

Texas Department of Transportation



Guidelines for
TxDOT—Regional
Toll Road Authority

AND

Cooperation AND Coordination



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Disclaimer

This research was performed in cooperation with TxDOT and FHWA. The contents of this report reflect the views of the author, who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of TxDOT or FHWA. This report does not constitute a standard, specification, or regulation. Trade names are used solely for information and not for product endorsement.

Guidelines for TxDOT—Regional Toll Road Authority Cooperation and Coordination

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Introduction

The mission of the Texas Department of Transportation (TxDOT) is to provide for the safe, effective, and efficient movement of people and goods. The guidelines for TxDOT, regional toll road authority, and regional mobility authority (RMA) cooperation and coordination help the department realize this mission.

The guidelines also address two elements of TxDOT's vision:

1. providing a comfortable, safe, durable, cost-effective, environmentally sensitive, and aesthetically appealing transportation system that works together, and
2. promoting a higher quality of life through partnerships with the citizens of Texas and all branches of government by being receptive, responsive, and cooperative.

The guidelines presented here provide direction to TxDOT staff on enhancing coordination and cooperation with regional toll authorities and RMAs. They provide guidance for TxDOT staff, rather than mandating a specific approach. The guidelines are flexible to meet the unique characteristics and needs of different areas, while providing a common direction.

The guidelines are appropriate for use with the wide range of toll-related projects that may be under consideration in an area or in various stages of planning, design, construction, and operation. Examples of toll options include building new toll roads, toll bridges, and toll tunnels; converting existing freeways and roadways into toll facilities; incorporating tolling into new or existing managed lanes; and constructing new toll facilities for trucks and commercial vehicles.

A variety of TxDOT districts and divisions and toll entities may be involved in these types of projects. The following toll

entities and existing toll authorities are currently involved in toll projects in the state:

- regional tollway authorities (North Texas Tollway Authority),
- county toll authorities (Harris County Toll Road Authority and Fort Bend County Toll Road Authority),
- the state toll authority (TxDOT's Texas Turnpike Authority (TTA) Division),
- private toll road companies (Camino Columbia, Inc.),
- regional mobility authorities (Central Texas Regional Mobility Authority, and other regional mobility authorities that may form in the future), and
- the Transportation and Expressway Authority Membership of Texas (TeamTX), which provides a forum for the discussion of issues, and the exchange of information, ideas, and experiences.

The guidelines are divided into the following eight sections.

- [Guiding Principles for Cooperation and Coordination](#)
- [Planning](#)
- [Environmental Review](#)
- [Funding and Financing](#)
- [Design](#)
- [Construction](#)
- [Monitoring and Evaluation](#)
- [Management and Operation](#)

Katy Freeway (I-10 West) Managed Lanes

- Memorandum of Understanding - TxDOT, METRO, Harris County - 2002
- Tri-Party Agreement - TxDOT, FHWA, Harris County - 2003





Guiding Principles for Cooperation and Coordination

TxDOT—Regional Toll Road Authority Cooperation and Coordination

The following principles provide overall guidance for TxDOT cooperation and coordination with toll authorities and RMAs. The guiding principles, which support TxDOT's mission and vision, establish the basis for ongoing cooperation and coordination with these authorities.

- **Guiding Principle 1** — TxDOT, toll authority, and RMA cooperation and coordination will support and promote a safe, efficient, and effective transportation system in the state for the movement of people and goods.
- **Guiding Principle 2** — TxDOT recognizes and acknowledges the differences in business philosophies, roles, and responsibilities among the department, toll authorities, and RMAs. Cooperation and coordination will build on the strengths and unique features of TxDOT, toll authorities, and RMAs.
- **Guiding Principle 3** — TxDOT, toll authority, and RMA cooperation and coordination will seek to maximize and leverage financial and staff resources, including the use of federal funds.
- **Guiding Principle 4** — TxDOT recognizes and acknowledges the need for different approaches to address the issues and opportunities in various parts of the state. The guidelines provide flexibility in cooperation and coordination among TxDOT, toll authorities, and RMAs, as well as working with transit authorities, metropolitan planning organizations (MPOs), and local jurisdictions.



RIGHT-OF-WAY
LOOP 810 EASTBOUND
LOOP 810 WESTBOUND

SH 288 SOUTHBOUND
SH 288 NORTHBOUND
DISTURBED AREA

FRONTAGE ROAD

END OF PROJECT



The following section provides direction in considering toll facilities during the transportation planning process. The guidelines are appropriate for use in regional, metropolitan, corridor, area, and project planning processes. The guidelines support existing federal, state, and local planning requirements and studies. The lead agency will depend on the nature and scope of the planning process or project. In addition to TxDOT, toll authorities, RMAs, MPOs, and metropolitan transit agencies may have the lead role or a supporting role in a planning study.

