

### CITY OF GRAND JUNCTION, COLORADO

#### CONTRACT

This CONTRACT made and entered into this 7th day of April, 2022 by and between the City of Grand Junction, Colorado, a government entity in the County of Mesa, State of Colorado, hereinafter in the Contract Documents referred to as the "Owner" and Roadway Asset Services hereinafter in the Contract Documents referred to as the "Consultant."

#### WITNESSETH:

WHEREAS, the Consultant shall furnishing all labor, services, supplies, equipment, materials, and everything necessary and required for the Project described by the Contract Documents and known as **2022 Pavement Condition Assessment 5047-22-DH**.

WHEREAS, the Contract has been awarded to the above-named Consultant by the Owner, and said Consultant is now ready, willing and able to perform the Services specified in accordance with the Contract Documents;

NOW, THEREFORE, in consideration of the compensation to be paid the Consultant, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

#### **ARTICLE 1**

<u>Contract Documents</u>: It is agreed by the parties hereto that the following list of instruments, drawings, and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the "Contract Documents" or the "Contract", and all of said instruments, drawings, and documents taken together as a whole constitute the Contract between the parties hereto, and they are fully a part of this agreement as if they were set out verbatim and in full herein:

The order of contract document governance shall be as follows:

- a. The body of this contract agreement
- b. General Conditions, Insurance Requirements, Special Conditions/Provisions, Scope of Services; **2022 Pavement Condition Assessment**;
- c. Consultants submitted Scope of Work and pricing proposal;
- d. Mesa County contract RFQ-22-03037, on which this contract is being "piggy-backed" from:
- e. Services Change Requests (directing that changed Services be performed);

# f. Change Orders.

#### ARTICLE 2

<u>Contract Services:</u> The Consultant agrees to furnish all labor, tools, supplies, equipment, materials, and all that is necessary and required to complete the tasks associated with the Services described, set forth, shown, and included in the Contract Documents as indicated in the Contract Document.

#### **ARTICLE 3**

<u>Contract Time:</u> Time is of the essence with respect to this Contract. The Consultant hereby agrees to commence Services under the Contract upon execution of this contract, and to achieve Substantial Completion and Final Completion of the Services within the time or times specified in the Consultant's Proposal.

#### **ARTICLE 4**

Contract Price and Payment Procedures: The Consultant shall accept as full and complete compensation for the performance and completion of all of the Services specified in the Contract Documents, the sum of One Hundred Three Thousand Thirty-Six and 00/100 Dollars (\$103,036.00). If this Contract contains unit price pay items, the Contract Price shall be adjusted in accordance with the actual quantities of items completed and accepted by the Owner at the unit prices quoted in the Consultant's Proposal. The amount of the Contract Price is and has heretofore been appropriated by the Grand Junction City Council for the use and benefit of this Project. The Contract Price shall not be modified except by Change Order or other written directive of the Owner. The Owner shall not issue a Change Order or other written directive which requires additional Services to be performed, which Services causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Project, unless and until the Owner provides Consultant written assurance that lawful appropriations to cover the costs of the additional Services have been made.

Unless otherwise provided in the Contract, monthly partial payments shall be made as the Services progresses. Applications for partial and Final Payment shall be prepared by the Consultant and approved by the Owner in accordance with the Contract.

#### **ARTICLE 5**

<u>Contract Binding:</u> The Owner and the Consultant each binds itself, its partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract Documents constitute the entire agreement between the Owner and Consultant and may only be altered, amended or repealed by a duly executed written instrument. Neither the Owner nor the Consultant shall, without the prior written consent of the other, assign or sublet in whole or in part its interest under any of the Contract Documents and specifically, the Consultant shall not assign any moneys due or to become due without the prior written consent of the Owner.

#### **ARTICLE 6**

<u>Severability:</u> If any part, portion or provision of the Contract shall be found or declared null, void or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having the authority thereover, only such part, portion or provision shall be effected thereby and all other parts, portions and provisions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, City of Grand Junction, Colorado, has caused this Contract to be subscribed and sealed and attested in its behalf; and the Consultant has signed this Contract the day and the year first mentioned herein.

The Contract is executed in two counterparts.

CITY OF GRAND	JUNCTION,	COLORADO
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By: Duane Hoff Jr., Contract administra	utor - City of Granadezolaraction	
Duane Hoff Jr., Contract Administrator	Date	

# **Roadway Assessment Services**

# SECTION 2.0: GENERAL CONTRACT TERMS AND CONDITIONS

- 2.1. Acceptance of RFP Terms: A proposal submitted in response to this RFP shall constitute a binding offer. Acknowledgment of this condition shall be indicated on the Letter of Interest or Cover Letter by the autographic signature of the Offeror or an officer of the Offeror legally authorized to execute contractual obligations. A submission in response to the RFP acknowledges acceptance by the Offeror of all terms and conditions including compensation, as set forth herein. An Offeror shall identify clearly and thoroughly any variations between its proposal and the Owner's RFP requirements. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in the RFP.
- 2.2. Execution, Correlation, Intent, and Interpretations: The Contract Documents shall be signed by the Owner and Firm. By executing the contract, the Firm represents that they have familiarized themselves with the local conditions under which the Services is to be performed, and correlated their observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by anyone, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment, services and other items necessary for the proper execution and completion of the scope of services as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the Owner are, and shall remain, Owner property. They are not to be used on any other project.
- 2.3. Permits, Fees, & Notices: The Firm shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the services. The Firm shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the services. If the Firm observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Firm performs any services knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.
- **2.4.** Responsibility for those Performing the Services: The Firm shall be responsible to the Owner for the acts and omissions of all his employees and all other persons performing any of the services under a contract with the Firm.
- 2.5. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Firm for the performance of the services under the Contract Documents. Upon receipt of written notice that the services is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when they find the services acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided

in the Contract Documents. Partial payments will be based upon estimates, prepared by the Firm, of the value of services performed and materials placed in accordance with the Contract Documents. The services performed by Firm shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of services in the applicable community. The services and services to be performed by Firm hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

- 2.6. Protection of Persons & Property: The Firm shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Firm shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Firm in the execution of the services, or in consequence of the non-execution thereof by the Firm, they shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.
- 2.7. Changes in the Services: The Owner, without invalidating the contract, may order changes in the services within the general scope of the contract consisting of additions, deletions or other revisions. All such changes in the services shall be authorized by Change Order/Amendment and shall be executed under the applicable conditions of the contract documents. A Change Order/Amendment is a written order to the Firm signed by the Owner issued after the execution of the contract, authorizing a change in the services or an adjustment in the contract sum or the contract time.
- **2.8. Minor Changes in the Services:** The Owner shall have authority to order minor changes in the services not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- 2.9. Uncovering & Correction of Services: The Firm shall promptly correct all services found by the Owner as defective or as failing to conform to the contract documents. The Firm shall bear all costs of correcting such rejected services, including the cost of the Owner's additional services thereby made necessary. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming services under the above paragraphs shall be removed from the site where necessary and the services shall be corrected to comply with the contract documents without cost to the Owner.
- 2.10. Acceptance Not Waiver: The Owner's acceptance or approval of any services furnished hereunder shall not in any way relieve the proposer of their present

responsibility to maintain the high quality, integrity and timeliness of his services. The Owner's approval or acceptance of, or payment for, any services shall not be construed as a future waiver of any rights under this Contract, or of any cause of action arising out of performance under this Contract.

- 2.11. Change Order/Amendment: No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- **2.12. Assignment:** The Offeror shall not sell, assign, transfer or convey any contract resulting from this RFP, in whole or in part, without the prior written approval from the Owner.
- 2.13. Compliance with Laws: Proposals must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements. Firm hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.
- **2.14. Debarment/Suspension**: The Firm herby certifies that the Firm is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Governmental department or agency.
- **2.15.** Confidentiality: All information disclosed by the Owner to the Offeror for the purpose of the services to be done or information that comes to the attention of the Offeror during the course of performing such services is to be kept strictly confidential.
- **2.16.** Conflict of Interest: No public official and/or Owner employee shall have interest in any contract resulting from this RFP.
- 2.17. Contract: This Request for Proposal, submitted documents, and any negotiations, when properly accepted by the Owner, shall constitute a contract equally binding between the Owner and Offeror. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the Proposal documents. The contract may be amended or modified with Change Orders, Field Orders, or Amendment.
- **2.18. Project Manager/Administrator:** The Project Manager, on behalf of the Owner, shall render decisions in a timely manner pertaining to the services proposed or performed by the Offeror. The Project Manager shall be responsible for approval and/or acceptance of any related performance of the Scope of Services.
- 2.19. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice*

- of Cancellation stating therein the reasons for such cancellation and the effective date of cancellation at least thirty days past notification.
- **2.20. Employment Discrimination**: During the performance of any services per agreement with the Owner, the Offeror, by submitting a Proposal, agrees to the following conditions:
  - 2.20.1. The Offeror shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, citizenship status, marital status, veteran status, sexual orientation, national origin, or any legally protected status except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Offeror. The Offeror agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
  - 2.20.2. The Offeror, in all solicitations or advertisements for employees placed by or on behalf of the Offeror, shall state that such Offeror is an Equal Opportunity Employer.
  - 2.20.3. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- 2.21. Immigration Reform and Control Act of 1986 and Immigration Compliance: The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien services or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, et.seq. (House Bill 06-1343).
- **2.22.** Ethics: The Offeror shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.
- 2.23. Failure to Deliver: In the event of failure of the Offeror to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Offeror responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.
- **2.24.** Failure to Enforce: Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- **2.25. Force Majeure:** The Offeror shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Offeror, unless otherwise specified in the contract.

