
draft

Evaluation Examples

Transportation and Community and System Preservation Pilot Program

prepared for

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1. Introduction

A TCSP grantee is responsible for conducting a systematic evaluation of their TCSP project. This evaluation component is consistent with the basic program objective, as defined in Section 1221 of the Transportation Equity Act for the 21st. Century (TEA-21), of *investigating* and addressing the relationships between transportation and community and system preservation.

A TCSP evaluation should be designed to provide an unbiased assessment of the successes and failures of a project in achieving its stated goals. The TCSP program is intended to test various approaches to community and system preservation, with the intent of learning which approaches are most successful, which are less successful, and why. A TCSP evaluation should be designed to meet this learning goal; it is more than simply the reporting of a project's results, and it is not intended simply to validate the merits of having undertaken a project.

The evaluation component of each TCSP project should be aimed at understanding the effectiveness of individual aspects of a project, as well as the project as a whole. Towards this end, it is useful to articulate both a hypothesis for the expected outcome(s) of the project and specific objectives that the project proponents aim to accomplish through project implementation. The evaluation plan then can be structured to test the hypothesis, by measuring the degree to which defined objectives have been achieved.

To assist with the development of useful and instructive evaluation plans, three example projects and evaluation plans are presented in the following sections. The projects represent a mix of geographic scales, urban and rural conditions, person and freight movement, and design strategies. The evaluation plan for each project includes a *process* evaluation, a *product* evaluation, and an *outcome* evaluation. For each sample project, it is assumed that 10 to 15 percent of the project budget will be spent on evaluation. Beginning with a description of the example project and its defined goals and budget, each write-up describes the underlying project hypothesis being tested and the associated set of objectives, performance measures, methodologies, and data sources that would be used in evaluating the project. Each sample concludes with a discussion of schedule and budget issues, and possible organizational responsibilities for conducting the evaluation. In addition, potential supplementary evaluation steps are identified that would improve the evaluation process if additional funding could be made available.

2. Example: Planning for the Upgrade of a Rural Highway

PROJECT DESCRIPTION

The DOT of State X and the MPO for Z propose to undertake a planning process focused on preserving and upgrading existing roadways in a 100-mile-long corridor to meet local, regional, and statewide transportation needs. The plan will be designed to minimize new construction of highways, while still improving intercity travel. This project constitutes a shift from the state's previous approach to planning in this corridor, which focused on new construction to serve intercity commerce at the expense of community economic preservation. The plan will require a complete review and reconsideration of the existing Regional Transportation Plan.

The planning process will be conducted over an 18-month period. Substantial effort will be made to encourage participation by and input from a wide range of constituencies and interest groups. It is critical to the successful future implementation of the plan that it receive support from the business community, the environmental community, individual municipalities, etc.

Goals

Four main goals will be achieved through this planning process:

1. **Continued economic well-being of our rural communities.** Experience in this state and others has shown that construction of new highways that bypass rural communities can have significant negative economic impacts on those communities. The state is committed to ensuring the economic viability of our rural communities, and we believe this planning process will work to further this commitment.
2. **Preservation of the state's important agricultural economy.** New highway construction in this region likely will interfere with agricultural land uses, which are important to the state's economic base. A planning approach that focuses on improving the existing roadway system will both preserve farmland and improve access to markets for the agricultural community.
3. **Protection of important, environmentally sensitive areas of the state.** The state has determined that several recently proposed highway projects would result in substantial negative impacts on sensitive environmental areas of the region. Upgrading of existing facilities is expected to have fewer negative environmental consequences.
4. **Reduce capital expenditures on transportation infrastructure.** Upgrades to and maintenance of existing roadways is expected to reduce costly future investments in public infrastructure, namely highway construction.

Hypothesis

A planning process that focuses on upgrading existing facilities rather than on new construction can 1) help maintain the economic viability of rural communities; 2) minimize disruptive impacts on the agricultural community, while improving access to markets; 3) reduce negative impacts of highway construction on the environment; and 4) minimize capital expenditures on transportation infrastructure.

Estimated Project Budget

Total project cost is estimated to be \$700,000. Implementation of the evaluation plan will cost approximately \$80,000.

