



MASTER SERVICES AGREEMENT #2024-132
Traffic Signal Maintenance & Repair Services

THIS MASTER SERVICES AGREEMENT (“**Agreement**”), effective the last date of signed approval (“**Effective Date**”), is entered into by and between the **North Central Texas Council of Governments** (“**NCTCOG**”), a Texas political subdivision and non-profit corporation, with offices located at 616 Six Flags Drive, Arlington, TX 76011, and

Grid Matrix, Inc.
 (“**Contractor**”)
with offices located at
801 Barton Springs Road
Suite #07-117
Austin, TX 78704

ARTICLE I
RETENTION OF THE CONTRACTOR

1.1 This Agreement defines the terms and conditions upon which the Contractor agrees to provide Executive Search Consulting and Related Services, (hereinafter, “Services”) to governmental entities participating in the TXShare program (hereinafter “Participating Entities”). The Contractor is being retained to provide services described below to Participating Entities based on the Contractor’s demonstrated competence and requisite qualifications to perform the scope of the services described herein and in the Request for Proposals #2024-132 (hereinafter, “RFP”). In the event of a conflict between this Agreement and the RFP, this Agreement will prevail. The Contractor demonstrated they have the resources, experience, and qualifications to perform the described services, which is of interest to Participating Entities and was procured via the RFP. NCTCOG agrees to and hereby does retain the Contractor, as an independent contractor, and the Contractor agrees to provide services to Participating Entities, in accordance with the terms and conditions provided in this Agreement and consistent with Contractor’s response to the RFP.

ARTICLE II
SCOPE OF SERVICES

2.1 The Contractor will provide Services described in a written Purchase Order issued by NCTCOG or a TXShare Participating Entity. Any such Purchase Order is hereby incorporated by reference and made a part of this Agreement and shall be subject to the terms and conditions in this Agreement. In the event of a conflict between any term or provision in this Agreement and any term or provision in a Purchase Order, the term or provision in this Agreement shall control unless the conflicting term or provision in this Agreement is referenced, and expressly stated not to apply, in such Purchase Order.

2.2 All Services rendered under this Agreement will be performed by the Contractor: i) with due care; ii) in accordance with generally prevailing industry standards; iii) in accordance with Participating Entities' standard operating procedures and applicable policies, as may be amended from time to time; and iv) in compliance with all applicable laws, government regulatory requirements, and any other written instructions, specifications, guidelines, or requirements provided by NCTCOG and/or Participating Entities.

2.3 Any agreed-upon changes to a Purchase Order shall be set forth in a subsequent Purchase Order amendment. Contractor will not implement any changes, or any new Services until a Purchase Order has been duly executed by Participating Entity. For the avoidance of doubt, the Contractor acknowledges that Participating Entity is under no obligation to execute a Purchase Order. Participating Entity shall not be liable for any amounts not included in a Purchase Order in the absence of a fully executed amendment of Purchase Order.

2.4 Pricing for items in Appendix A represent the maximum cost for each item offered by the Contractor. Contractor and Participating Entity may mutually agree to a lower cost for any item covered under this agreement.

2.5 NCTCOG Obligations

2.5.1 NCTCOG shall make available a contract page on its TXShare.org website which will include contact information for the Contractor(s).

2.6 Participating Entity Obligations.

2.6.1 In order to utilize the Services, Participating Entities must have executed a Master Interlocal Agreement for TXShare with NCTCOG. This agreement with the Participating Entity will define the legal relationship between NCTCOG and the Participating Entity.

2.6.2 In order to utilize the Services, Participating Entities must execute a Purchase Order with the Contractor. This agreement with the Participating Entity will define the Services and costs that the Participating Entity desires to have implemented by the Contractor.

2.7 Contractor Obligations.

2.7.1 Contractor must be able to deliver, perform, install, and implement services with the requirements and intent of the RFP.

2.7.2 If applicable, Contractor shall provide all necessary material, labor and management required to perform this work. The scope of services shall include, but not be limited to, items listed in Appendix A.

2.7.3 Contractor agrees to market and promote the use of the TXSHARE awarded contract whenever possible among its current and solicited customer base, such as, but not limited to via the Contractor's website. Contractor shall agree to follow reporting requirements and report sales made under this Master Services Agreement in accordance with Section 4.2.

ARTICLE III TERM

3.1 This Agreement will commence on the Effective Date and remain in effect for an initial term ending on **November 30, 2026** (the "Term"), unless earlier terminated as provided herein. This Agreement will automatically be renewed, unless NCTCOG explicitly desires otherwise, for an additional term, through **November 30, 2029**.

3.2 **Termination.** NCTCOG and/or Participating Entities may terminate this Agreement and/or any Purchase Order to which it is a signatory at any time, with or without cause, upon thirty (30) days' prior written notice to Contractor. Upon its receipt of notice of termination of this Agreement or Purchase Order, Contractor shall follow any instructions of NCTCOG respecting work stoppage. Contractor shall cooperate with NCTCOG and/or Participating Entities to provide for an orderly conclusion of the Services. Contractor shall use its best efforts to minimize the amount of any non-cancelable obligations and shall assign any contracts related thereto to NCTCOG or Participating Entity at its request. If NCTCOG or Participating Entity elects to continue any activities underlying a terminated

Purchase Order after termination, Contractor shall cooperate with NCTCOG or Participating Entity to provide for an orderly transfer of Contractor's responsibilities with respect to such Purchase Order to NCTCOG or Participating Entity. Upon the effective date of any such termination, the Contractor shall submit a final invoice for payment in accordance with Article IV, and NCTCOG or Participating Entity shall pay such amounts as are due to Contractor through the effective date of termination. NCTCOG or Participating Entity shall only be liable for payment of services rendered before the effective date of termination. If Agreement is terminated, certain reporting requirements identified in this Agreement shall survive termination of this Agreement.

3.2.1 **Termination for Cause:** Either party may immediately terminate this Agreement if the other party breaches its obligations specified within this Agreement, and, where capable of remedy, such breach has not been materially cured within thirty (30) days of the breaching party's receipt of written notice describing the breach in reasonable detail.

3.2.2 **Breach:** Upon any material breach of this Agreement by either party, the non-breaching party may terminate this Agreement upon twenty (20) days written notice to the breaching party. The notice shall become effective at the end of the twenty (20) day period unless the breaching party cures such breach within such period.

ARTICLE IV COMPENSATION

4.1 **Invoices.** Contractor shall submit an invoice to the ordering Participating Entity in accordance with billing terms as stated in Appendix A for each Scope of Service. If billing terms are not specified for a particular Scope of Service, then the Contractor will submit an invoice to the Participating Entity upon receipt of an executed Purchase Order and after completion of the work, with Net 30 payment terms.

Costs incurred prior to execution of this Agreement are not eligible for reimbursement. There shall be no obligation whatsoever to pay for performance of this Agreement from the monies of the NCTCOG or Participating Entities, other than from the monies designated for this Agreement and/or executed Purchase Order. Contractor expressly agrees that NCTCOG shall not be liable, financial or otherwise, for Services provided to Participating Entities.

4.2 **Reporting.** NCTCOG intends to make this Agreement available to other governmental entities through its TXShare cooperative purchasing program. Contractor shall submit to NCTCOG on a calendar quarterly basis a report that identifies any new client Participating Entities, the date and order number, and the total contracted value of services that each Participating Entity has purchased and paid in full under this Master Service Agreement. Reporting and invoices should be submitted to:

NCTCOG
ATTN: TXShare
PO Box 5888
Arlington, TX 76005-5888
Email: TXShare@nctcog.org

ARTICLE V SERVICE FEE

5.1 **Explanation.** NCTCOG will make this Master Service Agreement available to other governmental entities, Participating Entities, and non-profit agencies in Texas and the rest of the United States through its TXShare cooperative purchasing program. The Contractor is able to market the Services under this Agreement to any

Participating Entity with emphasis that competitive solicitation is not required when the Participating Entity purchases off of a cooperative purchasing program such as TXShare. However, each Participating Entity will make the decision that it feels is in compliance with its own purchasing requirements. The Contractor realizes substantial efficiencies through their ability to offer pricing through the TXShare Cooperative and that will increase the sales opportunities as well as reduce the need to repeatedly respond to Participating Entities' Requests for Proposals. From these efficiencies, Contractor will pay an administrative fee to TXShare calculated as a percentage of sales processed through the TXShare Master Services Agreement. This administrative fee is not an added cost to TXShare participants. This administrative fee covers the costs of solicitation of the contract, marketing and facilitation, as well as offsets expenses incurred by TXShare.

5.2 **Administrative Fee.** NCTCOG will utilize an administrative fee, in the form of a percent of cost that will apply to all contracts between awarded contractors and NCTCOG or participants resulting from this solicitation. The administrative fee will be remitted by the Contractor to NCTCOG on a quarterly basis, along with required quarterly reporting. The remuneration fee for this program will be 2% on all fees for service, with the exception of expenses that are passed through to Participating Entities without markup from the Contractor, such as, but not limited to, advertising, travel expenses and per diem costs, temporary housing, and materials production.

5.3 **Setup and Implementation.** NCTCOG will provide instruction and guidance as needed to the Contractor to assist in maximizing mutual benefits from marketing these Services through the TXShare purchasing program.

ARTICLE VI RELATIONSHIP BETWEEN THE PARTIES

6.1 **Contractual Relationship.** It is understood and agreed that the relationship described in this Agreement between the Parties is contractual in nature and is not to be construed to create a partnership or joint venture or agency relationship between the parties. Neither party shall have the right to act on behalf of the other except as expressly set forth in this Agreement. Contractor will be solely responsible for and will pay all taxes related to the receipt of payments hereunder and shall give reasonable proof and supporting documents, if reasonably requested, to verify the payment of such taxes. No Contractor personnel shall obtain the status of or otherwise be considered an employee of NCTCOG or Participating Entity by virtue of their activities under this Agreement.

ARTICLE VII REPRESENTATION AND WARRANTIES

7.1 **Representations and Warranties.** Contractor represents and warrants that:

7.1.1 As of the Effective Date of this Agreement, it is not a party to any oral or written contract or understanding with any third party that is inconsistent with this Agreement and/or would affect the Contractor's performance under this Agreement; or that will in any way limit or conflict with its ability to fulfill the terms of this Agreement. The Contractor further represents that it will not enter into any such agreement during the Term of this Agreement;

7.1.2 NCTCOG is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from, or ineligible for, participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. Contractor and its subcontractors shall include a statement of compliance with Federal and State Debarment and suspension regulations in all Third-party contracts.

- 7.1.3 Contractor shall notify NCTCOG if Contractor or any of the Contractor's sub-contractors becomes debarred or suspended during the performance of this Agreement. Debarment or suspension of the Contractor or any of Contractor's sub-contractors may result in immediate termination of this Agreement.
- 7.1.4 Contractor and its employees and sub-contractors have all necessary qualifications, licenses, permits, and/or registrations to perform the Services in accordance with the terms and conditions of this Agreement, and at all times during the Term, all such qualifications, licenses, permits, and/or registrations shall be current and in good standing.
- 7.1.5 Contractor shall, and shall cause its representatives to, comply with all municipal, state, and federal laws, rules, and regulations applicable to the performance of the Contractor's obligations under this Agreement.

ARTICLE VIII CONFIDENTIAL INFORMATION AND OWNERSHIP

- 8.1 **Confidential Information.** Contractor acknowledges that any information it or its employees, agents, or subcontractors obtain regarding the operation of NCTCOG or Participating Entities, its products, services, policies, customer, personnel, and other aspect of its operation ("Confidential Information") is proprietary and confidential, and shall not be revealed, sold, exchanged, traded, or disclosed to any person, company, or other entity during the period of the Contractor's retention hereunder or at any time thereafter without the express written permission of NCTCOG or Participating Entity.

Notwithstanding anything in this Agreement to the contrary, Contractor shall have no obligation of confidentiality with respect to information that (i) is or becomes part of the public domain through no act or omission of Contractor; (ii) was in Contractor's lawful possession prior to the disclosure and had not been obtained by Contractor either directly or indirectly from the NCTCOG or Participating Entity; (iii) is lawfully disclosed to Contractor by a third party without restriction on disclosure; (iv) is independently developed by Contractor without use of or reference to the NCTCOG's Participating Entity's Confidential Information; or (v) is required to be disclosed by law or judicial, arbitral or governmental order or process, provided Contractor gives the NCTCOG or Participating Entity prompt written notice of such requirement to permit the NCTCOG or Participating Entity to seek a protective order or other appropriate relief. Contractor acknowledges that NCTCOG and Participating Entities must strictly comply with applicable public information laws, in responding to any request for public information. This obligation supersedes any conflicting provisions of this Agreement.

8.2 **Ownership.** No title or ownership rights to any applicable software are transferred to the NCTCOG by this agreement. The Contractor and its suppliers retain all right, title and interest, including all copyright and intellectual property rights, in and to, the software (as an independent work and as an underlying work serving as a basis for any improvements, modifications, derivative works, and applications NCTCOG may develop), and all copies thereof. All final documents, data, reports, information, or materials are and shall at all times be and remain, upon payment of Contractor's invoices therefore, the property of NCTCOG or Participating Entity and shall not be subject to any restriction or limitation on their future use by, or on behalf of, NCTCOG or Participating Entity, except otherwise provided herein. Subject to the foregoing exception, if at any time demand be made by NCTCOG or Participating Entity for any documentation related to this Agreement and/or applicable Purchase Orders for the NCTCOG and/or any Participating Entity, whether after termination of this Agreement or otherwise, the same shall be turned over to NCTCOG without delay, and in no event later than thirty (30) days after such demand is made. Contractor shall have the right to retain copies of documentation, and other items for its archives. If for any reason the foregoing Agreement regarding the ownership of documentation is determined to be unenforceable, either in whole or in part, the Contractor hereby assigns and agrees to assign to NCTCOG all rights, title, and interest that the Contractor may have or at any time acquire in said documentation and other materials, provided that the Contractor has been paid the aforesaid.

**ARTICLE IX
GENERAL PROVISIONS**

9.1 **Notices.** All notices from one Party to another Party regarding this Agreement shall be in writing and delivered to the addresses shown below:

If to NCTCOG:

North Central Texas Council of Governments
P.O. Box 5888
Arlington, TX 76005-5888
Attn: Charlie Oberrender
(817) 695-9289
coberrender@nctcog.org

If to Contractor:

Grid Matrix, Inc.
801 Barton Springs Road
Suite #07-117
Austin, TX 78704
Attn: Nicholas D'Andre
ndandre@gridmatrix.com
(650) 272-9249

The above contact information may be modified without requiring an amendment to the Agreement.

9.2 **Tax.** NCTCOG and several participating entities are exempt from Texas limited sales, federal excise and use tax, and does not pay tax on purchase, rental, or lease of tangible personal property for the organization's use. A tax exemption certificate will be issued upon request.

9.3 **Indemnification.** Contractor shall defend, indemnify, and hold harmless NCTCOG and Participating Entities, NCTCOG's affiliates, and any of their respective directors, officers, employees, agents, subcontractors, successors, and assigns from any and all suits, actions, claims, demands, judgments, liabilities, losses, damages, costs, and expenses (including reasonable attorneys' fees and court costs) (collectively, "Losses") arising out of or relating to: (i) Services performed and carried out pursuant to this Agreement; (ii) breach of any obligation, warranty, or representation in this Agreement, (iii) the negligence or willful misconduct of Contractor and/or its employees or subcontractors; or (iv) any infringement, misappropriation, or violation by Contractor and/or its employees or subcontractors of any right of a third party; provided, however, that Contractor shall have no obligation to defend, indemnify, or hold harmless to the extent any Losses are the result of NCTCOG's or Participating Entities' gross negligence or willful misconduct.

9.4 **Limitation of Liability.** In no event shall either party be liable for special, consequential, incidental, indirect or punitive loss, damages or expenses arising out of or relating to this Agreement, whether arising from a breach of contract or warranty, or arising in tort, strict liability, by statute or otherwise, even if it has been advised of their possible existence or if such loss, damages or expenses were reasonably foreseeable.

Notwithstanding any provision hereof to the contrary, neither party's liability shall be limited by this Article with respect to claims arising from breach of any confidentiality obligation, arising from such party's infringement of the other party's intellectual property rights, covered by any express indemnity obligation of such party hereunder,

arising from or with respect to injuries to persons or damages to tangible property, or arising out of the gross negligence or willful misconduct of the party or its employees.

9.5 **Insurance.** At all times during the term of this Agreement, Contractor shall procure, pay for, and maintain, with approved insurance carriers, the minimum insurance requirements set forth below, unless otherwise agreed in a Purchase Order between Contractor and Participating Entities. Further, Contractor shall require all contractors and sub-contractors performing work for which the same liabilities may apply under this Agreement to do likewise. All subcontractors performing work for which the same liabilities may apply under this contract shall be required to do likewise. Contractor may cause the insurance to be effected in whole or in part by the contractors or sub-contractors under their contracts. NCTCOG reserves the right to waive or modify insurance requirements at its sole discretion.

Requirements:

Workers' Compensation:

Statutory limits and employer's liability of \$100,000 for each accident or disease.

Commercial General Liability with NCTCOG endorsed as a Named Additional Insured.