- 2.26. Indemnification: Offeror shall defend, indemnify and save harmless the Owner and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Offeror, or of any Offeror's agent, employee, sub-Firm or supplier in the execution of, or performance under, any contract which may result from proposal award. Offeror shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.
- 2.27. Independent Firm: The Offeror shall be legally considered an Independent Firm and neither the Firm nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Firm, its servants, or agents. The Owner shall not withhold from the contract payments to the Firm any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Firm. Further, the Owner shall not provide to the Firm any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- 2.28. Nonconforming Terms and Conditions: A proposal that includes terms and conditions that do not conform to the terms and conditions of this Request for Proposal is subject to rejection as non-responsive. The Owner reserves the right to permit the Offeror to withdraw nonconforming terms and conditions from its proposal prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.
- **2.29.** Ownership: All plans, prints, designs, concepts, etc., shall become the property of the Owner.
- **2.30. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.
- **2.31.** Patents/Copyrights: The Offeror agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Offeror for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this RFP.
- **2.32. Venue**: Any agreement as a result of responding to this RFP shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.
- **2.33.** Expenses: Expenses incurred in preparation, submission and presentation of this RFP are the responsibility of the company and cannot be charged to the Owner.

- **2.34. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.35. Public Funds/Non-Appropriation of Funds: Funds for payment have been provided through the Owner's budget approved by the City Council/Board of County Commissioners for the stated fiscal year only. State of Colorado statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the stated Owner's fiscal year shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- 2.36. Collusion Clause: Each Offeror by submitting a proposal certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all proposals shall be rejected if there is evidence or reason for believing that collusion exists among the proposers. The Owner may or may not, at the discretion of the Owner Purchasing Representative, accept future proposals for the same service or commodities for participants in such collusion.
- 2.37. Gratuities: The Firm certifies and agrees that no gratuities or kickbacks were paid in connection with this contract, nor were any fees, commissions, gifts or other considerations made contingent upon the award of this contract. If the Firm breaches or violates this warranty, the Owner may, at their discretion, terminate this contract without liability to the Owner.
- **2.38. Performance of the Contract:** The Owner reserves the right to enforce the performance of the contract in any manner prescribed by law or deemed to be in the best interest of the Owner in the event of breach or default of resulting contract award.
- **2.39. Benefit Claims:** The Owner shall not provide to the Offeror any insurance coverage or other benefits, including Worker's Compensation, normally provided by the Owner for its employees.
- 2.40. Default: The Owner reserves the right to terminate the contract in the event the Firm fails to meet delivery or completion schedules, or otherwise perform in accordance with the accepted proposal. Breach of contract or default authorizes the Owner to purchase like services elsewhere and charge the full increase in cost to the defaulting Offeror.
- **2.41. Multiple Offers:** If said proposer chooses to submit more than one offer, THE ALTERNATE OFFER must be clearly marked "Alternate Proposal". The Owner reserves the right to make award in the best interest of the Owner.
- **2.42.** Cooperative Purchasing: Purchases as a result of this solicitation are primarily for the Owner. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide

by the specifications, terms, conditions and pricings established in this Proposal. The quantities furnished in this proposal document are for only the Owner. It does not include quantities for any other jurisdiction. The Owner will be responsible only for the award for our jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The Owner accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

#### 2.43. Definitions:

- 2.43.1. "Offeror" and/or "Proposer" refers to the person or persons legally authorized by the Consultant to make an offer and/or submit a response (fee) proposal in response to the Owner's RFP.
- 2.43.2. The term "Services" includes all labor, materials, equipment, and/or services necessary to produce the requirements of the Contract Documents.
- 2.43.3. "Firm" is the person, organization, firm or consultant identified as such in the Agreement and is referred to throughout the Contract Documents. The term Firm means the Firm or his authorized representative. The Firm shall carefully study and compare the Scope of Services, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Firm shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Firm shall not commence services without clarifying Drawings, Specifications, or Interpretations.
- 2.43.4. "Sub-Contractor is a person or organization who has a direct contract with the Firm to perform any of the services at the site. The term Sub-Firm is referred to throughout the contract documents and means a Sub-Contractor or his authorized representative.
- 2.44. Public Disclosure Record: If the Proposer has knowledge of their employee(s) or sub-proposers having an immediate family relationship with an Owner employee or elected official, the proposer must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the Owner.

### **SECTION 3.0: INSURANCE REQUIREMENTS**

3.1 Insurance Requirements: The selected Firm agrees to procure and maintain, at its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Firm pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Firm shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

Firm shall procure and maintain and, if applicable, shall cause any Sub-Firm of the Firm to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to The Owner. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Firm pursuant to this Section. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise in the Special Conditions:

- (a) Worker Compensation: Firm shall comply with all State of Colorado Regulations concerning Workers' Compensation insurance coverage.
- (b) General Liability insurance with minimum combined single limits of:

ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) per job aggregate.

The policy shall be applicable to all premises, products and completed operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground (XCU) hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than:

ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate

(d) Professional Liability & Errors and Omissions Insurance policy with a minimum of:

ONE MILLION DOLLARS (\$1,000,000) per claim

This policy shall provide coverage to protect the Firm against liability incurred as a result of the professional services performed as a result of responding to this Solicitation.

With respect to each of Consultant's owned, hired, or non-owned vehicles assigned to be used in performance of the Services. The policy shall contain a severability of interests provision.

3.2 Additional Insured Endorsement: The policies required by paragraphs (b), and (c) above shall be endorsed to include the Owner and the Owner's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees,

or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Firm. The Firm shall be solely responsible for any deductible losses under any policy required above.

### SECTION 4.0: SPECIFICATIONS/SCOPE OF WORK/SERVICES

# 4.1. Special Conditions/Provisions:

**4.1.1 Price/Fees:** Project pricing shall be <u>all inclusive</u>, to include, but not be limited to: labor, materials, equipment, travel, design, drawings, engineering Services, shipping/freight, licenses, permits, fees, etc.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

**4.2. Specifications/Scope of Services:** See Roadway Asset Services submitted Scope of Work.

#### Attachment A

#### **Grand Junction Street Assessment Project**

# Section I - Scope of Work:

RAS understands that Grand Junction, Colorado desires to conduct a field survey of the pavement conditions on all the City roads following the ASTM Standard D6433-11 "Standard Practice for Roads and parking Lots Pavement Condition Index (PCI) Surveys." The PCI based pavement condition survey is to be conducted on approximately 396 centerline miles of paved roads in the City limits on each street segment which is typically a block and tagged with a Facility-ID on the feature-class layer in GIS.

The CONSULTANT (Roadway Asset Services, LLC.) shall provide the following services to the OWNER (Grand Junction, CO):

- Mobile data collection of roadway imagery and pavement distress for 501 test miles (assuming driving two directions for arterials and collectors, and one direction for local residential roads.)
- ASTM D6433 compliant pavement rating and assessment for 501 test miles.
- Inventory the following items: pavement condition and pavement width.
- Provide data in a format compatible with the OWNER's Pavement Management System (Lucity).
- Provide consultation for decision trees and maintenance options.

Description of the tasks to be performed.

# Task 1 - Project Setup

#### 1.1 Project Initiation

Upon notice to proceed the CONSULTANT will arrange a kick-off meeting to confirm the project requirements and scheduling. The kick-off meeting will include proposed key personnel and the OWNER's project members. During the meeting, CONSULTANT will present the proposed Project Approach, which includes project equipment, software, methodology, schedules, and deliverables. The proposed approach will be finalized based on the OWNER requirements and decisions during the meeting. CONSULTANT will request that the OWNER provide any existing database, previous inventory of street conditions, road centerlines, Geographic Information System (GIS) layers, and aerial imagery for project use. Project communication protocol, documentation, accounting methodologies, data format, and will be confirmed during the meeting.

#### 1.2 GIS Centerline/Data Import and Data Preparation

CONSULTANT will use the existing centerline data provided by the OWNER and create a pavement database based on the centerline layer. Each road segment record in the centerline layer will have a corresponding record in the pavement database. The OWNER represents that the City maintains approximately 396 centerline miles of roadways.

CONSULTANT will work with the OWNER to maintain the unique identifier of each of the road segments on the OWNER road network so that the pavement database can maintain a persistent link to the GIS data.

CONSULTANT will communicate with the OWNER to gather required information to define all the distress types and treatment selections. Based on this information, a Pavement Condition Index (PCI)



rating and treatment selection manual will be created to identify and define each distress type and its severity, extent, and treatment selection (based on the ASTM-D6433 testing methodology for roads and parking lots). Each collected GIS road and alley segment will be populated with its respective PCI as well as any other derivative indices used to make up the PCI.

CONSULTANT will provide the OWNER with a GPS "breadcrumb" file of data collection routes and image locations.

#### 1.3 Project Management

CONSULTANT will provide project management for the duration of the project, including coordinating and attending meetings via web meetings or in person with OWNER, data research and collection efforts as required, preparing weekly progress reports, and schedule updates. Weekly progress reports will include the total days collected and lost due to weather or mechanical issues for the current reporting period as well as cumulative totals. An exhibit displaying the roads collected and not yet collected will also be included.

#### **Task 1 Deliverables:**

- 1. The CONSULTANT will deliver weekly progress reports and schedule updates.
- 2. The CONSULTANT will provide the OWNER with a centerline assessment document for review and approval.

# Task 2 - Pavement Data and Image Capture

The CONSULTANT will collect roadway data and images for the 396 centerline miles of roadway using a Roadway Asset Collection (RAC) vehicle.

#### 2.1 System Setup, Mobilization and Pilot Project

CONSULTANT will work with the OWNER to review and verify that the data is ready to proceed. CONSULTANT will work with the OWNER to setup a pilot project area so that some initial sample data can be collected and verified. CONSULTANT will collect data within the pilot project area and review the result with the OWNER and acquire approval for full size project implementation.

#### 2.2 Field Data and Image Capture

The RAS team consists of a driver and operator (CONSULTANT) who will systematically drive the automated data collection vehicle on the road segment listings provided by the OWNER. The CONSULTANT will collect pavement data with two passes on arterial, collector, and striped local roads and one pass collection on residential local roadways. CONSULTANT proposes to use its collection vehicle line scan camera with laser illumination and right-of-way cameras to capture pavement and ROW images to be used during the pavement rating process. Unpaved roads will not be surveyed.