EVALUATION PLAN

Purpose

The DOT is undertaking a new approach to transportation planning. Traditionally, the DOT has focused on investments in new roads to improve transportation access through the state's rural areas. Considerable public concern has been raised in the past regarding the negative impact of new road construction on existing communities that are bypassed, on the state's agricultural base, and on the environment. Concerns also have been raised regarding the relative economic costs and benefits associated with new roadway construction. The new approach to planning in rural areas, though, is unproven. The DOT hypothesizes that upgrading existing roadways may avoid the negative impacts described above. The purpose of the evaluation is to determine whether this hypothesis proves true. To determine this, the evaluation plan has been designed to include elements (particularly in the Outcomes Evaluation section) that compare expected results under the new planning process with expected results under the old planing process. The project evaluation will be used to determine if the DOT's new approach to planning should become the standard.

The evaluation plan for this project comprises three elements: a *process* evaluation, a *product* evaluation, and an *outcome* evaluation. Each of these elements is described below.

Process Evaluation

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Continual public input reflected in plan	Number and type of groups involved in planning process Level of participation of groups involved in planning process	Public meeting attendance lists and minutes Written comments received during planning process, and responses Breadth of mailing list Evidence of participation of various stakeholders and interest groups in project focus groups

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Broad base of public buy-in and support	<p>Participation of a variety of interest groups and stakeholders in planning activities.</p> <p>Evidence of public buy-in and support from a variety of interest groups</p>	<p>Comparison of public input under new planning process to public input under old planning process (will compare to past projects)</p> <p>Review of public testimony to identify range of interests represented by comments</p> <p>Number of meetings sponsored by interest groups and stakeholders</p> <p>Number and type of media campaigns sponsored by various interest groups</p> <p>Number of newspaper articles quoting support from various interest groups</p> <p>Comparison of public buy-in and support under new planning process to public buy-in and support under old planning process (will compare to past projects)</p>
Broadens scope and impact of planning process to integrate transportation, community preservation, and environmental activities	<p>Number and type of businesses participating in planning process</p> <p>Number and type of environmental groups participating in planning process</p> <p>Number and type of businesses that will retain direct access to intercity roadway as result of project</p>	<p>Review meeting attendance lists, correspondence, etc., to identify all businesses and environmental groups involved in the planning process. Further, through meeting minutes and interviews with staff and participants, identify the role played by various groups.</p> <p>Conduct corridor site analysis to identify the number of businesses that will retain direct access to the highway system.</p> <p>Comparison to previous planning process.</p>
Non-traditional partners involved in process	<p>Number and types of groups actively involved in plan development</p> <p>Contribution and commitment of each group</p> <p>Involvement from other state agencies, such as Agriculture, Environmental Affairs, and Commerce</p>	<p>Through a review of project documentation, prepare a list of all partners, defined as active participants in the plan development, vocal supporters, and sponsors of project planning activities</p> <p>Review of meeting minutes and correspondence, and interview key staff and participants to substantiate source of specific plan components</p> <p>Interviews with key players, stakeholders and interest groups to identify time, financial, and other (e.g., use of conference facilities for meeting) contributions and commitments of each to plan development. Types of contributions might include sponsorship of media events, responsibility for mailings, etc.</p>

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
		Comparison to level of non-traditional partner participation in former planning process.
Consistent with Statewide and MPO planning process	<p>Coordination of MPO planning activities with DOT</p> <p>Planning process reflects recommended process detailed in state guidelines</p> <p>Plan goals and objectives reflects stated goals and objectives at the statewide level</p>	<p>Coordination supported by joint participation of MPO and DOT in plan development</p> <p>Review of state planning guidelines to identify how well planning process corresponds to the guidelines</p> <p>Review statewide transportation goals to identify consistency between state and plan goals</p> <p>Review goals of environmental organizations, local planning and business groups, State Departments of Agriculture, Environmental Affairs, and Commerce to identify parallel goals</p> <p>Comparison with previous planning process.</p>

Product Evaluation

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Adoption of plan	Evidence of formal adoption of plan	Plan improvement included in TIP for region
Provisions to ensure plan implementation	<p>Legal authority to implement plan</p> <p>Financial capacity to implement plan</p> <p>Support from key constituencies and interest groups, and the general public</p> <p>Schedule for plan implementation with responsibilities clear defined and mechanisms for reviewing project schedule in place</p>	<p>Plan improvement included in TIP</p> <p>Evidence of clear financial implementation plan with earmarked sources of funding</p> <p>Review plan documentation to establish extent of support (see process evaluation, above)</p> <p>Evidence of clear timeline for implementation in plan and TIP, with responsibilities clearly identified. Written evidence that those with responsibility have bought into program. Evidence that plan includes feedback mechanism for reviewing project status and adjusting implementation activities as needed</p>