Required Limits:

\$1,000,000 per occurrence;

\$3,000,000 Annual Aggregate

Commercial General Liability policy with NCTCOG endorsed as a Named Additional Insured.

Shall include:

Coverage A: Bodily injury and property damage;

Coverage B: Personal and Advertising Injury liability;

Coverage C: Medical Payments;

Products: Completed Operations;

Fire Legal Liability;

Policy coverage must be on an "occurrence" basis using CGL forms as approved by the Texas State Board of Insurance.

Business Auto Liability with NCTCOG endorsed as a Named Additional Insured.

Coverage shall be provided for all owned hired, and non-owned vehicles. Required Limit: \$1,000,000 combined single limit each accident.

Professional Errors and Omissions liability:

Required Limits:

\$1,000,000 Each Claim

\$1,000,000 Annual Aggregate

9.51 **Conflict of Interest.** During the term of this Agreement, and all extensions hereto and for a period of one (1) year thereafter, neither party, shall, without the prior written consent of the other, directly or indirectly, whether for its own account or with any other persons or entity whatsoever, employ, solicit to employ or endeavor to entice away any person who is employed by the other party.

9.6 **Force Majeure.** It is expressly understood and agreed by both parties to this Agreement that, if the performance of any provision of this Agreement is delayed by force majeure, defined as reason of war, civil commotion, act of God, governmental restriction, regulation or interference, fire, explosion, hurricane, flood, failure of transportation, court injunction, or any circumstances which are reasonably beyond the control of the party obligated or permitted under the terms of this Agreement to do or perform the same, regardless of whether any such circumstance is similar to any of those enumerated herein, the party so obligated or permitted shall be excused from doing or performing

the same during such period of delay, so that the period of time applicable to such requirement shall be extended for a period of time equal to the period of time such party was delayed. Each party must inform the other in writing within a reasonable time of the existence of such force majeure.

- 9.7 **Ability to Perform.** Contractor agrees promptly to inform NCTCOG of any event or change in circumstances which may reasonably be expected to negatively affect the Contractor's ability to perform its obligations under this Agreement in the manner contemplated by the parties.
- 9.8 **Availability of Funding.** This Agreement and all claims, suits, or obligations arising under or related to this Agreement are subject to and limited by the receipt and availability of funds which are received from the Participating Entities by NCTCOG dedicated for the purposes of this Agreement.
- 9.9 **Governing Law.** This Agreement will be governed by and construed in accordance with the laws of the State of Texas, United States of America. The mandatory and exclusive venue for the adjudication or resolution of any dispute arising out of this Agreement shall be in Tarrant County, Texas.
- 9.10 **Waiver.** Failure by either party to insist on strict adherence to any one or more of the terms or conditions of this Agreement, or on one or more occasions, will not be construed as a waiver, nor deprive that party of the right to require strict compliance with the same thereafter.
- 9.11 **Entire Agreement.** This Agreement and any attachments/addendums, as provided herein, constitutes the entire agreement of the parties and supersedes all other agreements, discussions, representations or understandings between the parties with respect to the subject matter hereof. No amendments hereto, or waivers or releases of obligations hereunder, shall be effective unless agreed to in writing by the parties hereto.
- 9.12 **Assignment.** This Agreement may not be assigned by either Party without the prior written consent of the other Party.
- 9.13 **Severability.** In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision(s) hereof, and this Agreement shall be revised so as to cure such invalid, illegal, or unenforceable provision(s) to carry out as near as possible the original intents of the Parties.
- 9.14 **Amendments.** This Agreement may be amended only by a written amendment executed by both Parties, except that any alterations, additions, or deletions to the terms of this Agreement, which are required by changes in Federal and State law or regulations or required by the funding source, are automatically incorporated into this Agreement without written amendment hereto and shall become effective on the date designated by such law or regulation.
- 9.15 **Dispute Resolution.** The parties to this Agreement agree to the extent possible and not in contravention of any applicable State or Federal law or procedure established for dispute resolution, to attempt to resolve any dispute between them regarding this Agreement informally through voluntary mediation, arbitration or any other local dispute mediation process, including but not limited to dispute resolution policies of NCTCOG, before resorting to litigation.
- 9.16 **Publicity.** Contractor shall not issue any press release or make any statement to the media with respect to this Agreement or the services provided hereunder without the prior written consent of NCTCOG.
- 9.17 **Survival.** Rights and obligations under this Agreement which by their nature should survive will remain in effect after termination or expiration hereof.

**ARTICLE X
ADDITIONAL REQUIREMENTS**

- 10.1 **Equal Employment Opportunity.** Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, or national origin. Contractor shall take affirmative actions to ensure that applicants are employed, and that employees are treated, during their employment, without regard to their race, religion, color, sex, sexual orientation, gender identity, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.2 **Davis-Bacon Act.** Contractor agrees to comply with all applicable provisions of 40 USC § 3141 – 3148.
- 10.3 **Contract Work Hours and Selection Standards.** Contractor agrees to comply with all applicable provisions of 40 USC § 3701 – 3708 to the extent this Agreement indicates any employment of mechanics or laborers.
- 10.4 **Rights to Invention Made Under Contract or Agreement.** Contractor agrees to comply with all applicable provisions of 37 CFR Part 401.
- 10.5 **Clean Air Act, Federal Water Pollution Control Act, and Energy Policy Conservation Act.** Contractor agrees to comply with all applicable provisions of the Clean Air Act under 42 USC § 7401 – 7671, the Energy Federal Water Pollution Control Act 33 USC § 1251 – 1387, and the Energy Policy Conservation Act under 42 USC § 6201.
- 10.6 **Debarment/Suspension.** Contractor is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from or ineligible for participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. Contractor and its subcontractors shall comply with the Certification Requirements for Recipients of Grants and Cooperative Agreements Regarding Debarments and Suspensions.
- 10.7 **Restrictions on Lobbying.** Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- 10.8 **Procurement of Recovered Materials.** Contractor agrees to comply with all applicable provisions of 2 CFR §200.322.
- 10.9 **Drug-Free Workplace.** Contractor shall provide a drug free workplace in compliance with the Drug Free Workplace Act of 1988.
- 10.10 **Texas Corporate Franchise Tax Certification.** Pursuant to Article 2.45, Texas Business Corporation Act, state agencies may not contract with for profit corporations that are delinquent in making state franchise tax payments.
- 10.11 **Civil Rights Compliance**
Compliance with Regulations: Contractor will comply with the Acts and the Regulations relative to Nondiscrimination in Federally assisted programs of the U.S. Department of Transportation (USDOT), the Federal

Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made part of this agreement.

Nondiscrimination: Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 45 CFR Part 21.

Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by Contractor for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier will be notified by Contractor of obligations under this contract and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, sex, or national origin.

Information and Reports: Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the State or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish this information, Contractor will so certify to NCTCOG, the Texas Department of Transportation (“the State”) or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

Sanctions for Noncompliance: In the event of Contractor’s noncompliance with the Nondiscrimination provisions of this Agreement, NCTCOG will impose such sanctions as it or the State or the FHWA may determine to be appropriate, including, but not limited to: withholding payments to the Contractor under this Agreement until the Contractor complies and/or cancelling, terminating or suspension of this Agreement, in whole or in part.

Incorporation of Provisions: Contractor will include the provisions of the paragraphs listed above, in this section 10.11, in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. Contractor will take such action with respect to any subcontract or procurement as NCTCOG, the State, or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided that if Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier because of such direction, Contractor may request the State to enter into such litigation to protect the interests of the State. In addition, Contractor may request the United States to enter such litigation to protect the interests of the United States.

10.12 **Disadvantaged Business Enterprise Program Requirements**

Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any U.S. Department of Transportation (DOT)-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. Contractor shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non-discrimination in award and administration of DOT-assisted contracts. Each sub-award or subcontract must include the following assurance: *The Contractor, sub-recipient, or sub-contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this agreement, which may result in the termination of this agreement or such other remedy as the recipient deems appropriate.*

10.13 **Pertinent Non-Discrimination Authorities**

During the performance of this Agreement, Contractor, for itself, its assignees, and successors in interest agree to comply with the following nondiscrimination statutes and authorities; including but not limited to:

- a. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- b. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects).
- c. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), as amended, (prohibits discrimination on the basis of sex).
- d. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.) as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27.
- e. The Age Discrimination Act of 1975, as amended, (49 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age).
- f. Airport and Airway Improvement Act of 1982, (49 U.S.C. Chapter 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex).
- g. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, subrecipients and contractors, whether such programs or activities are Federally funded or not).
- h. Titles II and III of the Americans with Disabilities Act, which prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38.
- i. The Federal Aviation Administration’s Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex).
- j. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations.
- k. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, the parties must take reasonable steps to ensure that LEP persons have meaningful access to the programs (70 Fed. Reg. at 74087 to 74100).
- i. Title IX of the Education Amendments of 1972, as amended, which prohibits the parties from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

10.14 **Ineligibility to Receive State Grants or Loans, or Receive Payment on State Contracts**

In accordance with Section 231.006 of the Texas Family Code, a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least twenty-five (25) percent is not eligible to:

- a. Receive payments from state funds under a contract to provide property, materials or services; or
- b. Receive a state-funded grant or loan.

By signing this Agreement, the Contractor certifies compliance with this provision.

10.15 **House Bill 89 Certification**

If contractor is required to make a certification pursuant to Section 2270.002 of the Texas Government Code, contractor certifies that contractor does not boycott Israel and will not boycott Israel during the term of the contract resulting from this solicitation. If contractor does not make that certification, contractor state in the space below why the certification is not required.

10.16 Certification Regarding Disclosure of Conflict of Interest.

The undersigned certifies that, to the best of his or her knowledge or belief, that:

“No employee of the contractor, no member of the contractor’s governing board or body, and no person who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of this contract shall participate in any decision relating to this contract which affects his/her personal pecuniary interest.

Executives and employees of contractor shall be particularly aware of the varying degrees of influence that can be exerted by personal friends and associates and, in administering the contract, shall exercise due diligence to avoid situations which give rise to an assertion that favorable treatment is being granted to friends and associates. When it is in the public interest for the contractor to conduct business with a friend or associate of an executive or employee of the contractor, an elected official in the area or a member of the North Central Texas Council of Governments, a permanent record of the transaction shall be retained.

Any executive or employee of the contractor, an elected official in the area or a member of the NCTCOG, shall not solicit or accept money or any other consideration from a third person, for the performance of an act reimbursed in whole or part by contractor or Department. Supplies, tools, materials, equipment or services purchased with contract funds shall be used solely for purposes allowed under this contract. No member of the NCTCOG shall cast a vote on the provision of services by that member (or any organization which that member represents) or vote on any matter which would provide a direct or indirect financial benefit to the member or any business or organization which the member directly represents”.

No officer, employee or paid consultant of the contractor is a member of the NCTCOG.

No officer, manager or paid consultant of the contractor is married to a member of the NCTCOG.
No member of NCTCOG directly owns, controls or has interest in the contractor.

The contractor has disclosed any interest, fact, or circumstance that does or may present a potential conflict of interest.

No member of the NCTCOG receives compensation from the contractor for lobbying activities as defined in Chapter 305 of the Texas Government Code. Should the contractor fail to abide by the foregoing covenants and affirmations regarding conflict of interest, the contractor shall not be entitled to the recovery of any costs or expenses incurred in relation to the contract and shall immediately refund to the North Central Texas Council of Governments any fees or expenses that may have been paid under this contract and shall further be liable for any other costs incurred or damages sustained by the NCTCOG as it relates to this contract.

10.17 Certification of Fair Business Practices

That the submitter affirms that the submitter has not been found guilty of unfair business practices in a judicial or state agency administrative proceeding during the preceding year. The submitter further affirms that no officer of the submitter has served as an officer of any company found guilty of unfair business practices in a judicial or state agency administrative during the preceding year.

10.18 Certification of Good Standing Texas Corporate Franchise Tax Certification

Pursuant to Article 2.45, Texas Business Corporation Act, state agencies may not contract with for profit corporations that are delinquent in making state franchise tax payments. The undersigned authorized representative of the corporation making the offer herein certified that the following indicated Proposal is true and correct and that the undersigned understands that making a false Proposal is a material breach of contract and is grounds for contract cancellation.

10.19 Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. Pursuant to Public Law 115-232, Section 889, and 2 Code of Federal Regulations (CFR) Part 200, including §200.216 and §200.471, NCTCOG is prohibited from using federal funds to procure, contract with entities who use, or extend contracts with entities who use certain telecommunications and video surveillance equipment or services provided by certain Chinese controlled entities. The Contractor agrees that it is not providing NCTCOG with or using telecommunications and video surveillance equipment and services as prohibited by 2 CFR §200.216 and §200.471. Contractor shall certify its compliance through execution of the "Prohibited Telecommunications and Video Surveillance Services or Equipment Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

10.20 Discrimination Against Firearms Entities or Firearms Trade Associations
Pursuant to Texas Local Government Code Chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who discriminate against firearm and ammunition industries. NCTCOG is prohibited from contracting with entities, or extend contracts with entities who have practice, guidance, or directive that discriminates against a firearm entity or firearm trade association. Contractor shall certify its compliance through execution of the "Discrimination Against Firearms Entities or Firearms Trade Associations Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

10.21 Boycotting of Certain Energy Companies
Pursuant to Texas Local Government Code Chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who boycott certain energy companies. NCTCOG is prohibited from contracting with entities or extend contracts with entities that boycott energy companies. Contractor shall certify its compliance through execution of the "Boycotting of Certain Energy Companies Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

10.22 Domestic Preference
As appropriate and to the extent consistent with law, the Contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). Consistent with §200.322, the following items shall be defined as: "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

Grid Matrix, Inc.


Signature 12/2/2024
Date

Michael Aren
Printed Name
COO
Title

North Central Texas Council of Governments


Signature Signed by: 12/5/2024
Date
A4E72C1BEF0F426...

R. Michael Eastland
Executive Director

APPENDIX A
Statement of Work

TAB A - CAPACITY TO DELIVER

Describe and clearly indicate any exceptions to the specifications, options or alternatives as found in Section 4 of this RFP. You should also indicate any major requirements found in any other Section of this RFP that you cannot meet or wish to make exception to or deviation from.

GridMatrix provides a software-as-a-service solution that delivers data, analytics, and insights on roadway and other critical infrastructure operations, efficiency, and safety. Data specifically on traffic signal and signalized intersection performance are Included in this suite of information. GridMatrix is responding to this RFP and bidding on providing its software platform and related services under Service Category #3: Ancillary Service, Maintenance, Equipment & Supplies.

GridMatrix is not bidding on Service Category #1: Preventative Maintenance Services, or Service Category #2: Emergency & Non-Emergency Repair Services.

GridMatrix’s software solution is explained in detail later in this section, in response to the question “Provide your narrative response to Section 4.1 and 4.2 of this RFP.”

Describe your firm’s capabilities to deliver the products offered in a timely fashion.

Should GridMatrix’s solution be sought for a deployment, the company will use the following methodology to ensure quality control, including for projects which have quick turnarounds. The company’s Management Approach (MA) and Task Approach (TA) to executing this project’s scope of work consists of the following steps:

NCTCOG Sample Deployment Timeline																	
		Month		Month 1				Month 2				Months 3 - End				End Month	
		Week		W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2
TA-1	Edge Sensor Connection & Setup																
MA-1	Need Definition																
TA-2	Data Pipeline Activation + TMC integration																
TA-4	Quality Assurance (Validation/Calibration)																
TA-3	Dashboard + API Deployment																
TA-5	User Account Provisioning																
MA-4	Progress Reporting & KPI Measurement																
MA-3	Training & Support																
TA-6	System Operation																
TA-7	Data Sharing																
TA-8	Project Conclusion																
MA-2	Deployment Task Tracking																

MA-1) Need definition (Approximate time ~4 weeks): Externally facing meetings with users (in-person or via video conference), calls, and written material exchange as needed to align scope. Additionally, GridMatrix will collect data from users on project requirements and system specifications. During this time, GridMatrix's project management team will also establish project milestones and define quantitative KPIs to measure project impact and success.

MA-2) Deployment Task Tracking (Ongoing basis): Internally facing meetings where GridMatrix's project management team will track tasks TA-1 - TA-8 to ensure timely delivery and overall project schedule integrity. GridMatrix uses Jira for technical project management purposes, allowing all team members to continuously view progress and issue reporting. During this time, GridMatrix's project management team will provide weekly updates to users on deployment progress.

MA-3) Training & Support (Ongoing basis): Once GridMatrix's dashboard has been deployed and user accounts provisioned, GridMatrix will provide users with credentials and hold a kick-off meeting to orient them to the platform. GridMatrix provides users with "train the trainer" onboarding. During this session, in addition to covering operations, troubleshooting, configuration, administration, calibration, and maintenance procedures, GridMatrix will work with each of the users to explain how to train other users on the system. Under the train the trainer system, GridMatrix expects to help certain customer users learn the ins and outs of the software to an extent that they will be able to be front-line experts. After the initial session, the project management team will provide bi-weekly check-ins for any additional questions, in-person meetings when necessary, and will otherwise be available for video, call, or email to provide additional support whenever necessary to maximize platform impact.

MA-4) Progress Reporting & KPI Measurement (Ongoing basis): GridMatrix's project management team will report on milestone progress to the user's project manager. Additionally, GridMatrix's project management team will report on the project's KPIs to measure impact and success. These KPIs may include the number of underperforming intersections identified, the number of successful changes made at underperforming intersections, and the number of stakeholders engaged and utilizing the data.

