

Indianapolis Regional Transportation Improvement Program Project Scoping and Cost Estimating Instructions August 2021

IRTIP Project Scoping and Cost Estimating Overview

One of the primary responsibilities of the Indianapolis Metropolitan Planning Organization (IMPO) is to administer a coordinated program of federal and state funded transportation projects within the Indianapolis Metropolitan Planning Area (MPA). The IMPO seeks to ensure that limited transportation funding provides the greatest benefit consistent with regional transportation goals. Recommended projects are approved by the IMPO Transportation Policy Committee for inclusion in the Indianapolis Regional Transportation Improvement Program (IRTIP).

The IRTIP provides a four-year schedule of all projects within the Indianapolis MPA designated to use federal funds or to use state funds provided as part of the IMPO's Federal Funds Exchange agreement with the Indiana Department of Transportation. It is amended as necessary to reflect changing conditions and project priorities. In addition, the IRTIP includes locally funded projects that are considered regionally significant or that are intended to be used as local match to a future federally funded project.

The IRTIP is short-term in nature and is intended primarily as an implementation tool. Member jurisdictions that are in good standing are eligible to submit funding applications for a wide variety of surface transportation related activities, ranging from traditional road projects to bicycle and pedestrian facilities. Applications are selected for inclusion in the IRTIP through a competitive process, based on published scoring criteria and available funding. There is also a public review and comment period to allow the public the opportunity to have their comments considered in the development of the IRTIP.

Developing and maintaining accurate project cost estimates, meeting planned schedules, and avoiding overruns during construction are important for maintaining the regional transportation program of the IRTIP. The IMPO and the region currently operate under a "use it or lose it" policy, meaning the IMPO cannot carry over balances in federal funding programs from year to year. Overruns, underruns, or schedule slippage on one project can impact the funding available for other projects or cause valuable transportation funds to go unused and possibly returned to INDOT. The IMPO has implemented strict cost and schedule change policies for IRTIP projects to ensure that the maximum funds are available for member agencies, and to see that these funds are expended in the most effective and efficient manner.

The Project Scoping and Cost Estimating Form was developed by the IMPO to help minimize cost and schedule changes for IRTIP projects. The form serves as a checklist for project scoping to help the local agency define project components, estimate costs, and identify risks to be addressed during development. The form is intended to help local agencies as they develop project concepts and is a required submittal for each IRTIP proposal. Most requested information should be readily available if a project is at the appropriate stage of definition for inclusion in the IRTIP. This form also helps the IMPO determine how well the sponsoring agency understands the scope and cost of a proposed project, and it helps the IMPO understand risks that may affect the cost or schedule of the project and the IRTIP as a whole.

Form Structure and General Instructions for Completion

The Project Scoping and Cost Estimating Form is a Microsoft Word fillable form intended to document all significant elements that affect the cost and schedule for project implementation. A combination of check boxes and comment lines are used to enter information. The check boxes expedite completion of the form and allow information to be compiled and summarized from multiple projects. The comment lines provide flexibility for describing project features and assumptions. Helper text is visible while editing the form to indicate what should be entered in each comment line. The agency name and project title are automatically copied to the form header but may not update completely until after a print preview.

When completing a project application in MiTIP, a completed Project Scoping and Cost Estimating Form and the local public agency's project cost estimate must be uploaded with the application. It is recommended that a printout from the IMPO planning-level cost estimating spreadsheet tool also be included.

General guidelines are provided below for completing each section of the Project Scoping and Cost Estimating Form.

Section 1: General Project Information

This information should match the entries for the project in MiTIP.

Only one box should be checked for Primary Project Type, reflecting the largest component of the project. For instance, a new roadway with bridges, roundabouts, and a parallel multi-use trail would be shown as a "Road." The other components of the project are captured in the next section (Project Description).

Section 2: Project Description

The intent is to provide a high-level description of the project. More detailed information about specific project components is provided in subsequent sections. For instance, project limits for a new roadway might be "from 56th Street to 62nd Street." Major features might be "two bridges, three roundabouts, and a parallel multi-use trail." The typical section might be described as "a two-lane roadway with curb and gutter." Bicycle/Pedestrian Facilities might be described as "a 5-foot sidewalk on one side and an 8-foot multi-use path on the other."

The project description should include a brief statement of the need and purpose of the project. This is a statement of the existing problem that will be addressed by the project and how the project will help to solve or alleviate the problem. Checkboxes are also included to identify completed items that are often used for project scoping.

It is assumed that a map of the proposed project and vicinity has previously been uploaded to MiTIP. If not, or if a more detailed map is available, one should be provided with the form. It is particularly important to upload a map depicting the proposed alignment for any new road and bike facilities.

