



State of Indiana
Department of Transportation
Request for Information
Interstate Tolling Project Delivery

Issuance Date: June 2, 2017

Responses Due: Wednesday, June 28, 2017 at 10:00 a.m.
Indianapolis, Indiana Time

I. Introduction and purpose of the RFI

House Enrolled Act 1002, signed by Governor Holcomb on April 27th, 2017, requires the Indiana Department of Transportation (INDOT) to perform feasibility studies and seek a Federal Highway Administration (FHWA) waiver to toll interstate highways. INDOT anticipates pursuing a broad interstate bridge tolling program under 23 U.S.C. 129.

Planning level traffic and revenue analysis (T&R) has been completed for I-65 and I-70. To satisfy HEA 1002, INDOT is contracting with HDR, Inc. to perform planning level T&R for Indiana's interstates, a risk analysis for I-65 and I-70, a statewide tolling survey, and an economic impact analysis. The detailed draft scope of services to be completed by HDR, Inc. is included in Appendix A.

The purpose of this RFI is to generate information to assist INDOT with planning an expeditious and effective tolling program deployment approach that can be expanded in a consistent manner. This RFI is intended solely to obtain such information to assist INDOT on an administrative level. The Department will consider responses to this RFI in connection with the evaluation of delivery and deployment options and considerations.

INDOT plans to advertise an RFP to select several consultant teams to prepare environmental studies and other project development documentation for each of the following interstate corridors: 1) I-65 from I-90 to I-465, 2) I-65 from I-465 to the Ohio River, 3) I-70 from the Illinois State line to I-465, 4) I-70 from I-465 to the Ohio State line, 5) I-65 and I-70 within I-465, and 6) I-94 from the Illinois State line to the Michigan State line. The proposed actions are reconstruction and tolling of applicable bridges within the corridors and expansion of the current four-lane roadway sections to six lanes. Specifically, INDOT is seeking information to determine the best approach to formulating the RFP for the following areas of interest:

1. Asset inventory and management in these corridors
2. Sequence of deployment of tolling among these corridors
3. NEPA documentation type and analytical approach for these corridors, and for the improvements identified above
4. Contracting and procurement approaches
5. Public outreach and information strategy
6. Any other topics the responder believes are relevant to this RFI

Firms who participate in preparation of the NEPA studies will be subject to the policies and restrictions addressed in the INDOT P3 Conflict of Interest Policy if future phases involve public private partnership procurement procedures. The P3 Conflict of Interest Policy is available in the INDOT P3 Implementation Guidelines document available at <https://secure.in.gov/indot/3186.htm>.

II. RFI Questions

All questions, inquiries and/or request for information related to this RFI shall be directed to: ContractsRFP@indot.in.gov. All questions, inquiries and/or request for information relating to this RFI must be in writing and received no later than **10:00 a.m. (Indianapolis, Indiana Time) on Monday, June 26, 2017.**

Questions and answers will be posted on INDOT's website at: <http://www.in.gov/indot/3119.htm>. After the deadline for submitting questions, inquiries and/or request for information passes, INDOT will review the questions, inquiries and/or request for information received, but INDOT reserves the right to determine whether to respond and post the questions and answers on INDOT's website.

INDOT will not respond to telephone or other oral questions, inquiries and/or request for information.

III. RFI Responses

This RFI does not constitute a Request for Qualifications ("RFQ"), a Request for Proposals ("RFP"), or other solicitation, nor does it constitute the commencement of any other type of procurement process. Moreover, it does not represent a commitment to issue an RFQ or an RFP in the future. Therefore, those choosing to respond to this RFI will not, merely by virtue of submitting such a response, be deemed to be "bidders" in any sense, and no such respondent will have any preference, special designation, advantage or disadvantage whatsoever in any subsequent procurement process.

Written responses to this RFI are requested from each respondent no later than **10:00 a.m. (Indianapolis, Indiana Time) on Wednesday, June 28, 2017.**

The page limit for responding to this RFI is 20 pages.

