



North Central Texas Council of Governments

**NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
METROPOLITAN PLANNING ORGANIZATION**

**REQUEST FOR PROPOSALS
PREDICTIVE CRASH ANALYSIS SOFTWARE**

Friday, March 14, 2025

**REQUEST FOR PROPOSALS
FOR
PREDICTIVE CRASH ANALYSIS SOFTWARE**

INTRODUCTION

The North Central Texas Council of Governments (NCTCOG) is requesting written proposals from qualified firms(s) to provide a crash analysis software license or tool which will aid our roadway safety improvement candidate selection processes and roadway safety plans by proactively identifying higher than expected or higher than predicted crash risk at intersections or along roadway segments throughout the North Central Texas region. The crash analysis software must incorporate the predictive crash methods documented in the most recent edition of the American Association of State Highway and Transportation Officials' (AASHTO) Highway Safety Manual (HSM).

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of, by, and for local governments, and was established to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. NCTCOG's purpose is to strengthen both the individual and collective power of local governments and to help them recognize regional opportunities, eliminate unnecessary duplication, and make joint decisions.

Since 1974, NCTCOG has served as the Metropolitan Planning Organization (MPO) for transportation in the Dallas-Fort Worth (DFW) Metropolitan Area. NCTCOG's Transportation Department is responsible for regional transportation planning for all modes of transportation. The Department provides technical support and staff assistance to the Regional Transportation Council (RTC) and its technical committees, which compose the MPO policy-making structure. In addition, the Department provides technical assistance to the local transit providers of North Central Texas in planning, programming, coordinating, and implementing transportation decisions.

PURPOSE AND NEED

The North Central Texas Council of Governments (NCTCOG) is seeking an individual or firm to improve safety for all users of the transportation system by supporting and coordinating planning

efforts to develop safety policies, programs, and projects. The NCTCOG Transportation Safety Program coordinates with the Texas Department of Transportation, local governments, local police departments, the Texas A&M Transportation Institute, and other organizations to collect and analyze the data needed throughout the safety planning process. The Safety Program utilizes crash data to identify high-crash locations, intersections, or hot spots; determine types and severity of crashes; identify contributing factors for serious injury and fatality crashes; and develop county, regional, and corridor-level crash rates for roadway facilities.

Because problem identification is the first step in effective transportation safety planning identifying, collecting, and analyzing crash, fatality, and other safety data is important to improving transportation safety in North Central Texas. Data from the Texas Department of Transportation's Crash Record Information System, the National Highway Traffic Safety Administration Fatality Analysis Reporting System, and the National Response Center are used by NCTCOG to analyze, map, and report regional performance measures. The data is used to analyze crashes for the three main categories of regional transportation system users: motor vehicles, freight carriers, and active transportation users. In 2024, the North Central Texas region experienced 122,395 crashes, resulting in 3,660 serious injuries and 825 fatalities.

The North Central Texas Council of Governments requests proposals for a crash analysis software license or tool which will aid our roadway safety improvement candidate selection processes and roadway safety plans by proactively identifying higher than expected or higher than predicted crash risk at intersections or along roadway segments throughout the North Central Texas region. The crash analysis software must incorporate the predictive crash methods documented in the most recent edition of the American Association of State Highway and Transportation Officials' (AASHTO) Highway Safety Manual (HSM).

This project is for the procurement of a safety analysis software license or tool which will improve our roadway safety improvement candidate selection processes by proactively calculating crash risk at intersections or along roadway segments throughout the North Central Texas region. The software will do this by incorporating the predictive method described in AASHTO's Highway Safety Manual.

The crash analysis methods described in the HSM are considered best practices for crash analysis. Our current method of identifying high crash locations relies solely on a reactive process of analyzing past crashes which cannot calculate the potential for future crashes or offer comparisons to peer locations nor does it identify crash reduction countermeasures to minimize risk.

