Introduction
The Tri-County Regional Planning Commission (TCRPC) is seeking proposals from qualified companies to provide technical services to create three-dimensional interactive software that will convey transportation and land use concepts in an understandable and aesthetically pleasing format. Services are being sought to create a tool that can be used by transportation professionals, planners, and laypeople alike. TCRPC expects proposals to be based upon the ability of the vendor to meet or exceed the specific requirements contained in this request for proposals (RFP). A contract will be awarded to the vendor that is determined to be best able to provide the services requested within the budget constraints contained in this RFP.

All proposals must be received at the offices of TCRPC, Attention: Nick Hayward, 411 Hamilton Blvd. Suite 2001, Peoria, Illinois 61602 before 4:30 p.m., March 27th 2009. The vendor may submit two (2) hard copies or send an electronic copy in .pdf or MS Word format to nhayward@tricountyrpc.org

The cost of developing a proposal is the responsibility of the respondent. TCRPC will review the proposals and may schedule presentations to be conducted by one or more of the qualified vendors as part of the final selection process. TCRPC reserves the right to reject any and all proposals and/or waive any informalities in this RFP process. TCRPC reserves the right to accept, reject, or negotiate modifications to any proposal as it shall, in its sole discretion, deem to be in its best interest.

The RFP is also available on TCRPC’s website at: http://www.tricountyrpc.org/

Executive Summary
TCRPC is soliciting proposals from qualified graphic, visioning, gaming, media, and information technology consultants to create user-friendly three-dimensional interactive software that will present visual presentations of transportation and land use scenarios in an understandable and aesthetically pleasing format. The final deliverable must be a fully packaged program able to run on a personal computer operating on a Windows platform.

TCRPC envisions each visual presentation to be composed of a linear fly-through or walk-through of a scaled area one mile long by one-half mile wide. Scenario attributes will be selected via an easy to use interface prior to the visual presentation. Attributes include selections such as street types, density, and development type. Further detail is presented below in the Scope of Work.

Background on TCRPC and Visualization Software
The Tri-County Regional Planning Commission was established in 1958 to promote intergovernmental cooperation, regional planning, and a vision for the future. The Commission exists to serve the residents of Peoria, Tazewell and Woodford Counties, Illinois by offering a forum for leaders of local government, and to develop a vision for the future by defining regional issues, setting goals, and cooperatively implementing plans.

These services include regional projects such as metropolitan transportation planning services, and projects which promote responsible land use management and protection of the
environmental assets.

The development of transportation and land use visualization software was made possible through grant funding from the Federal Highway Administration (FHWA). Our objective is to create a cutting edge interactive software tool to aid public decision making and participatory planning through computer generated visualization scenario analysis. Due to the nature of this project and the funding it receives from FHWA we are seeking proposals in the range of $75,000 to $111,000.

**Collaboration with TCRPC**
A close working relationship with TCRPC will be necessary during this project. Our organization will be closely involved with the project as our research and input is necessary to ensure the software is created in accordance with our vision.

**Scope of Work**
TCRPC is seeking proposals from qualified consultants who will provide the services and product characteristics set forth below:

**Task 1: Produce three-dimensional “fly-through” or “walk-through” visualizations of approximately 1,804 different development scenarios made available to the user as a fully functional software tool.** Please note that the figure of 1,804 development scenarios is our goal. If this is not feasible due to time and cost constraints, TCRPC is willing to decrease the scenario amount. TCRPC envisions each scenario to be one mile by one half mile in size. Once again, if feasibility issues arise, TCRPC is willing to modify the scale.

Guidelines: The production of three-dimensional visualizations of different development scenarios will achieve the overall project goal of providing a tool to engage citizens and government officials in land planning and transportation planning processes and help these groups to understand better the impacts of different development types. The three-dimensional visualizations must include multiple components to convey an accurate image of development types. Required components will include:

- Roads (including markings, signage, and signals)
- Bike paths (both on the road and separate from the road)
- Sidewalks
- Landscape features (trees, turf grass, planted medians)
- Transit accommodations (bus shelters, bus stop pull-outs)
- Residential buildings (including single family dwellings, duplexes, and multi-story apartment buildings)
- Commercial buildings (including one-story “big box” retail stores, shopping malls, strip malls, one-story restaurants with parking lot, and multi-story buildings)
- Mixed-use buildings such as multi-story buildings several stories in height
- Vehicles (including automobiles and buses)
- Pedestrians
Other components will be necessary to produce realistic three-dimensional visualizations. Using these components, the consultant must create three-dimensional visualizations that allow the user to “fly through” or “walk through” the development scenario at a speed that allows the user to visually identify the various components.