A RAS automated data collection vehicle

Roadway Asset Services (RAS) will perform data field collection on paved roads using a state-of-the-art International Cybernetics Corporation (ICC) data collection vehicle with following systems mounted:

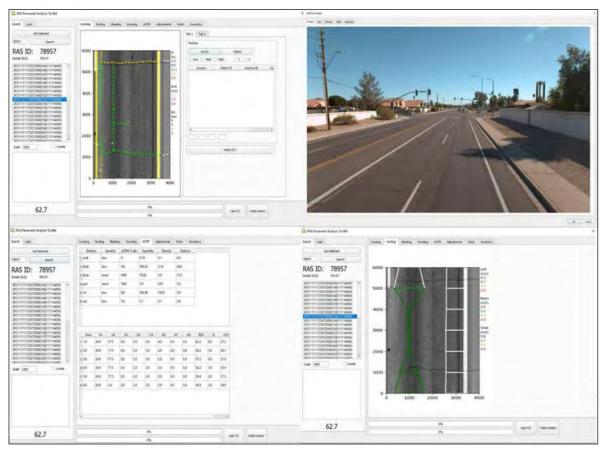
- Right-of-way georeferenced images with Ladybug 5+ camera: Forward, Left, Right, and 360degree spherical images.
- LCMS-2 pavement 2D/3D imaging.
- Longitudinal profile with 2-line lasers (left and right wheelpaths) Distance measuring instrument (DMI) with an accuracy of +/-0.1%.
- Differentially corrected GPS (DGPS) with an accuracy of +/- 2 feet.
- Applanix POS/LV 220 to compensate for difficult GPS conditions in urban environments.

The RAS system collects all pavement and right-of-way images, IMU, DMI and profiler data concurrently.



#### 2.3 Pavement Condition Evaluation

CONSULTANT will evaluate the PCI survey results in accordance with ASTM D6433. CONSULTANT will provide 100% survey of all lanes driven using RAS' Pavement Analysis Tool (RASPAT) software to evaluate the pavement condition using automated techniques per the ASTM D6433 pavement distress rating process including the following distresses: alligator cracking, longitudinal cracking, transverse cracking, raveling, and patching. Experienced pavement engineers will review the resultant output for accuracy and make any corrections that may be needed. RASPAT software allows the pavement and right of way imagery to be synced and the distress data to be displayed geospatially to provide another layer of quality assurance.



Pavement Condition Evaluation within RASPAT

The international Roughness Index (IRI) will be collected using a class 1 road surface profiler manufactured by International Cybernetics Corporation (ICC). The road surface profiler meets all ASTM E-950 standards for evaluating the smoothness of pavement.

#### **Task 2 Deliverables:**

- 1. CONSULTANT will provide Right-of-Way imagery for all segments collected.
- 2. CONSULTANT will provide downward-facing Pavement Imagery for all segments collected.
- 3. CONSULTANT will provide International Roughness Index (IRI) values for each delivered road segment.
- 4. CONSULTANT will provide Geodatabase of distresses containing the Type, Severity and Extent of distresses along the road segment as defined by the ASTM D6433 methodology.



5. CONSULTANT will provide Pavement Condition Index (PCI) values for each delivered road segment.

#### Task 3 Pavement Width

The CONSULTANT will use the images from the Ladybug 360 camera system to capture the width of pavement for each street segment to compare with the existing database information. CONSULTANT will provide the widths for roads with width changes by noting locations of changes by stations and measuring each section of change, and the addition of lanes or turn lanes.

#### **Task 3 Deliverables**

1. CONSULTANT will provide the OWNER width measurements within the Pavement database.

# Task 4 Lucity Import and Database

CONSULTANT will provide final PCI and Distress data in a format compatible with the Client's Pavement Management System (Lucity).

#### **Task 4 Deliverables:**

- 1. CONSULTANT will deliver a final Lucity import database file.
- 2. CONSULTANT will work with Lucity to import new data into OWNER's system.
- 3. CONSULTANT will provide consultation with the OWNER to set constraints within Lucity and assist the OWNER in performing internal budget scenarios with Lucity.

# Task 5 Development of Decision Trees and Treatment Options

CONSULTANT will discuss preferred treatment options and historical performance with the OWNER and develop appropriate decision trees for PCI levels based on experience with pavement performance and understanding critical conditions to apply appropriate treatments. The CONSULTANT may also provide recommendations for treatment options based upon experience with the observed conditions.

Analysis will include the following tasks, in cooperation with input from the City staff.

- a. Develop super segments by combining similar roads with similar conditions that are adjacent to each other,
- b. Develop deterioration curves for each combination of surface type, classification, and strength,
- c. Define rehabilitation strategies for each combination of surface type, classification, strength category (weak, moderate, strong) and update unit rates,
- d. Update work completed between the time of the survey and the start of analysis,
- e. Update planned work to account for work the City has already committed to,
- f. Develop various budget scenarios, and
- g. Provide detailed segment selections and maps for up to three of these scenarios.

#### **Task 5 Deliverables:**

- 1. CONSULTANT will deliver a Decision Tree with PCI levels for appropriate treatment options, including suggested PCI improvement per treatment, and estimate unit costs for treatments.
- 2. CONSULTANT will provide consultation with the OWNER to identify appropriate treatment options based upon deterioration curves and pavement conditions.



3. CONSULTANT will work with the OWNER to develop and present budget scenarios from options of three scenarios as identified in the Analysis process.

# Task 6 Quality Assurance and Quality Control and Field Verification

The CONSULTANT will perform quality assurance and quality control on all data collected.

CONSULTANT has a proven Quality Assurance (QA)/Quality Control (QC) procedure for all mobile data collection projects. CONSULTANTS QC procedures begin with the collection vehicle collection process.

The technician will check each camera's exposure rate, image quality and GPS and IMU operation to ensure the data collection system is recording the image, GPS, DMI and IMU data and that the GPS location is within the stated project tolerance. Each collection day's calibration collection will be documented in the collection logbook. The collection logbook also contains information such as date, location, technician and drivers name, any issue that developed during the collection day and DMI calibration runs.

During image collection, the technician reviews the images collected on-screen as they are collected and any issue with image clarity requires the collection run to end and the image quality issue to be resolved. Once resolved, the collection run begins from the beginning for the road segment collected. The technician also monitors GPS reception during collection. If GPS reception is lost (measured using PDOP – positional dilution of precision), the technician stops the collection and resolves the GPS reception issue. Collection begins again once the GPS reception issue is resolved. All issues resulting in the collection run being stopped will be recorded in the collection logbook along with the resolution.

With a completed collection drive delivered to CONSULTANT offices, images are post processed and provided to the image QC Officer who will perform quality control checks on each delivery provided. The QC Officer will visually review the collection routes for image quality. All collection runs that are considered of low quality will be marked for recollection before the data collection vehicle(s) is allowed to leave the City of Grand Junction.

Additionally, CONSULTANT will provide independent quality checks via field verification to confirm accuracy of automated data collection.

#### Acceptance Criteria

The results of the data collection shall be quality checked for rating consistency by CONSULTANT to ensure the accuracy and quality of deliverables. Additionally, deliverables will be checked for missing and/or duplicate assets. A 97% accuracy rate is expected, and Quality Control checks will be based on the batch/sample size of the delivery (see Table A below to determine sample size for the appropriate accuracy rate).

For any measurement that is needed it must be accurate to the nearest foot. If the data has more errors than allowable the set of data will be corrected. This process will be repeated until each set of data is within the allowable limits.

#### Method of measurement of acceptable quality level (AQL)

Each attribute captured for an asset counts as one unit of measure. Each physical measurement required for an asset location counts as one attribute or unit of measure. The following location information also counts as an attribute or unit of measure for each asset: Physical presence (when captured as per source = correct, not captured or missed = incorrect) In the event of a duplicate capture of an asset, the total number of attributes or units of measure for the duplicate asset(s) will be deducted from the total units of the sample set, and one error or unit of measure (incorrect physical presence) is charged.



Batch size	e		Sample Size	Acceptar	nce Rate (9	%)		
			(Normal)	99.0	98.5	97.5	96.0	93.5
2	То	8	2	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
9	То	15	3	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
16	То	25	5	≤ 0	≤ 0	≤ 0	≤ 0	≤ 1
26	То	50	8	≤ 0	≤ 0	≤ 0	≤ 1	≤ 1
51	То	90	13	≤ 0	≤ 0	≤1	≤ 1	≤ 2
91	То	150	20	≤ 0	≤1	≤1	≤ 2	≤ 3
151	То	280	32	≤1	≤1	≤ 2	≤3	≤ 5
281	То	500	50	≤1	≤ 2	≤3	≤ 5	≤ 7
501	То	1,200	80	≤ 2	≤3	≤ 5	≤ 7	≤ 10
1,201	То	3,200	125	≤3	≤ 5	≤ 7	≤ 10	≤ 14
3,201	То	10,000	200	≤ 5	≤ 7	≤ 10	≤ 14	≤ 21
10,001	То	35,000	315	≤7	≤ 10	≤ 14	≤ 21	≤ 21
35,001	То	150,000	500	≤ 10	≤ 14	≤ 21	≤ 21	≤ 21
150,001	То	500,000	800	≤ 14	≤ 21	≤ 21	≤ 21	≤ 21
500,001	and over		1250	≤ 21	≤ 21	≤ 21	≤ 21	≤ 21

Example: a delivery results in 100 assets – each asset has been determined to have 10 attributes to be captured (including the physical presence "attribute" for each asset) – thus total units of measure for the Batch size = 1,000 (100 x 10). Based on Table A, a Quality Control using a sample size of 80 units should be assessed for quality. With an expected accuracy of 97%, the allowable number of errors  $\leq$  5.



