

Interchange and Roadway  
Cost Sharing Policy

Illinois Tollway

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## I. INTRODUCTION

In 2007, the Illinois State Toll Highway Authority (the “Tollway”) issued an update to its ten-year capital plan, *Open Roads for a Faster Future*. The update was designed to address traffic congestion and infrastructure needs. The plan prioritized major system improvements, including the reconstruction and widening of large portions of the system. As part of this system-wide program, the Tollway has made significant investments in its bridges, plazas and interchanges. In 2011, the Tollway adopted the *Move Illinois* Program to further invest in the existing system, as well as to expand the system to provide additional congestion relief and enhance economic development in northern Illinois.

In addition to these improvements, the Tollway receives numerous requests for interchange and roadway projects. Since these requested projects are not specifically identified in the current capital plan, they are generally considered lower priority projects for the Tollway. However, the *Move Illinois* Program allocates funding for interchange access expansion. In an effort to respond to these requests in a clear and consistent manner, the Tollway developed and updated this cost sharing policy (the “Policy”). The purpose of the Policy is as follows:

- (1) *Memorandum of Understanding*. The Policy explains the Memorandum of Understanding (MOU) requirement. The Tollway will not initiate consideration of any project proposal without being provided with a signed MOU. It is understood that the MOU is meant to serve as an outline of the parties’ understanding of the proposed interchange/roadway improvements and is not a binding commitment on the part of the Tollway to construct the improvements. The parties’ final understanding concerning construction of the interchange/roadway improvements will be reduced to writing in the form of an Intergovernmental Agreement (IGA) which is subject to the approval of the Board of Directors of the Tollway.
- (2) *Application Requirements*. The Policy outlines application requirements for local requests of new or improved interchanges/roadways. Local requests may come from municipalities, townships, counties, the Illinois Department of Transportation (“IDOT”), or other governmental agencies. The application requirements include an explanation of purpose and need, a traffic analysis, and a financial plan. The applicant is responsible for all costs associated with producing the requirements as detailed in section III below.
- (3) *Evaluation and Prioritization*. The Policy explains how the Tollway will evaluate and prioritize requests. In evaluating the requests, the Tollway will consider issues such as traffic impacts, economic development, revenues, investment recovery, roadway operations, existing access, safety, and funding availability.

The Tollway is open to working with government agencies to foster regional economic development. However, the financial resources of the Tollway are limited. It is in this context of limited resources that the Tollway seeks to develop a fair, consistent and streamlined approach that: (a) is responsive to local governments and the region, (b) results in the efficient allocation of Tollway resources, and (c) maintains the current limited access system that allows for safe, high speed travel.

This Interchange and Roadway Cost Sharing Policy replaces and updates the Policy that was adopted in November 2007.

## **II. MEMORANDUM OF UNDERSTANDING REQUIREMENT**

The analysis of interchange/roadway requests can require considerable staff time and resources on the part of the Tollway. Given these costs, the Tollway needs to determine the applicant's level of commitment prior to embarking on any analysis. To this end, the Tollway requires a Memorandum of Understanding (MOU). The MOU lays out applicant and Tollway commitments to the proposal. The applicant must agree to perform the analysis as detailed in the Policy below and must have a preliminary funding plan for financing the local share of the project costs. This plan must explicitly state the revenue sources to be used (e.g., property tax revenue, bond funds, sales tax revenue, tax increment finance revenue, development impact fees, etc.). Exact project cost estimates, projected maintenance costs, and actual local contributions will be determined in subsequent steps of the process. MOUs that fail to present a preliminary cost estimate and fail to identify corresponding funding sources will not be given consideration. The plan must also address ongoing maintenance expenses in terms of local and Tollway responsibilities. The MOU must be signed by both the applicant and the Tollway prior to the Tollway performing any work on the proposal.