Task 2: Package the visualizations in a user-friendly software program on a digital video disc (DVD) that will allow the user to generate either a “user-defined scenario” or a “pre-defined scenario.”

Guidelines: A user-defined scenario will be generated after the user makes a series of selections from among different transportation and land use options available through pull-down menus. The following options will be available to the user:

**TRANSPORTATION**

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Multi-modal Accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 lanes</td>
<td>sidewalk/multi-use path</td>
</tr>
<tr>
<td>3 lanes</td>
<td>bike lanes</td>
</tr>
<tr>
<td>4 lanes</td>
<td>transit accommodations</td>
</tr>
<tr>
<td>5 lanes</td>
<td>parking</td>
</tr>
<tr>
<td></td>
<td>traffic signals</td>
</tr>
</tbody>
</table>

**LAND USE**

<table>
<thead>
<tr>
<th>Area</th>
<th>Development Type</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>residential</td>
<td>high</td>
</tr>
<tr>
<td>Suburban</td>
<td>commercial</td>
<td>medium</td>
</tr>
<tr>
<td>Urban</td>
<td>mixed</td>
<td>low</td>
</tr>
</tbody>
</table>

Each unique combination of choices must result in a unique three-dimensional visualization with the exception of implausible development combinations.

A pre-defined scenario will be generated from one pull-down menu that lists the different scenario options; the user will not be able to choose from different transportation and land use options. The pre-defined scenarios that must be available are:

- Development that utilizes current design standards;
- Conservation subdivision development;
- New urbanism development;
- Low impact development.

The software program itself must include a series of pages that will allow the user to easily navigate through the program, make selections, and view the three-dimensional visualizations. The software program must include the following components:
• Title screen
• Copyright/credits screen
• Options screen. The options screen will include introductory text, a pane for user-defined scenario options, and a pane for pre-defined scenario options. The pane for user-defined scenario options will include the transportation and land use options in a series of pull-down menus. The pane for pre-defined scenario options will include either a pull-down menu or list of scenarios.
• Three-dimensional visualizations. After the user has completed the options screen, the appropriate three-dimensional visualization should appear and the fly-through or walk-through sequence should begin.
• Development Report Card screen. After “travel” through each visualization is complete, a page will appear that includes a brief written evaluation of the impact of the development type on several different environmental attributes. The page will include “thumbs-up” and “thumbs-down” images to correspond with the positive and negative evaluations.

Task 3: Create and provide:
• a well-documented source code in electronic readable format;
• overall software architecture documentation; and
• overall and individual module interface documentation.

Guidelines: Documentation of the development of the software package must be provided to FHWA upon completion of the project.

Task 4: Develop list of computer system requirements needed for successful operation of the software.

Guidelines: TCRPC Planning Staff (Planning Staff) will create a user’s guide to accompany the software program. The user’s guide will include a list of system requirements that details appropriate hardware specifications and software packages needed on a computer to successfully operate the software program.

Task 5: Be available to regularly correspond with planning staff and assist staff’s research effort to ensure the information being gathered is of greatest use to the consultant.

Guidelines: Frequent correspondence between the consultant and planning staff will be necessary to ensure completion of this project. The consultant should be able to correspond with planning staff weekly (during normal business hours); daily communication may be needed during some portions of the project.

• This is required because TCRPC will conduct research on the scenarios themselves to qualify the details of specific attributes in each scenario. For example, TCRPC staff will research and provide a list of transit amenities to be included in the scenarios. TCRPC staff also will determine the “thumbs up” and “thumbs down” ratings of the different scenarios on the Development Report Card.
**Project Time Frame**
The consultant’s start date will be April 27, 2009, with creation of the three-dimensional visualizations to be completed by January 31, 2010. The software package containing the visualizations must be completed by April 30, 2010. Once the software package is completed, TCRPC staff will test the software and then report back to the consultant about any changes to the software that are needed. The consultant will make changes between June 1, 2010 and July 31, 2010. The final software package must be delivered to FHWA by August 31, 2010. The following table illustrates the project schedule.