PROJECT SUPPORT

The project will be conducted under the guidance and supervision of a Project Review Committee. The responsibilities of the Project Review Committee will be to serve as the principal technical review committee for this project. NCTCOG shall serve as project manager to implement a mutually agreed upon scope of work, monitor the progress of consultant activities; and serve as a liaison between the consultant and other partners. The selected consultant will enter into a contract with NCTCOG for the agreed upon scope and budget. NCTCOG shall also serve as the contract manager and procurement administrator for the project.

SCOPE OF WORK

The scope of work is summarized by the tasks outlined below. Proposers are encouraged to exercise creativity in responding to the project needs. Modifications to the tasks and task sequencing which will improve the effectiveness of the project effort, while containing costs, are encouraged.

Task 1: Project Administration and Data Management

Proposals should include the purchase of the Predictive Crash Analysis software including setup, data integration, staff training, training materials, ongoing support services, and software calibration to accurately reflect North Central Texas traffic conditions. This software must be capable of integrating data from the Texas Department of Transportation's (TxDOT) Crash Records Information Systems (CRIS) and NCTCOG's modeled roadway volume and attribute data. It must be capable of analyzing a minimum of five years' worth of crash data at once. If any additional data sources can be incorporated into the analysis software, please outline the data source(s) along with a description of benefits and any associated costs in the proposal.

The consultant will submit monthly progress reports for the SPF development and software setup and calibration period. After these tasks are completed, the consultant will submit quarterly progress reports detailing software updates and services rendered.

Task 2: Safety Performance Function Development

The consultant or vendor should demonstrate expertise in the development of custom SPFs for the NCTCOG 12-county region. Development of SPFs is anticipated for limited access facilities, as well as arterial and collector roadways and intersections for both urban and rural settings. The exact breakdown of SPFs for roadways and intersections may be recommended by the proposer. Crash, volume, and roadway data needed to calibrate these SPFs will be provided by the NCTCOG. Proposals should provide a complete overview of the data needed to create SPFs. A timeline of SPF development will be provided by the proposer.

Task 3: Baseline Software or Tool Features

At a minimum, the software should be able to identify intersections and roadway segments within the NCTCOG region that have the highest crash risk and the greatest potential for crash mitigation. Additional desired functionalities include, but may not be limited to the following:

- Network screening – the software should be able to identify and prioritize intersections and roadway segments with higher than average expected or predicted crashes relative to peers according to Highway Safety Manual methodology. The software should also be able to identify locations where crash frequencies may not necessarily be higher than expected but where safety countermeasures may provide the greatest safety benefit. Ideally, the software should be able to compare and prioritize high crash intersections and roadway segments relative to peers within a specified geography, such as a city, county, or the entire NCTCOG region.

The software should be able to identify an overrepresentation of specific crash type(s) at a particular location. It should also be able to identify all intersections or roadway segments for which a specific crash type is overrepresented. (Example: identify highway segments with a higher-than-expected number of wrong-way driving related crashes).

Countermeasure selection – the software should be able to help identify candidate improvements that address the specific safety concerns at an intersection or roadway segment using appropriate crash modification factors, crash reduction factors, or similar applicable factors. Ideally these factors should be customizable to include factors developed by TxDOT or another trusted source. The software should be capable of applying and combining multiple countermeasures simultaneously to

recommend the greatest crash reduction. Ideally the software would be able to recommend both engineering and behavioral countermeasures.

- Cost benefit analysis – The software should be able to consider the average cost of common safety countermeasures (average costs will be determined by NCTCOG or its partners) and evaluate which possible safety countermeasure(s) would be most cost effective at an intersection or along a roadway segment. The software should be capable of applying and combining multiple countermeasures simultaneously to recommend the most cost-effective combination of safety countermeasures.
- Before and After analysis – the software should be able to compare conditions before and after a countermeasure or set of countermeasures have been implemented at an intersection or roadway segment to evaluate the effectiveness of said countermeasures over time. Ideally before and after analysis should be able to determine the effectiveness of a certain countermeasure across locations (example: average crash reduction of implemented mid-block pedestrian crossings in the NCTCOG region).