- Match the planning process to the purpose, need, and scope of the project or study. Toll facilities may be considered in a variety of state, metropolitan, and local planning studies. These studies may include federally required state and metropolitan long-range transportation plans, corridor or area plans, and project plans. The analysis techniques and the level of detail will vary with the type of planning study. More detailed assessments are usually done at the corridor, area, and project levels. **In addition, there is a difference between these types of planning studies and the traffic and revenue studies conducted by toll authorities and RMAs. The traffic and revenue studies serve a different purpose and audience.** The level of detail and the scope of toll-related traffic and revenue studies range from preliminary toll viability studies to detailed comprehensive finance grade or investment grade traffic and revenue studies. The audiences for these studies are the bond market and other financing entities. As a result, the planning assumptions, input values, and time horizons may vary between traditional planning studies and traffic and revenue studies.
 - are toll viable in terms of generating sufficient revenues to meet project objectives (e.g., paying off bonds for construction, supporting operations and maintenance);
 - have right-of-way dedicated, donated, or available;
 - have public support;
 - have political support;
 - are part of a system; and
 - are included in state, regional, or local plans.
- Give consideration to including a toll option as one of the alternatives in planning studies. Most planning studies include a “no action” alternative. It is suggested that a toll option be included in planning studies as standard practice. Typically, the cross section and the general operation for toll and non-toll facilities are relatively similar. There are issues that are unique to toll alternatives, however. Examining these potential issues during the planning process saves time later if a toll option is added as an alternative or selected as the preferred alternative. The following issues are typically considered with toll options:
 - environmental justice and social issues associated with travelers’ abilities to pay tolls;
 - light and noise associated with toll plazas or toll payment facilities;
- The planning process should consider the characteristics associated with best candidate toll projects. These characteristics include projects that:
 - serve an identified public need;



- additional right-of-way for toll plazas or toll payment facilities;
- air quality, especially in air quality non-attainment areas;
- changes in access;
- traffic diversion due to tolls;
- public/political support or opposition; and
- duration of construction.
- The development of appropriate memoranda of agreement (MOA) is critical to coordination and should be initiated during the planning process if it appears that a toll option is a viable alternative. These documents identify the roles and responsibilities of TxDOT, toll authorities or counties, RMAs, the Federal Highway Administration (FHWA), transit authorities, and other agencies. Multiple MOAs may be used to address planning, funding, designing, constructing, and operating a project, or

all of these elements may be included in one document. An MOA typically includes the following sections.

- Witnesseth—describes the legislative and statutory responsibilities of the agencies and authorities, the project, and the intent of the agreement.
- Agreement
 - funding responsibilities,
 - design responsibilities,
 - operation and maintenance responsibilities,
 - environmental commitments to address identified issues,
 - non-compete clause, and
 - dispute resolution.
- Signatures
- Attachments or exhibits—may include project maps, project descriptions, schedules, reimbursement plans, and other information.

- TxDOT districts or divisions may wish to consider identifying or creating a staff position for an engineer or planner with toll-related expertise. This approach would develop and maintain toll expertise in the district or division, provide a common link among toll projects, and establish an ongoing point of contact with toll authorities and RMAs. These individuals would act as liaisons with toll authorities, RMAs, and other TxDOT districts and divisions. The general types of skills for these positions include an understanding of toll finance and operation, the environmental requirements and project development process, and other related topics.
- Coordinate the planning process with appropriate agencies, governmental units, and groups. Depending on the area, these organizations may include the MPO, cities and counties, transit agencies, and other governmental units. Close coordination with the MPO is critical to ensure that possible projects are considered and included in the required transportation improvement program (TIP) and other metropolitan plans. Toll projects also need to be coordinated with TxDOT and the state transportation improvement program (STIP).
- Give consideration to the roles and responsibilities for operation and enforcement of a toll project during the planning process. For example, having a toll authority operate a project and provide the “back room” services may be the most cost-effective approach. Give consideration to the toll payment methods and ensuring interoperability with other toll facilities in the region and state.
- TxDOT districts and the Texas Turnpike Authority Division should coordinate on interaction with existing and emerging RMAs. The TTA Division is the responsible office for providing technical assistance and support to RMAs. Districts also have a role to play in coordinating with RMA projects. The interaction among a district, TTA, and an RMA may depend on a number of factors including the need and scope of possible projects and staff availability. Staff from the TTA Division and districts should develop appropriate working relationships based on these factors and promote ongoing communication and coordination.
- Give consideration to establishing a TxDOT toll-related coordination group or committee. This group would be composed of representatives from districts with active or potential toll projects and divisions with a role in toll projects. This group would meet two to four times a year to discuss issues of mutual concern, changes in legislation or policies, and other related topics. The group would also help coordinate TxDOT efforts with toll authorities, RMAs, and TeamTX.