## **III. APPLICATION REQUIREMENTS**

Once the MOU has been signed by both the applicant and the Tollway, the applicant may begin work on the written request. The applicant is responsible for all costs detailed in this written request, which must include:

- (A) a detailed description of project need;
- (B) a traffic impact analysis; and
- (C) a financing plan for both the construction and maintenance of the project.

### **A. *Project Need***

The statement of need for the project should cover the following elements:

#### **1. Traffic Benefits**

This section should explain how the proposal will improve traffic flow both off and on the Tollway system. Improvements in safety and operations should be noted. This section is intended to provide a general overview of traffic issues and should not exceed three paragraphs. A more detailed traffic analysis is required in subsequent sections.

#### **2. Economic Development Benefit**

If the project is proposed for economic development reasons, the applicant should explain the economic benefits. This improvement should be consistent with all local, county and regional economic development plans. Land use and zoning issues, as well as existing, committed and proposed development should be discussed. As part of this plan, the applicant should estimate the new jobs and new businesses created or supported as a result of this proposal.

The applicant must demonstrate that the proposal is consistent with local agency comprehensive plans, as well as county-wide and regional lane use plans, such as

the Chicago Metropolitan Agency for Planning's (CMAP) Go To 2040 Plan or the Rockford Metropolitan Agency for Planning's (RMAP) Long Range Transportation Plan.

**3. Alternatives Analysis**

The applicant should explain why its proposed improvement is preferred over other alternatives such as transit, a non Tollway route, or a different land use.

**4. Local Support**

To be given consideration, the applicant must submit letters of written support or resolutions from the municipalities, townships, and counties that would be impacted by the proposal. After consultation with the applicant, the Tollway shall establish the boundaries of the impacted area. In addition, the application must include letters of support from all local, state and federal elected officials who represent the impacted area. Any known opposition from governments, elected officials or community groups to the proposal must be disclosed. Potential opponents should also be identified.

***B. Traffic Analysis Report***

One of the primary goals of the Tollway is to improve system performance by reducing traffic congestion, reducing queue lengths, minimizing conflicts, and generally fostering the free flow of traffic both on the system and at system interchanges. Applicants need to provide a Traffic Analysis Report ("Report"), which addresses these issues. The following sections detail the Report requirements.

**1. Requirements for New or Expanded Interchanges**

**A) FUTURE TRAFFIC FORECASTS**

In terms of traffic volumes, the applicant should provide Design Hour Volumes (DHVs) and Average Daily Traffic (ADTs) for the opening year, the design year and an interim planning year as specified by the Tollway. The DHVs and ADTs should cover both the Tollway roads and any affected local roads. The applicant may also elect to provide data on travel times, delay and accidents, if relevant.

In addition, the applicant will provide a "no-build" scenario for opening year, the design year and an interim planning year. The applicant will then compare the traffic forecasts as identified above to the "no-build" scenario.

**B) TYPE OF INTERCHANGE**

The applicant must submit conceptual horizontal and vertical geometrics for the proposed interchange showing the location and the type of interchange. Full engineering analysis is not required, but the applicant must demonstrate that the interchange is physically feasible at the designated location.

### **C) LEVEL OF SERVICE**

The applicant will perform a Level of Service (LOS) capacity analysis on: 1) the Tollway mainline, 2) the entrance ramp junction, 3) the exit ramp junction, and 4) the ramp intersection with the cross street. The LOS estimates should be provided for the opening year, the design year and an interim planning year. To be considered, the proposed interchange should perform at a minimum Level of Service = D. In certain instances, the Tollway may consider proposals that do not meet the minimum LOS = D, if the proposal improves system performance. The applicant should make a best effort at maintaining lane balance and should address operational concerns.

In addition, the applicant will provide a “no-build” scenario for opening year, the design year and an interim planning year. The applicant will then compare the Level of Service estimates as identified above to the “no-build” scenario.

