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16. Abstract This report documents the second year of the research implementation project 5-4055-01, Case Study Analysis of Urban/Rural Toll Road Options. The primary purpose of the research implementation project is to transfer research findings and best practices to the toll development process for Tyler Loop 49, given the unique nature of the project as a rural, low-volume toll facility. The secondary purpose of the effort is to document the processes used in evaluating and developing Loop 49 as a toll project so that other districts in the Texas Department of Transportation (TxDOT) can draw from lessons learned from Tyler's experiences. During the second year of the implementation project the research team focused on technology transfer associated with Loop 49 public outreach and documentation of the Regional Mobility Authority (RMA) formation and environmental re-evaluation process. In addition, the team formulated lessons learned from the Loop 49 experience into a one-day workshop to facilitate the sharing of information with other TxDOT district offices. These lessons drawn from the Tyler experience can be used in the development of other tolling projects in Texas, particularly in a smaller urban or rural setting. The report documents best practices that have been learned so far and summarizes them at the close of the report.			
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Case Study Analysis of Mid-Size Urban/Rural Area Toll Road Options - Year 2 Report

Implementation of Tolling on Loop 49
Tyler District
Texas Department of Transportation

Research Implementation Project 5-4055-01:
Case Study Analysis of Urban/Rural Area Toll Road Options
Report 5-4055-01-3

Ginger Goodin, Research Supervisor
Research Engineer
Texas Transportation Institute

Tina Collier
Associate Transportation Researcher
Texas Transportation Institute

Performed in cooperation with the
Texas Department of Transportation, Tyler District
and the
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Texas Transportation Institute
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Disclaimer

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Texas Department of Transportation (TxDOT) or the Federal Highway Administration (FHWA). This report does not constitute a standard, specification, or regulation, and it is not intended for construction, bidding, or permit purposes. The engineer in charge of the overall research project was Ginger Daniels Goodin, Texas P.E. #64560.

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Table of Contents

List of Figures	viii
Introduction	1
Loop 49 Project Status	1
Public Outreach.....	3
The Northeast Texas Regional Mobility Authority (NET RMA) Formation Process.....	5
Environmental Process	7
Case Study Workshops.....	8
Measures of Effectiveness (MOE).....	10
Conclusions.....	11
References.....	13

List of Figures

Figure 1. Loop 49 Map 2
Figure 2. Sample Outreach Tools. 3
Figure 3. Loop 49 Public Support Diagram. 4
Figure 4. County Judges Signing RMA Petition. 5
Figure 5. Loop 49 Construction 7
Figure 6. Loop 49 Case Study Workshop..... 9

Introduction

This report documents the second year of the research implementation project 5-4055-01 *Case Study Analysis of Urban/Rural Toll Road Options*. The purpose of the research implementation project is to:

- transfer research findings and best practices to the toll development process for Tyler Loop 49, given the unique nature of the project as a rural, low-volume toll facility; and
- document the processes used in evaluating and developing Loop 49 as a toll project so that other districts in TxDOT can draw from lessons learned from Tyler's experiences.

During the second year of the implementation project the research team focused on technology transfer associated with Loop 49 public outreach and documentation of the Regional Mobility Authority (RMA) formation and environmental re-evaluation process. In addition, the team formulated lessons learned from the Loop 49 experience into a one-day workshop to facilitate the sharing of information with other TxDOT district offices.

Loop 49 Project Status

The Texas Department of Transportation is preparing to construct a new regional highway, Loop 49, around the city of Tyler, Texas. The new facility will be an approximately 26-mile, circumferential, controlled-access highway. The southern section of Loop 49 extends from State Highway (SH) 155 to SH 110, a length of 9.62 miles. A 5-mile segment (south segment) of this section from SH 155 to US 69 is currently under construction (see [Figure 1](#)). In order to complete the loop in a compressed timeframe, the Tyler District and its partnering agencies have been evaluating Loop 49 for tolling, including application of tolling to the initial 5-mile segment under construction. It is expected that by tolling Loop 49 the opening of the completed loop project can be accelerated by as much as 20 years.

A toll public hearing was held on October 25, 2005, to solicit public comment. The environmental re-evaluation documents for the tolling of Loop 49 south and west segments were approved by FHWA on December 16, 2005. The Texas Transportation Commission approved toll financing for Loop 49. Current plans call for the first segment to open as a tolled facility with a short marketing period of "drive for free" to allow saturation of the TxTag in the Tyler area. All future segments will open as a tolled facility.