EXACT - CHANGE

CARS ONLY
NO TRAILERS

\$ FULL SERVICE \$

EZ TAG ONLY
NARROW LANE CARS ONLY

Brlar Forest
Dr ↗
EXIT ONLY

\$1.00
MINIMUM

\$1.00
MINIMUM

W Belmer Rd Va
N Diamond Ave Va

STOP

STOP

Environmental Review

TxDOT—Regional Toll Road Authority Cooperation and Coordination

Confusion may arise in determining the environmental requirements and the appropriate environmental review process for toll projects. The requirements for environmental review and public participation typically will depend on two factors—the source of project funds and when tolling is considered in the project development process. Follow appropriate federal and state legislation in the environmental review process. Some toll entities, such as the Central Texas Regional Mobility Authority, have taken formal action to follow federal and state environmental requirements regardless of the source of funds.

The U.S. Department of Transportation/Federal Highway Administration regulation 23 CFR, Chapter 1, Subchapter 11, Part 771, *Environmental Impact and Related Procedures*, prescribes the policies and procedures of FHWA and the Federal Transit Administration (FTA) for implementing the National Environmental Policy Act (NEPA) of 1969 as amended and the regulation of the Council on Environmental Quality (CEQ), 40 CFR, Parts 1500 through 1508. The public involvement requirements set forth by TxDOT must also be followed. The requirements contained in the Texas Administration Code (TAC), Title 43, Part 1, Chapter 2, *Environmental Policy*, must be followed for projects receiving state highway funds and/or that will become part of the state system. This chapter includes TxDOT’s memorandum of understanding with the Texas natural resource agencies related to project reviews. TxDOT’s *Environmental Manual* provides further direction on the process and the activities to be completed.

The following guidelines help provide direction on the environmental review processes and requirements associated with different types of toll projects and outlines approaches to help coordinate and streamline the environmental process. The Environmental Affairs Division can provide more detailed direction on specific projects.

- **Source of Funds.** The following guidelines provide direction on the appropriate environmental review and public involvement process based on the source of funds for a project.
- **Toll projects involving state and/or federal funds.** These projects must follow the applicable state and federal environmental review, approval, and permitting requirements, and the public involvement process.
- **Toll projects with no federal and state funds and with no connection to a state roadway.** Although a project meeting these criteria is unlikely, it would theoretically not have to follow the NEPA process unless the authority or private developer elects to. These projects would have to address other federal and state environmental requirements, however, such as those dealing with wetlands.
- **Toll projects with no federal and state funds but with connection to an Interstate highway or the state highway system.** FHWA regulation 23 CFR; TAC Title 43, Part 1, Chapter 2 and other federal and state environmental and public involvement requirements must be followed for the connection or interchange points. FHWA and TxDOT define the scope of this area to be the “touchdown” points of the connection.

■ When Tolling Is Considered. The environmental review and public participation requirements may also be influenced by when tolling is considered in the project development process. The long-range transportation plan (LRTP), TIP, and STIP must match the project resulting from an environmental review and public involvement for FHWA and TxDOT approval. If the recommended project does not match, these documents will need to be updated and a new conformity determination in air quality non-attainment areas would need to be made. The following examples provide more guidance on possible procedures based on when tolling is considered in the project development process.

■ Known Toll Road. If it is predetermined that a facility will be tolled, the project purpose and need can be structured to address only toll alternatives. The environmental review and public involvement process are conducted based on the project being a toll road.

■ Non-Toll or Toll Road Possible.

When it is not known if a facility will be a non-toll road or a toll road, both options should be studied in the environmental review. The purpose and need is structured to support both types of facilities and both free and toll alternatives are considered. The environmental review and public involvement process examines both types of facilities and evaluates the benefits and the limitations of the alternatives. If the approval is based on one scenario and it is subsequently determined to implement the other scenario, then an amended approval could more easily be provided since the environmental review included both options. However, the LRTP, TIP, and STIP will need to be revised before the amended approval could be issued.