This software should be able to complete the analysis described above for limited access roadways, arterials, and collector/local roadways. It should be able to perform the described analysis not only for vehicle crashes but for bicyclists and pedestrians as well. The proposal should outline how crash, volume, and roadway characteristic data are stored and how data security is maintained within that environment. It should list what data is needed or desired to ensure accuracy within the software or tool.

ADDITIONAL REQUIREMENTS

1. The Proposer must include a description of technical hardware, software, equipment, and professional services to be used in carrying out the proposed service.
2. The Proposer must demonstrate expertise in the development of Safety Performance Functions
3. The Proposer must submit a data backup plan and schedule that ensures very little downtime of the software, if applicable.
4. The Proposer must include an initial training plan for NCTCOG designated administrators and periodic trainings on an as-needed basis. If such training can be adequately provided through other means, it need not be conducted in person.

5. The proposer must outline the process for adding and updating CRIS crash data, roadway volume and characteristic data, and any other needed datasets.
6. If requested, the Proposer must make an online demo version of the proposed system available for review and testing.

Cyber Security and Technology Requirements

Proposers should outline their cybersecurity strategy and provide evidence of third-party attestation of compliance with any of the following certifications or standards:

- NIST 800-171, 800-53, CSF
- Texas CSF
- ISO27001
- SOC 2
- FedRAMP
- TX-RAMP
- Cloud Security Alliance STAR
- PCI-DSS
- HITRUST

In the absence of third-party attestation of compliance with these certifications or standards, proposers should provide documentation around the following cybersecurity controls at a minimum:

- Cybersecurity strategy and governance
- Risk management framework
- Third-Party/Supply Chain risk management
- Third-Party penetration testing, including frequency
- Data security
 - Encryption in transit and at rest
 - Data access by support personnel
- Personnel screening
- Physical security
- Software development life cycle security
- Network access controls
- Privileged level access controls
- Disaster recovery and business continuity
- Software Development Framework

In addition, proposers should outline their Single-Sign-On capabilities, e.g., support for SAML and integration with identity providers such as Azure Active Directory.

PROJECT SCHEDULE

Proposers shall develop a schedule of tasks with completion deadlines and methodologies for the project. NCTCOG will select all the identified tasks or a subset of the tasks to be completed. NCTCOG and the selected firm will jointly determine a schedule for progress meetings in accordance with the final schedule for the scope of work. The timetable for completion of this

project is 2 years with an option to extend from the date the consultant firm is authorized to proceed. NCTCOG anticipates the contract will begin late June 2025.

CONSULTANT SELECTION CRITERIA

The Consultant Selection Committee (CSC) will review all proposals and select a consultant it considers qualified to undertake the project. The following criteria will be used to evaluate the proposals:

1. Project Understanding	30 percent
2. Scope of Services	25 percent
3. Project Manager/Staff Qualifications	20 percent
4. Knowledge of the Dallas/Fort Worth Area	10 percent
5. Firm Qualifications/Consultant References	10 percent
6. Project Schedule	5 percent

If the CSC determines that interviews will be required before a final decision can be made, the interviews will take place **the week of May 5, 2025**. Proposers should be willing and able to attend these interviews in person or via web conference, if necessary. Consultants who are invited to an interview will be notified by the close of business on **Friday, May 2, 2025**, that an interview has been scheduled. Costs for developing the proposal and costs attributed to interviews (and subsequent negotiations) are at the proposer's own expense and will not be reimbursed by NCTCOG.

CONTRACT AWARD

Following final negotiations of the work plan and costs satisfactory to NCTCOG, the consultant will be asked to execute a contract with NCTCOG. If applicable, a Notice to Proceed will be issued upon execution of the contract. NCTCOG reserves the right to reject any and all proposals, to contract for any or all portions of the project with the selected consultant, or to hire multiple firms.