Public Outreach

In the first year of the project TTI conducted stakeholder interviews, trucker interviews, focus groups and a public opinion poll to ascertain the public's knowledge of the project and to solicit reaction to the potential tolling of Loop 49. A public outreach strategy was developed as a two-phase process (1):

- Awareness Stage - Inform the public about the plans and progress of the project with accurate information.
- Operational Stage - Announce and celebrate the opening of the first part of the south segment and provide information on the facility operations to increase usage.

The Awareness Stage began in earnest in September 2004 with the development of a number of outreach tools, some of which are shown in Figure 2:

- PowerPoint® presentation used at public meetings and small group gatherings,
- seven-minute educational video designed for outreach to civic organizations and other local group meetings,
- website with project information,
- pamphlets — an initial version and a later version with updated information,
- talking points/fact sheet,
- informational booth at the East Texas State Fair, and
- Loop 49 logo contest — with votes taken at the East Texas State Fair and online at the website.

TxDOT held two widely advertised public meetings in the fall of 2004. The purposes of the meetings were to inform the public that TxDOT was considering a toll funding option, convey information regarding the potential effects of that funding and solicit input from the public. Written comments from the public meeting were 80 percent in favor of tolling Loop 49 to 20 percent against tolling Loop 49.

The success of the Tyler District in garnering public support for the Loop 49 project is illustrated in the concentric circles shown in Figure 3. Support for the project began with the project champions at the core of the process, represented by the Tyler Chamber of Commerce,

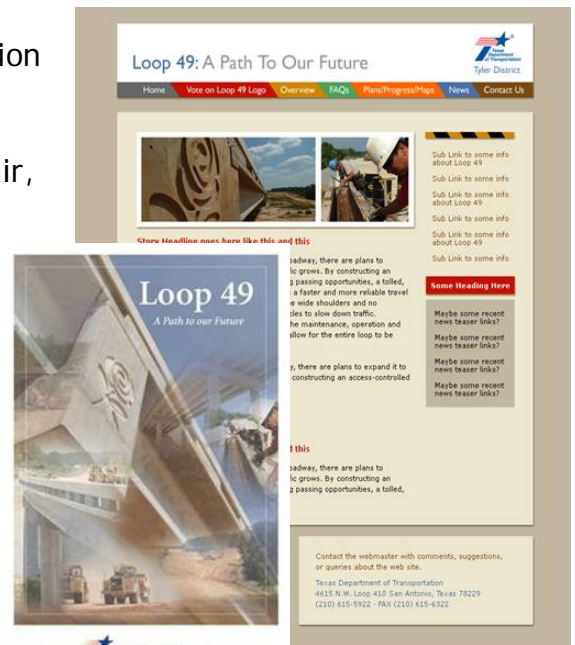


Figure 2. Sample Outreach Tools.

Smith County, and the City of Tyler. Support from these entities has been consistent from the outset, long before tolling was a consideration. From the core support of these champions the public support was built from the inside out by eliciting the backing of local politicians, community leaders, media and finally the general public. This model for gaining public support has been an important factor in the progress toward development of Loop 49 as a potential toll facility.