■ Change from Non-Toll to a Toll Road after Environmental Approval, but Prior to Construction.

In this situation, additional environmental review and public involvement would be needed, with appropriate revisions to the LRTP, TIP, and STIP, including a new conformity determination, as applicable, before the environmental approval.



■ **Change from Non-Toll to Toll Road during Construction.** Additional environmental review and public involvement would be needed along with related revisions to the LRTP, TIP, and STIP. These activities and related approvals would need to be finalized prior to completing construction of the toll road.

■ **Change from Operating Non-Toll Road to Toll Road.** Environmental studies and public involvement should be part of a process for considering changing an operating non-toll road to a toll road. Environmental approvals may be needed.

■ Consider identifying the environmental review requirements and process in a multi-agency MOA. The roles and responsibilities of the various agencies and authorities should be identified, including which group will carry out any necessary environmental permit commitments.

■ Coordinate the environmental process to balance the need to ensure a comprehensive assessment of possible environmental issues with the desire to meet project schedules. Concurrent reviews of environmental documents by TxDOT districts and divisions, the state resource agencies, and FHWA can help streamline the review process.



Patrons

With quarters or
complaints are to be
given this new number
effective immediately
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6 A

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Funding and Financing

TxDOT—Regional Toll Road Authority Cooperation and Coordination

Traditionally, toll authorities finance projects by issuing bonds, which are paid back through toll revenues. While bonds remain the primary source of funding for toll projects, other financing methods are being used, including federal and state funds or loans. The mix of bonds, toll revenues, and various federal, state, and local programs is becoming more common in financing toll projects. The following elements provide guidance in coordination and cooperation among TxDOT, toll authorities, and RMAs on funding toll projects.

■ **Identify Best Funding Sources.**

Determine the best funding approach based on the project characteristics, available funding options, available resources, and the project objectives. The optimum funding approach will depend on the roles, responsibilities, and legislative authority of TxDOT and toll entities involved in a project. In general, toll entities will use bonding and toll revenues as their main funding mechanisms, supported by other sources. TxDOT relies primarily on federal, state and local funds. The focus for a specific project should be on matching the best mix of these sources, along with the use of exclusive or comprehensive development agreements and other innovative approaches to meet the objectives of the projects.

■ **Leverage Federal Funds.** Give consideration to leveraging federal funds for toll projects. Leveraging may include the use of innovative federal loan programs and other innovative approaches.

■ **Identify Best Approach for Obtaining Right-of-Way.**

Give consideration to the best approach for obtaining needed project right-of-way. TxDOT, toll authorities, and RMAs have different authority and different policies related to obtaining right-of-way based on state legislation. Give consideration to the entity with the ability to obtain the needed right-of-way in the most effective and efficient manner.

■ **Identify Funding in MOA.** Consider using an MOA on toll projects involving public and private funding to identify the sources of financing, the roles and responsibilities of the participating agencies and authorities, billing or payment schedules, and other related elements. The MOA can serve as a guide for the financing aspects of a project.



In general, TxDOT and toll authorities tend to use similar design standards, based on the TxDOT *Design Manual*, and plans, specifications, and estimates (PS&E) processes. Legislation approved in 2003 gives TTA and RMAs expanded authority in the use of exclusive or comprehensive development agreements, which may complicate the coordination of design and construction. The following elements provide guidance in coordinating the design of toll projects.

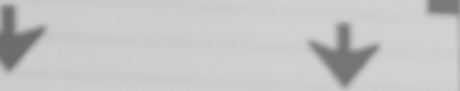
- The TxDOT *Design Manual* and the *Manual on Uniform Traffic Control Devices (MUTCD)* should be used as the basis for design of toll facilities. The *Design Manual* does not include guidance on the design of toll plazas or other toll payment infrastructure elements, however. TTA is developing prototype designs for different types of toll payment and infrastructure elements that will provide guidance for districts and RMAs. Possible areas of special concern for coordination among TxDOT and toll entities include the geometry of connecting roads and interchanges, the use of minimum or desirable design standards, and signing. All groups should try to identify possible issue areas early, so that adequate time is available for review and resolution.
- Coordinate the design review process to balance the need to provide adequate time for review, while expediting the review process. Consider concurrent reviews by TxDOT and FHWA.
- Consider using an MOA to outline the roles, responsibilities, and review process for design of a toll facility and the design of connections to state and local roadways.