GridMatrix Task Approach (TA) to Executing this Task Order: Deploying GridMatrix's dashboard and enabling it consists of the following sequential steps:

TA-1) Sensor connection and setup (Approximate time ~4 weeks): This step involves installing edge hardware and integrating any desired pre-existing sensors to GridMatrix's platform. This requires getting the internet connection online for each sensor and locating the IP address and location of each sensor (e.g. intersection cross streets). GridMatrix will work to define the intersections' virtual loops and boundaries and incorporate data feeds.

TA-2) Data pipeline activation + TMC Integration (Approximate time ~2 weeks): With IP addresses and locations for each intersection, GridMatrix's engineering team will create a data pipeline in that ingests live, raw data from each intersection, processes it, and then outputs signal performance metrics as well as congestion, emissions, and safety information for the purposes of analytics, reporting, and traffic control.

TA-3) Quality assurance (QA) (Approximate time ~2 weeks, followed by an ongoing basis): GridMatrix's engineering team will perform QA checks on users' dashboards, ensuring that both content and functionality are to the highest standards. For functionality, this includes filtering and latency checks. For content, this includes accuracy certifications achieved by processing raw data samples (such as controller data and video clips) manually and validating automatically processed results from (TA-2).

TA-4) Dashboard & API deployment (Approximate time ~2 weeks): GridMatrix's engineering team will create

a web-based dashboard for users and connect to the data pipeline from (TA-2), populating it with live and historical data. GridMatrix will deploy its API for integration with Blue-Band Integrator-AI™ for traffic control

TA-5) User account provisioning & handoff (Approximate time ~1 day): GridMatrix's engineering team will create user accounts for relevant stakeholders with an email alias as a username and customer password, delivering these credentials to enable dashboard access.

Total time required to start receiving results from the first sensor is approximately 4 weeks, with full data pipeline activation across all sensors by month 4 at the latest. This time may be shorter or longer depending on the size of on-call installation support and/or time restrictions, and will generally scale with the scope and complexity of the customer's specific needs. Additionally, GridMatrix's engineering team will support these ongoing system operations:

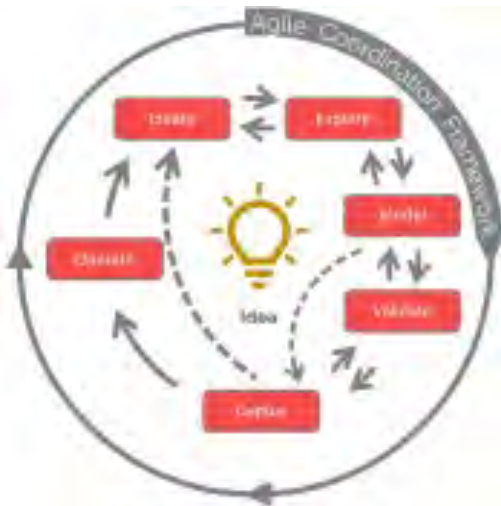
TA-6) System Operation (Ongoing basis): GridMatrix's engineering team will monitor the user's dashboard on a daily basis to ensure the system is exceeding requirements in all respects. GridMatrix's engineering team maintains internal dashboards that report on camera outages, data pipeline interruptions, and other abnormalities that allow them to proactively address issues before they result in user-facing service interruptions.

TA-7) Data Sharing (Ongoing basis): Data is accessible to users through multiple means. Users may access visual and graphical analyses via GridMatrix's dashboard. Custom graphs may be created and downloaded via filtering and then downloaded as image or .pdf files. Raw data underlying the graphs may also be exported via .csv or .xlsx to a Microsoft Excel file. Additionally, GridMatrix's dashboard provides for custom report building, whereby users can create their own reports based on filters or parameters they specify. These reports can be run on a one-time basis or delivered via email for any period of time (e.g. hourly, weekly, monthly, etc.). Furthermore, GridMatrix's system includes an API whereby users can query and export raw data to incorporate into other software platforms, analyses, simulations, and processes on a programmatic basis. GridMatrix's engineering team is also available to assist users to report generation and maintenance.

On-Call Consultative Services: If a user requires additional services such as advanced data analysis, or interpretation, custom reporting/writing/graph creation, collaboration with other vendors, etc. as part of its task order, GridMatrix will provide these services on an hourly basis to support the project. GridMatrix is available to provide these services via email, slack, phone call, in-person, or via video conference, and will use Jira for task tracking and project scheduling. GridMatrix has also assisted cities with grant preparation and provided information for Peachtree Corners' successful FY2023 Safe Streets For All grant application.

GridMatrix employs a "directly responsible individual" (DRI) system to ensure timely project completion. For this project, the DRI for the project as a whole will be the project manager, CEO Nicholas D'Andre. D'Andre will handle coordination of this contract with other concurrent work, remain in contact with the customer and host regular meetings, maintain sufficient staffing to perform the work, and maintain the administration of the contract, including updating the customer about the project status and the budget. Each task is assigned its own DRI responsible for deadline delivery and a red-yellow-green high/medium/low technical risk assignment per task to create a task priority matrix. Red risk assessments are deemed "project blockers," yellow are "project inhibitors," and green are either "neutral" or "accelerants" to project delivery.

These risk assessments are reviewed in a scrum Agile project management setting by the project manager and the DRIs with red and yellow risk items. The scrum agile framework breaks work into goals to be completed within "sprints" of work with defined timelines of no more than one month, typically two weeks. During this summit, technical risk mitigation strategies for resolution are identified, additional tasks created, project schedules amended (if at all), and then executed by the DRIs and their supporting team. All changes



are reflected in a Gantt chart which is live updated and shared with our customers. If technical risks arise that will impact the schedule of product delivery >1 week, the DRI is responsible for communicating with the project manager. The manager then elevates the issue to the client point of contact for immediate communication of the issue with resolution plans and timelines for approval. Budget tracking is undertaken in parallel with project management.

At the conclusion of the requirements gathering phase, the GridMatrix technical team uses sprints to develop and track project work. Items are pulled down from the backlog, and weekly planning and retrospective meetings take place to track overall progress. Weekly to bi-weekly meetings with customers are included in this process to ensure that deliverables are aligned with

the overall roadmap for development. Using an Agile methodology allows for a combination of design, planning, and development during an iterative process toward delivery. This process also facilitates customer feedback during the requirements gathering, planning, design, development, verification, deployment and maintenance phases to ensure that deliverables align with the needs of the customer.

Our QA process then checks our developments in test environments. This includes unit, integration and regression testing, as well as quality checks on the front end for data integrity and accuracy. Upon passing QA, the project enters a deployment phase. In this phase, the systems are brought up in production environments or new features are released into production. The systems are monitored for reliability and maintained for customer use. GridMatrix maintains a communication channel to field any customer issues for quick resolutions.

The GridMatrix team maintains a weekly standing planning meeting towards tracking overall project progress and delivery. This meeting includes commercial, product, and technical teams to ensure the weekly goals are tracking towards milestones and delivery, as well as identifying any blocking issues. For the technical team, work items in the form of user stories are added to a backlog to define the scope of work for the upcoming sprint cycle. Previous work and the current backlog may be reviewed to add or reprioritize work as needed.

KPIs for measuring project progress & success could include:

Goal	KPI
Integrate existing cameras or other datasets into GridMatrix platform	-# of cameras/datasets successful integrated -achieve 99% system uptime (while cameras are also working)
Integrate wit ATMS	-# of controllers integrated with SCOOT -# of calls changed by multimodal detection logic
Detect multiple road user classes at customer intersections	-% accuracy for pedestrian detection -% accuracy for cyclist detection -% accuracy overall system in a variety of conditions (day, night, weather events)

Generate V2X messages	-# of V2X messages generated
GridMatrix provides real time and historical metrics on congestion, safety, and signal performance	-# of intersections providing data feeds -dashboard + bulk data provided via dashboard and API -# of recurring reports created by the customer users
Identify hazardous roadside areas over time	-# of hazardous intersections/deployment areas quantified -quantifying hazard level in terms of # and severity of near miss incidents -# of near misses avoided post installation compared with # detected pre-installation
Customer personnel uses the data	-# of monthly active platform users
Provide data on asset uptime and reliability	-% uptime for assets -# of intersections below 80% uptime identified
Real-time safety notifications & reporting	-provide real-time alerts for in-progress safety issues

List the business location(s) out of which your firm’s team members will work from. You are encouraged to provide options to cover multiple geographic areas outside of Dallas/Fort Worth.

To service NCTCOG customers, GridMatrix will work out of two primary locations:

- GridMatrix, 801 S Barton Springs Road, Suite #07-117, Austin, Texas, 78704
- GridMatrix, 2443 Fillmore St #380-6286, San Francisco, CA 94115

Beyond GridMatrix’s offices at these locations, GridMatrix personnel may also work from Amazon Web Services (AWS) offices nationally. These offices are listed here - [Amazon Web Services Global Office Network](#)

Provide an overview of Proposer’s organization, size, years in business, and experience; major clients; and other information that you feel would assist in our evaluation process.

- **Size:** GridMatrix currently employees 10 full-time employees, all of whom are located in the United States and work from its offices in Austin, TX and/or San Francisco, CA
- **Offices:** GridMatrix maintains two offices, with one location in Austin, Texas and its second in San Francisco, CA
- **Years in Business:** GridMatrix was incorporated in January 2021 and has been in continuous operation since (3+ years in business)
- **Experience, Major Clients, Other Information:**

GridMatrix has deployed its award-winning software platform for transit analytics with 15 customers in 10 states, and worked across multiple levels of government including city, county, state, and federal entities, as well as universities. A full list of GridMatrix deployments is below:

Trusted By Municipalities Nationwide



GridMatrix has worked across levels of federal, state, and local government

Project Experience Summary by Level

US Federal Government: GridMatrix was selected to participate in The Opportunity Project (TOP), a collaborative initiative between the US Census Bureau and US DOT. The program’s mission is to provide support to innovative startups that can help solve the nation’s most pressing challenges. From Q4 2022 to Q1 2023, GridMatrix was part of the program’s winter cohort and collaborated with a team of US DOT data scientists on how to make transit more resilient to climate change. GridMatrix prototyped a solution that combined data from existing roadway sensors, real-time fleet asset data from NYC MTA buses, and NOAA

weather data to create a real-time picture of bus route transit risk. GridMatrix's engineering team presented this solution at TOP's annual demo day.

State DOTs: GridMatrix has received RFP awards from 3 state DOTs, including the states of Arizona, Georgia, and Texas. Arizona has contracted with GridMatrix to provide on-call support for its research and development initiatives. Georgia has contracted with GridMatrix as part of its statewide Intelligent Transportation Solution (ITS) Marketplace, and is currently evaluating GridMatrix for implementation on existing state-operated roadway cameras for data collection and incident detection. The State of Texas Department of Information Resources has whitelisted GridMatrix, enabling multiple state, county, and city entities both in and out of Texas to directly procure GridMatrix's software. We have also received a contract from the Purchasing Cooperative of America, which allows us to sell directly to multiple states and thousands of local government entities across the country.

Counties & Cities: GridMatrix has launched its solution in Bellevue, WA, Morrisville, NC, Peoria, IL, Pleasanton, CA, Peachtree Corners, GA and Maricopa County, AZ and has upcoming projects in Denver, CO, Maricopa County, AZ, and San Mateo, CA. These governments are utilizing GridMatrix for:

- Congestion Management - to gather accurate data on vehicle and pedestrian counts, as well as cyclist traffic data
- Signal Performance - to optimize signal light timing
- Emissions - to gather data on emissions, particularly on heavy vehicles and freight traffic in residential neighborhoods
- Safety - to gather data on near misses and support both Vision Zero & Safe Streets for All grant planning

It is also notable that in these deployments, GridMatrix has successfully integrated with data from multiple different cameras, LiDAR, radar, and inductive loops.

Airports: Los Angeles World Airports, the organization responsible for managing Los Angeles International Airport (LAX) and Van Nuys (VNY) airport has invited GridMatrix to demonstrate its technology at LAX. The airport is specifically interested in using GridMatrix with LiDAR at the roadside of LAX to:

- Count people and vehicle at curbside locations and on roadways, and baggage at curbside locations
- Accurately measure distances between vehicles, and between vehicles and curbs
- Monitor "near misses" between vehicles and people
- Determine vehicle speeds and identify vehicles through their characteristics

Universities: GridMatrix has launched its solution at California State University at Sacramento. The campus has a student population of 30,000 people and the university is interested in monitoring campus ingress and egress using GridMatrix's platform as well as monitoring pedestrian and cyclist safety via "near miss" monitoring on-campus. GridMatrix is launching a similar deployment at CU Denver's urban campus in Denver, CO.

Since 2021, we have deployed GridMatrix's platform 15 times. These include deployments in New York City on the world's busiest bridges and tunnels to deployments with counties, cities, towns, and universities. These deployments have collectively gathered millions of road user data points, which in turn have developed our world-leading AI algorithms for transportation safety analysis. GridMatrix's software has been competitively evaluated and selected for on-call service by multiple organizations, including Arizona DOT (ADOT), Texas DIR (TXDIR), the Purchasing Cooperative of America, and Georgia DOT (GDOT), as well as the Arizona-based Strategic Alliance for Volume Expenditures via Maricopa County. The Intelligent Transportation Society of America has recognized GridMatrix's software as a leading new innovative solution for sustainable and resilient infrastructure, while CoMotion Miami named our team the winners of the M2 Challenge.

GridMatrix is improving safety, sustainability, and equity outcomes in US cities and can help Seattle enhance mobility with respect to other areas outside of safety. Transportation planners in New York City have used GridMatrix's software to gather accurate, real-time emissions data from over 100,000 daily vehicle trips to determine their primary emissions drivers. Data Scientists at the Uthe customer are working with GridMatrix's engineering team to predict accidents and provide real-time safety alerts. We are [Allies in Action](#) with the Uthe customer and are dedicated to the NRSS Safe Systems Approach and Uthe customer Complete Streets policies.

Please provide a description of how your firm intends to interact with the Customer while providing services.

- **Virtual communication:** GridMatrix personnel are reachable by zoom, email, phone, and Slack (as well as other platforms if so desired by the customer)
- **Project Management:** GridMatrix uses Jira to track project management deliverables
- **Regular Meetings:** GridMatrix team members will meet regularly with customer team members to update on status, no fewer than bi-weekly
- **Site Visits:** As needed and as agreed with the customer, GridMatrix team members will conduct in-person and site visits to the customer's offices or deployment locations

Describe your invoicing process. Payment terms? Is payment by credit card accepted? Is a deposit required?

GridMatrix's payment terms are outlined in its [Standard Terms & Conditions](#), section 4

4. PAYMENT OF FEES

4.1 Customer will pay GridMatrix the applicable fees described in the Order Form for the Services and Implementation Services in accordance with those terms (the "Fees"). All Fees are quoted and will be billed and due in U.S. Dollars. If Customer's use of the Services exceeds the Service Capacity set forth on the Order Form or otherwise requires the payment of additional fees (per the terms of this Agreement or additional Order Forms), Customer shall be billed for such usage and Customer agrees to pay the additional fees in the manner provided in this Section. GridMatrix reserves the right to change the Fees or applicable charges and to institute new charges and Fees at the end of the Initial Service Term or then-current renewal term, upon thirty (30) days prior notice to Customer (which may

be sent by email). If Customer believes that GridMatrix has billed Customer incorrectly, Customer must contact GridMatrix no later than 60 days after the closing date on the first billing statement in which the error or problem appeared, in order to receive an adjustment or credit. Inquiries should be directed to GridMatrix's customer support department

4.2 GridMatrix may choose to bill through an invoice, in which case, full payment for invoices issued in any given month must be received by GridMatrix thirty (30) days after the mailing date of the invoice. Unpaid amounts are subject to a finance charge of 1.5% per month on any outstanding balance, or the maximum permitted by law, whichever is lower, plus all expenses of collection and may result in immediate termination of Service. Customer shall be responsible for all taxes and government fees associated with Services other than U.S. taxes based on GridMatrix's net income.

Designate and provide names of specific contact person(s) for the following phases: (1) proposal evaluation process (2) contracting process (3) primary point of contact for receiving orders from participating agencies.

- (1) Proposal Evaluation Contact - Nicholas D'Andre, ndandre@gridmatrix.com, 650-272-9259
- (2) Contracting Process - Nicholas D'Andre, ndandre@gridmatrix.com, 650-272-9249
- (3) Order Reception - Nicholas D'Andre, ndandre@gridmatrix.com, 650-272-9249

Include a list of no more than five (5) similar contracts awarded within the last 5 years. These same five projects should be used as your references in Tab C.

Project #1 - [NYC Bridges & Tunnels Get AI Traffic Analytics from GridMatrix](#)

Sponsoring Agency: Port Authority of New York and New Jersey

Scope: GridMatrix deployed using existing cameras on the Lincoln Tunnel, Holland Tunnel, and George Washington Bridge to collect data multimodal data on traffic congestion, emissions, and safety including near-miss events

Project #2 - [GridMatrix Texas DIR \(Contract #DIR-CPO-5299\)](#)

Sponsoring Agency: Texas Department of Information Resources

Scope: GridMatrix was selected by the Texas Department of Information Resources (the State Technology Agency of the State of Texas) to provide commercial off-the-shelf "COTS" software services for roadway traffic analytics, critical infrastructure optimization, and other transportation planning and analysis use cases using edge sensors including cameras, radar, lidar, and inductive loops as well as supporting services.