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Consistent with environmental and economic development plans for region and state	<p>Common goals in plans of various interest groups</p> <p>Agreement among groups that plan will support achievement of common goals</p>	<p>Comparison to projects developed under previous planning process</p> <p>Review plans and goals of key interest groups to identify consistency among goals</p> <p>Interview representatives of key groups to identify consistencies among goals. Interviews to be conducted by independent group with no vested interest in plan.</p> <p>Review written documentation to identify correspondence or other evidence that environmental, economic development and business interests believe the plan will help achieve the goals of each interest group</p> <p>Comparison to projects developed under previous planning process</p>
Plan is consistent with Statewide and regional planning process	<p>Includes collaborative partnerships among DOT, MPO, environmental groups, business groups, economic development groups</p> <p>Contributes to alleviation of priority area transportation and related problems identified in the 20-year plan</p>	<p>Review implementation plan to identify who is responsible for implementation of each plan element. Review documentation demonstrating support of plan by various interest groups. Review goals of plans for each interest group to identify consistency among plans</p> <p>Identify sources of financing to establish commitment of various groups</p> <p>Review documentation supporting plan recommendations to identify how plan alleviates transportation problems: estimated changes in LOS on roadway; estimated changes in number of accidents; estimated changes in intercity travel time</p>
Timely completion of plan	Schedule established at outset of planning effort was adhered to	Review schedule for development of plan. Identify variation between proposed schedule and actual schedule. Document reasons for variation and identify ways in which variation could have been avoided (if desirable)
Plan completed on budget	Planning effort completed within budget established for plan development	Review proposed budget and actual budget for plan development. Identify variations and document reasons for variations. Identify mechanisms for avoiding variation for future plan development.

Additional (Unfunded) Product Evaluation Techniques

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Provisions to ensure plan implementation	Support from key constituencies and interest groups, and the general public	Survey to identify extent of public support for final plan

Outcomes Evaluation

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Plan is implemented	Roadway improvements are made as scheduled	Roadway improvements are completed Review schedule for improvements against actual timetable for improvements. Identify discrepancies, and document reasons for discrepancies.
Preserve rural economies through focusing roadway investments on improving existing facilities	Continued economic growth in rural communities in region, measured in terms of growth in employment, income and regional output.	Conduct corridor analysis to identify localized impacts. That is, drive corridor and record number and types of businesses for whom access will be retained or improved as a result of plan (see process evaluation, above). Using a spreadsheet-based model, estimate economic loss to these businesses if a new, limited access highway is built to bypass these businesses.
Preserve farm economy by improving access to markets without interfering with agricultural production	Number of acres of farmland preserved by avoiding new highway construction Improved travel time to markets	Estimate agricultural land takings required to build a new highway. Compare to taking (if any) required for proposed road improvements. Using transportation model, estimate the travel time savings from agricultural areas to market areas as a result of highway improvements. Convert travel time savings to a monetary savings for farmers.
Preserve environmentally sensitive areas	Acres by type of environmentally sensitive land preserved	Estimate number of acres of environmentally sensitive land that would be taken to accommodate new highway construction. Compare to similar takings for proposed project.

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Manage capital expenditures	<p>Changes in safety, travel time and operating costs/benefits</p> <p>Cost per mile of roadway improvements</p> <p>Cost per mile of roadway improvements compared to cost per mile to construct a new highway to serve the area</p> <p>Benefit/cost ratio for highway improvements compared to cost benefit ratio for new highway construction</p>	<p>Use construction cost estimates (prepared during the planning phase) for both the proposed improvements and construction of a new facility, and compare results.</p> <p>Use of transportation model to generate safety benefits, changes in operating costs, and changes in travel times as a result of roadway improvements.</p> <p>Use benefit/cost analysis to identify the benefit/cost ratio of roadway improvements compared to new construction.</p>

Additional (Unfunded) Outcome Evaluation Techniques

Goals and Objectives	Performance Measures	Measurement Methods and Data Sources
Preserve rural economies through focusing roadway investments on improving existing facilities	Continued economic growth in rural communities in region, measured in terms of growth in employment, income and regional output.	Utilize a regional economic forecasting and simulation models (such as REMI) to forecast expected impacts of roadway improvements on regional economy. Utilize employment and business sales data and forecasts from the State Dept. of Commerce to validate data in forecasting model. Obtain information on improvements in travel time, safety and operating costs from the transportation model.
Preserve farm economy by improving access to markets without interfering with agricultural production	Value of agricultural products produced on preserved farmland	Identify agricultural products produced on land likely to be taken for new highway. Using State Department of Agriculture data on the volume of each crop produced per acre, and the most recent figures for value per unit for each crop, estimate the value of crops preserved by avoiding new highway construction

SCHEDULE

The evaluation phase could be completed within one year of plan completion. Measurement of economic impacts could start during plan implementation, once the project is defined.