The successful responder(s) to this Request for Proposals is expected to provide qualified personnel to accomplish each portion of the work in this study. NCTCOG will maintain the right to request the removal of any personnel found, in its opinion, during the course of work on this project, to be unqualified to perform the work. The successful firm shall agree to contract with

NCTCOG to provide the safety analysis software license or tool to NCTCOG. It is anticipated that the initial contract period will be a two-year period, with four optional one year renewals. The awarded vendor shall develop a detailed annual budget for the initial contract period and for each renewal year. Initial set-up, data integration, and helpdesk services along with any fees must be outlined in the proposal.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

The Disadvantaged Business Enterprise participation must meet the **14.1%** goal identified for this type of procurement. Proposers should also include an Affirmative Action Plan is included in the proposal. Failure on the part of the majority contractor to meet this goal or show meaningful good faith efforts may be grounds for finding the proposal nonresponsive.

QUESTIONS AND ANSWERS

All questions regarding the RFP shall be directed in writing by e-mail to TransRFPs@nctcog.org by the close of business on **Friday March 21, 2025**. All questions and responses will be posted on the NCTCOG website at www.nctcog.org/rfp by the close of business on **Wednesday, March 26, 2025**. NCTCOG reserves the right to respond to inquiries as it deems necessary.

OVERALL PROCUREMENT SCHEDULE

This RFP shall be used to accept, review, and score proposals based on the following schedule with the intent of awarding a deliverable/milestone-based pricing contract. The following represents the schedule of procurement activities leading to contract award:

Issue Request for Proposals	March 14, 2025
Last Day to Submit Questions	March 21, 2025
NCTCOG Q&A Posted to Website	March 26, 2025
Proposals Due & Proposal Public Opening	April 11, 2025
Consultant Selection Committee	Week of April 28, 2025
Interviews (if needed)	Week of May 5, 2025
NCTCOG Executive Committee Approval	June 26, 2025
Execute Contracts	June 30, 2025

NCTCOG reserves the right to make changes to the above-mentioned schedule. All such changes shall be made by an amendment to the RFP and shall be posted on NCTCOG's

website at www.nctcog.org/rfp. It is the responsibility of the consultant to frequently check this website for information concerning amendments to the RFP.

*Public opening of the proposals will be done via Microsoft Teams on **April 11, 2025 at 5:05 p.m.**

A link to the Microsoft Teams meeting is below. Microsoft Teams is integrated with audio so you will only need to use the conference call number (below) if you are unable to access the Microsoft Teams App. The Teams App is available for download [HERE](#).

Microsoft Teams

[Join the meeting now](#)

Meeting ID: 224 995 400 951

Dial in by phone

[+1 903-508-4574](tel:+19035084574)

Phone conference ID: 273 730 958#

INSTRUCTIONS FOR PROPOSALS
ARCHITECTURAL/ENGINEERING SERVICES

The Sample Contract provided with this Request for Proposals contains federal requirements which must be included with Proposals. Appendices C through H contain compliance requirements and certification forms which must accompany the Proposals. **Failure to comply with the requirements may result in finding the proposal to be nonresponsive.**

Additional information is provided below:

1. Proposers may submit one hard copy or one flash drive of the proposal Sonya Landrum, Program Manager, North Central Texas Council of Governments, 616 Six Flags Drive, Arlington, Texas 76011. **Proposals must be received by 5:00 p.m., Friday, April, 11, 2025.** Proposals received after that time will not be considered and will be returned to the proposer unopened. The in-hand submittal will count as the official submittal. In addition to the in-hand submittal, NCTCOG is requesting electronic submission of proposal documents to TransRFPs@nctcog.org. Electronic submissions only will **not** be evaluated.