	Grand Junction, CO 2022 Pavement Condition Asses	sment		Roadway Assot Services
Task	Description	Units	Unit Cost	Fee
1	Centerline Identification, Field Set-up and Mobilization (Lump Sum)	1	\$1,950	\$1,950
2.1	Pilot and Senior Pavement Engineer Consultation (Hours)	24	\$275	\$6,600
2.2	Street Network Collection (Test Mile) <sup>1</sup>	501	\$90	\$45,090
2.3	Pavement Condition Index (Test Mile) <sup>1</sup> Modified ASTM D6433 using AI	501	\$40	\$20,040
3	Pavement Width (Lane Mile) <sup>2</sup>	792	\$5.5	\$4,356
4	Lucity Import and Clean-up of City's Database (Lump Sum)	1	\$15,000	\$15,000
5	Development of Decision Trees and Treatment Options (Lump Sum)	1	\$10,000	\$10,000
	Total Services <sup>3</sup>			\$103,036

#### **Notes:**

<sup>&</sup>lt;sup>1</sup>The collection test miles will equal twice the centerline mileage for Arterial, Collector, and Striped Local Roads (multiple passes), while residential local roads (single pass) test miles will equal centerline mileage

<sup>&</sup>lt;sup>2</sup>Lane Miles equal twice the centerline miles as assets will be extracted on both sides of road

 $<sup>^3\</sup>mbox{Bill}$  monthly, lump sum based on percent complete for each task item.

# **CHANGE ORDER**

# CHANGE ORDER NO. 1

Date: January 12, 2022

Project: 2022 Pavement Condition Assessment

RFQ: RFQ-22-03037

Contractor: Roadway Asset Services Contract Date: December 22, 2021

Attn: Bart Williamson

You are directed to make the changes noted below in the subject Contract:

#### NATURE OF CHANGES:

Add the current Scope of Work to the existing contract with Roadway Asset Services that was approved January 3, 2022. The updated Scope of Work was received by Mesa County on December 28, 2021.

#### **REASON FOR CHANGES:**

The current Scope of Work was updated with a project schedule/timeline.

These changes result in the following adjustment of Contract Price and Contract Time:

Contract Price (Decrease/Increase):

\$0.00

Contract Time (Decrease/Increase):

0 working days

The Above Changes are Approved by Mesa County Public Works:

Name: David Gray Objects (Speed by David Gray Objects) Excluded gray Objects (2014) (Speed David Gray Objects) (Speed David Gray

Title: Construction Group Manager

Date: January 12, 2022

# **CHANGE ORDER**

The foregoing Change Order No. \_1\_ is satisfactory and is hereby accepted. In accepting this Change Order No. \_1\_, the Contractor acknowledges that he has no unsatisfied claim against the County arising out of or resulting from this Order, and the Contractor hereby releases and discharges the County from any and all claims or demands whatsoever arising out of or resulting from this Order.

The Above Changes are Accepted:

Contractor:	KOADWAY	ASSET	SERVICES	LLC	
By:	But helles	Title:	CEO		
Date:	1/13/2022				

### **SUMMARY OF CHANGE ORDERS**

These Change Orders to date have resulted in the following adjustment of Contract Price and Contract Time:

Original Contract Price:

\$228,230.00

Original Contract Time:

174 days

Change Order No.	Date	Amount (+ or-)	Time (+ or -)
1	1/12/2022	0.00	0
		mpote transcent and the second	
Net Change of ALL Chan	nge Orders (+ or -)	0	0
Net Change this Change	Order (+ or -)	0	0
New Contract Price and/o	or Time	\$228,230.00	0

AGREEMENT FOR
PROFESSIONAL SERVICES
BETWEEN
ROADWAY ASSET SERVICES, LLC
AND
MESA COUNTY

2022 PAVEMENT CONDITION ASSESSMENT

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**RAS QULIFICATIONS** 

# AGREEMENT FOR PROFESSIONAL SERVICES

This Agreement for Professional Services ("Agreement") is made by and between **ROADWAY ASSET SERVIES**, a Texas corporation ("Consultant") and **MESA COUNTY, COLORADO**, a political subdivision of the State of Colorado (hereinafter "County" or "Board").

#### ARTICLE 1 - CONSULTANT'S SERVICES & PERSONNEL

The Consultant shall perform all services and furnish all materials, equipment, labor, permits and other things necessary to skillfully complete the work described in RFQ-22-03037. Upon notification to proceed, the Consultant shall promptly commence and diligently continue the work to completion in compliance with RFQ-22-03037. The Consultant's services shall be performed by experienced personnel in accordance with professional industry practices and standards.

The Consultant shall follow and comply with all federal, state and local government laws, rules, regulations, codes, ordinance and orders applicable to the work hereunder.

The Consultant shall be responsible for completeness and accuracy of its work and shall correct all errors or omissions at its own expense. The Consultant assumes entire responsibility and liability for death or injury to all persons, whether employees of the Consultant or otherwise, and damage to all property arising from or occurring in connection with the Consultant's work, caused by the Consultant's negligence or acts or omissions. Liens or claims arising from or occurring in connection with the Consultant's work shall be immediately removed and discharged by the Consultant.

Key personnel have been identified by the Consultant and relied upon by the County in awarding this Agreement. Mesa County reserves the right to re-negotiate or terminate the contract if either of the following occurs:

- There is a significant (50%) change in the Consultant's key personnel without approval; or
- The Project Engineer is changed during the performance of the contract without approval.

In the event the Consultant desires to change any key personnel or the Project Engineer during the agreement period, the Consultant must submit for prior approval a written request demonstrating the extraordinary circumstances and providing: local availability of the substituted key personnel or Project Engineer; professional qualifications; related project experience; and, current and future commitments. In addition to the remedies above, if, for whatever reason, a key personnel or Project Engineer is deemed unsuitable or a hindrance to the cooperative completion of the Project, Mesa County may remove that person from the Consultant's design team.

#### **ARTICLE 2 - COMPENSATION**

County shall pay the Consultant for its services in accordance with **Attachment A** ("Scope and Fee") and shall submit charges as shown in **Attachment A**. If an authorized change to the scope of work or request for additional services under Article 3 causes an increase or decrease in the Consultant's work, an equitable adjustment shall be made to the Consultant's compensation in accordance with the terms of Article 3 and this Agreement shall be modified in writing accordingly.

The Consultant shall submit statements for basic services once per month. Each invoice shall present a summary of services provided, a summary table of billings to date with respect to the contract amount, and an invoice amount based upon the work completed all in accordance with RFQ-22-03037 and Attachment A). If County objects to any statement submitted by the Consultant, County shall so advise the Consultant in writing giving reasons therefor within 14 days of receipt of such statement. If no such objection is made the statement will be considered acceptable by County and the County's Project Manager will make a recommendation to pay the amount recommended.

### ARTICLE 3 - CHANGES TO SCOPE OF WORK, SUSPENSION

County may request the Consultant to make changes to the scope of work or perform additional services. Such changes or additions may include the work required to evaluate such a request. Prior to commencing work which constitutes such a change or addition, the Consultant and County shall agree in writing to the exact nature of the change or addition. This writing, when signed by both parties or their authorized agents, shall constitute an authorization for changes or additions and shall contain a description of the work, the commencement date and expected completion date for the work, and any special conditions applicable to the work.

If an authorization for changes or additions causes an increase or decrease in the Consultant's work, the parties shall in good faith attempt to reach a written agreement adjusting the Consultant's compensation in an equitable manner. The Consultant agrees to make no claim for compensation attributable to unauthorized work.

County may at any time, by written notice to the Consultant, suspend further performance of the work by the Consultant. Upon receiving notice of suspension, the Consultant shall promptly suspend further performance of the work to the extent specified. During the period of suspension, the consultant shall properly care for and protect all work in progress. County may at any time withdraw the suspension of performance of the work as to all or part of the suspended work by written notice to the Consultant specifying the effective date and scope of withdrawal. The Consultant shall then resume diligent performance of the work for which the suspension was withdrawn.

If suspension or withdrawal of suspension justifies modification of the Consultant's compensation, an equitable adjustment shall be made under Attachment "A" and this Agreement shall be modified in writing accordingly. Mesa County or their authorized agent shall determine whether a modification is justified.

### ARTICLE 4 - RECORDS, AUDIT, OWNERSHIP OF DOCUMENTS

The Consultant shall maintain its records of performance in safekeeping for a period of three years after completion of the work, unless the circumstances dictate retention of records for a longer period. If any dispute arises in connection with the project or the Consultant's work such as litigation, arbitration, government proceedings, audits or any other form of claim process, the Consultant shall maintain its records of performance for a period of three years after full and final resolution of the matter.

All documents, graphics, exhibits and data, including magnetic media, developed for, and furnished by the Consultant pursuant to this Agreement shall become the property of County, unless otherwise provided in this Agreement.

# ARTICLE 5 - CONFLICT OF INTEREST, NO CONTINGENT FEES

The Consultant represents that it has no direct or indirect interest and will not acquire any such interest which would conflict with the performance of services required to be performed under this Agreement.

#### ARTICLE 6 - CONFIDENTIAL & PROPRIETARY INFORMATION

County and the Consultant, to the extent of their rights and abilities to do so, shall exchange technical data and information reasonably required of each to perform this Agreement.

Each party agrees that it will not disclose to any third party any confidential or proprietary information revealed to it by the other, if such information is not known to the public, unless such disclosure is required by state, federal or local law. This covenant shall survive termination of this Agreement.

### ARTICLE 7 - SOFTWARE RIGHTS, COPYRIGHT, PATENT, TRADEMARK

County shall retain ownership and proprietary rights of its software programs or data to be used and/or developed under this Agreement. County retains the right to use, sell and/or modify the data and database developed and/or modified by the Consultant in performing the services under this Agreement. The Consultant assumes no responsibility for data modified or reused by County.