RESPONSIBILITIES

Process Evaluation: The majority of evaluation steps included in the process evaluation will be undertaken by agency staff. Most of these steps involve simple review of documents and site review that can be done on an ongoing basis throughout project implementation. An independent third party (consultant or university) will be used to conduct interviews regarding participation and commitment by non-traditional partners. A third party will be used for these interviews to facilitate a frank discussion on this topic.

Product Evaluation: Agency staff will conduct evaluation steps related to adoption of plan and provisions to ensure plan implementation. An independent third party will be used to conduct evaluation steps related to consistency with economic development and environmental plans, and consistency with statewide and regional planning process. Use of an independent party for these latter steps will eliminate bias in the review process.

Outcome Evaluation: An independent third party (consultant or university) with expertise in transportation modeling and economic impact analysis will be used to conduct the outcome analysis, with staff support from the agency. The agency does not have staff with sufficient background in the types of analysis proposed to effectively conduct the outcomes evaluation.

BUDGET ISSUES

The process evaluation is not costly and can be conducted as the project unfolds by staff of the project proponent. This element might cost \$5,000 to \$10,000 in staff time. Elements of the product evaluation also can be conducted by proponent staff at a cost of approximately \$4,000. An additional \$6,000 to \$8,000 will be required for outside consultant assistance.

The outcomes evaluation will be the most costly component of the evaluation elements. The economic and transportation modeling components together will cost a minimum of \$40,000 (assuming a valid transportation model exists.) Measurement of localized impacts will cost approximately \$12,000 to \$15,000 (although some of this could be done in-house). An estimate of agricultural impacts will require approximately \$3,000, assuming an estimate of land saved is available. Benefit/cost analysis will cost approximately \$10,000 to \$15,000, depending on how much model development is required.

Total evaluation cost between \$80,000 and \$95,000, not including staff costs to project proponent. If a consultant is used for the full evaluation, costs could be higher.

The additional unfunded evaluation methods listed could add an additional \$75,000 to \$100,000 to the evaluation cost, but would strengthen the evaluation considerably. The unfunded elements require expertise in survey preparation and administration, as well as economic modeling. Outside consultants or university assistance would be required for these tasks.

3. Example: Planning Grant for Transit-Oriented Development

PROJECT DESCRIPTION

A transit agency and city planning department jointly propose to develop, adopt, and implement a package of zoning regulations and incentives to encourage development around stations on a rail transit line. Policies to be considered include density bonuses, urban design standards, streamlined permitting, loan packages, joint development packages, and decreased parking requirements. Consideration will be given to the character of each station in adopting zoning changes. A committee comprised of planners, transportation experts, transit agency staff, representatives of the MPO, representatives from the general public and interest groups, and members of the development community will be established to draft a package of appropriate and workable policies. Public input meetings will be held and the policies will be refined and presented to City Council for adoption. Upon adoption, local land use and transportation plans will be modified to reflect the changes. Planners will work with the development community to encourage development in the station areas.

Goals

Increase transit ridership through increasing the mix and density of uses within walking distance of transit stations. Reduce urban sprawl and dependence on SOVs. Improve air quality.

Hypothesis

By implementing land use policies and incentives in the vicinity of transit stations, developers will be induced to increase the mix and density of uses around stations, which will result in higher transit ridership.

Estimated Project Budget

The entire process, from inception through implementation is estimated to cost approximately \$130,000. The evaluation of the project will cost approximately \$20,000.

EVALUATION PLAN

Purpose

Transit-oriented development has not previously occurred in the applicant's jurisdiction. There is some skepticism about the benefits of transit-oriented development (TOD), and there is no local track record to demonstrate the impacts of TOD on local communities. The project proponents feel strongly that an objective evaluation of the results of the project are important

for a variety of reasons, including: 1) to identify whether the program achieves the established goals; 2) to identify both positive and negative impacts of the program so that the program can be improved upon in the future; and 3) to provide accurate and clear information to the public and to the development community about the impacts of the program. The agencies involved are interested in an accurate assessment of the program to determine whether or not future efforts should be made to encourage TOD.