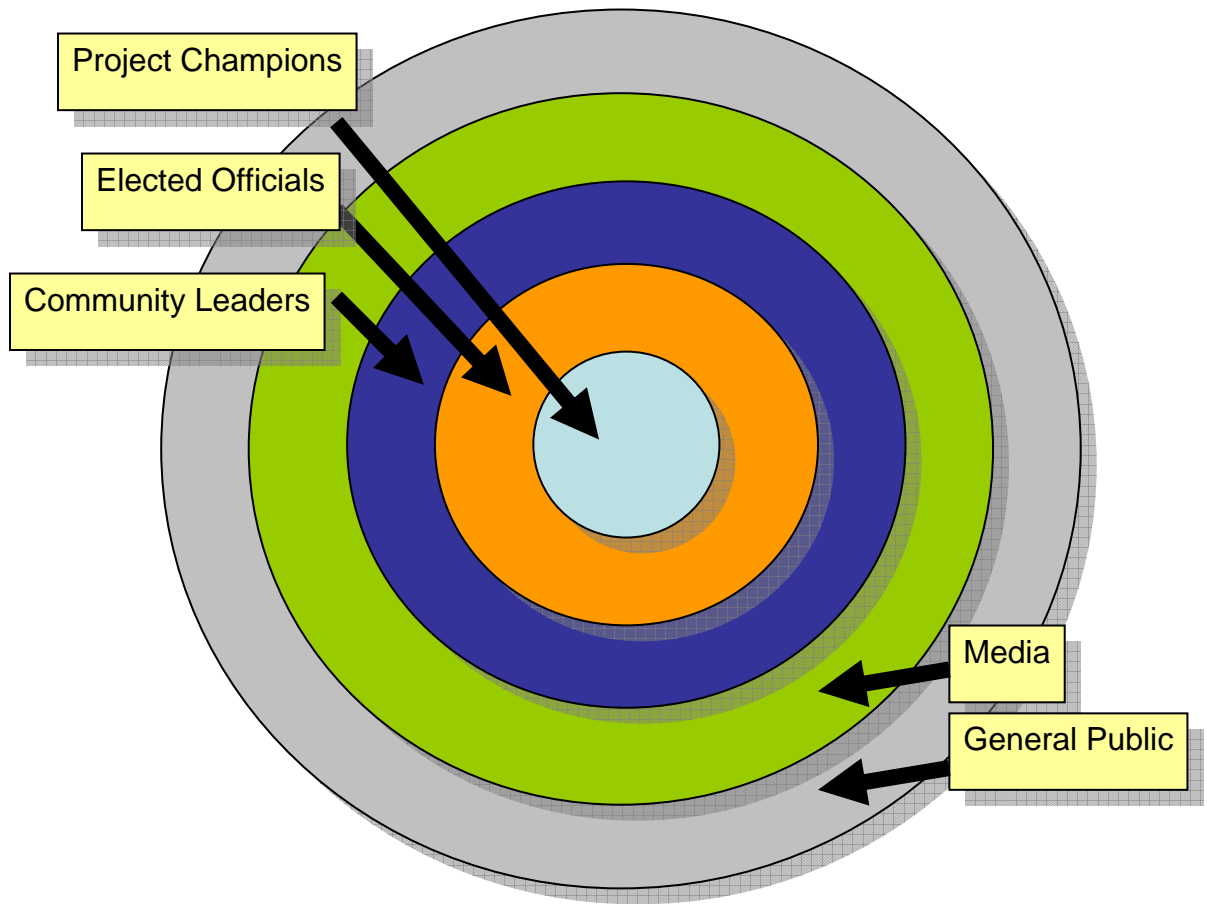


Figure 3. Loop 49 Public Support Diagram.

The Northeast Texas Regional Mobility Authority (NET RMA) Formation Process

The formation of the NET RMA had significant milestones during the closing months of 2004 and the beginning of 2005. A case study of the NET RMA formation process was prepared under this research implementation project (2). The highlights are provided below.



Smith County and Gregg County have worked cooperatively and successfully formed the NET RMA. Discussions of formation of an RMA between Smith and Gregg Counties began in November 2003. The county judges from both counties envisioned the NET RMA as a mechanism to speed project implementation (Figure 4).

Figure 4. County Judges Signing RMA Petition. The Turnpike Authority Division (TTA) of TxDOT is charged with assisting TxDOT districts and others interested in forming an RMA. On June 24, 2004, Smith and Gregg Counties submitted an application to the Texas Transportation Commission. The application was accompanied by resolutions from each of the commissioners' courts supporting the effort.

State law requires that public hearings be held to allow for community input regarding the formation of an RMA. The meetings for the NET RMA were held in September and October 2004. Overall, comments from the audience in each of the hearings were very supportive. This region sees itself as an example to other parts of the state and believes that regional coordination provides the greatest opportunity to advance transportation initiatives quickly.

On October 28, 2004, the Texas Transportation Commission approved the petition for the NET RMA formation. In doing so, it cited the communities'

willingness to work together to help themselves and the overwhelming support of so many other entities in the area such as the chambers of commerce, the metropolitan planning organizations (MPOs), economic development corporations, the smaller cities in the region and many private business interests. Smith County and Gregg County each appointed three members to the board in February 2005, with one representing the interests of Tyler and one representing the interest of Longview. In March 2005, the governor appointed the chair of the NET RMA. [Table 1](#) illustrates the timeline of events leading to the NET RMA formation.

Table 1. RMA Timeline.