Cooperation and coordination among TxDOT, toll authorities, and RMAs are critical during construction of a toll project. Ensuring a high-quality facility as well as the safety of construction workers and the traveling public are important. Minimize possible negative impacts on traffic and phase construction activities to coordinate with other projects. The following elements provide guidance for coordinating construction activities on toll projects.

- Coordinate the preparation of bid documents with toll authorities and RMAs as appropriate on a project. For example, contract incentive/disincentive amounts may need to account for time-sensitive aspects of bond funding, such as capitalized interest and lost revenues due to construction delays. Consider the potential need for conflict resolution to keep construction underway on a project at this time.
- Toll authorities currently purchase TxDOT-approved materials. This approach provides benefits to the toll entities, helps ensure the use of approved materials, and provides common elements to the traveling public. Continue to support and encourage the purchasing of TxDOT-approved materials.
- In some instances, toll authorities have used TxDOT materials testing facilities. This approach provides benefits to toll authorities, helps ensure that materials meet specifications, and provides common elements to the traveling public. Encourage toll authorities to use TxDOT testing facilities on toll projects.
- Coordinate construction activities among TxDOT, toll authorities, RMAs, local jurisdictions, and transit authorities to minimize the possible negative impacts on the traveling public and to ensure the safety of construction workers and motorists. Coordinating public information is an important element of this process. Individuals to involve in coordinating construction activities include the TxDOT area engineer, project manager, and public information officer, as well as their counterparts at the toll authority, RMA, and local jurisdiction.

E TAG ONLY



EZ TAG ONLY



Monitoring and Evaluation

TxDOT—Regional Toll Road Authority Cooperation and Coordination

Cooperation and coordination among TxDOT, toll authorities, and RMAs continue to be important once a toll project is in operation. The focus of this coordination changes to monitoring, managing, operating, and maintaining the toll facility over the life of the project, however. The following element provides guidance in coordinating monitoring and evaluation programs.

- Consider coordinating data collection activities among TxDOT, toll authorities, MPOs, and RMAs. Ongoing monitoring programs are important to help determine if project objectives are being met. The focus of the monitoring efforts may be slightly different among agencies and authorities, however. Toll authorities, which depend on toll revenues generated by users to repay bonds, tend to focus on toll payments. TxDOT and MPO monitoring programs focus primarily on vehicle volumes.

Both of these approaches provide useful information on the use of facilities. In addition, information on crashes and citations is important to ensure the safe operation of a facility. It is suggested that TxDOT, toll authorities, MPOs, and RMAs establish and maintain coordinated monitoring programs and that the information generated from these programs be shared and evaluated on a regular basis.

ON EMERGENCY



TEAM

1500

Management and Operation

TxDOT—Regional Toll Road Authority Cooperation and Coordination

Cooperation and coordination among TxDOT, toll authorities, and RMAs are critical to the ongoing management and operation of a toll project. The following elements provide guidance in management and operation of toll facilities and the connections with state roadways.

- Consider the policies TxDOT, toll authorities, and RMAs will use to allow access on different types of facilities. Access policies and treatments will influence the operation of the toll facility and adjacent and connecting state roadways.
- Give consideration to maintenance agreements on toll projects and coordinating maintenance activities among TxDOT, toll authorities, and RMAs. Toll authorities may benefit from contracting with TxDOT for maintenance.
- Outline the roles, responsibilities, and funding for management, operations, enforcement, and maintenance activities in an MOA or other document.
- Consider including toll agency and RMA personnel in transportation management centers (TMCs) and other operations centers. TxDOT, toll authorities, and RMAs can all benefit from the co-location of personnel in centers and from the closer coordination of daily operations and emergency response that can result from the location of personnel from all agencies in a TMC. This coordination is especially critical if toll facilities are part of an emergency evacuation route system.



**THANK
YOU**

Summary

TxDOT—Regional Toll Road Authority Cooperation and Coordination

Use of these guidelines by TxDOT staff and personnel at regional toll authorities, RMAs, and other groups will help ensure that toll facilities, the Interstate system, and the state highway system provide for the safe, efficient, and effective movement of people and goods. Enhanced cooperation and coordination among all groups will help address traffic congestion, mobility, and accessibility concerns throughout Texas.

The use of these guidelines will provide numerous benefits. The guidelines enhance a common approach, while providing flexibility to meet the needs and the unique characteristics of different parts of the state. Use of the guidelines will also help groups avoid “reinventing the wheel” as they move forward with toll projects. Ultimately, the guidelines will assist all groups as they maximize resources and expedite projects to address congestion, accessibility, and mobility concerns throughout the state.

For More Information

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