Section 3: Cost Estimate Data and Assumptions

Unit price-based cost estimates are required for project applications submitted to the IMPO. The “unit cost sources” entry is used to identify the data sources that were used for unit cost information. In most cases, unit cost sources are INDOT averages, comparable costs from local bids for similar projects, or industry estimating guides (i.e. Means Cost Data). If more than one source is used, list them all. If unit costs were adjusted based on previous experience or local conditions, please explain the adjustments.

At the project scoping phase, the quantities of some items that will be included in the project might be difficult to estimate. These items might be expressed as cost allowances at this phase of project development. Describe allowances used in the cost estimate and how the allowance amount was determined.

Guidelines for the other items in this section are usually provided in the instructions for an IRTIP call for projects. The IMPO requires that project costs for IRTIP applications be identified in year of expenditure (YOE) dollars. Identify the anticipated year of construction and the annual escalation rate assumed for project costs. Justification must be provided if the escalation rate differs from what has been provided by the IMPO. Design, construction engineering, and contingency costs are often specified as a percentage of the project construction cost. Identify the percentages used for each of these or whether they were derived using some other method. Justification must be provided if the percentages differ from what has been suggested by the IMPO.

Section 4: Base Data Collection/Source

Use this section to identify the data sources and data collection activities used to support project scoping and cost estimating. It is recommended that whoever is scoping and costing the project conduct at least one site visit or field check before submitting the project for the IRTIP. The date is requested to help identify conditions that may have changed since the site visit was made and can be shown as month/year. Other items provide an indication of how reliable and detailed the base data might be. Aerial photography is often used for initial estimates, with field surveys completed for use during project design.

Section 5: Right of Way

Since right of way acquisition can have a significant effect on cost and schedule for any project, defining existing right of way, required new right of way, and the number and type of relocations is a high priority in project scoping. For the purposes of this section, right of way dimensions may be described in ranges, and parcels to be acquired may be estimated until the design is completed. The source of right of way data should be clearly stated, such as field survey, GIS data, physical evidence in the field, right of way monuments, legal descriptions, plat maps, existing plans, etc. The sources and methods for developing right of way cost estimates should also be stated. These might have been estimated from property tax data, developed by a right of way appraiser, or developed using some other method. Assumptions for right of way engineering fees, appraisal costs, and relocations should be included.

Section 6: Major Project Components

Check the boxes in this section according to whether each of the listed components is included in the proposed project. For each included component, provide a general description of the quantities, limits and assumptions. The descriptions should reflect assumptions used in the cost estimate. For instance,

culverts might be described as “two 4-foot by 6-foot box culverts, approximately 42 feet long, and four 18-inch culverts with end sections.” The quantity and unit cost of any component checked should be readily identifiable in the cost estimate. Briefly describe any allowances used to estimate the cost of known but unquantified requirements for an activity or work item. It is possible that some items are not known at this time and are included with the project contingency.

Section 7: Environmental Features and Issues

Check every box that applies in this section and provide a general description of each component. Unless environmental studies are already complete, it is recommended that a Red Flag Investigation (RFI) as described on the IMPO website (www.indympo.org) be developed for every project submitted for the IRTIP. The fundamental purpose of an RFI is to identify the level of environmental study required for the project, but it also provides an early indication of factors that may add cost to a project or delay the schedule. If an RFI has been completed, the descriptions in this section can be high level descriptions, highlighting features that may affect the project’s cost and schedule. Describe significant environmental resources and features in the project area and whether they will be impacted by the project. If any environmental mitigation measures have been identified at this time, they should be described. If an RFI has not yet been completed, the IMPO can assist.

Section 8: Utilities

List the utilities in the project area by name and identify whether they are located in public right of way or in their own dedicated easement. The sources of information for utility location and easements should also be identified. At early stages of design, the source may be physical evidence (manholes, meters, pole lines, etc.). If locations have been identified or marked in the field by the utility companies, that should be noted in the description. Any known utility relocation requirements should be noted. Reimbursable utilities should be included as part of the project’s construction cost.

Section 9: Cost Estimate Exclusions and Notes

In this section, describe any significant cost estimating exclusions, project risks, or other special circumstances which could impact cost or schedule and have not been identified in other sections of the form. Project risks should be identified in the course of scoping a project. The probability and consequences of each risk event should be considered.

The IMPO has developed a planning level cost estimation spreadsheet tool that can be used as a reasonableness check. This spreadsheet tool can usually be completed in less than 15 minutes. Please use this tool to estimate the project cost and explain any significant differences between the planning level cost estimate tool results and the cost estimate prepared for the IRTIP submittal. It is expected that the cost prepared for the IRTIP submittal will be more accurate because the project sponsor has more detailed information on project scope and conditions.

Section 10: Form Preparer

Provide the name and contact information for the person that prepared the form, along with the date the form was prepared.