Tasks	Time
Legislature authorizes creation of RMAs	January 2001
Discussion of Smith/Gregg County RMA begins	November 2003
RMA application to the Texas Transportation Commission	June 24, 2004
Public hearing for RMA formation in Smith County	September 7, 2004
Public hearing for RMA formation in Gregg County	September 8, 2004
Third public hearing for RMA formation/first Loop 49 tolling public meeting	October 7, 2004
Texas Transportation Commission approves NET RMA application	October 28, 2004
Counties appoint NET RMA board members	February 2005
Governor appoints NET RMA board chair	March 2005
NET RMA conducts first meeting	April 2005

The NET RMA has met to define its roles and responsibilities including drafting by-laws and adopting administrative policies. The NET RMA is working with the Tyler District to identify additional short-term and long-term projects to pursue. The board has established its vision and sees its role as that of bringing transportation projects to fruition sooner. Jeff Austin III, the board chairman, notes that the NET RMA is unique because this region has been able to do what others have not – that is, work cooperatively. He says the partnership between Smith and Gregg Counties offers an example to other communities. The NET RMA will be able to deliver more transportation projects faster than traditional means. This makes the entire region more economically viable as a choice for new or expanded industry. It also makes the area more competitive with other parts of the state and even other states in terms of attracting new business.

The board is currently working toward establishing subcommittees for planning efforts. The board is also actively seeking public participation in the transportation planning process. Additionally, other counties are actively participating, are supportive and may join the NET RMA in the future.

The documentation of the RMA formation process culminated in the development of an educational video that will be used to invite other counties into the RMA and to inform the general public of the benefits of the RMA.

Environmental Process

The Loop 49 project was the first project of its kind to undergo environmental re-evaluation for tolling while a segment was under construction (see [Figure 5](#)). Highlights of the process are provided in this section and documented in more detail in a separate report [\(3\)](#).

The process presented many unknown circumstances to the district staff, the Environmental Affairs Division (ENV) of TxDOT and the Federal Highway Administration. The first step in the process was to determine what type of documentation would be needed to address the issues related to tolling. The researchers conferred with FHWA and ENV staff, researched guidance documents offered by each and suggested the following steps:

- Create Memorandum of Understanding between TxDOT and FHWA — FHWA policy indicates that a toll agreement, known as a Section 129 agreement, must be executed with FHWA to construct or improve a toll facility or convert an existing federally funded free facility to a toll facility.
- Conduct an Environmental Re-evaluation — An environmental re-evaluation is an appropriate document to describe what about the project has changed since the Record of Decision (ROD) and assess the impacts caused by tolling. With the existence of a ROD, the conclusions will not affect the alignment of the highway. The analysis focuses on whether or not tolling the highway presents unacceptable or disproportionate negative impacts. The re-evaluation should be consistent with the existing environmental impact statement (EIS) document. The steps in the environmental re-evaluation process were identified as follows:
 - document changes,
 - assess the impacts,
 - conduct public meetings/public involvement, and
 - respond to comments from the public.
- Obtain Document Approval — Each of the steps noted above can be underway and completed during construction of the facility if construction



Figure 5. Loop 49 Construction.

has already begun on the facility. However, if segments of the project have not been let TxDOT may wish to postpone the letting until more public involvement can take place.

The steps outlined above may be appropriate for any project that has already received a ROD.

Because the project is a new-location project that proposes all electronic tolling, no additional right-of-way will need to be acquired. This has simplified the documentation required of the re-evaluation. The environmental impact statements that were previously done are still very relevant and the re-evaluation documents focus primarily on the users of the facility and how tolling would impact them. An environmental justice analysis showed that there would be no substantial additional effects as a result of constructing and operating Loop 49 as a toll facility.

Although the Loop 49 environmental re-evaluation process presented many challenges it also provided many opportunities. The project is unique in that the south segment and the west segment are at different stages of development. Thus, ENV was tasked with identifying the appropriate course of action based on various stages of development.

The extensive public involvement that has been conducted under the research implementation project has benefited the project and was an integral component of the environmental re-evaluation. TxDOT recognizes the importance of an on-going communication and outreach plan and continues to provide opportunities for public comment.

The environmental re-evaluation documents for the tolling of Loop 49 south and west segments were approved by FHWA on December 16, 2005. This approval was granted after the district held a public hearing to solicit comments on October 25, 2005. The Texas Transportation Commission has approved a financial plan based on toll funding for Loop 49. With these milestones passed, TxDOT and the FHWA will execute a Section 129 agreement for the tolling of Loop 49.