### **D) CAPACITY ANALYSIS**

The applicant must illustrate that adequate capacity is provided at the first access point on the cross street upstream and downstream of the proposed interchange. The required storage length for through and turning traffic should be calculated and compared to the required minimum distances. The longer distance will be used to locate the first access point to provide space for the Tollway exiting traffic onto the cross street and to protect the service interchange from traffic congestion. The required storage shall be calculated using the information provided in Table 1 of the Appendix.

### **E) ACCESS CONTROL**

The applicant must submit an access control plan as part of the Report. The plan should address access control issues for both Tollway and local road systems.<sup>1</sup> If any local road improvements are needed for traffic operations, these improvements must be explained under the plan and funding sources for these improvements must be identified. This plan should cover a one mile distance on each side of the interchange. The plan needs to include local roadway connections that consolidate access between adjacent developments. Proposed interchanges must minimize traffic conflicts between the interchange ramp and the first cross street.

The limit of access control must be defined to provide adequate distance for turning traffic onto the first access point from the ramp intersection along the cross street. The access control limits should be measured from the end of the radius return at the ramp intersection or from the taper point of a free flow ramp to the start of the radius of return of the first access point. The access control limits will be measured from the furthest ramp from the Tollway along the cross street. The recommended minimum access control distance is shown in Table 2 of the Appendix.

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<sup>1</sup> Access control is the condition where a public authority regulates the rights of abutting owners to have access to and from a highway.

In certain instances, the Tollway may approve interchanges that do not meet the minimum distances, if operational improvements can be demonstrated.

#### **F) INTERCHANGE SPACING**

The applicant must address interchange spacing in the Report. Since, the distance between successive ramps affects the capacity and operations of the Tollway mainline, the proposed interchange spacing must protect the capacity, safety, and efficiency of the Tollway through-traffic on the system. The interchange spacing must allow for an adequate distance between interchanges to provide for the safe merging and diverging of traffic with a minimal interruption of the through-traffic flow. The interchange spacing must also facilitate safe weaving maneuvers between the entering and exiting traffic and allow roadway signs to operate effectively.

The spacing between interchanges should be maintained as follows: at least one mile in urban areas, two miles in suburban areas, and three miles in rural areas.<sup>2</sup> However, existing and future conditions along the Tollway system should be factored into interchange spacing decisions. The Tollway may consider interchange proposals that are spaced more closely, if the proposal improves traffic flow and Tollway operations. No interchanges will be allowed within the influence (upstream or downstream) of any mainline plaza.

The design process for new interchanges and access points must follow typical Tollway design procedures and processes. The applicant should use the latest versions of the traffic analysis software as approved by the Tollway.

Ramp queue detection and signal interconnection within one mile will be a requirement of all new/modified interchanges.

#### **G) STRATEGIC REGIONAL ARTERIALS**

The applicant will identify if the interchange is located on a strategic regional arterial (SRAs).<sup>3</sup> Proposed interchanges that are located on SRAs may be given preference, since SRAs facilitate regional travel.

#### **H) DESIGNATED TRUCK ROUTE**

The applicant will identify if the interchange provides access to a designated truck route. The applicant should also identify Truck Route Classification and weight restrictions on surrounding or adjacent roads. Interchanges that provide access to designated truck routes or a network of roads that support and are designed to accommodate freight may be given preference, since these roads

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<sup>2</sup> These desirable spacings are suggested in the Policy on Geometric Design of Highways and Streets by the American Association of State Highway and Transportation Officials (AASHTO) and the Bureau of Design and Environmental Manual of the Illinois Department of Transportation (IDOT).

<sup>3</sup> The Strategic Regional Arterial (SRA) system is a network of approximately 1,500 miles of existing roads in northeastern Illinois. The SRA system, which was first designated as part of the 2010 Transportation System Development Plan, was adopted by regional planning agencies and continues as a component of the 2020 Regional Transportation Plan. SRAs are intended to supplement the existing and proposed expressway facilities by accommodating a significant portion of long-distance, high volume automobile and commercial vehicle traffic in the region.

support the efficient movement of freight and facilitate economic development.