The evaluation plan for this project comprises three elements: a *process* evaluation, a *product* evaluation, and an *outcome* evaluation. Each of these elements is described below:

Process Evaluation

Goal/Objective	Performance Measures	Evaluation Method(s)
Involvement of Non-Traditional Partners	Number and variety of groups involved in creating and providing input to policies Number and variety of groups involved in package implementation	Review project planning and implementation records (including meeting attendance lists and minutes, correspondence, and meeting sponsorship) to identify groups involved in the process, and their roles.
Achieves stakeholder commitment and buy-in	Letters of support, testimonials, editorials supporting project, sponsorship of events, etc., by variety of groups Commitment to implementation (through responsibility, funding, etc.)	Review project records to document evidence of stakeholder buy-in. Identify noteworthy stakeholders that have failed to buy in to the policies. Review project records to document evidence of sponsorship by various groups

Product Evaluation

Goal/Objective	Performance Measures	Evaluation Method(s)
Provisions to ensure implementation of package	Legal authority to implement plan Funding/resources identified to implement plan	Document evidence of the legal authority of participants to adopt and enforce policies Review project records and document funding for plan implementation
	Provisions for management/oversight of plan implementation	Review project records and document management plan
	Feedback process to monitor/adjust implementation as needed	Review project records to document monitoring program

Goal/Objective	Performance Measures	Evaluation Method(s)
Package is linked to transportation plans/projects	Implementation through collaborative partnerships, for example, involving the MPO, state transportation and environmental agencies, city planning agencies, transit, or non-traditional partners	Document roles played by various agencies
	Contributes to alleviation of priority area transportation and related problems identified in the 20-year plan and any “visioning”	Review long-range transportation plan for consistency with project policies. Identify where goals are consistent, as well as needs for revisions.

Outcome Evaluation

Goal/Objective	Performance Measures	Evaluation Method(s)
Improve efficiency of transportation system	Comparison of transit and non-motorized mode share and daily travel activities from residents and employees of TOD to the overall patterns for the metropolitan area, as well as the average for non-TOD suburban developments	Survey of TOD residents and employees to determine journey to work mode split and other travel data. Compare to existing census and other available survey information data.
	Increase in transit ridership as a result of TOD; increase in transit riders using non-motorized access	Evaluate total boardings by station, before and after TOD implementation. Compare TOD with non-TOD stations.
	Land consumption per unit development	Compare planned land area/unit of development within the TODs with typical land area/unit of development in other recent developments. Compare actual FARs in TODs with other non-TOD developments.
Ensure efficient access to jobs, services, centers of trade	Total number of residents, jobs within walking distance of transit	Projected population and employment within one-half-mile of TOD transit stations with and without TOD policies. After TOD development, compare based on actual development in TOD.
Encourage private sector land development patterns to achieve above objectives	Developer endorsement/support for package	Actual development is occurring consistent with plan objectives

Goal/Objective	Performance Measures	Evaluation Method(s)
	Demonstrated changes in development patterns/trends	Compare types, densities, and character of land use in TOD areas to other new or recent developments in region

Additional (Unfunded) Outcome Evaluation Techniques

Goal/Objective	Performance Measures	Evaluation Method(s)
Improve efficiency of transportation system	Comparison of travel activities for residents/employees of TOD to the overall mode split for the metropolitan area, as well as the average for non-TOD suburban developments	New household travel survey of TOD residents, or oversampling in the metropolitan area household survey
	Increase in transit ridership as a result of TOD; increase in transit riders using non-motorized access	Based on existing or new transit rider surveys – compare mode of access, before vs. after TOD implementation; relate total non-motorized access boardings to amount of TOD by station
	Total reductions in VMT	Using a journey to work survey of TOD residents and employees, and a survey of transit riders, apply average trip lengths to mode share changes. Determine reductions in VMT through comparisons of household survey data.
Reduce impacts on environment	Change in criteria pollutants, greenhouse gas emissions	Apply emission factors to changes in VMT and trip-ends
Reduce costs of infrastructure investment	Cost of local infrastructure in TODs compared to traditional suburban development	Compare cost of local infrastructure per dwelling unit or per 1,000 square feet of commercial development in TODs with concurrent new suburban developments in region (unit cost based on projected units at full build-out)
Ensure efficient access to jobs, services, centers of trade	Change in total travel time or accessibility measure	Using regional travel model, compare baseline land use forecasts without TODs to TOD land use distribution

SCHEDULE

The project will require a total of 18 months from inception to adoption of policies. The process and product evaluation will require an additional eight months. Some of the tasks in the outcome evaluation can be accomplished within one year after adoption of policies; evaluation measures that rely on comparisons of actual TOD developments to metropolitan and suburban development patterns, however, cannot occur until after TOD development is completed and occupied. This likely will take several years.