2. The proposal should address the criteria identified in the Request for Proposals that will be used for consultant selection. Proposals should include, at a minimum, the following information.
 - **Proposal Formatting** – Proposals should be printed double-sided and include a footer containing consultant firm name, page number, and total pages in the proposal. (e.g., Planning firm 1 of 20).
 - **Cover Letter** -- A brief summary of the key points of the proposal and approach to accomplishing the work. Name and address of the firm, as well as the contact person's name, phone number, and email address should also be included.
 - **Project Understanding** - A general description of the approach to be used in accomplishing the work, including the project organization and management plan. Senior personnel who will work on the project, including subcontractor personnel, should be identified by name and by role in the project; e.g., project manager, principal in charge, project advisor, etc. The project manager in particular must be specified and a clear indication given as to his/her involvement in the project. If more than one firm will be involved, the proposal should clearly delineate the work to be accomplished by each firm and how the work will be coordinated and managed. Any special requirements or coordination needs should be clearly identified.
 - **Scope of Services and Schedule** - This section should respond to the Request for Proposals task descriptions for the project by describing clearly in detail what and how work in each task will be accomplished, the technical methodology to be used, and the planned work flow and schedule. A description should be included concerning quality

control and how this will be maintained and accomplished during the course of this project.

- **Consultant Qualifications** - This section should identify the background and experience of the consulting firm(s) and individuals in similar types of work and the results of that experience, along with up-to-date references (name, current affiliation, and phone number), should be included. Knowledge of the Dallas-Fort Worth area should be specifically indicated.
 - **Compliance Requirements** - Appendices C through H of the Sample Contract contain compliance requirements and other certification forms which must accompany the Proposal.
 - **Affirmative Action Plan** - NCTCOG is required, under Title 49, Code of Federal Regulations, Part 21 to request from all contractors an Affirmative Action Plan for the contracting entity. Such a plan will be reviewed by NCTCOG to determine compliance with federal Equal Employment Opportunity requirements. You are requested, then, to submit a plan which should include, at a minimum, a policy statement and utilization analysis of your workforce. An indication of the number and percent of your employees who would be classified as minorities, including both women and ethnic minorities, should be provided. An indication of the number and percent in professional versus nonprofessional positions, or administration versus clerical positions, should also be provided.
 - **Entities that Boycott Israel (House Bill 89)**
 - If proposers are required to make a certification pursuant to Section 2271.002 of the Texas Government Code, proposers should include a certification statement that they do not and will not boycott Israel during the term of the contract resulting from this solicitation. If the proposer does not make that certification, proposer must indicate that in its response and state why the certification is not required.
 - **Prohibition on Firearm and Ammunition Industry Discrimination (S.B. 19)**
 - Pursuant to Chapter 2274, Government Code, as enacted by S.B. 19, 87th Legislature, NCTCOG is prohibited from using public funds to contract with entities who discriminate against firearm and ammunition industries. By signing this contract, the Consultant agrees that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Contract.
 - **Prohibition on Boycotting Energy Companies (S.B. 13)**
 - Pursuant to Chapter 2274, Government Code, as enacted by S.B. 13, 87th Legislature, NCTCOG is prohibited from using public funds to contract with entities who boycott energy companies. By signing this contract, the Consultant verifies that it does not discriminate against energy companies and will not discriminate during the term of the Contract.
3. The North Central Texas Council of Governments, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000(d) to 2000(d)(1) and Title 49, Code of Federal Regulations Part 26, Department of Transportation, Subtitle A, Office of the

Secretary, Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all proposers that it will affirmatively assure that, in regard to any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award.