**I) RAMP TOLL PLAZAS**

The Tollway will define the location and design of any required ramp plaza. The applicant should use its best judgment in determining whether a ramp plaza should be assumed in all of the analysis. The Tollway reserves the right to ask the applicant to resubmit its proposal with new ramp tolling conditions.

**J) ACCESS JUSTIFICATION REPORT**

The applicant should note if the proposed interchange requires an Access Justification Report (AJR) as required by the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHWA).

**K) ENVIRONMENTAL ANALYSIS**

The applicant should analyze the environmental and drainage conditions to identify any remediation or permitting issues necessitated by the project. The applicant should also provide a landscaping plan for the final project and include the costs of this plan in the overall project budget.

**L) NOISE ANALYSIS**

The applicant should estimate the noise impact on the surrounding communities and identify any sound walls or other abatement needed as a result the project. The Tollway's Traffic Noise Study and Abatement Policy shall be used for the analysis.

**M) RIGHT-OF-WAY IDENTIFICATION**

The applicant should identify any Right-of-Way (ROW) needed for the proposal and include an estimate for acquisition. As part of the final IGA terms, the Tollway may require that the applicant acquire and or preserve ROW needed for future interchange improvements. For example, if the Tollway agrees to support a partial interchange, as part of that agreement it may require that the applicant preserve the ROW needed for the eventual construction of the full interchange. If the applicant owns or has rights to necessary ROW, the project may receive preference.

**N) OTHER**

The Tollway may ask the applicant to address additional operational issues identified in its review of the report, such as: lane balance, route continuity, ease of operations, and driver expectancy. If required, the applicant will submit the additional analysis under a separate letter to be appended to the original Report.

If appropriate, the applicant may provide additional "no-build" scenarios for issues noted in this section.

## **2. Requirements for New or Expanded Roadways**

### **A) FUTURE TRAFFIC FORECASTS**

In terms of traffic volumes, the applicant should provide Design Hour Volumes (DHVs) and Average Daily Traffic (ADTs) for the opening year, the design year and an interim planning year as specified by the Tollway. The DHVs and ADTs should cover both the Tollway roads and any affected local roads. The applicant may also elect to provide data on travel times, delay and accidents, if relevant.

### **B) INTERCHANGE ANALYSIS**

The applicant should provide all the information listed above in the Requirements for New or Expanded Interchange section.

### **C. Financial Plan**

The applicant must provide a financial plan for funding the project. The plan will have two sections: 1) project costs (uses), and 2) project funding (sources). The first section will provide a preliminary estimate of the project costs. This estimate, or budget, should include all project costs, including construction, Right-of-Way (ROW) acquisition, environmental mitigation/remediation, drainage costs, noise abatement, landscaping costs, any capitalized interest, and all soft costs. The applicant must also provide an annual estimate of any maintenance/operation costs resulting from the proposed project.

The second section should provide a table, which identifies the source of funds used to pay for the project, as well as projected duration for project financing and proposed reimbursement schedule. If multiple funding sources will be used they must be identified. Projects using federal funding may require identification of a lead implementation agency other than the Tollway and may also require project development in accordance with the most current federal funding criteria. As noted in earlier sections, the Tollway has limited resources to contribute to new interchange projects. Therefore, the applicant must agree to share a portion of the cost. The Tollway's cost sharing requirements are as follows:

#### **1. Requirements for New or Expanded Interchanges**

##### **A) APPLICANT SHARE**

The applicant must provide not less than 50% of the project cost.<sup>4</sup> The applicant shall make its financial contribution to the project according to the