Case Study Workshops

As part of the research implementation project, a workshop was developed to share the Tyler District's experiences with other TxDOT staff around the state and local partners. In addition to an abbreviated pilot workshop presented to TTA and other division staff in March, one-day workshops were presented in five locations between June 1 and August 31 to a total of 109 individuals. Participating in those workshops were the districts of El Paso, Tyler, Paris,

Corpus Christi, Laredo, and Pharr and representatives of MPOs, cities, counties, and RMAs in those regions.

The purpose of the workshop is to provide an interactive forum for sharing “lessons learned” from the Loop 49 experience with toll project development, and to share aspects unique to toll projects in mid-size urban/rural areas. The workshop is largely a presentation of project development aspects for Loop 49 that the Tyler District has had to address from a tolling perspective. However, the final two hours of the workshop allow the local district office to bring its own case study to the table and identify opportunities to enhance the project based on what has been learned from Loop 49.

The general topics presented in the workshop from a Loop 49 perspective include the following:

- project description and vision,
- stakeholder involvement and support,
- design and environmental review,
- public outreach and education,
- traffic, revenue and financial analyses,
- building and toll financial plan, and
- RMA formation and purpose.

Participants in the workshop receive a notebook that includes the workshop presentation and printed diagrams, charts and artist renderings discussed during the presentation. In addition, each receives a CD that contains over 30 files that can be reviewed and adapted for their own projects, including survey instruments, presentations, photos, environmental documents, RMA documents, a planning timeline, a financial planning template and research documents.



Figure 6. Loop 49 Case Study Workshop.

Participant evaluations of the workshops have been extremely positive. Virtually all participants have stated that the workshop was a valuable use of their time and that they would recommend it to others.

Measures of Effectiveness (MOE)

As the project moves forward, it is recommended that the MOEs established early in the project be measured and tracked. The baseline measures are listed below, along with the current values for those public acceptance benchmarks that were measured through the baseline public opinion survey. Continued evaluation of the project will provide valuable information to TxDOT as future projects are implemented.

Measures of effectiveness:

- technology applications
 - number of unique tolling features tested and evaluated,
 - effectiveness of kiosk option – revenue/operating costs, and
 - public acceptance of electronic tolling – percent favorable (Baseline: 40 percent);
- public acceptance of tolling concept:
 - baseline acceptance – percent favorable [Baseline: 49 percent (“Tolling Loop 49 is a good way to pay for the road.”)],
 - public acceptance prior to opening – percent favorable,
 - public acceptance after opening – percent favorable,
 - compliance rate (percent of vehicles paying toll), and
 - actual revenue/estimated revenue and/or growth rate on Loop 49 versus growth rate on other roadways;
- number of districts adopting Tyler model for tolling implementation.

Conclusions

The research implementation project has provided a valuable mechanism to document in detail a case study of one district's experience in applying the new financing policies of the department while meeting the transportation needs of its community. The documentation process has provided unique insights into the adjustments to the project development process associated with consideration of tolling, particularly in a mid-size urban/rural environment. To date, the lessons learned from the two-year research implementation project are summarized below. In many ways the initial planning for the Loop 49 tolling project has represented a systematic approach that has integrated several elements that are critical for successful implementation:

- Early efforts are needed to develop support for the tolling project among politicians, policy-makers and key community stakeholders, with clear justification for the need for tolling and early positive media coverage.
- Technology selection and a decision on toll operating strategy in the initial stages of the development should be guided by TTA and consistent with TxDOT's statewide toll operating philosophy. The establishment of a number of statewide implementation contracts by TTA is supporting the ability of the Tyler District to incorporate tolling in a manner that is consistent with statewide operations.
- Development of a marketing strategy should be based on public perception data that identify the gaps in the public's understanding of the project.
- Use of a variety of communication mechanisms will share information about the project with the public.
- Flexibility and adaptability in response to changes and clarifications in policy, procedures and legislation has affected the project development process over the last two years.
- Consistent support and cooperation of a variety of project champions — most notably the Tyler Chamber of Commerce, Smith County and City of Tyler — have shown a spirit of regional collaboration that has directly resulted in the formation of the two-county RMA (Smith and Gregg Counties) led by the two county judges. The project champions have been the primary spokespersons for the project and have been the key to widespread public acceptance of the tolling proposal.

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² *Regional Mobility Authority: Creation to Implementation*. T. Collier. Project Status Report 5-4055-01-2. Texas Transportation Institute. November 2006.

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