RESPONSIBILITIES

The staff of the agencies involved will be responsible for the majority of the project evaluation. Assistance from X University will be used for conducting the survey of residents and employees of TOD areas. All of the unfunded tasks included in the outcomes evaluation will require substantial assistance from an independent consultant or university, as staff from participating agencies are not trained to conduct the analyses described.

BUDGET ISSUES

The budget for the evaluation plan is approximately \$20,000. Much of the documentation review can be completed for a minimal cost by proponent staff. The most costly components of the proposed evaluation plan will be the survey of TOD residents and employees to document changes in travel patterns, and the collection of information on total boardings per station. The unfunded evaluation plan elements contain several costly items that include land use and transportation modeling, and household surveys. The unfunded portion of the plan could cost more than \$100,000, but would add considerable information to the project evaluation.

4. Example: Development of Urban Design and Land Use Strategies for an Urban Office Complex

PROJECT DESCRIPTION

An MPO seeks an implementation grant to fund enhancements to land use, urban design and transportation demand management (TDM) elements of an office complex located near the downtown of a major urban area. The current facility is oriented toward a large parking lot. The main entrances to the complex are on the parking lot side of the facility, not the roadway side, which is served by transit. Currently, no transit shelter exists. Sidewalks are of a poor quality with poor lighting, with no street furniture and no landscaping. Employers do not offer transit passes but do provide parking subsidies. There are no HOV vehicle parking accommodations. The project includes a set of urban design improvements, land use changes and TDM measures to encourage commuting other than in single-occupant automobiles (SOVs). Partners will include the transit agency, planning agency, owner of the office complex, and employers located in the complex.

Goal

Increase transit, HOV, bicycle and walk mode share. Reduce SOV mode share. Create pedestrian-friendly environment.

Hypothesis

A combination of urban design, land use and TDM measures will result in an improved mode share for non-SOV modes of travel.

Estimated Project Budget

Total project cost is estimated to be \$750,000, with \$250,000 from private sources and \$500,000 from a TCSP grant. Implementation of the evaluation plan is budgeted for approximately \$100,000, which covers the costs of conducting and analyzing four employee surveys at different points in time.

EVALUATION PLAN

Purpose

The proponents of this project are interested in identifying the impacts of urban design measures, land use regulations, and TDM on changing mode choice. If the project demonstrates that these measures can, in fact, significantly influence mode choice, there is interest in pursuing similar measures elsewhere in the community. However, there is also a hesitancy in expending

large amounts of time and resources on programs that do not meet SOV reduction goals. Therefore, the project evaluation plan has been developed not only to meet the requirements of TCSP, but also to provide clear information to guide future decision-making.

The evaluation plan for this project comprises three elements: a *process* evaluation, a *product* evaluation, and an *outcome* evaluation. Central to the evaluation is a series of employee transportation surveys, the first of which will be conducted prior to instituting enhancements to develop baseline information regarding pre-project employee travel behavior. Time series data will be collected to identify changes in travel behavior after project implementation. Regression analyses will be used to account for the influence of the land use, urban design, and TDM factors, as well as other factors, on changes in travel behavior.