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<sup>4</sup> The applicant may provide its share in cash or through a combination of cash and "in-kind" contribution. In-kind contribution may include, but not be limited to: design costs, signal interconnects, intersection improvements, utility connections, noise walls, pedestrian access, ROW, design services, environmental remediation services, landscaping enhancements, drainage improvements or other elements approved by the Tollway. The in-kind contribution will be valued at its actual cost(s) or at the unit prices provided for in the construction contract. The in-kind contribution must be located within one mile of the Tollway and must meet Tollway design specifications. The in-kind contribution is subject to negotiation, but may not include improvements to local roads that are outside the project limits.

schedule defined in the final Intergovernmental Agreement (IGA). The following standard schedule will be included in all IGAs:

50% at “Notice to Proceed”  
25% at 50% completion  
25% at 100% completion

Because of the substantial costs that the Tollway will incur in evaluating the applicant’s request and in constructing the interchange/roadway improvements, the applicant agrees that if the applicant fails to meet the terms of the contribution schedule as defined in the IGA, the applicant will have breached the terms of the IGA. Further, the applicant agrees that if it is found by a court of competent jurisdiction that the applicant has breached the IGA, then, in addition to the unpaid balance, the applicant shall pay the Tollway pre-judgment interest on the remaining unpaid balance at a rate of 5%. The Tollway reserves the right to take appropriate legal action and may opt to delay or cancel the project. The Tollway may evaluate and establish toll rates that are higher than adjacent interchanges to recover project costs. The Tollway may also consider a corridor approach and adjust toll rates at adjacent interchanges if supported by the surrounding communities. The corridor approach will require public hearings in accordance with the Toll Highway Act.

## **B) TOLLWAY SHARE**

The Tollway will contribute the remaining share of the cost, but will proceed with the project only if it can recover these costs over a 10-year period through toll revenue. The cost recovery will be based on an estimate of net new toll revenue produced by the new interchange. Net new toll revenue factors in diversions off the system or reductions at surrounding interchanges that could result from the project.

In all instances, the Tollway reserves the right to negotiate the local share percentage. If the proposal provides significant operational, environmental, safety or economical improvements to the system, the Tollway may elect to fund a relatively higher proportion of the project costs.

Additionally, projects may be considered for a greater level of Tollway contribution should any of the following apply:

1. Revenue projection exceed 50% of the project costs over the initial 10-year period
2. Proposed access completes an existing partial interchange, provides new access to an SRA or designated truck route
3. Project is located in a rural area and recovers the Tollway investment through net new revenues over a 15-year period
4. Applicant owns or has rights to a majority of the necessary ROW for the project

5. Applicant agrees to finance the project with Tollway reimbursement
6. Access serves multiple regional purposes such as, transit access, crash investigation site, commercial parking access, etc.

The Tollway's Traffic Engineer shall monitor the Tollway's receipt of actual revenues on an annual basis. Should the actual toll revenues fail to meet the estimates over the time period specified in the Intergovernmental Agreement, the applicant will fund the shortfall within a two-year time period per the IGA. If the applicant fails to fund the shortfall within the two year period, the Tollway reserves the right to take appropriate legal action.

## **2. Requirements for New or Expanded Roadways**

### **A) APPLICANT SHARE**

If the Tollway elects to build a new roadway or to expand an existing roadway, the local share will be the cost of the associated interchanges or a portion of the cost necessary to ensure the project is financially viable.<sup>5</sup>

## **IV. TOLLWAY METHOD FOR SELECTION**

### **A. *Traffic Analysis***

While the Tollway is interested in providing new services and attracting new patrons, the Tollway is also concerned about being able to continue providing a high level of service to the existing patrons. To ensure that there will be no negative impacts on system performance, the Tollway will have its Traffic Engineer review the applicant's Traffic Analysis Report. The Traffic Engineer will evaluate the Report in terms of Level of Service, Traffic Forecasts, Capacity, Access Control and other elements as defined in prior sections of this Policy.