4. The NCTCOG Transportation Department maintain a Disadvantaged Business Enterprise (DBE) participation goal on the part of socially and economically disadvantaged individuals in DOT-assisted projects. The specific DBE goal requirement for this procurement is identified in the RFP and Appendix D to the Sample Contract and is determined by the type of services being procured. **Failure on the part of a majority contractor to meet this goal or to show meaningful good faith efforts may be grounds for finding the proposal nonresponsive.** To facilitate this goal, a list of DBEs is attached for consideration. In the event the proposer is a majority firm and the above stated goal for DBE participation is not met, the prime contractor shall be required to provide justification and documentation for not reaching the goal with disadvantaged subcontractors.
 - a. Joint ventures between majority and disadvantaged contractors are encouraged. Whenever a joint venture involves a disadvantaged firm(s), the proposer shall submit with the proposal the names, scope of work, and the anticipated percentage of work of each proposed DBE subcontractor and joint venture. The Affidavit of Intended Entrepreneurship, included as Appendix D.2 of the Sample Contract, is intended for this purpose. **Please submit the original notarized affidavit with the Proposal.** NCTCOG shall reserve the right to approve all substitutions of subcontracts.
 - b. For the purposes of this policy, a Disadvantaged Business Enterprise is defined as: A business enterprise that is owned and controlled by one or more socially and/or economically disadvantaged persons. "Owned and controlled" is specified as a business which is (1) a sole proprietorship legitimately owned by an individual who is a disadvantaged person or (2) a partnership or joint venture controlled by disadvantaged persons and in which at least 51 percent of the voting interest and 51 percent of the beneficial ownership interests legitimately are held by disadvantaged persons. Such persons include individuals who are Women, Black, Hispanic, Native Americans, Asian-Pacific Americans, Asian-Indian Americans, or any other minorities or individuals found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act. **DBE Certificates issued through the Texas Unified Certification Program are required.**
 - c. The contractor shall maintain for three years such records as are necessary to determine compliance with their DBE obligations and shall submit regular reports to enable the North Central Texas Council of Governments to monitor this compliance.
5. The NCTCOG Executive Board encourages the use of local firms. However, all proposals, regardless of firm locale, will be evaluated using the consultant selection criteria contained in the Request for Proposals.
6. A consultant selection committee will review the proposals and select a firm it considers qualified to undertake the project. The selection of the proposal will be based on the technical proposal and/or interviews but will be subject to negotiation of conditions of cost satisfactory to NCTCOG. NCTCOG reserves the right to reject any or all proposals and to contract for any or all portions of the project with the selected consultant.

7. The Texas Legislature has adopted House Bill 1295. In short, the law states a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties (Form 1295) to our agency at the time of a signed contract. As part of contract development, the consultant will be asked to complete the disclosure of interested parties electronically and submit through the Texas Ethics Commission website. NCTCOG will provide a specific contract number associated with the award for inclusion in the submittal. Once submitted, the consultant will be requested to return an e-mail confirmation of submittal to NCTCOG.

- For more information about the process, please visit the following website for a Frequently Asked Questions:
https://www.ethics.state.tx.us/resources/FAQs/FAQ_Form1295.php

8. Procurement information shall be a public record to the extent provided by the Texas Open Records Act and the Freedom of Information Act and shall be available to the public as provided therein. If a proposal contains information that the proposer considers proprietary and does not want disclosed to the public or used for any purpose other than the evaluation of the offer, all such information must be indicated with the following suggested language:

The information contained on pages _____ shall not be duplicated or used in whole or in part, for any purpose other than to evaluate the proposal; provided that if a contract is awarded to this office as a result of or in connection with the submission of such information, NCTCOG has the right to duplicate, use or disclose this information to the extent provided in the contract.

9. Conflict of Interest Disclosure Requirement
Pursuant to Chapter 176 of the Local Government Code, any person or agent of a person who contracts or seeks to contract for the sale or purchase of property, goods, or services with a local governmental entity (i.e. NCTCOG) must disclose in the Questionnaire Form CIQ (“Questionnaire”) the person’s affiliation or business relationship that might cause a conflict of interest with the local governmental entity. By law, the Questionnaire must be filed with NCTCOG no later than seven days after the date the person begins contract discussions or negotiations with the NCTCOG, or submits an application or response to a request for proposals or bids, correspondence or another writing related to a potential agreement with the NCTCOG.

Updated Questionnaires must be filed in conformance with Chapter 176.

A copy of the Questionnaire Form CIQ is enclosed with the submittal documents. The form is also available at <https://www.ethics.state.tx.us/data/forms/conflict/CIQ.pdf>

If you have any questions about compliance, please consult your own legal counsel. Compliance is the individual responsibility of each person or agent of a person who is subject to the filing requirement. An offense under Chapter 176 is a Class C misdemeanor. If the consultant has no Conflict of Interest, please include the following statement: [insert firm name] has reviewed and confirmed there are no Conflicts of Interest for the prime or subconsultants with the North Central Texas Council of Governments or any associated local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A).