#### **ARTICLE 8 - INSURANCE**

The Consultant shall procure and continuously maintain during the term of this Agreement, insurance of the kinds and with the limits not less than the amounts shown below:

**8.1** Workers' Compensation and Employer's Liability Coverage - Workers' compensation limits as required by the State of Colorado and Employer's Liability limits of: \$100,000 each accident; \$100,000 disease each employee; \$500,000 disease policy limit.

- **8.2** Commercial General Liability ("Occurrence Form") 1,000,000 combined single limit, per occurrence for bodily injury, personal injury and property damage.
- **8.3** Comprehensive Automotive Liability. \$1,000,000 per accident bodily injury and property damage, combined.
- **8.4** Excess Liability ("Umbrella Form") \$1,000,000 limit per occurrence; \$1,000,000 aggregate.
- **8.5 Professional Errors and Omissions.** \$1,000,000 PER CLAIM, minimum level of coverage.

The Consultant's insurance policies shall be endorsed to include, for the benefit of County, a 30-day advance written notice of cancellation, non-renewal, or reduction in policy limits of liability by endorsement. Additionally it shall specifically state on the Commercial General Liability and Auto Liability policies the following: "Mesa County, it's officers, officials, employees and volunteers as INSUREDS, as respects liability, on behalf of Consultant, arising out of this Contract." All certificates of insurance are to be submitted on standard "ACCORD 25-S" form. A Certificate of such insurance coverage naming Mesa County, its officials, officers, employees and agents as insured, shall be supplied to Mesa County upon signing of this Contract. Failure to obtain or maintain such insurance shall constitute a breach of the Contract.

Consultant shall require all subcontractors and sub-subcontractors to maintain during the term of this agreement, Commercial General Liability insurance, Comprehensive Automobile Liability insurance, and Workers' Compensation and Employers' Liability insurance, in the same manner as specified for Consultant. Consultant shall furnish subcontractors' certificates of insurance to the Board, with a copy to the Board's Contract Administrator, immediately upon request. Additional requirements are outline on Attachment F of this Agreement.

#### **ARTICLE 9 - TERM AND TERMINATION**

This Agreement shall continue in force until completion of all services required of the Consultant, unless terminated by County or the Consultant pursuant to the provisions herein.

This Agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party. No such terminations shall be effective until the other party is given not less than 10 working days' written notice of intent to terminate and an opportunity for consultation with the terminating party prior to termination.

This Agreement may be terminated in whole or in part in writing by County for its convenience. No such terminations shall be effective until the Consultant is given not less than 10 working days' written notice of intent to terminate and opportunity for consultation with County prior to termination.

Upon receipt of a notice of termination, the Consultant shall promptly discontinue all services affected (unless the notice directs otherwise), and deliver or otherwise make available to County all finished or unfinished documents and all information which has been accumulated, developed, or prepared by the Consultant in performing services under this Agreement.

The Consultant shall be paid on a pro rated basis for work properly completed under this Agreement through the effective date of termination, less allowances for errors in work which must be corrected, or liens or claims arising from or occurring in connection with the Consultant's work. Upon any termination of this Agreement, County may take over the work and complete it by agreement with another party or otherwise.

#### **ARTICLE 10 - GENERAL**

- 10.1 If any part, term or provision of the Agreement is held to be invalid or unenforceable by a court or other authority with like jurisdiction to adjudicate the rights and duties of the parties, the remainder of this Agreement shall be unaffected and enforceable, and there shall be deemed substituted for the affected provision a valid and enforceable provision as similar as possible to the affected provision.
- 10.2 This Agreement shall inure to the benefit of and shall be binding upon the parties and their respective legal representatives, successors, and permitted assigns.
- 10.3 No delay or failure by County to exercise any right under this Agreement, and no partial or single exercise of that right, shall constitute a waiver of that or any other right. Payment by County shall not constitute a waiver of any breach or default by the Consultant.
- 10.4 In the performance of work under this Contract, the Consultant shall be deemed to be, and is, an independent Consultant with the authority to control and direct the performance and details of its work, the County being interested only in the results obtained. The Consultant shall in no way be considered an agent, employee, joint venture or partner of County. As an independent consultant, Consultant shall be responsible for payment of all taxes including federal, state and local taxes arising out of the activities under this Contract, including by way of illustration but not limitation, federal and state income tax, Social Security tax, unemployment insurance taxes, and any other taxes or license fees required.
- 10.5 The County reserves the right, without notice and at reasonable times, to inspect the work accomplished by the Consultant under this Contract. The right of inspection reserved in the County is for protection of County in assuring that the work is proceeding in a timely and satisfactory manner and does not relieve the Consultant from responsibility for selecting appropriate means of fulfilling its obligations hereunder. The reservation of right of inspection in the County does not permit nor enlarge County's direction and control over the Consultant or Project nor grant the County authority to direct the means selected, course of work or quality of work beyond the standards established in RFQ-22-03037, related bid documents or proposals and industry or professional standards.

- 10.6 Neither party shall be considered in default of its obligations of its performance is prevented or delayed by an existing or future major condition including, without limitation, act of government, act of God, strike, insurrection, embargo, fire, flood, earthquake, explosion, riot, war, rebellion, sabotage, epidemic, or any other cause beyond the reasonable control of a party.
- 10.7 Notice required or permitted hereunder shall be in writing and shall be deemed to have been given when received by the party to whom it is directed by hand delivery, facsimile, or mail delivery at the address contained in Article 11 below; provided, however, as a matter of good faith and fair dealing, notice should be given in the most efficient and speedy manner called for by the circumstances;
- 10.8 Any other work, materials, equipment or machinery not specifically described or expressly covered herein, but which is required or necessary to perform or complete the work which is contemplated, shall be deemed to be, and is, covered by this Contract.
- 10.9 The Consultant shall perform its work hereunder in accordance with sound and acceptable industry or professional practices and standards and in accordance with all codes, standards, regulations, and laws applicable to the work; and prior to beginning work, shall secure, at Consultant's expense, all necessary permits required by any governmental agency with jurisdiction.
- 10.10 Precautions shall be exercised at all times for the protection of all persons (including County employees) and property. The safety provisions of all applicable laws, regulations, and codes shall be observed. Hazards arising from the use of vehicles, machinery, and equipment shall be guarded or eliminated in accordance with the highest accepted standards of safety practice. The Consultant and any sub-consultants shall comply fully with all requirements of the Occupational Safety and Health Act, and any other pertinent Federal, State or Local Statutes, rules or regulations. The Consultant and any sub-consultants shall bear full responsibility for payment of any fines or other punishments resulting from violation of any such statutes, rules or regulations.
- 10.11 This is a personal services contract on the part of the Consultant. This Contract may not be assigned or subcontracted without the prior express written consent of the County and any attempt to assign this Contract without the prior express written consent of the County shall render the Contract null and void with respect to the attempted assignee. This Agreement is not intended to benefit any 3<sup>rd</sup> party.
- **10.12** The County, or its designee, may, at reasonable times, during the term of this Contract or for two years after its termination or expiration, audit the Consultant's books with regard to this Contract, and the Consultant shall retain its books and records for the required period.
- 10.13 This is not an exclusive Contract. The County may, at its sole discretion, contract with other entities for work similar to that to be performed by the Consultant hereunder. Consultant may contract to perform similar work for others, and is not expected to work exclusively for County.

- **10.14** This Contract is and shall be deemed to be performable in the County of Mesa, Colorado, and venue for any dispute hereunder shall be in the District Court of the County of Mesa, Colorado. In the event of dispute concerning performance hereunder, the parties agree that the Court may enter judgment in favor of the prevailing party for costs and reasonable attorney's fees.
- **10.15** Consultant agrees that any information received by Consultant during any furtherance of the Consultant's obligations hereunder will be treated by the Consultant as confidential and will not be revealed to other persons, firms or organizations, unless directed to do so by law.
- **10.16** (This paragraph applies if the work performed is a "public work"): In discharge of this Contract, Consultant shall employ Colorado labor to perform not less than 80% of each type or class of labor in each of the several classifications of skilled and common labor employed on this project. A "public work" is any construction, alteration, repair, demolition, or improvement of any building, road, street, bridge, drain, park, or other structure suitable for and intended for use by the public.
- **10.17** This Contract constitutes the entire Agreement between the parties, and no changes or modifications shall be effective unless reduced to writing and signed by the party to be charged.
- 10.18 Persons signing as or on behalf of Consultant represent by their signature that the person signing is fully authorized to so sign this Contract and that the Consultant has taken all steps necessary that the signature is binding upon the Consultant.
- 10.19 Notwithstanding anything herein to the contrary, the parties understand and agree that all terms and conditions of this Agreement, and the exhibits and attachments hereto, which may require continued performance or compliance beyond the termination date of this Agreement shall survive such termination date and shall be enforceable as provided herein in the even of a failure to perform or comply by a party to this Agreement.
- 10.20 Consultant shall indemnify, and hold harmless the County, its agents, officials and employees, against all loss or damages, including penalties, charges, professional fees, interest, costs, expenses and liabilities of every kind and character arising out of and to the extent cause by the negligent acts, errors and omissions of the Consultant or any sub consultant for which it is legally responsible, or any of their respective employees and agents, on a comparative fault basis in accordance with C.R.S. 13-21-111.5(6). Consultant further agrees that its obligations to the County under this paragraph include claims against the County by Consultant's employees whether or not such claim is covered by workers compensation. Consultant expressly understands and agrees that any insurance or bond protection required by this contract, or otherwise provided by consultant, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County as herein provided, and such obligation exists even if the claim is fraudulent or groundless.
- 10.21 Consultant assures that where activities supported by this Contract produce any discovery or invention, original computer programs, writing, sound recordings, pictorial reproductions, drawing or other graphical representation and works of any similar nature, the County has the right to use, duplicate and disclose, in whole or in part in any manner for any purpose what soever and

authorize others to do so. If the material or invention is copyrightable, the Consultant may copyright such, but the County reserves royalty-free non-exclusive and irreversible license to practice, reproduce, publish and use such materials in whole or in part, and authorize others to do so.