Project #3 - [US DOT Partnership to Develop Predictive Models for Emergency Responders](#)

Sponsoring Agency: US Department of Transportation

Scope: GridMatrix developed a real time safety index for transit vehicles using near-miss data, crash data, and NOAA meteorological data

Project #4 - [GridMatrix Deploys In Peoria, IL](#)

Sponsoring Agency: Hanson Inc. on behalf of the city of Peoria

Scope: GridMatrix deployed its platform on existing Peoria 360 degree cameras to collect multimodal traffic data collection

Project Manager Name // Title

Project #5 - [San Mateo County Deploys GridMatrix for Vision Zero](#)

Sponsoring Agency: San Mateo County

Scope: GridMatrix is deploying its software along a critical corridor to measure near-misses and other safety metrics to help San Mateo County reach its vision zero goals

Additional Reference

Project #6 - GridMatrix Deploys At California State University, Sacramento

Sponsoring Agency: California State University, Sacramento

Scope: GridMatrix is operating its platform on Sac State’s campus to gather data on pedestrian and cyclists counts, near misses, and campus ingress/egress

Identify any contracts within the past three years that were terminated due to non-performance.

None

Please state in your proposal what warranty or guarantee may apply to the goods or services you are proposing.

GridMatrix’s warranty policy is outlined in its [Standard Terms & Conditions](#), section 6

6. WARRANTY AND DISCLAIMER

6.1 GridMatrix shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Services and shall perform the Implementation Services in a professional and workmanlike manner. Services may be temporarily unavailable for scheduled maintenance or for unscheduled emergency maintenance, either by GridMatrix or by third-party providers, or because of other causes beyond GridMatrix’s reasonable control, but GridMatrix shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption. GRIDMATRIX DOES NOT WARRANT THAT THE SERVICES WILL BE UNINTERRUPTED OR ERROR FREE; NOR DOES IT MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM USE OF THE SERVICES. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE SERVICES AND IMPLEMENTATION SERVICES ARE PROVIDED “AS IS” AND GRIDMATRIX DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT

What is your standard response time for emergency traffic signal calls? Is this response available twenty-four (24) hours a day, including Saturdays, Sundays, and holidays? Please explain.

GridMatrix’s response and support terms are outlined in its [Standard Terms & Conditions](#), Exhibit A

EXHIBIT A

Service Level Terms

The Services shall be available 99.9%, measured monthly, excluding holidays and weekends and scheduled maintenance. If Customer requests maintenance during these hours, any uptime or downtime calculation will exclude periods affected by such maintenance. “Downtime” means any period of time during which no user is able to access the Services. Downtime does not include outages as the result of Customer or third party connections, equipment or utilities or other reasons beyond GridMatrix’s control. Customer’s sole and exclusive remedy, and GridMatrix’s entire liability, in connection with Service availability shall be that for each period of Downtime lasting longer than 4 hours, GridMatrix will credit Customer 5% of that month’s Service fees; provided that no more than one such credit will accrue per 24 hour period. Downtime shall begin to accrue as soon as Customer notifies GridMatrix (by contacting the help desk) that Downtime is taking place, and continues until the availability of the Services is restored. In order to receive Downtime credit, Customer must notify GridMatrix in writing within 24 hours from the time of Downtime. Failure to provide such notice will forfeit the right to receive Downtime credit. Such credits may not be redeemed for cash and shall not be cumulative beyond a total of credits for 1 week of Service Fees in any 1 calendar month in any event. GridMatrix will only apply a credit to the month in which the incident occurred. GridMatrix’s blocking of data communications or other Service in accordance with its Policy shall not be deemed to be a failure of GridMatrix to provide adequate service levels under this Agreement.

Support Terms

GridMatrix will provide Technical Support to Customer via both telephone and electronic mail on weekdays during the hours of 10:00am through 5:00pm Pacific time, with the exclusion of U.S. Federal Holidays (“Support Hours”)

Customer may initiate a helpdesk ticket during Support Hours by emailing or calling the helpdesk at the email or phone number provided by GridMatrix to Customer.

GridMatrix will use commercially reasonable efforts to respond to all Helpdesk tickets within one (1) business day.

What is your standard response time for non-emergency traffic signal calls? Please explain.

Same as above.

What repair parts can you provide and what expectation if any do you have of the Customer to provide the repair parts?

N/A, GridMatrix is not providing repair parts as part of this proposal

Provide your narrative response to Section 4.1 and 4.2 of this RFP.

GridMatrix is responding to this RFP and bidding on providing its software platform and related services under Service Category #3: Ancillary Service, Maintenance, Equipment & Supplies.

GridMatrix is not bidding on Service Category #1: Preventative Maintenance Services, or Service Category #2: Emergency & Non-Emergency Repair Services.

GridMatrix's software solution is explained in detail below:

GridMatrix Solution Overview & Modular System Diagrams

GridMatrix's mission is to help cities understand their streets through data. GridMatrix's award-winning software solution utilizes data from any existing or new roadway sensors and available cloud-based data sources to efficiently resolve traffic, emissions, and safety challenges. Our technology uses patented AI and machine learning techniques to identify potential issues at intersections and roadways and isolate their root causes. Roadway operators can leverage our insights to make data-driven upgrades to the deployment areas, or directly actuate traffic signals, saving lives and improving traffic flow. The Intelligent Transportation Society of America recognized GridMatrix's software as a leading new innovative solution for sustainable and resilient infrastructure, and our technology and past deployments have been profiled numerous times in ITS International and Traffic Technology today.

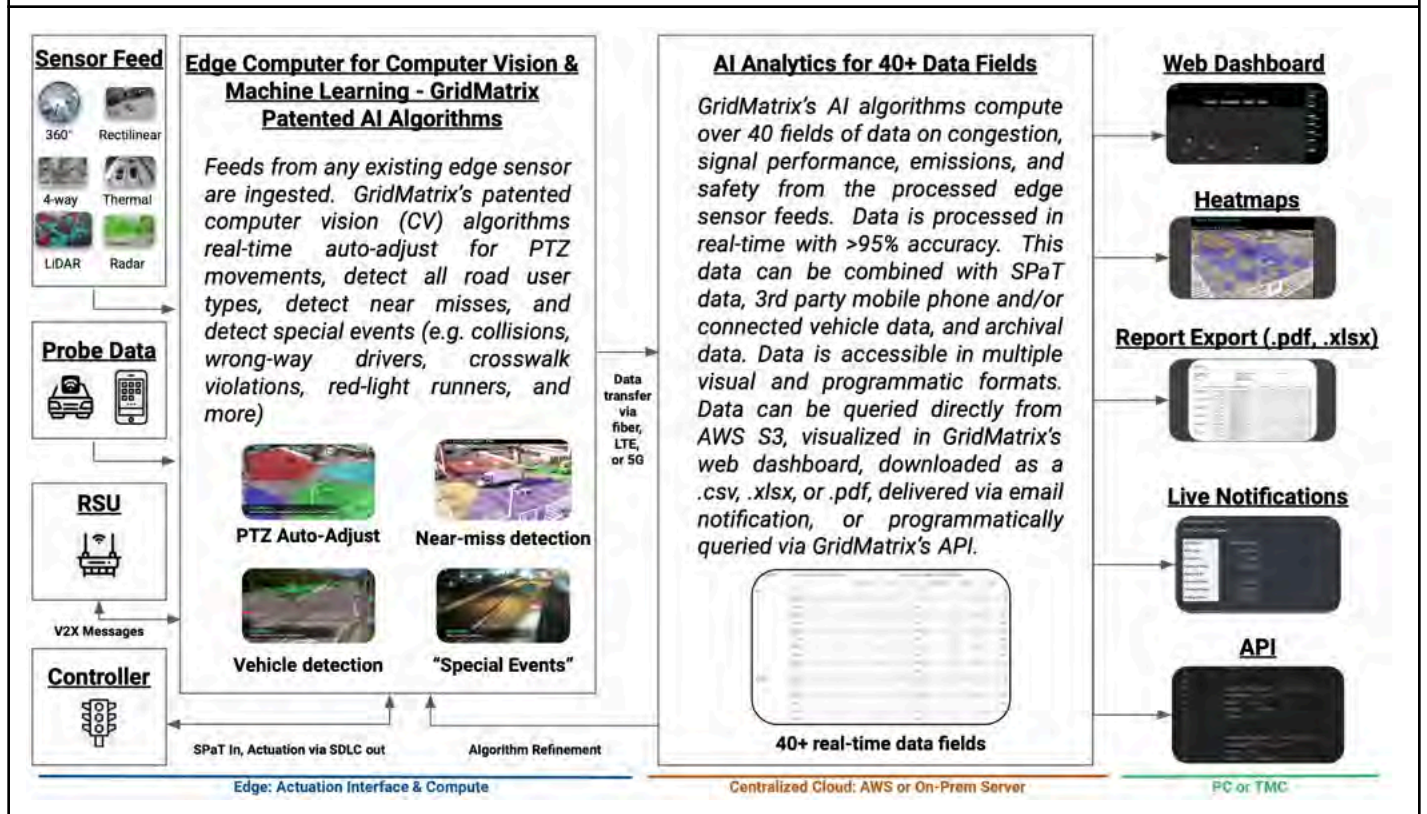
For the purposes of this RFP, GridMatrix will offer a modular, end-to-end intersection data collection and monitoring system that can be easily adapted to a customer's needs on a per-location basis, including:

- **[Multimodal Traffic Detection]** - Leveraging existing roadway and infrastructure detection sensors such as cameras, LiDAR, radar, and inductive loops
- **[Multimodal Traffic Data Collection, Analytics, Reporting]** - Either an edge (decentralized, edge computer using NVIDIA GPUs) or cloud-based (centralized, AWS single-tenant cloud or on-premise server with Nvidia GPUs) AI analytic engine architecture
- **[Road Safety Analytics & Reporting with API]** - A web dashboard and API user interface for data analytics and reporting with multiple data output formats

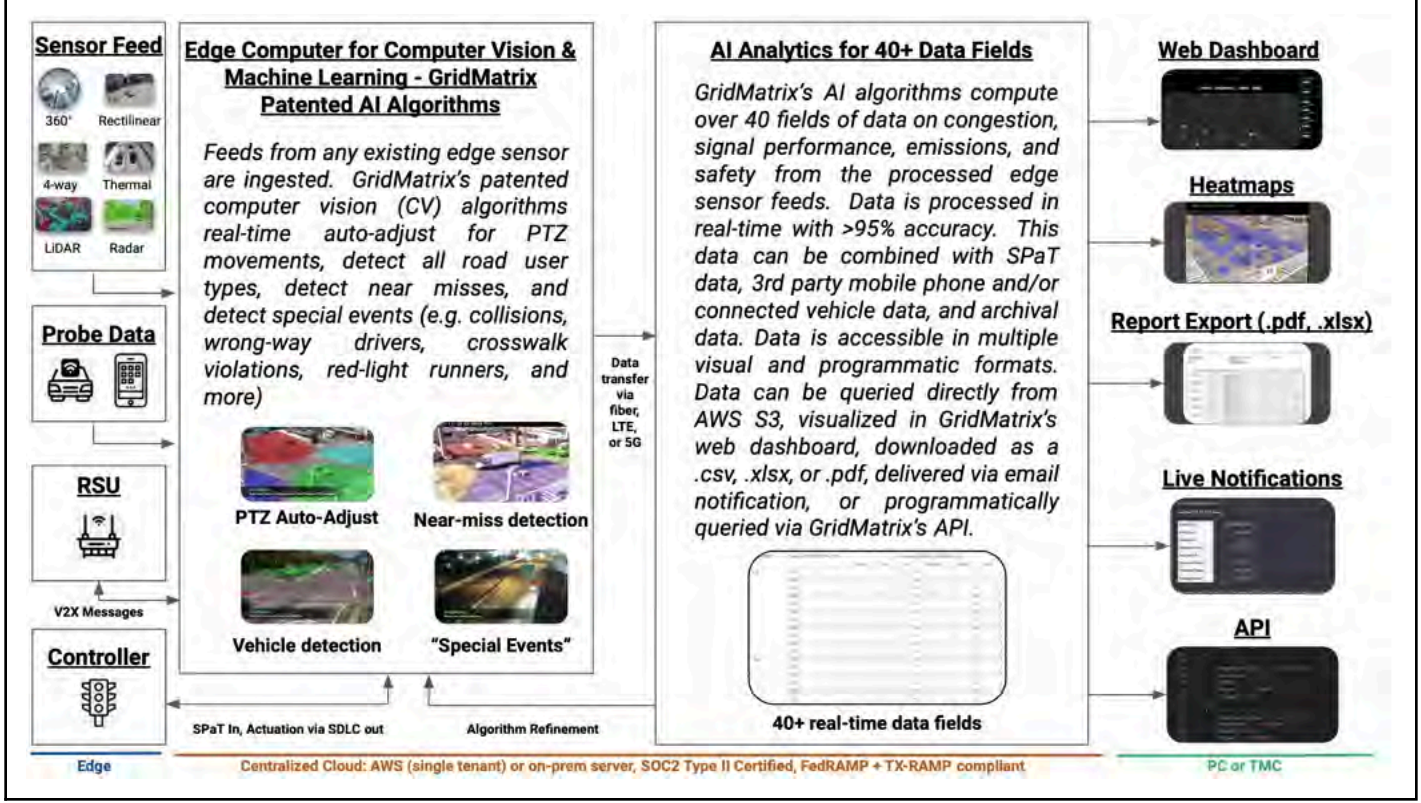
GridMatrix's data collection and monitoring system is built for modularity and customization based on user preferences and needs. Where the customer has existing cameras or other sensors for detection, GridMatrix's system can work with their raw feeds and process them into data regardless of sensor manufacturer. The data collection and processing of the raw sensor outputs can be performed in a centralized, single-tenant cloud environment or in an on-prem server. The output mechanisms for this process include a web dashboard, heatmaps, live notifications, and an API (delivered in JSON or geoJSON format). Data may also be delivered in a variety of static, common file formats (e.g. .png, .pdf, .xlsx, .csv, etc.). Options for both a decentralized, edge based (Option #1) and centralized cloud/on-prem-based (Option #2) versions of GridMatrix's analytic engine are presented on the following page. These system configuration options can be mixed and matched by discrete location across a deployment. **GridMatrix's software is built to scale and has been tested with over 1000 sensor feeds simultaneously.**, supporting the RFP's initial deployment scope, subsequent potential expansion, up to city-wide deployment. **GridMatrix meets the highest standards for data security and privacy. GridMatrix is SOC2 Type II Certified and**

TX-RAMP compliant. SOC2 Type II certification is confirmation from an independent 3rd party auditor that GridMatrix not only met or exceeded the highest standards for data security and privacy, we did so over a sustained period of time. We have also received TxRAMP certification and are whitelisted by Texas' Department of Information Resources, the official technology agency of the state of Texas. GridMatrix is a privacy-first platform that captures no personally identifiable information or biometric data (PII data). Images and video may be captured at the customer's option.

Option 1: GridMatrix Modular System Diagram - Decentralized Analytic Engine with Edge Compute



Option 2: GridMatrix Modular System Diagram - Centralized Analytic Engine via AWS or On-Prem Server



Multimodal Traffic Data Collection, Analytics, and Reporting

The GridMatrix platform is designed to be user friendly and intuitive. The platform has been streamlined to quickly deliver clear and actionable insights. This focus on creating impact from data has been incorporated into every layer of GridMatrix’s platform, as well as the set of features developed to support active users.

GridMatrix multimodal data collection begins at the edge and includes ALL road users. Raw feeds from any existing or newly installed sensor are collected and processed. The amount of processing required is determined by the sensor’s type. “Heavy” sensors such as cameras and LiDAR require a layer of computer vision (CV) algorithm to detect and classify ALL road users (e.g. pedestrians, cyclists, multiple FHWA vehicle classes, fleet vehicles, light rail, etc.) calculate their current and predicted trajectories, segment regions of interest, and determine each road user’s geospatial location. This process is conducted on a frame-by-frame basis in real-time, and the result is a live stream relational data set. “Light” sensors such as radar, inductive loops, and probe data are already structured relationally and do not require the same level of intermediate processing as “heavy” sensors. Once all raw sensor data is structured relationally, it can be merged together for further processing into actionable KPIs on roadway congestion, signal performance, emissions, and safety.

GridMatrix's platform is compatible with any existing edge sensor. These include multiple types of camera with different resolutions, frame rates, and fields of view, LiDAR, thermal cameras, and radar.