Please submit responses by mail or e-mail to:

Heather McIntosh
Professional Services RFP and PSCS Supervisor
Indiana Department of Transportation
100 N. Senate Ave., N725 Indianapolis, IN 46204
HMclntosh@indot.in.gov

IV. Agency Liability and Confidential Information

This Request for Information (RFI) is only a request for information about potential services and no contractual obligation on behalf of the Indiana Department of Transportation (INDOT) whatsoever shall arise from the RFI process. It does not constitute a Request for Qualifications (RFQ), a Request for Proposals (RFP), or other solicitation, nor does it constitute the commencement of any other type of procurement process. Moreover, it does not represent a commitment to issue an RFQ or an RFP in the future. Therefore, those choosing to respond to this RFI will not, merely by virtue of submitting such a response, be deemed to be "bidders" in any sense, and no such respondent will have any preference, special designation, advantage or disadvantage whatsoever in any subsequent procurement process related to this RFI.

This RFI does not commit INDOT to pay costs incurred in the preparation or submission of any response to the RFI.

By submitting a response to this RFI, you grant to INDOT a fully paid-up, worldwide, royalty-

free, irrevocable, perpetual, and nonexclusive license to use any idea, information, process, or other material submitted with your response, and regardless of whether such ideas, information, processes, or other materials are patented or subject to other laws governing the protection of intellectual property, including, without limitation, trade secret and unfair competition laws. Nothing in this RFI will impair this right of use on behalf of INDOT.

Respondents are advised that materials contained in their responses are subject to the Indiana Public Records Act, IC 5-14-3 et seq., and after the execution of a related contract, may be viewed and/or copied by any member of the public, including news agencies and competitors.

INDOT Tolling Feasibility Report

Proposed Work Plan - DRAFT

I. Proposed Work Plan

The objective of this effort is to evaluate the feasibility of tolling Indiana’s Interstates and develop a report that meets the requirements of Indiana House Bill 1002. The following table presents the requirements for this report and maps them to our proposed work plan.

Required Report Content	Relevant Tasks
1. The economic impact and feasibility of tolling particular interstate highways.	Addressed in Task 5
2. The ability to provide discounts, credits, or otherwise lessen the impact of tolling on local, commuter, and in-state operators.	Addressed in Tasks 2 through 4
3. Information related to the number and impact of out-of-state operators expected to use interstate highways in Indiana.	Addressed in Tasks 2 and 3
4. The rationale for the federal authorization of any tolling plan that may be submitted by the state to the United States Department of Transportation.	Addressed in Task 6
5. The optimal levels at which tolls may reasonably be expected to be set for passenger vehicles and other vehicles.	Addressed in Tasks 2 through 4
6. Appropriate tolling rules regarding population center local traffic.	Addressed in Tasks 2 through 4
7. The state's ability to enter into monetization agreements or long term contracts for initial construction, long term maintenance, installation, and operation of tolling facilities.	Not included in this work plan. HDR will incorporate materials provided by INDOT into the report.
8. Any estimates of which highway facilities would be conducive to tolling operations.	Addressed in Tasks 2 and 3.
9. Goals for participation by women-owned and minority-owned business enterprises.	Not included in this work plan. HDR will incorporate materials provided by INDOT into the report.
10. Ways to maximize the use of Indiana workers and products made in Indiana.	Not included in this work plan. HDR will incorporate materials provided by INDOT into the report.

The following is our proposed approach for completing this report. The work is advisory in nature. HDR will be assessing the feasibility of different toll rates throughout this effort based on financial and economic analysis and a public survey. The overall objective of this analysis is to explore the feasibility of tolling Indiana’s Interstates. The analysis is for planning purposes and not meant as an investment grade forecast of traffic and revenue. Therefore, HDR takes no responsibility for setting actual future toll rates.

TASK 1. PROJECT MANAGEMENT AND PROJECT MEETINGS

Task 1 covers project management activities and project meetings throughout the project. We anticipate up to 2 meetings per month to review progress, present preliminary findings, and coordinate with INDOT staff.

Deliverables

- Monthly progress reports and invoices.
- Participation in up to 12 project meetings.