- 10.22 <u>Conformance with Law</u>: The Consultant shall at all times during the performance period strictly adhere to all applicable federal and state laws and implementing regulations as they currently exist and may hereafter be amended. Consultant shall also require compliance with these statutes and regulations in subcontract and subgrant agreements, if any, permitted under this Contract. Without limitation, these federal and state laws and regulations include:
  - \* Age Discrimination Act of 1975, 42 USC Sections 6101 et seq and its implementing regulation, 45 CFR Part 91;
  - \* Age Discrimination in Employment Act of 1967, 29 USC 621-634;
  - \* Americans with Disabilities Act of 1990 (ADA), 42 USC 12101 et seq;
  - \* Drug Free Workplace Act of 1988, 41 USC 701 et seq;
  - \* Equal Pay Act of 1963, 29 USC 206(d);
  - \* Immigration Reform and Control Act of 1986, 8 USC 1324b;
  - \* Pro-Children Act of 1994, 20 USC 6081 et seq;
  - \* Section 504 of the Rehabilitation Act of 1973, 29 USC 794, as amended, and implementing regulation 45 CFR Part 84;
  - \* Titles VI and VII of the Civil Rights Act of 1964, 42 USC 2000d and e;
  - \* Title IX of the Education Amendments of 1972, 20 USC 1681 et seg;
  - \* Section 24-34-302, et seq, Colorado Revised Statutes 1993, as amended;
  - \* The AUniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments (Common Rule), at 49 CFR, Part 18;
  - \* Office of Management and Budget Circulars A-87, A-21 or A-122, and A-102 or A-110, whichever are applicable;
  - \* The Hatch Act (5 USC 1501-1508 and PL 95-454 Section 4728). These statutes state that federal funds cannot be used for partisan political purposes of any kind by any person or organization involved in the administration of federally-assisted programs.
  - \* Health Insurance Portability and Accountability Act of 1996 (HIPAA) Public Law 104-191 codified at 45 CFR 160-164.
- 10.23 <u>Non-discrimination</u>: Consultant shall not discriminate against any person on the basis of race, color, national origin, age, sex, religion and disability, including Acquired Immune Deficiency Syndrome (AIDS) or AIDS related conditions, in performance of work and provision of services under this Contract.
- 10.24 <u>Availability of Funds:</u> Both parties agree that payments pursuant to this Agreement are subject to and contingent upon the continuing availability of funds for the purposes herein. If such funds become unavailable, the Board may terminate this Agreement immediately without further liability.

#### ARTICLE 11 - DESIGNATED REPRESENTATIVE AND ADDRESSES

Mesa County hereby designates Laura Page, Project Manager, to act as its Designated Representative. The Designated Representative shall have the authority to determine the reasonableness of payment requests, to enter into written additions on behalf of Mesa County if appropriate, and to attend the final review meeting to receive all information from the Consultant.

All notices required or permitted under this Agreement shall be in writing and shall be deemed given when personally served or three(3) days after deposit in the United States Mail, certified mail, return receipt requested, and addressed to the following parties or to such other addressee(s) as may be designated by a notice complying with the foregoing requirements.

#### **MESA COUNTY: CONSULTANT: Mesa County Commissioners** Roadway Asset Services, LLC Chair 6001 W Parmer Lane P.O. Box 20,000 Suite 370-1102 Grand Junction, CO 81502 Austin, TX 78727 970-244-1604 210-837-5249 with a copy to: With a copy to: Laura Page, Project Manager **Designated Representative** Mesa County Public Works P.O. Box 20,000 Grand Junction, CO 81502

#### **ARTICLE 12 - INCORPORATION OF ATTACHMENT**

The following Attachments are incorporated into and made a part of this Agreement.

ATTACHMENT A – SCOPE OF WORK AND FEE
ATTACHMENT B - HOURLY RATE SCHEDULE
ATTACHMENT C – NOTIFICATION OF IMMIGRATIONS COMPLIANCE
REQUIREMENTS AND CERTIFICATION BY CONTRACTOR
ATTACHMENT D – FINANCIAL AND EXCEPTION STATEMENT
ATTACHMENT E – INSURANCE CLARIFICATION
RFQ-22-03037 AND ADDENDUMS
RAS QULIFICATIONS

IN WITNESS WHEREOF, the parties execute this Agreement on the date last written below:

Chair		
Mesa County Board of County Cor	nmissioners	
1/3/2022		A PER L
ti. Ann T. Peta	1/3/2022	
Mesa County Clerk and Recorder		- Autor
CONSULTANT		
ture Statil	, IAM, - President	_
e & Title G. Scot Gordon, PE	, IAM, - President	_
e & Title G. Scot Gordon, PE	, IAM, - President	

# Attachment A Scope and Fee

#### Mesa County Street Assessment Project

# Section I - Scope of Work:

RAS understands that Mesa County, Colorado desires to conduct a field survey of the pavement conditions on all the County roads following the ASTM Standard D6433-11 "Standard Practice for Roads and parking Lots Pavement Condition Index (PCI) Surveys." The PCI based pavement condition survey is to be conducted on approximately 697 centerline miles of paved roads in the County limits on each street segment which is typically a block and tagged with a Facility-ID on the feature-class layer in GIS.

The CONSULTANT (Roadway Asset Services, LLC.) shall provide the following services to the OWNER (Mesa County, CO):

- Mobile data collection of roadway imagery and pavement distress for 1064 test miles (assuming driving two directions for arterials and collectors, and one direction for local residential roads.)
- ASTM D6433 compliant pavement rating and assessment for 1064 test miles.
- · Inventory the following items: pavement condition and pavement width.
- Provide data in a format compatible with the OWNER's Pavement Management System (Cartegraph).
- Provide consultation for decision trees and maintenance options.

Description of the tasks to be performed.

# Task 1 - Project Setup

#### 1.1 Project Initiation

Upon notice to proceed the CONSULTANT will arrange a kick-off meeting to confirm the project requirements and scheduling. The kick-off meeting will include proposed key personnel and the OWNER's project members. During the meeting, CONSULTANT will present the proposed Project Approach, which includes project equipment, software, methodology, schedules, and deliverables. The proposed approach will be finalized based on the OWNER requirements and decisions during the meeting. CONSULTANT will request that the OWNER provide any existing database, previous inventory of street conditions, road centerlines, Geographic Information System (GIS) layers, and aerial imagery for project use. Project communication protocol, documentation, accounting methodologies, data format, and will be confirmed during the meeting.

# 1.2 GIS Centerline/Data Import and Data Preparation

CONSULTANT will use the existing centerline data provided by the OWNER and create a pavement database based on the centerline layer. Each road segment record in the centerline layer will have a corresponding record in the pavement database. The OWNER represents that the County maintains approximately 697 centerline miles of roadways.

CONSULTANT will work with the OWNER to maintain the unique identifier of each of the road segments on the OWNER road network so that the pavement database can maintain a persistent link to the GIS data.

CONSULTANT will communicate with the OWNER to gather required information to define all the



distress types and treatment selections. Based on this information, a Pavement Condition Index (PCI) rating and treatment selection manual will be created to identify and define each distress type and its severity, extent, and treatment selection (based on the ASTM-D6433 testing methodology for roads and parking lots). Each collected GIS road and alley segment will be populated with its respective PCI as well as any other derivative indices used to make up the PCI.

CONSULTANT will provide the OWNER with a GPS "breadcrumb" file of data collection routes and image locations.

#### 1.3 Project Management

CONSULTANT will provide project management for the duration of the project, including coordinating and attending meetings via web meetings or in person with OWNER, data research and collection efforts as required, preparing weekly progress reports, and schedule updates. Weekly progress reports will include the total days collected and lost due to weather or mechanical issues for the current reporting period as well as cumulative totals. An exhibit displaying the roads collected and not yet collected will also be included.

#### Task 1 Deliverables:

- 1. The CONSULTANT will deliver weekly progress reports and schedule updates.
- The CONSULTANT will provide the OWNER with a centerline assessment document for review and approval.

# Task 2 - Pavement Data and Image Capture

The CONSULTANT will collect roadway data and images for the 697 centerline miles of roadway using a Roadway Asset Collection (RAC) vehicle.

#### 2.1 System Setup, Mobilization and Pilot Project

CONSULTANT will work with the OWNER to review and verify that the data is ready to proceed. CONSULTANT will work with the OWNER to setup a pilot project area so that some initial sample data can be collected and verified. CONSULTANT will collect data within the pilot project area and review the result with the OWNER and acquire approval for full size project implementation.

#### 2.2 Field Data and Image Capture

The RAS team consists of a driver and operator (CONSULTANT) who will systematically drive the automated data collection vehicle on the road segment listings provided by the OWNER. The CONSULTANT will collect pavement data with two passes on arterial, collector, and striped local roads and one pass collection on residential local roadways. CONSULTANT proposes to use its collection vehicle line scan camera with laser illumination and right-of-way cameras to capture pavement and ROW images to be used during the pavement rating process. Unpaved roads will not be surveyed.





A RAS automated data collection vehicle

Roadway Asset Services (RAS) will perform data field collection on paved roads using a state-of-the-art International Cybernetics Corporation (ICC) data collection vehicle with following systems mounted:

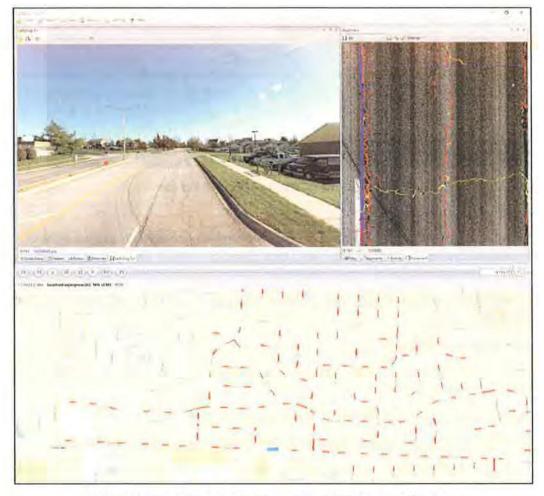
- Right-of-way georeferenced images with Ladybug 5+ camera: Forward, Left, Right, and 360degree spherical images.
- LCMS-2 pavement 2D/3D imaging.
- Longitudinal profile with 2-line lasers (left and right wheelpaths) Distance measuring instrument (DMI) with an accuracy of +/-0.1%.
- Differentially corrected GPS (DGPS) with an accuracy of +/- 2 feet.
- Applanix POS/LV 220 to compensate for difficult GPS conditions in urbanenvironments.