Great Results With Any Sensor or 3rd Party Data



Sensor examples from past GridMatrix deployments



4-way actuation 480P



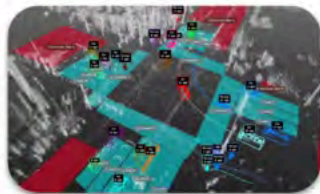
240P low resolution



360 degrees 1080P



Wide Angle 720P



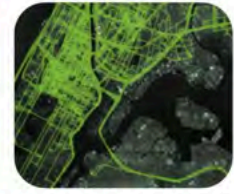
LiDAR



Thermal



Radar



Probe (CV/Mobile)

GridMatrix © Confidential

After raw sensor data has been relationally structured, it can be algorithmically converted into actionable KPIs on congestion, signal performance, emissions, safety, and more. GridMatrix's software platform can process raw sensor feeds into more than 40+ fields of multimodal data in each of these four core areas on **ALL** road users. Our data collection process is continuous for as long as users elect to operate GridMatrix at an intersection. Users receive real-time data and historical data for the entirety of a GridMatrix deployment.

GridMatrix Data Fields

Timing: Real Time and Historical (as long as the solution has been deployed in a city)

Periods: Live data (by minute and second), Historical data (by yearly, quarterly, monthly, weekly, daily, hourly, minute, second) report increments

Data Filters: GridMatrix's software can filter all data with the distinctions below:

Intersection Views	Time	Object Class	Approach	Turning Movement	Signal Phase	Near Miss Pair
City grid (compare multiple intersections simultaneously)	Live data (last 15 minutes)	Vehicular (bus, car, motorcycle, truck)	Approach (e.g. northbound, southbound, eastbound, westbound)	Turning Movement (left, right, through)	Arrival on red	30+ discrete pairings between ALL road user classes
Single intersection (deep dive time series)	Historical data (user defined period)	Pedestrian (bicycle, person)			Arrival on Green	

Data Fields: GridMatrix’s software delivers quantitative time series data for the following fields:

Congestion	Object volume	Count of objects
	Flow	Objects/min
	Idle time	Total and per object (seconds)
	Travel time	Total and per object (seconds)
	Queue length	Length in # of vehicles and feet
Signal Performance	Arrival on Green/Red	% objects arriving per phase
	Total Green/Red Time	Total phase time (seconds)
	Effective Green Time	Effective phase time (seconds)
	Average Green Time	Average phase time (seconds)
	Platoon ratio	Phase performance measure
Emissions	CO2 emissions	Emissions from CO2 (MT)
	Gas Consumption	Gas consumer (gallons)
Safety	Speed	Object speed (MPH)
	Near Misses	Near miss incident logging by PET, TTC and speed
	Special Events	Collisions, crosswalk violations, red-light running, and more

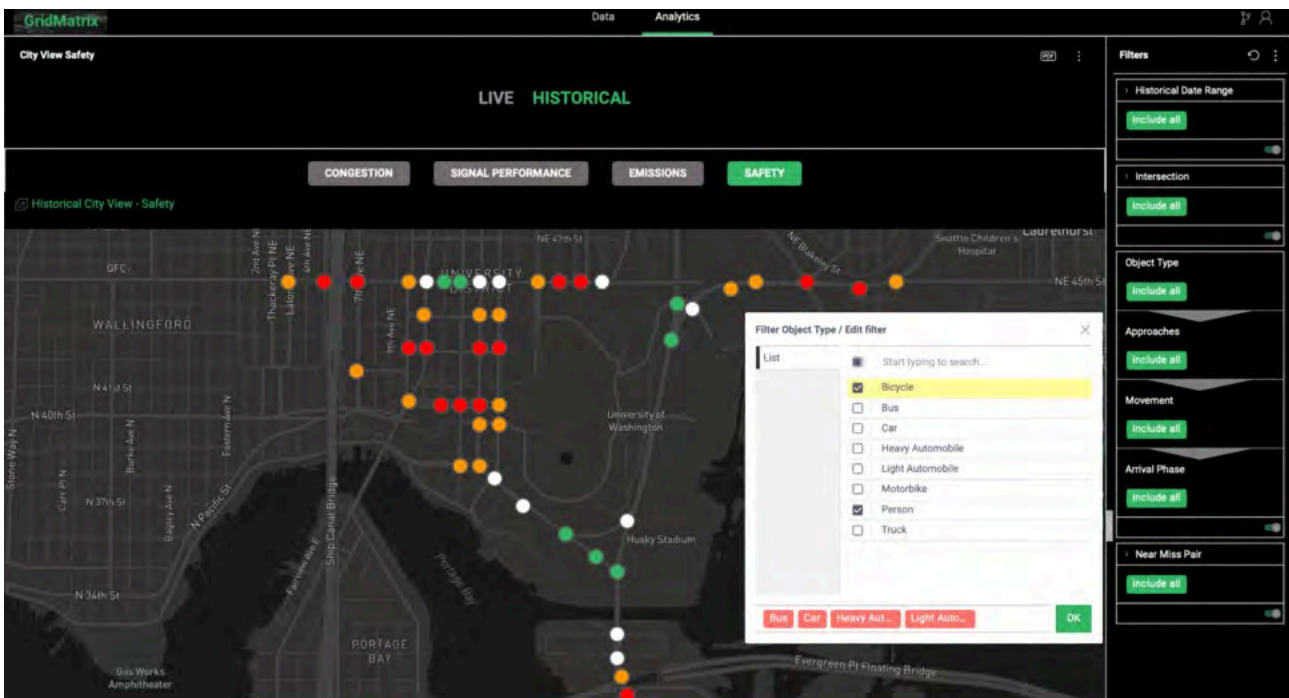
Setting Specific Metrics:

GridMatrix’s platform can also provide data that is setting specific, such as data and KPIs relating to the apron of an airport, dock/bertside of a port, or other common critical infrastructure settings that are non-roadway.

Once data has been algorithmically processed into KPIs on ALL road users, it is made available via web dashboard, heatmaps, static reports in all common file formats, push notifications, and API. Our data collection process is continuous for as long as users elect to operate GridMatrix at an intersection. Users will receive real-time and historical data for the entire period of GridMatrix’s operation.

GridMatrix Dashboard & Heat Maps - “City View” & “Intersection View”: GridMatrix’s dashboard consists of two primary views, “City View” and “Intersection View”. City View presents data geospatially and provides comparative analytics on an intersection-by-intersection basis, in both live and historical formats, for all classes of road user. Operators can quickly determine which locations are “hotspots” for any given data field, such as near-misses between specific pairings of road users. In the graphic below, near-miss pairings by road-user are selected for multiple intersection locations across a GridMatrix deployment area. Intersection View provides the same data as City View, however it is presented as a time series instead of geospatially.

“City View” - Geospatial data representation for intersection-to-intersection comparison in the GridMatrix Web Dashboard. *The GridMatrix Insights Web Dashboard’s “City View”, displaying historical near-miss safety performance metrics for all vehicular road users, cyclists and pedestrians in a customer’s operating, with filtering by object class. City View allows users to quickly compare intersections against each other on all GridMatrix data fields.*

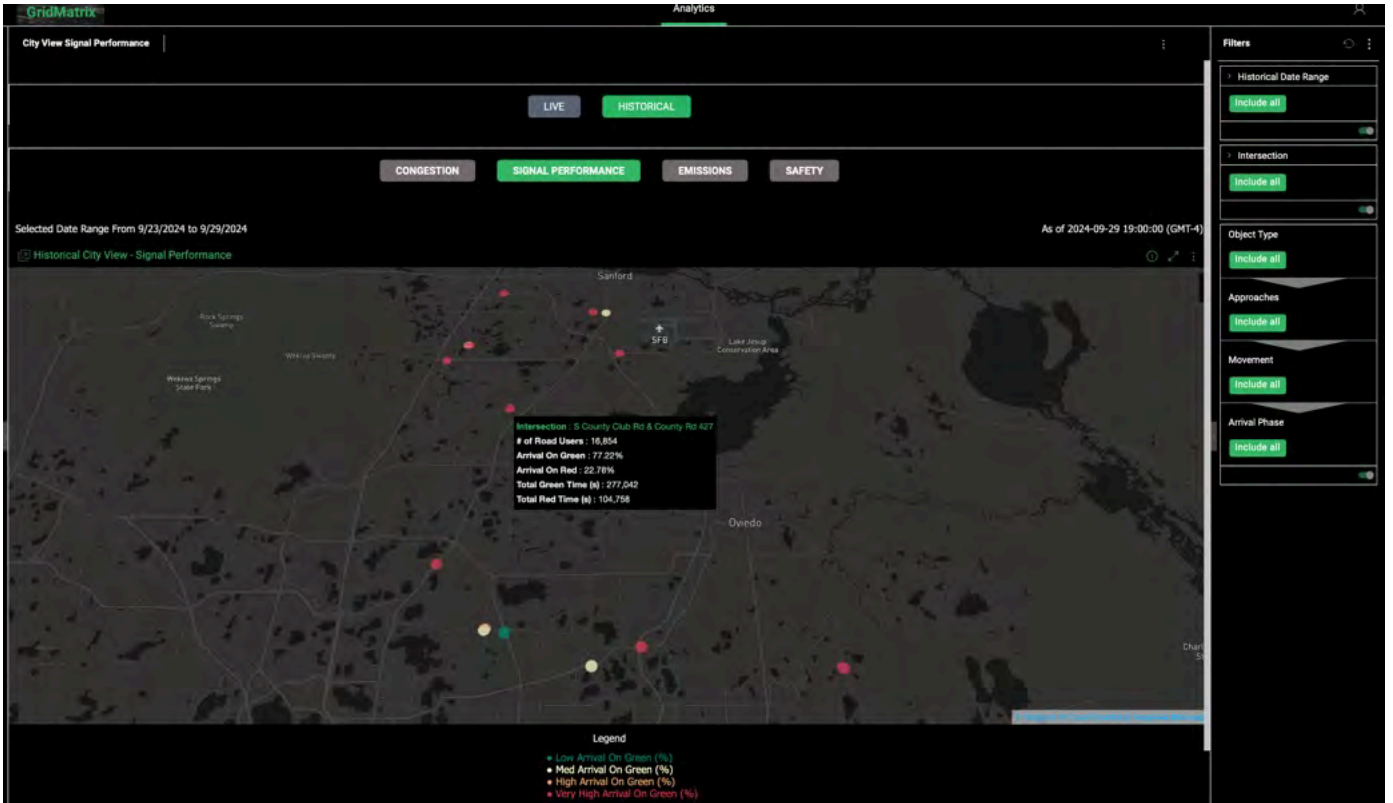


“Intersection View” - Time-series safety data representation for intersection deep-dive in the GridMatrix Insights Web Dashboard. The GridMatrix Insights Web Dashboard’s “Intersection View”, displaying historical safety performance metrics and near-miss heat maps using existing PTZ cameras. As opposed to the “grid” view above, intersection view is meant to provide a detailed, time-series analysis of a single location. As with “grid” view, users may select live or historical data, KPI family (congestion, signal performance, emissions, and safety), as well as specify periodicity (months, weeks) and filter by multiple object classes as well as other parameters. The top row of intersection view includes special visualizations and reports to better understand a given location’s traffic patterns. In the top left, an intersection map shows metrics by approach. The middle is a static report of all KPIs for a selected family (e.g. safety), while the right is a heat map of near misses. Intersection view includes heatmaps localizing data at a given deployment location. For instance, in the graphic below, a near miss conflict analysis is presented. The warmer the color, the more near-miss events occurring in a specific location.

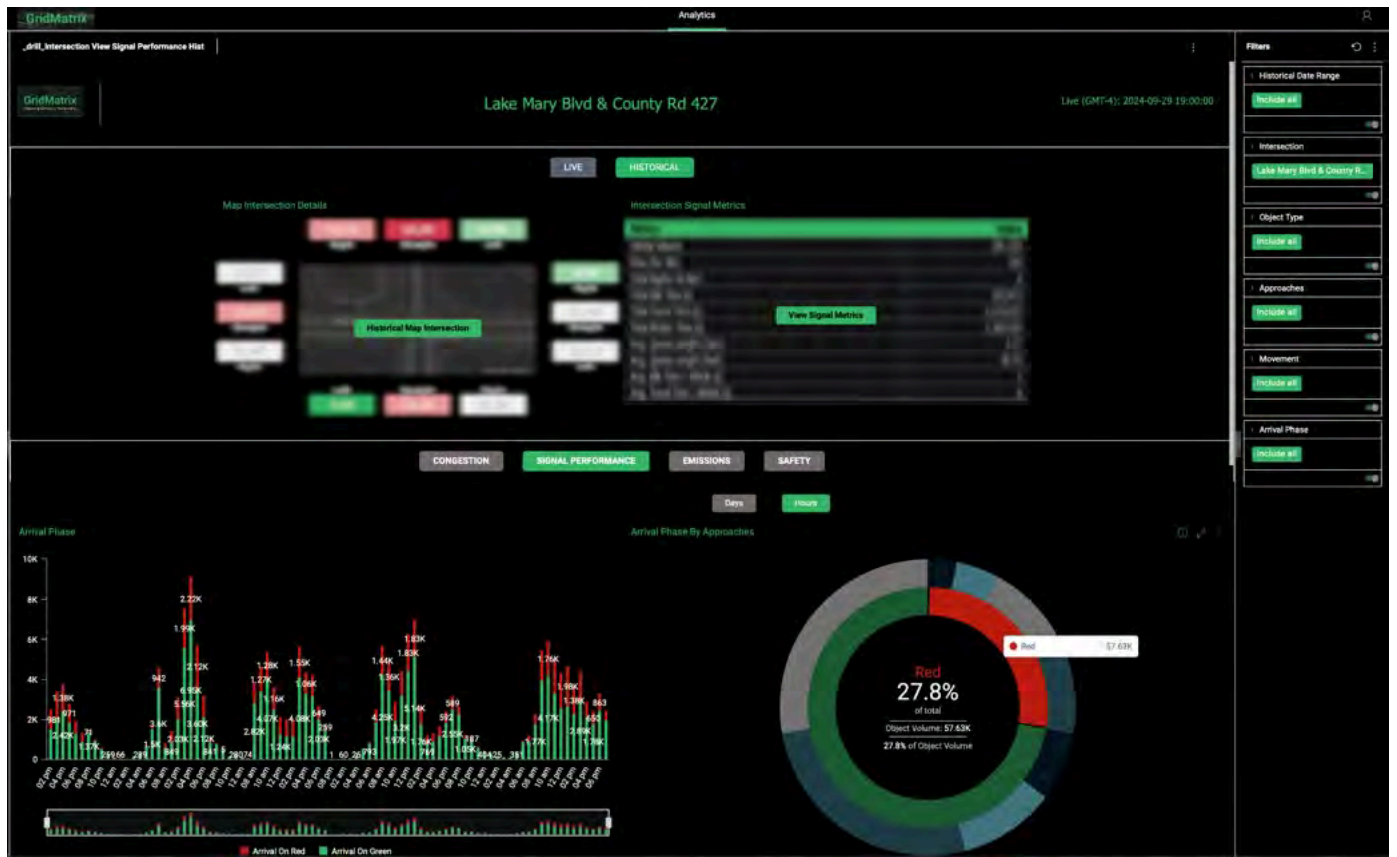


Congestion, Signal Performance, and ATSPM Metrics

Signal Performance - City View: Signalized intersections are heat mapped by % arrival on green. This mapping can be scaled to other ATSPM metrics.



Signal Performance - Intersection View: ATSPM metrics are visualized in a time series and available for export.