TASK 2. TRAFFIC AND REVENUE ANALYSIS FOR 5 CORRIDORS

The objective of Task 2 is to conduct a “Level 1.5” traffic and revenue (T&R) analysis for the following five corridors: I-64, I-69, I-74, I-94, and I-465. A level 1.5 analysis will enable INDOT to understand the feasibility of tolling these highways, but is not detailed enough to serve as an investment grade forecast. Our analysis will be similar to that conducted in 2015 for the I-65 and I-70 corridors, except that the analysis for the new corridors will include a risk component. Similar to the 2015 effort, we will base our analysis primarily on the output from network-level analysis conducted by INDOT with its statewide travel demand model.

As part of Task 2, we will perform the following activities:

- Review the previous T&R study and related documents, with a focus on methods, data sources, and assumptions.
- Prepare a technical memorandum describing our proposed approach, assumptions, and specific data needs. For budgeting purposes, we have assumed that INDOT will generate all runs with its travel demand model and provide output files to us for post processing. This approach was efficient and effective during the 2015 study.
- Review and discuss our proposed approach, assumptions and data requirements with INDOT’s modeling staff.
- Develop a spreadsheet-based T&R forecasting tool to process and summarize output from the statewide travel demand model.
- Integrate quantitative risk analysis capabilities within the tool, through a commercially available add-in, such as Palisade Corporation’s @RISK.
- Review, process, and tabulate travel demand model output, and produce T&R forecasts for each corridor.
- Document results in technical memorandum and summary presentation.

As noted above, the analysis will rely heavily on output from INDOT’s travel demand model. In addition to output for the Base Year (Existing Conditions), three series of model runs will be needed:

- Future conditions *without* tolling and with minimal, constrained network improvements;
- Future conditions *with* tolling and with minimal, constrained network improvements; and
- Future conditions *with* tolling and with all planned and/or required network improvements.

The scenarios with tolling will assume that all seven corridors are tolled (“all-or-nothing” analysis). As in the previous study, flat toll rates will be assumed, with the possibility of different rates for three vehicle types (cars, medium trucks, and heavy trucks). At least three runs will be needed for each tolling scenario, with three different rates assumed for each vehicle class. We will use output data from these runs to calibrate a “demand function” and calculate optimal (e.g. revenue-maximizing) toll rates within the spreadsheet-based tool.

The forecasting tool that we develop under this task will be used primarily to:

- Organize, process, and summarize the statewide travel demand model output under all tolling and infrastructure development scenarios;
- Calculate output in intermediate years through interpolation (to produce annual T&R forecasts for all years within the period of analysis);
- Estimate “optimal” toll rates by vehicle class, through a demand function calibrated with output from the statewide travel demand model; and
- Run Monte Carlo simulations to produce T&R forecasts (and other results) as ranges of probable values, as opposed to single-point estimates.

As part of the analysis, we will forecast a number of variables, including: Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT), number of toll transactions, diversion rates, and toll revenue. We will develop their forecasts by corridor, vehicle class, and, to the extent possible, residency (e.g. toll revenue generated from Indiana residents vs. non-residents). We anticipate deriving resident vs. non-resident comparisons with Origin-Destination data (i.e. trip tables) produced within INDOT’s statewide travel demand model.

In the treatment of uncertainty through quantitative risk analysis, we will first identify the input variables most likely to significantly affect the forecasts. These variables will be limited to factors directly represented in the new post-processing tool as opposed to all inputs used in the statewide travel demand model. Using a combination of historical data, findings from the technical literature, and expert judgment, we will assign a probability distribution to each of these variables. We will also identify a number of discrete, “event” risks (threats and opportunities) that could further affect the forecasts, and assemble them in a “Risk Register.” To the extent possible, each risk will be assigned a probability of occurrence and a magnitude of impact (expressed itself as a range or probability distribution). Finally, we will estimate the cumulative impact of all sources of uncertainty through statistical simulations (Monte Carlo).

We will present the results of our analysis to INDOT staff, and document them in a technical memorandum that describes our approach, data, assumptions, and results.

Deliverables

- A technical memorandum describing our methodology, assumptions, and data needs, delivered electronically.
- A summary presentation highlighting key findings, delivered electronically.
- A technical memorandum documenting the analysis and results, delivered electronically.