The RAS system collects all pavement and right-of-way images, IMU, DMI and profiler data concurrently.



#### 2.3 Pavement Condition Evaluation

CONSULTANT will evaluate the PCI survey results in accordance with ASTM D6433. CONSULTANT will provide 100% survey of all lanes driven using RAS' Pave Intel software to evaluate the pavement condition using automated techniques per the ASTM D6433 pavement distress rating process including the following distresses: alligator cracking, longitudinal cracking, transverse cracking, raveling, and patching. Experienced pavement engineers will review the resultant output for accuracy and make any corrections that may be needed. ICC connect software allows the pavement and right of way imagery to be synced and the distress data to be displayed geospatially to provide another layer of quality assurance.



Pavement Condition Evaluation within ICC Connect software

The international Roughness Index (IRI) will be collected using a class 1 road surface profiler manufactured by International Cybernetics Corporation (ICC). The road surface profiler meets all ASTM E-950 standards for evaluating the smoothness of pavement.

#### Task 2 Deliverables:

- 1. CONSULTANT will provide Right-of-Way imagery for all segments collected.
- 2. CONSULTANT will provide downward-facing Pavement Imagery for all segments collected.



- CONSULTANT will provide International Roughness Index (IRI) values for each delivered road segment.
- 4. CONSULTANT will provide Geodatabase of distresses containing the Type, Severity and Extent of distresses along the road segment as defined by the ASTM D6433 methodology.
- CONSULTANT will provide Pavement Condition Index (PCI) values for each delivered road segment.

# Task 3 Pavement Width

The CONSULTANT will use the images from the Ladybug 360 camera system to capture the width of pavement for each street segment to compare with the existing database information. CONSULTATNT will provide the widths for roads with width changes by noting locations of changes by stations and measuring each section of change, and the addition of lanes or turn lanes.

#### Task 3 Deliverables

1. CONSULTANT will provide the OWNER width measurements within the Pavement database.

# Task 4 Cartegraph Import and Database

CONSULTANT will provide final PCI and Distress data in a format compatible with the Client's Pavement Management System (Cartegraph).

#### Task 4 Deliverables:

- 1. CONSULTANT will deliver a final Cartegraph import database file.
- 2. CONSULTANT will work with Cartegraph to import new data into OWNER's system.
- 3. CONSULTANT will provide consultation with the OWNER to set contraints within Cartegraph and assist the OWNER in performing internal budget scenarios with Cartegraph.

# Task 5 Development of Decision Trees and Treatment Options

CONSULTANT will discuss preferred treatment options and historical performance with the OWNER and develop appropriate decision trees for PCI levels based on experience with pavement performance and understanding critical conditions to apply appropriate treatments. The CONSULTANT may also provide recommendations for treatment options based upon experience with the observed conditions.

#### Task 5 Deliverables:

- CONSULTANT will deliver a Decision Tree with PCI levels for appropriate treatment options, including suggested PCI improvement per treatment, and estimate unit costs for treatments.
- CONSULTANT will provide consultation with the OWNER to identify appropriate treatment options.



# Task 6 Curb and Gutter Inventory

CONSULTANT's Pavement and ROW collection vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement condition survey. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect the curb and gutter with the following attributes:

## Curb and Gutter Attributes (Linear Feature):

- AssetID
- Location (Street Name asset located on)
- Photo Image link
- Travel Direction
  - o EB
  - o NB
  - o NE
  - o NW
  - o SB
  - o SE
  - o SW
  - o WB
- Side of Road
  - o East
  - o North
  - o South
  - o West
- Physical Condition Rating
  - o Good
  - o Fair
  - o Poor
- Painted Color
  - o None
  - o Yellow
  - o Red
  - o Green
  - o Blue
  - o Other
- Comments
- Material type
  - o PCC Standard Curb and Gutter
  - o PCC Median Curb and Gutter
  - o PCC Pinned Curb
  - o PCC Other
  - o Asphalt Curb
  - o None





# **TASK 6 Deliverables:**

1. CONSULTANT will deliver a Curb and Gutter Inventory with attributes identified above in a linear GIS file geodatabase

# Task 7 Sidewalks Inventory

CONSULTANT's Pavement and ROW collection vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement condition survey. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect the following for the sidewalk inventory:

- 1. The collection of sidewalk imagery.
- 2. The extraction of sidewalks from the imagery (GIS Line features).
- 3. The attribution required for each sidewalk feature

## Sidewalk Attributes (Linear Feature):

- AssetID
- Street Name
- Photo Image
- Physical Condition Rating
  - o Excellent
  - o Good
  - o Fair



- o Poor
- o Very Poor
- Width
- Comments
- Length



## **TASK 7 Deliverables:**

 CONSULTANT will deliver a sidewalk inventory and sidewalk obstruction with attributes identified above in a GIS file geodatabase. CONSULTANT is only able to identify obstruction information visible in the imagery collected and OWNER acknowledge this data capture will not include all sidewalk obstructions.

# Task 8 Curb Ramps Inventory

CONSULTANT's Pavement and ROW collection vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement condition survey. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect the following for the curb ramp inventory:

## Ramps Attributes (Point Feature):

- AssetID
- X,Y Location
- Photo Image link



- Physical Condition Rating
  - o Good = ramp is level with no uprooting or cracking
  - o Fair = ramp has minimal uprooting or cracking
  - o Poor = ramp has major uprooting or cracking and poses a hazard to pedestrians
- Truncated Dome
  - o Yes
  - o No
- Comments



# **TASK 8 Deliverables:**

1. CONSULTANT will deliver a Ramp Inventory with attributes identified above in a GIS Point file geodatabase.



# Task 9 Quality Assurance and Quality Control and Field Verification

The CONSULTANT will perform quality assurance and quality control on all data collected.

CONSULTANT has a proven Quality Assurance (QA)/Quality Control (QC) procedure for all mobile data collection projects. CONSULTANTS QC procedures begin with the collection vehicle collection process.

The technician will check each camera's exposure rate, image quality and GPS and IMU operation to ensure the data collection system is recording the image, GPS, DMI and IMU data and that the GPS location is within the stated project tolerance. Each collection day's calibration collection will be documented in the collection logbook. The collection logbook also contains information such as date, location, technician and drivers name, any issue that developed during the collection day and DMI calibration runs.

During image collection, the technician reviews the images collected on-screen as they are collected and any issue with image clarity requires the collection run to end and the image quality issue to be resolved. Once resolved, the collection run begins from the beginning for the road segment collected. The technician also monitors GPS reception during collection. If GPS reception is lost (measured using PDOP – positional dilution of precision), the technician stops the collection and resolves the GPS reception issue. Collection begins again once the GPS reception issue is resolved. All issues resulting in the collection run being stopped will be recorded in the collection logbook along with the resolution.

With a completed collection drive delivered to CONSULTANT offices, images are post processed and provided to the image QC Officer who will perform quality control checks on each delivery provided. The QC Officer will visually review the collection routes for image quality. All collection runs that are considered of low quality will be marked for recollection before the data collection vehicle(s) is allowed to leave the Mesa County.

Additionally, CONSULTANT will provide independent quality checks via field verification to confirm accuracy of automated data collection.

# Acceptance Criteria

The results of the data collection shall be quality checked for rating consistency by CONSULTANT to ensure the accuracy and quality of deliverables. Additionally, deliverables will be checked for missing and/or duplicate assets. A 97% accuracy rate is expected, and Quality Control checks will be based on the batch/sample size of the delivery (see Table A below to determine sample size for the appropriate accuracy rate).

For any measurement that is needed it must be accurate to the nearest foot. If the data has more errors than allowable the set of data will be corrected. This process will be repeated until each set of data is within the allowable limits.

#### Method of measurement of acceptable quality level (AQL)

Each attribute captured for an asset counts as one unit of measure. Each physical measurement required for an asset location counts as one attribute or unit of measure. The following location information also counts as an attribute or unit of measure for each asset: Physical presence (when captured as per source = correct, not captured or missed = incorrect) In the event of a duplicate capture of an asset, the total number of attributes or units of measure for the duplicate asset(s) will be deducted from the total units of the sample set, and one error or unit of measure (incorrect physical presence) is charged.



Batch size			Sample Size	Acceptance Rate (%)					
		(Normal)	99.0	98.5	97.5	96.0	93.5		
2	То	8	2	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0	
9	То	15	3	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0	
16	То	25	5	≤ 0	≤ 0	≤ 0	≤ 0	≤1	
26	То	50	8	≤ 0	≤ 0	≤ 0	≤1	≤1	
51	То	90	13	≤ 0	≤ 0	≤1	≤1	≤ 2	
91	То	150	20	≤ 0	≤1	≤1	≤ 2	≤3	
151	То	280	32	≤1	≤1	≤ 2	≤3	≤ 5	
281	То	500	50	≤1	≤ 2	≤3	≤ 5	≤7	
501	То	1,200	80	≤ 2	≤3	≤ 5	≤7	≤ 10	
1,201	То	3,200	125	≤3	≤ 5	≤7	≤ 10	≤ 14	
3,201	То	10,000	200	≤ 5	≤7	≤ 10	≤ 14	≤ 21	
10,001	То	35,000	315	≤7	≤ 10	≤ 14	≤ 21	≤ 21	
35,001	То	150,000	500	≤ 10	≤ 14	≤ 21	≤ 21	≤ 21	
150,001	То	500,000	800	≤ 14	≤ 21	≤ 21	≤ 21	≤ 21	
500,001	and over		1250	≤ 21	≤ 21	≤ 21	≤ 21	≤ 21	

Example: a delivery results in 100 assets – each asset has been determined to have 10 attributes to be captured (including the physical presence "attribute" for each asset) – thus total units of measure for the Batch size = 1,000 (100 x 10). Based on Table A, a Quality Control using a sample size of 80 units should be assessed for quality. With an expected accuracy of 97%, the allowable number of errors  $\leq$  5.