<table>
<thead>
<tr>
<th>3-D Visualizations</th>
<th>Incorporate Changes</th>
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<tbody>
<tr>
<td>April 2009</td>
<td>Jan. 2010</td>
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<td>May 2009</td>
<td>Feb. 2010</td>
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<td>June 2009</td>
<td>March 2010</td>
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<td>July 2009</td>
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<td>Sept. 2009</td>
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<td>Oct. 2009</td>
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<td>Nov. 2009</td>
<td>Aug. 2010</td>
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<td>Dec. 2009</td>
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**Use of Subcontractors**
The use of subcontractors to assist with completion of this project is allowed.

**Intellectual Property Rights**

*Funding for this project is being provided by the Federal Highway Administration (FHWA). Per the terms of TCRPC’s contract with FHWA, the software to be created during this project must not have any restrictions on intellectual property. The software to be created will be under the ownership of the Federal Highway Administration. The awarded consultant will have to agree to the terms identified in the Broad Agency Announcement for the STEP Program, the FHWA program through which funding is being provided. The applicable terms are:*

*The government expects to obtain no less than Government Purpose License Rights to all software delivered as a part of these funded efforts. All software deliveries, preliminary and final, will include as a minimum, well-documented source code in electronic readable format, overall software architecture documentation, overall and individual module interface documentation, and a users operations manual. Also, if applicable, proprietary claims to results, software, hardware, prototypes, or systems supporting and/or necessary for the use of the software to be developed during this project shall be provided.*

**Required Elements of Proposal**

Each submitted proposal should include a narrative that includes the following:

1.) **Qualifications and References**

Respondents must describe how they will approach this project and describe why they are the most uniquely qualified firm to develop this visualization software. Two references for work done on similar projects, a short history of the firm, a description of similar work completed in the past, and a list of the staff to be involved with the project shall be submitted; this information also must be provided for any subcontractors who will work on the project. Samples of similar work that are appropriate for consideration may be included.
2.) Budget and Time-Frame
Respondents must include a project budget that includes an itemized list of costs associated with all five (5) tasks. The budget must contain a breakdown of the cost of all staff involved, as well as any subcontractors. Respondents must submit a project timetable that corresponds with the project time frame provided in this RFP. The selected consultant will provide periodic progress reports throughout the course of the project.

3.) Methodology
TCRPC is aware that there are numerous methods of creating a program which will fit our needs. Respondents must submit a detailed description of how they will complete all five (5) tasks and meet all requirements as defined in the Scope of Work. To receive proper consideration every aspect of the Scope of Work must be addressed.

Evaluation Criteria
TCRPC will award this RFP based on the proposal that best meets our specific requirements. While price will be a factor in consideration, it is not the sole criterion. TCRPC will review all proposals on the following criteria:

1.) Cost: The terms and fees proposed for the service.
2.) Experience and Competence: The vendor’s specific experience and demonstrated ability in producing the services on a similar scale. Preference may be given to vendors with experience working with transportation or planning related projects.
3.) Location: As this project requires a fairly high amount of interaction between TCRPC and the vendor, preference may be given to applicants within a reasonable distance of Peoria.
4.) Methodology: TCRPC will give preference to the most efficient framework for the completion of this project.

Evaluation criteria are not listed in order of importance. TCRPC reserves the right to weigh its evaluation criteria in any manner it deems appropriate.

Proposal Schedule
A schedule of the RFP, review and selection process is as follows:

RFP Released: February 19, 2009
Requests for Clarification Due Date: March 5, 2009
Pre-Proposal Meeting: March 12, 2009
Proposal Due Date: March 27, 2009
Consultant Selection: April 15, 2009
Contract Approval: April 24, 2009
Project Start Date: April 27, 2009

Pre-Proposal Meeting
A non-mandatory pre-proposal meeting will be held on March 12th at 2:00 p.m. Attendance is
strongly encouraged. The meeting will take place at TCRPC’s office, located at 411 Hamilton Boulevard, Suite 2001, Peoria, IL, 61602. A teleconference option may be considered.

**Requests for Clarification**

All questions regarding the interpretation or meaning of any specifications must be made via e-mail to Nick Hayward at nhayward@tricountyrpc.org and be made no later than March 4, 2009. Formal written responses will be distributed via e-mail on March 12, 2009 and discussed at the Pre-Proposal Meeting.

**Project Contact**

Nicholas Hayward will serve as the primary point of contact for the selected consultant.

Nicholas Hayward  
Tri-County Regional Planning Commission  
411 Hamilton Blvd., Suite 2001  
Peoria, IL 61602  
(309) 673-9796x227 (p)  
(309) 673-9802 (f)  
nhayward@tricountyrpc.org