TASK 3. RISK ANALYSIS FOR I-65 AND I-70

The objective of Task 3 is to expand the assessment conducted by INDOT for the I-65 and I-70 corridors in 2015 to consider uncertainty more explicitly through quantitative risk analysis.

Task 3 will include the following sub-tasks:

- Review and update of the spreadsheet-based model developed in the 2015 study, to ensure consistency with the new analysis in Task 2.
- Identify, based on the Task 2 work, key sources of risk (threats and opportunities) and develop probability distributions for all input variables “that matter.”

- Integrate Monte Carlo simulation capabilities into the existing tool or model, through a commercially available risk analysis add-in.
- Calibrate the existing T&R model, and produce and tabulate the results, which will be expressed as ranges of probable values.
- Document and interpret the findings, in a technical memorandum.

Deliverable

- A technical memorandum summarizing the risk analysis and results for I-65 and I-70, delivered electronically.

TASK 4. STATEWIDE TOLLING SURVEY

The objective of Task 4 is to assess the public's willingness to pay tolls on Indiana's Interstates. Stated preference (SP) studies are often used to forecast demand for toll facilities as a function of toll cost and trip times and traveler details such as income and household size. However, in order to meet the deadlines for this work and in order to be cost-conscious, we propose to use modeling techniques used in willingness-to-pay (WTP) studies instead of conducting an SP study.

WTP studies, similar to SP studies, are based on the principles of contingent valuation, which is a method of estimating the value that a person places on a good or service. WTP studies test a person's sensitivities to various price points by first offering a price suggestion of "medium" value and then depending on the person's response, a different value may be offered to elicit an additional response.

In Task 4, we will design a state-wide survey to assess automobile WTP. We will ask survey participants to provide their preference for conducting a trip using alternative routes (or scenarios) that feature different travel times. We will develop up to ten different trip scenarios which cover the typical trip lengths for the majority of drivers in the state.

The data required to estimate WTP can be collected in different ways, from a telephone survey to an internet-based survey. However, it is important that the surveying instrument be designed by the research team so the WTP questions and scenarios allow the appropriate estimation of WTP for drivers. Based on the timeframe this study and our previous experience with surveys in Indiana, we propose to use an online survey to conduct this WTP study. The target population would consist of adults (over the age of 18) that have a driver's license and have driven on Indiana Interstates in the recent past. The goal is to have up to 1,000 surveys completed from a random selection of eligible drivers.

An approach that HDR has found to be successful in similar WTP studies is to tell survey takers that the purpose of the survey is to explore interest in improving travel times and safety on major highways. The concept of paying toll is not introduced until the end of survey so as not to bias the experiments as people generally have negative attitudes towards toll. Respondents will be provided with a trip scenario that is familiar to them, such as commuting to work. They will be presented a trip length in miles and a trip travel time in minutes. They will then be presented with an alternative route for the same trip, with the alternative route featuring a different length and different travel time. Finally, they will be presented with plausible costs and asked if the time savings of the alternative route would be worth the cost.

We will base the costs used in the survey on fixed toll costs per mile traveled in the alternative

route. We will discuss these rates with INDOT during the design stage of the survey. We will define a number of different amounts (normally three) in the survey tool for each of the trips and their alternative. The amounts are meant to reflect a range of costs which reflect plausible low to high payments. The respondents will always be provided first with the medium cost and then, depending on whether the respondent said no/yes to the medium cost, they will be asked if they would pay the lower/higher value.

We will design and administer the survey. We will then use the results to conduct distribution fitting algorithms for censored data¹ to find a mathematical function which would best explain the patterns in the responses as a function of toll price per mile. We will aggregate the different survey results to produce a state-wide WTP estimate. We will also derive the value of time drivers place on travel time savings.

We will document the survey methodology and results in a technical memorandum.

Deliverables

- Online survey, administered to up to 1,000 drivers.
- A technical memorandum documenting the survey approach and results, delivered electronically.

TASK 5. ASSESS ECONOMIC IMPACTS

The objective of Task 5 is to assess and document the potential impacts of tolling on Indiana's economy. Our assessment will include two parts:

- A quantitative statewide analysis using INDOT's REMI (Regional Economic Models, Inc.) model.
- A qualitative assessment based on 1) targeted interviews with business owners, developers, and other stakeholders; and 2) a spatial analysis of employment and business locations.

