - β Environmental Stewardship techniques

Project Performance Data Sheet

- "Expert" assessment of:
 - β Built Environment
 - β Natural Environment
 - β Bicycle Mobility and Safety
- Mobility Performance Data
- Safety Performance Data
- Project Cost and Schedule Data

Economic Analysis Data Sheet

- Before and After Economic status of the project study area:
- Number of Building Permits
 - Assessed Value of Properties
 - Number of Property Sales
 - Value of Property Sales
 - Number of Businesses
 - Annual Payroll of employment in the area

Pilot Study Results

Project Ratings

Projects rated on a scale of:

- _ 4-Excellent (A)
- _ 3-Good (B)
- _ 2-Fair (C)
- _ 1-Poor (D)
- _ N/A—not available

“**” Measures were recommended to be used in the SHA Business Plan based on current practices

Customer Satisfaction

Measure	Project A	Project B	Project C
* General public satisfaction with project outcomes	N/A	3	N/A
Project task force satisfaction with project outcomes	N/A	N/A	N/A
* Perception that the project “fits” with the character or values of the community	N/A	4	N/A
* Perception of community disruption during construction	N/A	3	N/A
Perception of how well a project met its stated objectives	N/A	N/A	N/A
Perception of improvements made to protect the natural environment	N/A	4	N/A
Perception if SHA has left the built environment better off than before they came in	N/A	4	N/A

Mobility

Measure	Project A	Project B	Project C
Perception of mobility for a range of modal users	N/A	3	N/A
Speed of traffic at 85th percentile or average speed	N/A	N/A	N/A
Level of Service	N/A	N/A	3
Peak Hour Throughput	2	N/A	2
Travel Time and delay-auto	3	N/A	N/A
Travel Time and delay-bicycle	N/A	N/A	N/A
Travel Time and delay-pedestrian	N/A	N/A	N/A

Safety

Measure	Project A	Project B	Project C
* Reported Accidents	1	2	4
Perception of safety for all modes	N/A	N/A	N/A

Environmental Stewardship

Measure	Project A	Project B	Project C
Post-construction assessment of environmental and other best practices	3	3	4
Whether environmental and other best practices were used to meet CSS objectives	3	4	4

Project Development Process

Measure	Project A	Project B	Project C
* CTP programmed cost vs. final bid price	1	N/A	N/A
Percent of project task force members satisfied with project process	N/A	N/A	N/A
Project scope is agreed to by a full range of stakeholders	3	4	4
is the public involvement plan developed and followed for planning, design and construction?	2	2	3
Quality of communication with the public throughout project delivery.	3	3	4
% of commitments accommodated by project	N/A	N/A	N/A

Economic Impact

Measure	Project A	Project B	Project C
Change in vacancy rates in commercial areas	N/A	N/A	N/A
Number of new commercial investments in a given area	N/A	N/A	N/A
Number of property sales	N/A	N/A	N/A
Change in property values	N/A	N/A	N/A
Business Growth	N/A	N/A	N/A
Job Growth	N/A	N/A	N/A

Pilot Study Conclusions and Recommendations

Assessing the Data Collection Tools

- **Post-Construction Survey**
 - β Modify distribution to increase rate of return
- **Project Team Survey**
 - β Use to exchange “best practices” in project design
 - β Use to institutionalize these design practices
- **Project Performance Data Sheet**
 - β Modify to track use of agency “best practices”
 - β Use with independent “expert” reviews
- **Economic Analysis**
 - β Limited application for measuring economic development projects

Assessing the Data

- Data Not Available was due to one or more of the following:
 - "Before construction" data not available for comparison.
 - Low response to post-construction survey
 - Information was not documented or file could not be retrieved.
 - Insufficient data to develop a rating
- A Significant finding was the amount of non-traditional data that we would have to begin to collect

Assessing the Measures

- Measures assessed based on:
 - β Technical Accuracy
 - β Relevance
 - β Cost of Measurement (indirectly includes availability)
 - β Data Quality Control