Process Evaluation

Goals/Objectives	Performance Measures	Methods/Data Resources
Involvement of non-traditional partners	Number and type of groups involved Role of groups involved	Review of project documents to identify role and commitment of transit agency, planning agency, employers and property owner
Consistent with statewide and MPO planning process	Goals of project reflect goals of statewide plan and long-range plan for region.	Review goals at a state and regional level. Identify how project supports these goals.
Integrates transportation, community preservation and environmental activities	Plan includes elements that consider land use, environmental impacts, and private sector activities.	List of plan elements that address key categories (e.g., land use, environment, private sector). Identification of linkages between categories.
Stakeholder commitment and buy-in	Level of time and financial resources committed by key stakeholders	Review project budget and responsibilities to document role of each stakeholder

Product Evaluation

Goals/Objectives	Performance Measures	Methods/Data Resources
Project is innovative and provides a learning experience	Successful collaboration of non-traditional partners Successful implementation of complementary TDM, land use and design initiatives targeted at goal of reducing SOV travel to a specific business destination.	Evidence of documents attesting to project development partnership between non-traditional partners (e.g., property owner, transit agency, and MPO); ongoing agreements for continued involvement by partners

Goals/Objectives	Performance Measures	Methods/Data Resources
Project successfully completed	Completed on schedule Completed on budget Level of program participation	Review of project to note variety of project elements that have been implemented, and the extent of implementation of each element (e.g., how many businesses are offering employee transit passes?) Compare proposed project schedule to actual project schedule Compare proposed project budget to actual project budget Identify number of employers participating in program.

Outcomes Evaluation

Goals/Objectives	Performance Measures	Methods/Data Resources
Improve efficiency of transportation infrastructure	Percent of employee, visitor and other trips made by transit, HOV, and non-motorized travel modes	Before and after employee and visitor surveys; Compare mode splits by trip purpose before and after improvements; Conduct regression analysis to identify role of improvements in changes in travel behavior versus role of other external factors.
Reduce impact on environment	Change in total VMT/1,000 square feet of occupied space at site Community satisfaction, including issues related to aesthetics, safety and improved air quality	Use before and after surveys to collect data on trip length by type of trip and mode. Collect data from property owner on total square footage of occupied space. Ideally, calculate by use (e.g., calculate VMT generated by retail, office, and other uses separately.) Surveys also can be used to identify employee and visitor satisfaction with project.
Reasonable return on investment	Cost effectiveness ratio	Cost per passenger for any new service to area. Another interesting measure might be project cost (all improvements) per mile reduction in VMT.
Encourage private sector land development patterns to achieve TCSP goals	Project successfully implemented Evidence of interest by others in replicating project	Before and after site comparison to document design changes, transportation demand measures implemented. Interviews with land owner and employers to identify satisfaction with project, transferability, other issues relevant to success of project and ideas for interesting other land owners/developers/businesses

Goals/Objectives	Performance Measures	Methods/Data Resources
		<p>Interviews with planners, transit agency personnel to identify interest by other developers.</p> <p>Interviews with development community to measure interest in replicating project.</p>

Additional (Unfunded) Outcome Evaluation Techniques

Goals/Objectives	Performance Measures	Methods/Data Resources
Reduce impact on environment	Community satisfaction, including issues related to aesthetics, safety and improved air quality	<p>Change in VMT could be used to calculate change in emissions, using an emissions model.</p> <p>Interviews and focus groups can be used to determine user and general community satisfaction.</p>
Ensure efficient access to jobs and services	Travel time savings	Travel demand model

SCHEDULE

Project will require one month to survey employees and visitors to collect data on “before” conditions. Implementation of TDM, urban design and land use strategies will require a 24-month period. Ideally, three “after” surveys should be conducted – one at six months after project is completed, another one year after project completion, and a final survey two years after project completion. This would allow time for people to change their travel patterns, and also would allow measurement of how attitudes about the project (i.e., satisfaction) change over time. Initial evaluation can be completed within two months after the first “after” survey is completed. A final evaluation can be completed within three months after the final survey is completed, or two-and-one-quarter years after project completion.

RESPONSIBILITY

The project proponent has elected to hire an independent third party to conduct the proposed evaluation plan. This project involves non-traditional partners working together. To preserve and protect the integrity of this relationship, the partners feel it is best to have a mutually acceptable uninterested third party conduct the evaluation, with support from staff of the

proponents. It is expected that a local university would be used with expertise in the areas of transportation and land use, and with experience in conducting and evaluating surveys.

BUDGET ISSUES

The cost to implement the project will vary considerably depending on what is proposed (for example, street lighting has a very different cost than new bus service). Process and product evaluations can be completed for a small cost, using in-house staff to assist with data collection. Initial employee surveys and analysis of survey results will cost \$15,000 to \$20,000. Follow-up surveys, interviews and analysis will cost approximately \$60,000 to \$65,000. Regression analysis could add another \$15,000 to \$20,000. The cost of using a travel demand model and emission model to measure changes in VMT and emission would add further to the evaluation cost.