In the quantitative analysis we will consider the following three types of impacts:

- Impacts of changes in household expenditures due to tolling (i.e. household income spent on tolls instead of goods and services produced in the state economy);
- Impacts of changes in public spending on roadway construction and preservation projects made possible by tolling; and
- Impacts of improvements to the transportation system resulting from additional spending on roadway construction and preservation projects (e.g. travel time savings to commuters and business travelers, and reduction in fuel consumption from congestion relief and smoother pavements).

We will estimate these impacts with INDOT's REMI model. For budgeting purposes, we have assumed that a member of INDOT staff will run the REMI model with input files and detailed instructions prepared by HDR. The input files and assumptions needed to produce the results will come directly from our Task 2 work. We will derive the changes in household expenditures and public spending on roadway construction from the toll revenue forecasts, adjusted as needed. We will also derive the effects of transportation system improvements on

¹ Hintze, J. (2013). NCSS 9. NCSS, LLC. Kaysville, Utah, USA. www.ncss.com. See Chapter 550 Distribution (Weibull) Fitting.

travel conditions and generalized transportation costs with output from the statewide travel demand model (e.g. VMT and VHT, with and without tolling and network improvements).

We will obtain results from the REMI model from INDOT staff in raw format (e.g. CSV file), and tabulate and reformat them in a spreadsheet tool for documentation and presentation. We anticipate expressing economic impacts using the following variables:

- Total employment;
- Private non-farm employment;
- Gross domestic product;
- Output;
- Value added;
- Real disposable personal income; and
- Population.

We will estimate all variables at the state level and report them for all years within the period of analysis. Standard REMI output also include variables expressed as percent of national totals (e.g. total state employment as percent of total national employment). We will report these estimates as well. We anticipate that only one series of economic impacts will be produced and documented: the impacts of tolling all corridors at the “optimal” toll rates, relative to a state of the world without tolling.

As part of Task 5, we also will conduct a qualitative assessment of business impacts through targeted interviews and GIS-based analysis of business locations (under existing conditions). We will work with INDOT staff and other state stakeholders (e.g. Indiana Chamber of Commerce) to identify potential interviewees in the business community and beyond, focusing on those most likely to be affected by tolling (e.g. truckers or big-box retailers). We will prepare a brief survey questionnaire comprised of two to three open-ended questions, and up to five closed-ended questions. The questions will be aimed at assessing how businesses may respond to tolling, in particular in terms of future location and expansion plans.

We will conduct up to 30 interviews by phone. We will supplement the interviews with a GIS-based analysis and representation (in maps and tables) of existing business and employment locations, within the seven corridors. These may include employment-density maps as well as spatial distributions of businesses and employment by industry.

We will summarize the results of the quantitative and qualitative assessments in a presentation to INDOT, and develop a Technical Memorandum that documents all methods, data, assumptions, and results.

Deliverables

- A brief technical memorandum describing our approach and providing instructions to operate REMI, delivered electronically.
- A summary presentation highlighting key findings, delivered electronically.
- A technical memorandum documenting the analysis and results, delivered electronically.

TASK 6. WRITE REPORT

The objective of Task 6 is to develop the final report and present it to the FIRSST Committee. In Task 6, we will conduct the following activities:

- Define materials needed from INDOT for requirements 7, 9 and 10 in the table above. These items relate to the state's ability to enter into monetization agreements, goals for woman-owned and minority-owned business, and ways to maximize the use of Indiana workers and products made in Indiana.
- Define the rationale for the federal authorization of any tolling plan.
- Combine materials provided by INDOT with the materials developed by the project team into a draft report and provide to INDOT for review.
- Incorporate feedback into a final report.
- Summarize the highlights from the report into a summary presentation.
- Assist INDOT in the presentation of these materials to the FIRSST Committee.

Deliverables

- Draft and Final report, delivered electronically.
- A summary presentation highlighting key findings, delivered electronically.
- Participation in the FIRSST Committee meeting when the results are presented.

SCHEDULE

The Final Report is due by October 31, 2017.