Recommended Measures

- Customer Satisfaction
 - β General public satisfaction with project outcomes.
 - β Perception that the project "fits" with the character or values of the community
 - β Perception of community disruption during construction.
- Mobility and Safety
 - β Reported accidents
- Project Development Process
 - β CTP Program cost vs. Final Bid Price

Possible Measures

- Customer Satisfaction
 - β Project Task Force satisfaction with project outcomes
 - β Perception of how well project met its stated objectives
 - β Perception of improvements made to enhance natural environ
 - β Perception of that built environ. is better off than before project
- Mobility and Safety
 - β Average speeds
 - v Level of Service
 - β Peak Hour Throughput
 - v Travel time and delay for autos
- Environmental Stewardship
 - v Post-construction assessment of best practices
 - β Inventory of use of best practices to meet CSS objectives

Possible Measures

- Project Development Process
 - v Percent of project task force members satisfied with the process
 - β Project scope is agreed to by a full range of stakeholders
 - v Public Involvement Plan developed and followed through planning/design/construction.
 - v % commitments accommodated by project
- Economic Impact
 - v Change in vacancy rates in commercial areas
 - β Number of property sales
 - v Change in property values

Measuring CSS Goals- Not Recommended Measures

- Safety and Mobility
 - β Perception of safety for all modes
 - β Perception of mobility for a range of modal users
 - β Travel time and delay for bicycles
 - β Travel time and delay for pedestrians
- Economic Impact
 - β Number of new commercial investments
 - β Business growth-number of businesses
 - β Job growth

Additional Measures to Consider

- Customer Satisfaction
 - ℳ Perception of how project has been maintained
 - ℳ Perception of whether project has spurred other community improvements
- Mobility and Safety
 - ℳ BLOC
 - ℳ Measure of Enforcement
 - ℳ Use of Innovative Roadway Design Techniques (if Use of other CSS techniques is adopted)
- Environmental Stewardship
 - ℳ Add "preserving scenic vistas" to assessment
- Project Delivery Process
 - ℳ Local dollar contribution to project

Relationship to SHA Business Plan

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 added lasting value to the community while minimizing disruption to the community to the extent reasonable.

SHA Business Plan

Customer Service and Satisfaction

Objective 6.2 – Annually attain at least 80% overall customer satisfaction rating of "A" or "B" after completion of construction projects

Relationship to SHA Business Plan

CSS Mobility and Safety

SHA will develop projects that enhance mobility and safety for users of all modes.

SHA Business Plan

Safety

Objective 1.1-Reduce annual number of traffic fatalities on all Maryland roads... and reduce the annual number of people injured...

Objective 1.2-Reduce the annual number of pedestrian fatalities on all Maryland roads... and reduce the number of pedestrians injured....

Relationship to SHA Business Plan

CSS Mobility and Safety

SHA will develop projects that enhance mobility and safety for users of all modes.

SHA Business Plan Mobility

Objective 2.2-Reduce delays caused by congestion along state highways that have scheduled improvement projects intended to improve traffic flow.

Objective 2.4-Provide bicycle accessibility by maintaining at least 80% of State-owned roadways with a BLOC of "D" or better.

Objective 2.5-Increase the percentage of State-owned roadway center-line miles that have sidewalks within urban areas by 20%.

Relationship to SHA Business Plan

CSS 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.

SHA Business Plan

Environmental Stewardship - Objective 5.1-Annually meet 100% of project-related environmental commitments.

System Preservation and Maintenance - Objective 3.6-Maintain annually 80% of the MD SHA Highway Network in acceptable appearance to the traveling public.

Relationship to SHA Business Plan

CSS 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 through construction, will be seamless.

SHA Business Plan

Customer Service and Satisfaction-Attain at least 80% overall partnership customer satisfaction rating of "A" or "B" with special interest stakeholder and partner advisory groups

Efficiency in Government – Achieve 90% of project advertisement dates and contact bid dates within one month of scheduled dates.

Relationship to SHA Business Plan

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

Business Plan
Not included in current Business Plan

Questions???

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