Static Reports - Built for Interaction, Quickly Refine Queries & Export Data: The GridMatrix platform is built to be interactive. There are multiple ways to filter data, and it can be easily exported into all common file formats, including .png, .jpeg, .pdf, .xlsx, or .csv format. GridMatrix also provides the ability for users to create custom reports using SQL queries covering all of the 40+ data fields monitored by the platform

GridMatrix Custom Report Builder - Drag/drop fields or use SQL queries to extract desired data fields



User selects desired fields



User generates report

Custom Reports - Custom near-miss report example exported to .pdf



Report Number: 0006
 County: San Mateo
 City:
 Division:

Report Type: Safety / Near Miss
 Duration: 30 Days
 Report Date: 11/2/23
 Intersections Monitored: 5

Project ID: 0001

Safety Incident Report By Intersection, Type, Severity and Vehicle Direction			September 2023					August 2023					Historical Average				
			N	E	W	S	Total	N	E	W	S	Total	N	E	W	S	Total
Middlefield & Pacific	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	0	0	4	1	5	0	0	2	0	2	0.1	0.2	1.1	0.8	2.2
		Near Misses (0.5 < PET < 1.2)	6	8	28	16	58	4	9	33	28	74	5	8.5	30.5	22	66
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1
		Near Misses (0.5 < PET < 1.2)	1	0	3	1	5	2	1	5	4	12	1.5	0.5	4	2.5	8.5
Middlefield & Dumbarton	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	6	0	1	0	7	5	0	1	0	6	5.5	0	1	0	6.5
		Near Misses (0.5 < PET < 1.2)	5	9	2	0	16	4	9	2	0	15	4.5	9	2	0	15.5
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	0	15	12	5	32	0	20	7	6	33	0	17.5	9.5	5.5	32.5
		Near Misses (0.5 < PET < 1.2)	2	17	11	1	31	2	21	10	1	34	2	19	10.5	1	32.5
Middlefield & 2nd	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	4	0	4	19	27	5	0	2	28	35	4.5	0	3	23.5	31
		Near Misses (0.5 < PET < 1.2)	0	1	12	2	15	0	1	14	2	17	0	1	13	2	16
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	0	0	2	1	3	0	0	3	1	4	0	0	2.5	1	3.5
		Near Misses (0.5 < PET < 1.2)	5	12	33	6	56	6	17	47	7	77	5.5	14.5	40	6.5	66.5
Middlefield & 4th	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	1	1	3	2	7	1	1	4	2	8	1	1	3.5	2	7.5
		Near Misses (0.5 < PET < 1.2)	4	9	18	1	32	4	12	23	1	40	4	10.5	20.5	1	36
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	2	0	5	0	7	1	0	7	0	8	1.5	0	6	0	7.5
		Near Misses (0.5 < PET < 1.2)	11	8	0	6	25	14	8	0	6	28	12.5	8	0	6	26.5
Middlefield & 5th	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	4	4	5	3	16	4	5	4	4	17	4	4.5	4.5	3.5	16.5
		Near Misses (0.5 < PET < 1.2)	22	13	19	29	83	28	16	22	40	106	25	14.5	20.5	34.5	94.5
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1
		Near Misses (0.5 < PET < 1.2)	2	2	4	1	9	2	3	2	1	8	2	2.5	3	1	8.5
All Intersections	Vehicle On Vehicle	Critical Incidents / Near Misses (PET <0.5)	15	5	17	25	62	15	6	13	34	68	15.1	5.7	13.1	29.8	63.7
		Near Misses (0.5 < PET < 1.2)	37	40	79	48	204	40	47	94	71	252	38.5	43.5	86.5	69.5	228
	Vehicle On Pedestrian	Critical Incidents / Near Misses (PET <0.5)	2	15	20	7	44	1	20	18	8	47	1.5	17.5	19	7.5	45.5
		Near Misses (0.5 < PET < 1.2)	21	39	51	15	126	26	50	64	19	159	23.5	44.5	57.5	17	142.5

Notifications & Alerts via Dashboard, API, Email, SMS, & Text

GridMatrix features real-time alerting for all of its metrics based on user-set thresholds as well as specific alerts for unsafe interactions via multiple channels. These interactions include stopped vehicles, collisions and near misses, loss of visibility events, crosswalk violations, hard stops, and occupancy exceeded alerts. These alerts can be delivered via email, text, dashboard, or via our API. Detector outputs can also be sent to the traffic signal controller. We are continuously developing our software and will shortly be launching new features, and have the capacity to develop new features based on customer needs, and provide all software updates free of charge to ensure our customers continuously operate the latest and most advanced edition of GridMatrix's platform. GridMatrix does not record video data by default but can enable it at a customer's request.

Notifications - Live notifications can be created for any data field using user-defined thresholds

Location: 136_ht_14th_jersey

Alert Time:	03/14/2024 01:10:42
Alert Type:	Transit Time
Camera ID:	NY0136
Approach Alias:	North Bound
Approach ID:	2
Observed Value:	13.25 seconds
Threshold Value:	5.38 seconds
Average Value:	2.45 seconds

The average transit time for 136_ht_14th_jersey North Bound approach exceeds the average value by 10.8 seconds.

The alert system is designed to trigger an alert when the observed metric deviates from the mean metric by more than three standard deviations in the case of a normal distribution, or when it falls within the top 2.5 percentile for non-normal distributions.

The thresholds for the metric are established based on the data obtained from the last 30 days, and they are grouped by intersection, approach ID, and hour of day.

If you have any questions please contact Raffi at rmesrobian@gridmatrix.com.

Notification Delivery - Notifications can be delivered via email, text, dashboard, or via our API.

API - GridMatrix will provide bulk data access and query via its API (Please see the [API Documentation](#) section for more information). GridMatrix’s platform includes an API that allows for users to directly query data from any data field, receive notifications, or integrate data into the TMC or other central repositories.

<pre> 1 { 2 "timePeriod": "historical", 3 "objectClassName": "Heavy Automobile", 4 "intersectionName": "HT NJ 14th St. and Jersey Ave.", 5 "dateRange": { 6 "start": "2024-02-01", 7 "end": "2024-02-28" 8 } 9 } </pre>		<pre> 36 }, 37 { 38 "approach_alias": "North Bound", 39 "movement": "left", 40 "date": null, 41 "flow": "1.127668", 42 "value": "53" 43 }, 44 { 45 "approach_alias": "South Bound", 46 "movement": "straight", 47 "date": null, 48 "flow": "1.000000". </pre>
<p>API: User inputs query request</p>	<p>API: Request transmission</p>	<p>API: Query output returned</p>

Road Safety Analytics & Reporting

Definitions: **“Near Miss”**: incidents involving two or more road users with presently conflicting paths of travel that require one or more of the road users to make an adjustment to speed or heading or both to avoid a collision within a short period of time. **“Post-Encroachment Time” (PET)**: PET is the difference between the time a leading object enters a point in their current path of travel that conflicts with a following object, and the time a following object in a conflicting path of travel arrives at the same point. **“Time-To-Collision” (TTC)**: TTC measures the time until a collision would occur if existing speed conditions persisted. It is calculated by estimating the time it would take for two vehicles (or a vehicle and a pedestrian or bicycle) to

collide if they continued on their current trajectory, and is primarily used as a surrogate safety metric when a leading object and following object do not have a path of travel that conflicts (compared with PET where paths of travel conflict). GridMatrix continuously derives future position vectors for all moving objects and computes TTC for intersecting vectors. **PET & TTC are examples of “Surrogate Safety Metrics”**. Surrogate safety metrics are used to quantify the severity of a near miss. **“Special Events”** are incidents with elevated risk of roadway collision, fatality, property damage, or significantly disruptive impacts to traffic flow such as significantly congestion measured by idling and queue length increases, reduced signalized intersection performance efficiency measured by reduced arrival on green, and increased vehicular emissions.

GridMatrix collects data on the following safety related KPIs for all road users. All data fields below are available live (current by minute, second), historically with user-configurable periodicities (yearly, quarterly, monthly, daily, hourly, minute, second) since deployment inception, by road user type (e.g. cyclist, pedestrian, vehicle), by approach (e.g. northbound), by turning movement (e.g. left), by arrival phase (e.g. green), and for near misses by road user pair (e.g. truck-cyclist):

- Speed
- Count of near misses
- Near misses severity as quantified by PET/TTC
- Special events, including:
 - Disabled vehicles
 - Collisions
 - Crosswalk violations
 - Curb violations (e.g. double parking)
 - Work zone violations
 - Red light running
 - Wrong-way driving

GridMatrix’s platform makes safety data visualization, reporting, and export, from all the fields above available in multiple formats, including:

- “City View”, where safety data is localized geospatially across a deployment area (see p.8)
- “Intersection View”, where safety data is displayed as a time series (see p.9)
- “Custom Report Builder”, where users can query data fields of their choosing and export the result as a .png, .jpeg, .pdf, .xlsx, or .csv file (see pp.12)
- Push notifications, where users can receive emails, texts, and other notifications for specific safety data fields of interest (see p.13)
- API, where users can bulk query safety data fields
- Raw Image and Video (.jpeg, .mp4, .flv): recordings of near-misses and other “special events” such as collisions, crosswalk violations, etc. can be captured and stored at the sole option of the customer

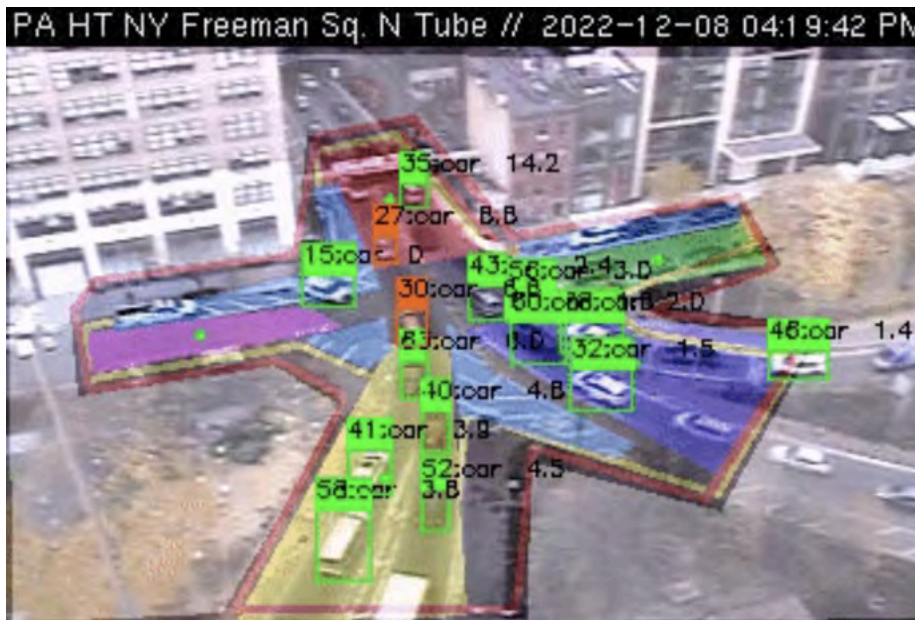
GridMatrix’s patented machine vision algorithms underpin the generation of all safety data fields. The US Patent Office has granted GridMatrix the patent for near miss detection (see [US11,955,001](#))

GridMatrix Near Miss Detection with PET: *Real time near miss example quantified with PET using existing intersection cameras with 240P, 12FPS cameras. Left image: a pedestrian (leading object) walks outside a*

crosswalk across a highway entrance. Middle image: a white vehicle (following object) turning right narrowly avoids hitting the crossing pedestrian, intersecting the pedestrian's path of travel with a conflicting path of travel. Right: the point of conflict between the pedestrian and vehicle is highlighted and recorded by GridMatrix's system for further review.



GridMatrix Near Miss Detection with TTC: Real time near miss example quantified with TTC using existing intersection cameras with 240P, 12FPS cameras. Highlighted vehicles in orange are in the same path of travel. The leading object (#27) has stopped as it encountered congestion at a tunnel entrance. The following object (#30) must quickly decelerate to avoid a collision.



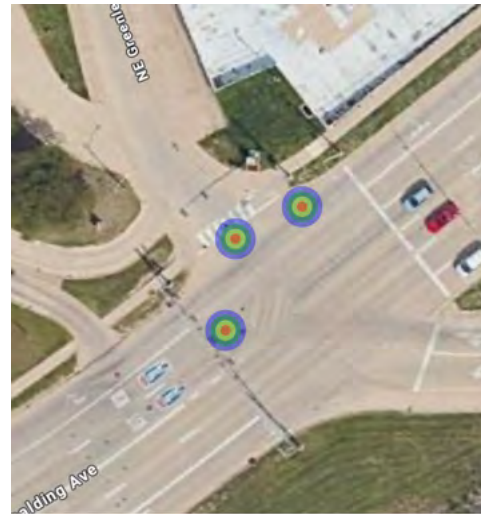
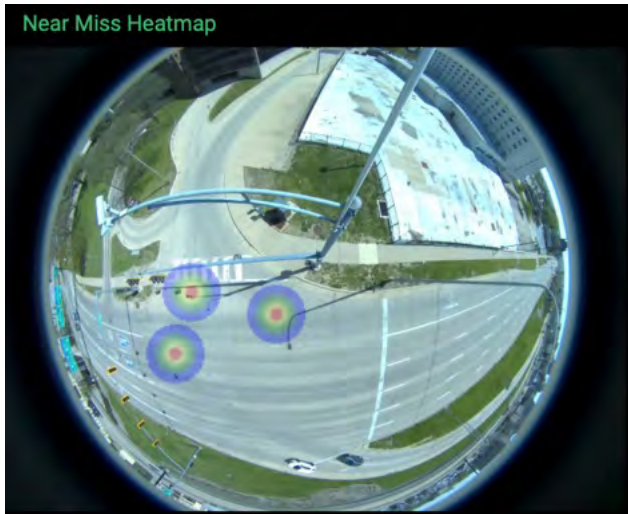
Conflict Analysis - Tools for Finding Patterns in Near Miss Events: GridMatrix's software monitors all surrogate safety metrics and flags positive events in real time, displaying them in a variety of visual formats and with filtering capabilities. These visualization tools are presented below:

Near Miss Filtering: As near misses occur in a given location, an intersection risk-profile is developed over time. Near-misses can be filtered by object-pairing. Below, near misses for buses & pedestrians are highlighted. The number of events are bucketed by the speed of the fastest moving object (e.g. 0-20mph,

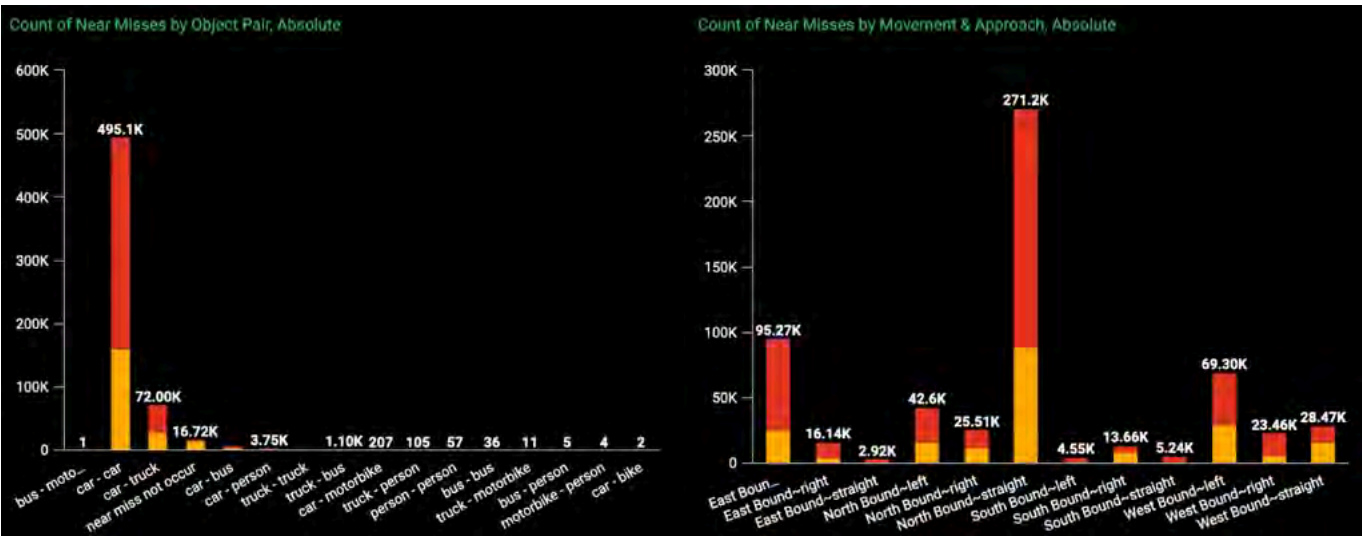
20-40mph) and by PET value. The size of the points reflects the quantity of near misses in a given bucket.



Near miss incidents generated with existing 360 degree cameras (left) and localized geospatially (right)



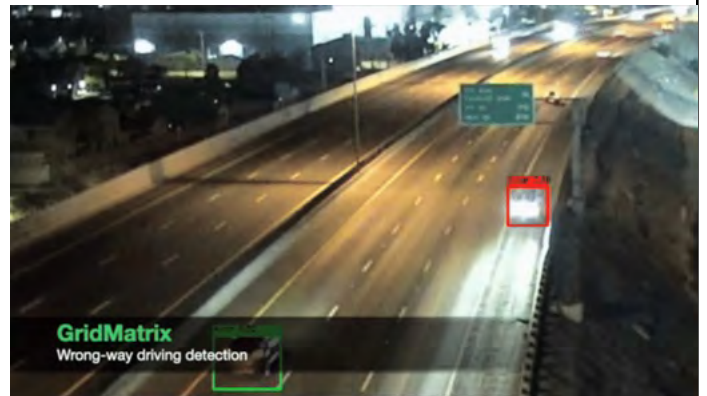
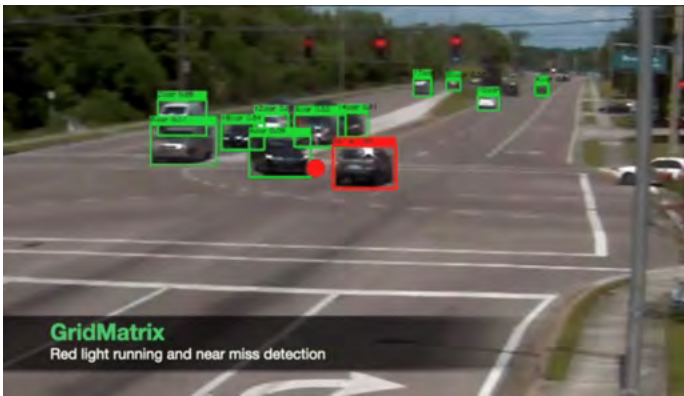
Count of Near Miss Events: Near miss incidents by pair and approach, severity by PET



Near Miss Per Capita: Near miss incident frequencies are listed by absolute quantity in the top table. In the bottom table, these counts of near misses are adjusted by the count of road user types, to achieve a “normalized”, per capita measure of near miss frequency by road user type. This normalization compensates for the fact that passenger vehicles (for example) may be the majority of road users in a given location but near misses occur at the higher frequency between pedestrians and heavy automobiles (example below) given their respective populations. In this example, despite light automobiles (passenger vehicles) accounting for the most near misses in absolute terms (1102), they account for 23.7% of all near misses total.