In addition, the Traffic Engineer will perform an independent analysis of the proposed improvement to verify the results of the applicant's analysis. The Traffic Engineer will use the Chicago Metropolitan Agency for Planning (CMAP) model and the Rockford Metropolitan Agency for Planning (RMAP) model as the basis for forecasting development trends and traffic travel patterns for the opening year, the design year and an interim planning year as specified by the Tollway.

Finally, the Traffic Engineer will simulate three alternative toll rate scenarios to assess the potential revenue impact of the proposed improvement. Tollway staff will determine the toll rate scenarios in conjunction with the Traffic Engineer based on rate per mile, projected revenue, and operational considerations. The Traffic Engineer will calculate the new revenues, as well as the potential reduction in revenues that could occur at nearby interchanges or system-wide as some users divert to the local roads.

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<sup>5</sup> The applicant may provide its share in cash or through a combination of cash and "in-kind" contribution. In-kind contribution may include, but not be limited to: design costs, signal interconnects, intersection improvements, utility connections, noise walls, pedestrian access, ROW, design services, environmental remediation services, landscaping enhancements, drainage improvements or other elements approved by the Tollway. The in-kind contribution will be valued at its actual cost(s) or at the unit prices provided for in the construction contract. The in-kind contribution must be located within one mile of the Tollway and must meet Tollway design specifications. The in-kind contribution is subject to negotiation, but may not include improvements to local roads that are outside the project limits.

**B. Project Cost Estimate**

The applicant will prepare a preliminary cost estimate for the Tollway's General Consulting Engineer to review. This estimate will include engineering, ROW acquisition, drainage and environmental costs necessitated by the project. In addition to the construction cost estimates, the applicant shall provide an annual estimate of any maintenance/operations costs resulting from the proposed project.

**C. Selection**

The Tollway will evaluate each application in terms of the following categories:

- Economic development benefit
- Regional priority
- Existing access
- Operational effectiveness
- Level of service
- Access control/interchange spacing
- Access to a SRA route or designated truck route
- Urban or rural location
- Environmental impacts
- Project costs
- Future maintenance costs
- Revenue generation

The Tollway will consider each application and provide a written decision within one hundred and eighty calendar days (180) of receipt of the application.

A project's acceptance for further consideration will be authorized by the Tollway's Chief Engineer. The Chief Engineer may: a) accept; b) accept conditionally requiring further study; or c) deny the application. The Chief Engineer reserves the right to reject any proposed project, to stipulate conditions on which further study of a proposed project will be approved, and/or to require that any information submitted be supplemented, completed or clarified before consideration. Authorization of a study of a proposed project does not in any way assure that the proposed interchange/roadway improvements or related access road will be constructed. The ultimate acceptance is contingent upon Tollway Board approval.

**V. INTERGOVERNMENTAL AGREEMENT**

Once the Tollway approves the application, the Tollway will draft an Intergovernmental Agreement (IGA) to formalize the agreement concerning the roadway/interchange improvements. The IGA will specify the applicant's financial, technical, and maintenance commitments to the project. It will also outline the Tollway's recourse, should the applicant fail to meet its commitments. The IGA must be approved by the Tollway's Board of Directors.

The signed IGA must be completed and be fully executed by the parties prior to the Tollway expending any design or construction dollars on the project.

## VI. APPENDIX

### A. *Table 1*

Required Storage Length for Through and Turning Traffic

$L = X/Y$ (in feet)
$X = 50 * (1 + \%T) * DHV$
$Y = NC * NL$
Where:
$\%T$ = percent of trucks in lane group
DHV = vehicles per hour in lane group
NC = number of cycles per hour based on HCS analysis
NL = number of lanes in lane group

### B. *Table 2*

Minimum Required Access Control Distance<sup>6</sup>

Cross Street Design Speed (mph)	Access Control Distance (feet)
30	450
40	625
45	750
50	900
55	1050

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<sup>6</sup> The distance is based on the Design Speed of the cross street.