Pair	NM Count, Absolute								
	bicycle	bike	bus	car	heavy automobile	light automobile	motorbike	person	truck
bicycle									
bike						124			
bus									
car			3	390		203			7
heavy automob...						432		227	
light automob...						702			
motorbike									
person						75			
truck									
Pair	NM Count, Normalized								
	bicycle	bike	bus	car	heavy automobile	light automobile	motorbike	person	truck
bicycle									
bike						1.9%			
bus									
car			0.74%	24.68%		3.1%			0.88%
heavy automob...						6.7%		50%	
light automob...						10.8%			
motorbike									
person						1.15%			
truck									

Special Events - Examples of special event detection with GridMatrix's platform



"Special Event" - Pedestrian Crosswalk Violation Examples

Night Time Examples



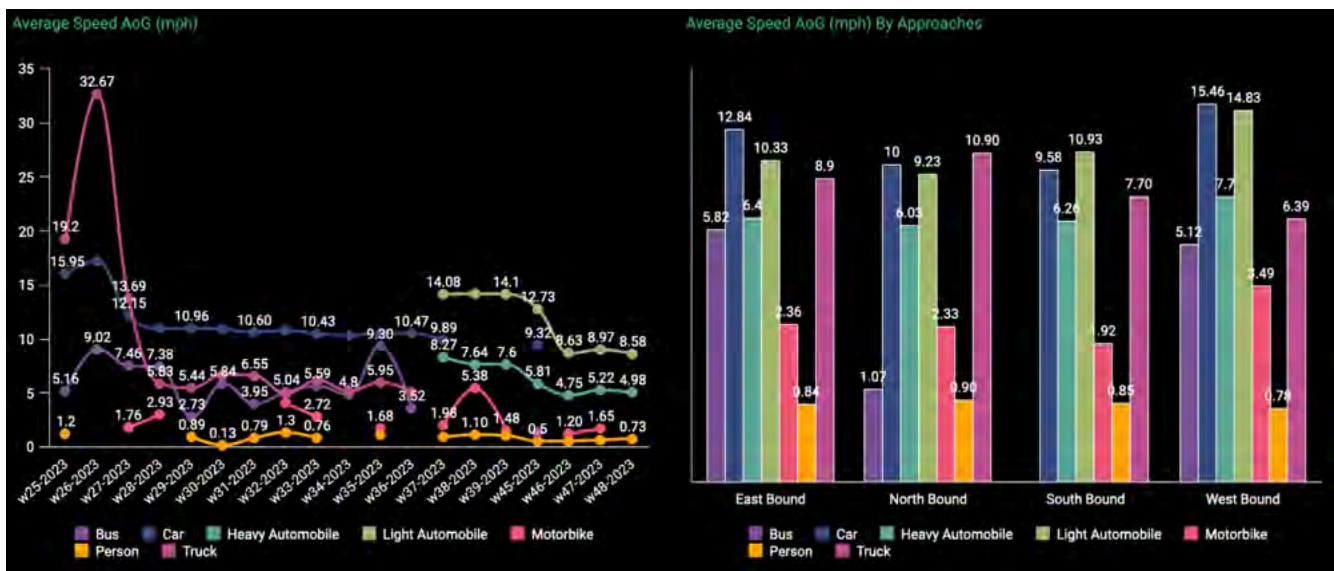
Pedestrian is detected in the upper shoulder

Day Time Examples



Pedestrian is detected in the upper shoulder

Average Free Flow (Arrival on Green, AoG) Speeds: Speeds presented by object class as well as by approach









Signal Performance, Congestion Analysis & ATSPMs

Patent Pending - Pan-Tilt-Zoom (PTZ) Auto-Adjust & Support for PTZ Cameras

Pan-Tilt-Zoom (PTZ) Camera Compatibility & Operator Augmentation: GridMatrix has developed the ability for its platform to automatically detect "large" and "small" PTZ camera shifts and to adapt accordingly. "Large shifts" occur when an operator moves the camera and the intersection or other region of primary interest is no longer visible. "Small" shifts occur from environmental

disturbances such as vibration due to traffic, wind, etc. that slowly shift the camera and can increase system error if detection zones are fixed. This allows GridMatrix's system to continue to collect data from existing cameras without interfering with existing operations. Facility operators routinely use their PTZ cameras to visually investigate special situations and incidents on a daily basis to ensure smooth facility operations. An example of such a PTZ camera event investigation along with automatic shift detection is presented below:

<p><i>Figure 1: GridMatrix's platform collecting data by approach from a Port Authority PTZ camera. Each color is a different approach.</i></p>	<p><i>Figure 2: The camera's operator has begun shifting the camera's field of view to zoom in on a disabled vehicle further up the entrance to US I-9</i></p>	<p><i>Figure 3: The camera's operator continues the shift, and GridMatrix's software identifies the camera is in a new position and stops collecting data</i></p>
		
<p><i>Figure 4: The camera's operator zooms in on the disabled (gray sedan) vehicle that is blocking a lane on the entrance to US I-9</i></p>	<p><i>Figure 5: The camera's operator completes their investigation of the stalled vehicle and begins shifting the camera back into its original position</i></p>	<p><i>Figure 6: GridMatrix's software identifies the camera is in its original position and resumes collecting data on congestion and other metrics</i></p>
		

GridMatrix's engineering team collected a validation data set consisting of 104 image pairs reflecting "large shifts" - shifts where the PTZ camera's primary intersection was no longer visible, and 97 image pairs of "small shifts" - shifts where the intersection was still visible. These image pairings included a diversity of lighting conditions and weather. Our third-party auditor confirmed GridMatrix's algorithm detected "large shifts" with 97% accuracy, and small shifts with 92% accuracy. Overall accuracy was 95%.

Data Accuracy & Validation

GridMatrix's multimodal detection data generated from its analytics engine is independently validated at 95% accuracy in a variety of lighting and weather conditions. GridMatrix partners with National Data and Surveying (NDS) to manually review random samples and compares NDS' results to GridMatrix's algorithmically provided results. Further, GridMatrix's QA checklist involves 50+ review items to ensure fidelity and data integrity. Final customer delivery involves sign-off from at least two members of GridMatrix's engineering team.

Validation Method: algorithm vs. manual review (red=GridMatrix algorithm, blue=NDS manual review)

Object Detection - Validation Methodology

- Record static clip from camera feed
- Send clip to National Data & Surveying Service (NDS) for third-party verification
- Receive validated vehicle counts and movement for these clips
- Validate against our old model (v1) and new custom model (v2) to compare accuracy and improvement



Static Video
Clip Produced

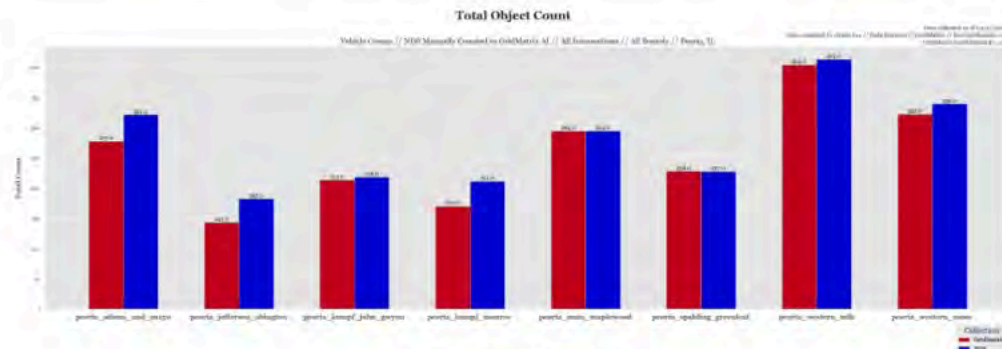


Day/night/multiple weather
conditions Samples Shared with NDS



NDS Manual Report

Accurate, Ground Truth, Real Data on All Road Users



Data Security - GridMatrix is SOC Type 2 Certified & TX-RAMP Compliant



Prescient Assurance LLC
25 W 36th Street Floor 11
New York, NY 10018

August 21, 2023

GridMatrix Inc.
19800 Vallco Parkway, Unit 522, Cupertino CA 95014
Name of Signatory: Nicholas D'Andre
Phone and Email of Signatory: 650-272-9249, ndandre@gridmatrix.com

Letter of Attestation

SOC 2 Type 2 Compliance

Unqualified Opinion

In our opinion, in all material respects:

- a) The description presents GridMatrix Inc.'s system that was designed and implemented throughout the period April 2, 2023 to July 2, 2023 in accordance with the description criteria.
- b) The controls stated in the description were suitably designed throughout the period April 2, 2023 to July 2, 2023, to provide reasonable assurance that GridMatrix Inc.'s service commitments and system requirements would be achieved based on the applicable trust services criteria, if its controls operated effectively throughout the period, and if the subservice organization and user entities applied the complementary controls assumed in the design of GridMatrix Inc.'s controls during that period.
- c) The controls stated in the description operated effectively throughout the period April 2, 2023 to July 2, 2023, to provide reasonable assurance that GridMatrix Inc.'s service commitments and system requirements were achieved based on the applicable trust services criteria, if the complementary subservice organization and complementary user entity controls assumed in the design of GridMatrix Inc.'s controls operated effectively throughout the period.

Prescient Assurance LLC confirms SOC 2 Type 2 compliance by GridMatrix Inc. in accordance with the AICPA's Trust Service Criteria for Security.

John Wallace

Prescient Assurance, LLC.
John Wallace
CPA & Partner





Texas Risk and Authorization Management Program Certification

The information below is provided as a companion to the TX-RAMP Certification.

Cloud Service Name

GridMatrix: GridMatrix Insights web dashboard

Cloud Service Provider URL

https://www.gridmatrix.com/product/software.html

Cloud Service Description (200 words or less)

GridMatrix's Insights Web Dashboard for traffic analytics provides real time data on vehicular and pedestrian traffic congestion, signal performance, emissions, and road safety. Key product features include:

- 1) Universally compatible with existing intersection detection sensors including cameras, inductive loops, and radar
- 2) Compatible with LiDAR
- 3) Can integrate cloud based data sources such as connected vehicle, mobile phone, or satellite image data
- 4) Secure AWS cloud based architecture, requiring no additional hardware
- 5) Web based application, accessible via URL from any device

GridMatrix's Insights Web Dashboard provides data on 4 core areas, with continuous time series data available 24/7/365. Raw data and graphical analytics can be viewed in the dashboard or exported to .csv based on user preferences. Data includes:

Traffic Congestion - understand vehicular and pedestrian traffic congestion included counts, turning movements, flow, idle time, queue length, and transit time by road user class and approach

Signal performance - understand arrival on green, arrival on red, platoon ratio, effective green time by road user class and approach

Emissions - Data on CO2 emissions and gasoline consumption by vehicle type

Safety - Identify near misses in real time and gather data on conflict zones and hazardous intersections. Receive alerts on accidents in under 1 second and accelerate emergency response times.

Certification Status

Level 1 Certification

Texas Department of Information Resources – Transforming How Texas Government Serves Texans
dir.texas.gov | #DIRisIT | @TexasDIR

Certification Document Generated: 4/25/2024



Texas Risk and Authorization Management Program Certification

Certificate Granted	Certification Expiration	Certificate ID
04/24/2024	04/23/2027	TX1257072

Do you provide any training services to the Customer?

Training & Support (Ongoing basis): Once GridMatrix's dashboard has been deployed and user accounts provisioned, GridMatrix will provide users with credentials and hold a kick-off meeting to orient them to the platform. GridMatrix provides users with "train the trainer" onboarding. During this session, in addition to covering operations, troubleshooting, configuration, administration, calibration, and maintenance procedures, GridMatrix will work with each of the users to explain how to train other users on the system. Under the train the trainer system, GridMatrix expects to help certain customer users learn the ins and outs of the software to an extent that they will be able to be front-line experts. After the initial session, the project management team will provide bi-weekly check-ins for any additional questions, in-person meetings when necessary, and will otherwise be available for video, call, or email to provide additional support whenever necessary to maximize platform impact.

TAB B - Proposal Pricing

Under this Tab, you are to furnish Exhibit 1 (BID PRICE WORKSHEET) & Exhibit 2 (MARKET BASKET WORKSHEET). Your pricing shall be based on a percentage discount for each item you are bidding on. In addition, you are to provide in a separate document your current published unit pricing for the products you intend to provide. Due to constant price changes, the current published unit pricing is not a contractual obligation, but you will provide NCTCOG an updated price list as yours changes over time. However, the awarded vendor will only be obligated to honor the percentage discount. When preparing a quote for a Customer, you are expected to show on the quote your current published unit price, contracted percentage discount, and the net price for the item. The intent of your providing a current price list is for the Customer to be able calculate their actual cost by applying the contracted percent discount to your published unit pricing. Failure to submit Exhibit 1 or 2 may result in your proposal being disqualified as non-responsive.

Please see Exhibit 1 & Exhibit 2 attached to this document for proposal pricing as well as a link and supporting documentation for current published/nationally advertised pricing.

TAB C - REFERENCES

Include a list of five (5) references for relevant contracts awarded within the last five years, preferably from a government customer. Include customer name, point of contact, address, phone number, and email address. NCTCOG may contact references provided regarding the firm's past performance.

Project #1 - [NYC Bridges & Tunnels Get AI Traffic Analytics from GridMatrix](#)

Sponsoring Agency: Port Authority of New York and New Jersey

Scope: GridMatrix deployed using existing cameras on the Lincoln Tunnel, Holland Tunnel, and George Washington Bridge to collect data multimodal data on traffic congestion, emissions, and safety including near-miss events

Project Manager Name // Title // Email // Phone // Address: Terriann Moore-Abrams // tmabrams@panynj.gov // 917-576-7577 // 150 Greenwich Street, New York, NY 10006

Project #2 - [GridMatrix Texas DIR \(Contract #DIR-CPO-5299\)](#)

Sponsoring Agency: Texas Department of Information Resources

Scope: GridMatrix was selected by the Texas Department of Information Resources (the State Technology Agency of the State of Texas) to provide commercial off-the-shelf "COTS" software services for roadway traffic analytics, critical infrastructure optimization, and other transportation planning and analysis use cases using edge sensors including cameras, radar, lidar, and inductive loops as well as supporting services.

Project Manager Name // Title // Email // Phone // Address: Suzanne Carson // Contract Administrator // suzanne.carson@dir.texas.gov // 52-475-4948 // 300 W 15th St #1300, Austin, TX 78701

Project #3 - [US DOT Partnership to Develop Predictive Models for Emergency Responders](#)

Sponsoring Agency: US Department of Transportation

Scope: GridMatrix developed a real time safety index for transit vehicles using near-miss data, crash data, and NOAA meteorological data

Project Manager Name // Title // Email // Phone // Address: David Schneider // Acting Deputy Associate Administrator, Federal Transit Administration Office of Research, Demonstration, and Innovation // David.Schneider@dot.gov // 202-493-0175 // 1200 New Jersey Avenue SE, Washington DC, 20590

Project #4 - [GridMatrix Deploys In Peoria, IL](#)

Sponsoring Agency: Hanson Inc. on behalf of the city of Peoria

Scope: GridMatrix deployed its platform on existing Peoria 360 degree cameras to collect multimodal traffic data collection

Project Manager Name // Title // Email // Phone // Address: Kurt Bialobreski // Chief Innovation Officer // kbialobreski@hanson-inc.com // 309-713-1408 // 7625 N. University Street Suite 200, Peoria, IL 61614

Project #5 - [San Mateo County Deploys GridMatrix for Vision Zero](#)

Sponsoring Agency: San Mateo County

Scope: GridMatrix is deploying its software along a critical corridor to measure near-misses and other safety metrics to help San Mateo County reach its vision zero goals

Project Manager Name // Title // Email // Phone // Address: Alfred Torres // Information Services Department ISD Contracts & Procurement // aktorres@smcgov.org // 650-363-4548 // 455 County Center, ISD 3rd Floor, Redwood City, CA 94063

Additional Reference:

Project #6 - GridMatrix Deploys At California State University, Sacramento

Sponsoring Agency: California State University, Sacramento

Scope: GridMatrix is operating its platform on Sac State's campus to gather data on pedestrian and cyclists counts, near misses, and campus ingress/egress

Project Manager Name // Title // Email // Phone // Address: Jeff Dierking // Director, University Transportation & Parking Services // jeffrey.dierking@csus.edu // 916-278-2604 // 6000 J Street, Sacramento, CA 95819

APPENDIX A.1
Pricing for TXShare Cooperative Purchase Program Participants

BID PRICE WORKSHEET FOR RFP #2024-132

Category #1 - Not Applicable/No Bid

Category #2 - Not Applicable/No Bid

Category 3: Ancillary Service, Maintenance, Equipment & Supplies

Item	Description	% Discount Off Unit List Price
------	-------------	--------------------------------------

8

Describe Below:

Index	Manufacturer	Product Description	Item Type	Item QTY	MSRP	Scope	NCTCOG Customer Discount	NCTCOG Customer Price
1	GridMatrix	GridMatrix Software Plaform- camera/LiDAR based	Software	1x Camera/LiDAR	\$500	Per Sensor/Per Month	-49.62%	\$251.88
2	GridMatrix	GridMatrix Software Plaform- camera/LiDAR based	Software	2x Camera/LiDAR	\$500	Per Sensor/Per Month	-39.55%	\$302.25
3	GridMatrix	GridMatrix Software Plaform- camera/LiDAR based	Software	4x Camera/LiDAR	\$500	Per Sensor/Per Month	-19.40%	\$403.00
4	GridMatrix	GridMatrix Software Plaform - radar based	Software	1x Radar	\$500	Per Sensor/Per Month	-74.81%	\$125.94
5	GridMatrix	GridMatrix Software Plaform - radar based	Software	2x Radar	\$500	Per Sensor/Per Month	-69.75%	\$151.23
6	GridMatrix	GridMatrix Software Plaform - radar based	Software	4x Radar	\$500	Per Sensor/Per Month	-59.70%	\$201.50
7	GridMatrix	GridMatrix Software Plaform - loop based	Software	4x Loop	\$500	Per Sensor/Per Month	-91.94%	\$40.30
8	GridMatrix	GridMatrix Software Plaform - loop based	Software	6x Loop	\$500	Per Sensor/Per Month	-87.91%	\$60.45
9	GridMatrix	GridMatrix Software Plaform - other sensor	Software	1x Sensor	\$500	Per Sensor/Per Month	-49.62%	\$251.88
10	GridMatrix	Support for software	Labor	1x Intersection	\$20	Per Sensor/Per Month	-50.00%	\$10.00
11	GridMatrix	Blended engineering/data sciences/software product development hourly rate	Labor	1x Hour	\$280	Per Hour	-37.50%	\$175.00
12	GridMatrix	Blended project management/administrative services hourly rate	Labor	1x Hour	\$200	Per Hour	-37.50%	\$125.00
13	GridMatrix	Server with GPUs for On-Premise Deployment	Hardware	1x Server	\$20,000	Per Server	-30.00%	\$14,000

APPENDIX A.2
Service Area Designation Forms

EXHIBIT 3

SERVICE DESIGNATION AREAS

Texas Service Area Designation or Identification			
Proposing Firm Name:	GridMatrix		
Notes:	Indicate in the appropriate box whether you are proposing to service the entire state of Texas		
	Will service the entire state of Texas	x	Will not service the entire state of Texas
	GridMatrix will service the entire state of Texas		
	If you are not proposing to service the entire state of Texas, designate on the form below the regions that you are proposing to provide goods and/or services to. By designating a region or regions, you are certifying that you are willing and able to provide the proposed goods and services.		
Item	Region	Metropolitan Statistical Areas	Designated Service Area
1.	North Central Texas	16 counties in the Dallas-Fort Worth Metropolitan area	
2.	High Plains	Amarillo Lubbock	
3.	Northwest	Abilene Wichita Falls	
4.	Upper East	Longview Texarkana, TX-AR Metro Area Tyler	
5.	Southeast	Beaumont-Port Arthur	
6.	Gulf Coast	Houston-The Woodlands-Sugar Land	
7.	Central Texas	College Station-Bryan Killeen-Temple Waco	
8.	Capital Texas	Austin-Round Rock	
9.	Alamo	San Antonio-New Braunfels Victoria	
10.	South Texas	Brownsville-Harlingen Corpus Christi Laredo McAllen-Edinburg-Mission	
11.	West Texas	Midland Odessa San Angelo	
12.	Upper Rio Grande	El Paso	

(Exhibit 3 continued on next page)

(Exhibit 3 continued)

Nationwide Service Area Designation or Identification Form									
Proposing Firm Name:		GridMatrix							
Notes:		<p>Indicate in the appropriate box whether you are proposing to provide service to all Fifty (50) States.</p> <table border="1"> <tr> <td>Will service all fifty (50) states</td> <td style="text-align: center;">x</td> <td>Will not service fifty (50) states</td> </tr> <tr> <td colspan="2">GridMatrix will service all fifty (50) states</td> <td></td> </tr> </table> <p>If you are not proposing to service to all fifty (50) states, then designate on the form below the states that you will provide service to. By designating a state or states, you are certifying that you are willing and able to provide the proposed goods and services in those states.</p> <p>If you are only proposing to service a specific region, metropolitan statistical area (MSA), or City in a State, then indicate as such in the appropriate column box.</p>		Will service all fifty (50) states	x	Will not service fifty (50) states	GridMatrix will service all fifty (50) states		
Will service all fifty (50) states	x	Will not service fifty (50) states							
GridMatrix will service all fifty (50) states									
Item	State	Region/MSA/City (write "ALL" if proposing to service entire state)	Designated as a Service Area						
1.	Alabama								
2.	Alaska								
3.	Arizona								
4.	Arkansas								
5.	California								
6.	Colorado								
7.	Connecticut								
8.	Delaware								
9.	Florida								
10.	Georgia								
11.	Hawaii								
12.	Idaho								
13.	Illinois								
14.	Indiana								
15.	Iowa								
16.	Kansas								
17.	Kentucky								
18.	Louisiana								
19.	Maine								

20.	Maryland		
21.	Massachusetts		
22.	Michigan		
23.	Minnesota		
24.	Mississippi		
25.	Missouri		
26.	Montana		
27.	Nebraska		
28.	Nevada		
29.	New Hampshire		
30.	New Jersey		
31.	New Mexico		
32.	New York		
33.	North Carolina		
34.	North Dakota		
35.	Ohio		
36.	Oregon		
37.	Oklahoma		
38.	Pennsylvania		
39.	Rhode Island		
40.	South Carolina		
41.	South Dakota		
42.	Tennessee		
43.	Texas		
44.	Utah		
45.	Vermont		
46.	Virginia		
47.	Washington		
48.	West Virginia		
49.	Wisconsin		
50.	Wyoming		

End of Exhibit 3

APPENDIX A.3

The categories awarded under this contract are listed on the following Exhibit 1.

Exhibit 1

Page 23 of RFP

**EXHIBIT 1
CATEGORIES SELECTED, PRICING & CURRENT PUBLISHED PRICE LIST**

- **Please place a checkmark next to each Category that you are offering in your proposal:**

Service Category #1: Preventative Maintenance Services
 Service Category #2: Emergency & Non-Emergency Repair Services
 Service Category #3: Ancillary Service, Maintenance, Equipment & Supplies

- **Proposed Contractual Discounts on Pricing for Categories Offered**

For each of the categories you selected above, provide your proposed **discount** off your list price on the attached *Bid Price Worksheet*. You may offer tiers of discounts based on the different bid items or the sale quantity.

Please see Bid Price Worksheet for proposed discount on a per item basis

- **Current Published Price List for Items Offered**

For each of the bid items you wish to offer, please provide the current published list price. Please attach this information to your proposal on a separate sheet or via a weblink. Please match the Category item number from the Bid Price Worksheet to the matching item on your current published price list.

NOTE: The current price list will NOT be a part of your contractual obligation and may be modified at your discretion during the term of any contract that is awarded to you. You are however requested to provide us with an updated version of the current price list whenever it is updated. Only the percentage discount is contractually obligated.

Current published list price/nationally advertised pricing is available on GridMatrix's AWS Marketplace web page

**APPENDIX B
DEBARMENT CERTIFICATION**

I, Michael Areen
(Name of certifying official)

being duly sworn or under penalty of perjury under the laws of the United States, certifies that neither

GridMatrix, Inc.
(Name of lower tier participant)


nor its principals are presently:

- debarred, suspended, proposed for debarment,
- declared ineligible,
- or voluntarily excluded from participation in this transaction by any federal department or agency

Where the above identified lower tier participant is unable to certify any of the above statements in this certification, such prospective participant shall indicate below to whom the exception applies, the initiating agency, and dates of action.

Exceptions will not necessarily result in denial of award but will be considered in determining contractor responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

EXCEPTIONS:



Signature of Certifying Official Chief Operating Officer

Title 12/2/2024

Date of Certification

Form 1734
Rev.10-91
TPFS

APPENDIX C RESTRICTIONS ON LOBBYING

Section 319 of Public Law 101-121 prohibits recipients of federal contracts, grants, and loans exceeding \$100,000 at any tier under a federal contract from using appropriated funds for lobbying the Executive or Legislative Branches of the federal government in connection with a specific contract, grant, or loan. Section 319 also requires each person who requests or receives a federal contract or grant in excess of \$100,000 to disclose lobbying.

No appropriated funds may be expended by the recipient of a federal contract, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any federal executive department or agency as well as any independent regulatory commission or government corporation, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered federal actions: the awarding of any federal contract, the making of any federal grant, the making of any federal loan the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

As a recipient of a federal grant exceeding \$100,000, NCTCOG requires its subcontractors of that grant to file a certification, set forth in Appendix B.1, that neither the agency nor its employees have made, or will make, any payment prohibited by the preceding paragraph.

Subcontractors are also required to file with NCTCOG a disclosure form, set forth in Appendix B.2, if the subcontractor or its employees have made or have agreed to make any payment using nonappropriated funds (to include profits from any federal action), which would be prohibited if paid for with appropriated funds.

**LOBBYING CERTIFICATION
FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS**

The undersigned certifies to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension continuation, renewal amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, US Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



Signature

COO

Title

GridMatrix

Agency

12/2/2024

Date

**APPENDIX D
ATTESTATION OF CONTRACTS NULLIFYING ACTIVITY**

The following provisions are mandated by Federal and/or State of Texas law. Failure to certify the following will result in disqualification of consideration for contract. Entities or agencies that are not able to comply with the following will be ineligible for consideration of contract award.

D-1: PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT CERTIFICATION

This Contract is subject to the Public Law 115-232, Section 889, and 2 Code of Federal Regulations (CFR) Part 200, including §200.216 and §200.471, for prohibition on certain telecommunications and video surveillance or equipment.

Public Law 115-232, Section 889, identifies that restricted telecommunications and video surveillance equipment or services (e.g. phones, internet, video surveillance, cloud servers) include the following:

- A) Telecommunications equipment that is produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliates of such entities).
- B) Video surveillance and telecommunications equipment produced by Hytera Communications Corporations, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliates of such entities).
- C) Telecommunications or video surveillance services used by such entities or using such equipment.
- D) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, Director of the National Intelligence, or the Director of the Federal Bureau of Investigation reasonably believes to be an entity owned or controlled by the government of a covered foreign country.

The entity identified below, through its authorized representative, hereby certifies that no funds under this Contract will be obligated or expended to procure or obtain telecommunication or video surveillance services or equipment or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as a critical technology as part of any system prohibited by 2 CFR §200.216 and §200.471, or applicable provisions in Public Law 115-232 Section 889.

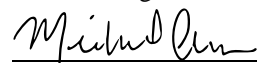
Check one of the following:

The Contractor or Subrecipient hereby certifies that it does comply with the requirements of 2 CFR §200.216 and §200.471, or applicable regulations in Public Law 115-232 Section 889.

-OR-

The Contractor or Subrecipient hereby certifies that it cannot comply with the requirements of 2 CFR §200.216 and §200.471, or applicable regulations in Public Law 115-232 Section 889.

GridMatrix
Name of Organization/Contractor


Signature of Authorized Representative

Michael Areen
Printed/Typed Name and Title of Authorized Representative

Nov. 15, 2024
Date

D-2: DISCRIMINATION AGAINST FIREARMS ENTITIES OR FIREARMS TRADE ASSOCIATIONS

This contract is subject to the Texas Local Government Code chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who discriminate against firearm and ammunition industries.

TLGC chapter 2274, Subtitle F, Title 10, identifies that “discrimination against a firearm entity or firearm trade association” includes the following:

- A) means, with respect to the entity or association, to:
 - I. refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; and
 - II. refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or
 - III. terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association.

- B) An exception to this provision excludes the following:
 - I. contracts with a sole-source provider; or
 - II. the government entity does not receive bids from companies who can provide written verification.

The entity identified below, through its authorized representative, hereby certifies that they have no practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and that they will not discriminate during the term of the contract against a firearm entity or firearm trade association as prohibited by Chapter 2274, Subtitle F, Title 10 of the Texas Local Government Code.

Check one of the following:

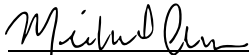
The Contractor or Subrecipient hereby certifies that it does comply with the requirements of Chapter 2274, Subtitle F, Title 10.

-OR-

The Contractor or Subrecipient hereby certifies that it cannot comply with the requirements of Chapter 2274, Subtitle F, Title 10.

GridMatrix

Name of Organization/Contractor



Signature of Authorized Representative

Michael Areen, COO

Printed/Typed Name and Title of Authorized Representative

Nov. 15, 2024

Date

D-3: BOYCOTTING OF CERTAIN ENERGY COMPANIES

This contract is subject to the Texas Local Government Code chapter 809, Subtitle A, Title 8, prohibiting contracts with companies who boycott certain energy companies.

TLGC chapter Code chapter 809, Subtitle A, Title 8, identifies that “boycott energy company” means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company:

- I. engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; and
- II. does business with a company described by paragraph (I).

The entity identified below, through its authorized representative, hereby certifies that they do not boycott energy companies, and that they will not boycott energy companies during the term of the contract as prohibited by Chapter 809, Subtitle A, Title 8 of the Texas Local Government Code.

Check one of the following:


The Contractor or Subrecipient hereby certifies that it does comply with the requirements of Chapter 809, Subtitle A, Title 8.

-OR-

The Contractor or Subrecipient hereby certifies that it cannot comply with the requirements of Chapter 809, Subtitle A, Title 8.

GridMatrix

Name of Organization/Contractor



Signature of Authorized Representative

Michael Areen

Printed/Typed Name and Title of Authorized Representative

Nov. 15, 2024

Date

NCTCOG FEDERAL AND STATE OF TEXAS REQUIRED PROCUREMENT PROVISIONS

The following provisions are mandated by Federal and/or State of Texas law. Failure to certify to the following will result in disqualification of consideration for contract. Entities or agencies that are not able to comply with the following will be ineligible for consideration of contract award.

REQUIRED 2 CFR 200 CLAUSES

Uniform Administrative Requirements, Cost Principles & Audit Requirements for Federal Awards (Contractor)

1. **Equal Employment Opportunity.** PROVIDER shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, or national origin. PROVIDER shall take affirmative actions to ensure that applicants are employed, and that employees are treated, during their employment, without regard to their race, religion, color, sex, sexual orientation, gender identity, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
2. **Davis-Bacon Act.** PROVIDER agrees to comply with all applicable provisions of 40 USC § 3141 – 3148.
3. **Contract Work Hours and Safety Standards.** PROVIDER agrees to comply with all applicable provisions of 40 USC § 3701 – 3708 to the extent this agreement indicates any employment of mechanics or laborers.
4. **Rights to Invention Made Under Contract or Agreement.** PROVIDER agrees to comply with all applicable provisions of 37 CFR Part 401.
5. **Clean Air Act, Federal Water Pollution Control Act, and Energy Policy Conservation Act.** PROVIDER agrees to comply with all applicable provisions of the Clean Air Act under 42 USC § 7401 – 7671, the Energy Federal Water Pollution Control Act 33 USC § 1251 – 1387, and the Energy Policy Conservation Act under 42 USC § 6201.
6. **Debarment/Suspension.** PROVIDER is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from or ineligible for participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. PROVIDER and its subcontractors shall comply with the special provision “Certification Requirements for Recipients of Grants and Cooperative Agreements Regarding Debarments and Suspensions”.
7. **Restrictions on Lobbying.** PROVIDER of these funds is prohibited from using monies for lobbying purposes; PROVIDER shall comply with the special provision “Restrictions on Lobbying”. PROVIDER shall include a statement of compliance with the Lobbying Certification and Disclosure of Lobbying Activities in applicable procurement solicitations. Lobbying Certification and Disclosure of Lobbying Activities shall be completed by subcontractors and included in subcontractor contracts, as applicable.
8. **Procurement of Recovered Materials.** PROVIDER agrees to comply with all applicable provisions of 2 CFR §200.322.
9. **Anti-Israeli Boycott.** By accepting this work order, PROVIDER hereby certifies the following:
 1. PROVIDER’s Company does not boycott Israel; and
 2. PROVIDER’s Company will not boycott Israel during the term of the contract.The following definitions apply to this statute:
 - (1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli- controlled territory, but does not include an action made for ordinary business purposes; and
 - (2) "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

10. Domestic Preference for Procurements

As appropriate and to the extent consistent with law, the PROVIDER should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). Consistent with §200.322, the following items shall be defined as: “Produced in the United States” means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. “Manufactured products” means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

11. Trafficking in Persons

Proposer agrees to comply with all applicable provisions of 2 CFR §175.15. NCTCOG, the Contractor, and its subcontractors are prohibited from (i) engaging in severe forms of trafficking in persons during the period of time that the award is in effect; (ii) procure a commercial sex act during the period of time that the award is in effect; (iii) used force labor in the performance of the award or subawards under the award. The Federal award agency may unilaterally terminate the award, without penalty, if the Contractor (i) is determined to have violated an applicable prohibition; (ii) has an employee who is determined by the agency officially authorized to terminate the award to have violated an applicable prohibition of this award term. NCTCOG must notify the Federal award agency immediately if any information received from the Contractor indicates a violation of the applicable prohibitions.

The Contractor or Subrecipient hereby certifies that it does comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.



Signature of Authorized Person

Michael Areen

Name of Authorized Person

GridMatrix

Name of Company

Nov. 15, 2024

Date

-OR-

The Contractor or Subrecipient hereby certifies that it cannot comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.

Signature of Authorized Person

Name of Authorized Person

Name of Company

Date