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	Mesa County, CO 2022 Pavement Condition Assessment					
Task	Description	Units	Unit Cost	Fee		
1	Centerline Identification, Field Set-up and Mobilization (Lump Sum)	1 -	\$1,950	\$1,950		
2,1	Pilot and Senior Pavement Engineer Consultation (Hours)	24	\$275	\$6,600		
2.2	Street Network Collection (Test Mile) <sup>1</sup>	1098	\$90	\$98,820		
2.3	Pavement Condition Index (Test Mile) <sup>1</sup> Modified ASTM D6433 using Al	1098	\$40	\$43,920		
3	Pavement Width (Lane Mile) <sup>2</sup>	1396	\$5.5	\$7,678		
4	Cartegraph Import and Clean-up of County's Database (Lump Sum)	1	\$15,000	\$15,000		
5	Development of Decision Trees and Treatment Options (Lump Sum)	1	\$10,000	\$10,000		
6	Curb and Gutter Inventory (Lane Mile) <sup>2</sup>	315	\$45	\$14,175		
7	Sidewalks Inventory (Lane Mile) <sup>2</sup>	315	\$35	\$11,025		
	10% Contingency			\$19,062		
	Total Services <sup>3</sup>					

<sup>(</sup>single pass) test miles will equal centerline mileage <sup>2</sup>Lane Miles equal twice the centerline miles as assets will be extracted on both sides of road

<sup>&</sup>lt;sup>3</sup>Bill monthly, lump sum based on percent complete for each task item.

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## **ATTACHMENT B**

## **HOURLY RATE SCHEDULE**

Name of Firm: Roadway Asset Services, LLC

Address: 6001 W Parmer Lane, Suite 370-1102, Austin, TX 78727

Phone: 210-837-5249

# FEE SCHEDULE EFFECTIVE THROUGH

(Date: 12/31/2023)

POSITION	RATE
Scot Gordon, Project Manager	275/ HR
Sandra Marrero, Pavement Engineer	150/HR
Rafael Rivera, Data Collection Manager	150/ HR
Tim Kane, GIS Specialist	110/HR
Tom Brenneman, Data Quality and Integration	150/HR
Winfred Rooks, Data Collection Field Crew	65/ HR
Bart Williamson, Project Principal	215/ HR

Submitted By:

Roadway Asset Services, LLC

6001 W Parmer Lane

Suite 370-1102

Austin, TX 78727

DocuSign Envelope ID: 37A8EF9B-AF6D-4588-879B-1C3251C23BC3

## ATTACHMENT C FOR SERVICES

# NOTIFICATION OF IMMIGRATION COMPLIANCE REQUIREMENTS AND CERTIFICATION BY CONSULTANT

Roadway Asset Services, LLC.	. ("Consultant" herein) acknowledges that
Consultant has been notified of the immigration	n compliance requirements of C.R.S. § 8-17.5-
101, et.seq. (House Bill 06-1343), and hereby (	CERTIFIES that:

- 1. The Consultant shall not knowingly employ or contract with an illegal alien to perform work under the public contract for services: or
- 2. Enter into a contract with a subcontractor that fails to certify to the Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the public contract for services;
- 3. The Consultant has verified or attempted to verify through participation in the basic pilot program that the Consultant does not employ any illegal aliens and, if the Consultant is not accepted into the basic pilot program prior to entering into a public contract for services, that the Consultant shall apply to participate in the basic pilot program every three months until the Consultant is accepted or the public contract for services has been completed, whichever is earlier. This provision shall not be required or effective in a public contract for services if the basic pilot program is discontinued;
- 4. The Consultant acknowledges that the Consultant is prohibited from using basic pilot program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed:
- 5. If the Consultant obtains actual knowledge that a subcontractor performing work under the public contract for services knowingly employs or contracts with an illegal alien, the Consultant shall be required to:
  - (A) Notify the subcontractor and the contracting state agency or political subdivision within three days that the Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
  - (B) Terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to subparagraph (A) of this Section 5 the subcontractor does not stop employing or contracting with the illegal alien: except that the Consultant shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

- 6. Consultant is required to comply with any reasonable request by the State Department of Labor and Employment ("Department" herein) made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).
- 7. If Consultant violates a provision of the public contract for services required herein may terminate the contract for a breach of the contract. If the contract is so terminated, the Consultant shall be liable for actual and consequential damages to the County.
- 8. The County is obligated to notify the office of the secretary of state if a Consultant violates a provision of this Addendum and the County terminates the contract for such breach. Based on this notification, the secretary of state shall maintain a list that includes the name of the Consultant, the state agency or political subdivision that terminated the public contract for services, and the date of the termination. A Consultant shall be removed from the list if two years have passed since the date the contract was terminated, or if a court of competent jurisdiction determines that there has not been a violation of the provision of the public contract for services required pursuant to Section I. An agency or political subdivision shall notify the office of the secretary of state if a court has made such a determination. The list shall be available for public inspection at the office of the secretary of state and shall be published on the internet on the website maintained by the office of the secretary of state.
- 9. The Department may investigate whether a Consultant is complying with the provisions of a public contract for services required pursuant to Section I. The Department may conduct on-site inspections where a public contract for services is being performed, request and review documentation that proves the citizenship of any person performing work on a public contract for services, or take any other reasonable steps that are necessary to determine whether a Consultant is complying with the provisions of a public contract for services required pursuant to Section I. The Department shall receive complaints of suspected violations of a provision of a public contract for services (this Addendum) and shall have discretion to determine which complaints, if any, are to be investigated. The results of any investigation shall not constitute final agency action. The Consultant is hereby notified that the Department is authorized to promulgate rules in accordance with article 4 of title 24, C.R.S., to implement the provisions of C.R.S. § 8-17.5-101. et. seq.

Dated this	10th	day of	Novem	ber	2021.	
			Ву:_	Bart Willia	mson	[Print Name]
				Baf	lut-	[Signature]

# ATTACHMENT D

# Respondent is required to submit

# Financial and Exception Statement

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. You may submit any additional information you desire, but the total number of pages for this attachment should not exceed ten (10) pages.

- 1. Name of Respondent: Roadway Asset Services, LLC.
- Permanent main office address, email and phone number: 6001 W Parmer Lane, Suite 370-1102, Austin, TX 78727 bwilliamson@roadwayassetservices.com 210-837-5249
- 3. When Organized: 7/9/2020
- 4. If a corporation, where incorporated; N/A. LLC in Texas
- 5. How many years have you been engaged in the business under your present firm or trade name?
  1.5 years
- 6. Give bank references:

Cache Valley Bank Kristen Certonio

kcertonio@cachevalleybank.com

435-673-9610

7. What type of liability insurance, and what coverage limits do you currently carry for your organization, and give the name of the insurance carrier: Travelers Insurance

Commercial General Liability, Auto Liability, Works Compensation, and Employers Liability

- \$1,000,000

Unbrella Policy - \$5,000,000

8. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the County?

Yes

The undersigned Offeror acknowledges the right of the County to reject any and all proposals submitted and to waive informalities therein. All participating Offerors, by their signature hereunder, shall agree to comply with all conditions, requirements, and instructions of this RFP as stated or implied herein. Print the words "No Exceptions" here No Exceptions if there are no exceptions taken to any of the terms, conditions, or specifications of these quotation documents. If there are exceptions taken to any of these terms, conditions or specifications of these quotation documents, they must be clearly stated on a separate sheet of paper, attached to this quotation sheet and returned with your quotation. Should Mesa County omit anything from this RIP package, which is necessary to a clear understanding of the requirements, or should it appear that various instructions are in conflict, then the Contractor shall secure instruction from Connie Hahn, telephone number (970)244-1812, prior to the date and time of the deadline for questions shown in the RFP.

Offeror agrees to perform all work described in the Contract Documents for unit prices or lump sum as shown on the Attachment "A" Schedule of Payment. The Offeror further agrees that no proposal may either be changed or withdrawn, without the consent of the County for a period of sixty (60) days after the scheduled time for opening the proposals.

The Offeror shall certify (a) that his/her proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation: (b) that he/she has not directly or indirectly induced or solicited any other Offeror to put in a false or sham bid: (c) that he/she has not solicited or induced any other person, firm, or corporation from proposing; and (d) that he/she has not sought by collusion to obtain for himself/herself any advantage over any other Offerors or over Mesa County.

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the County in verification of the recitals comprising this Statement of Respondent's Qualifications:

Dated at:

This 10th day of November . 2021

Bat Well

Roadway Asset Services, LLC.

(Name Of Consultant)

Title: Chief Executive Officer

Sta	te of	TEXAS			
Cor	unty of	Trlavis	4		
Being duly swom	deposes and	says that he/she	e is the	Œo	of
ROADWAY ASSET	Jervice 1	and that th	e answers to the	ne foregoing a	uestions and all
ROLOWAY ASSET	contained ar	e true and corre	201.	- W 1	
Subscribed and sw	orn to before	e me this 10	day of	NOVEMBER	,20 W
	An Aug				
TO THE THE THE PROPERTY SERVEY OF THE PROPERTY	(N	otary Public)	in agrane		
					JUSTIN SHEAREN Notary ID #131091058 My Commission Expires
20610 FM 14	(A)	ddress)	-1.	W. A.	April 14, 2025
My Comm	ission Expire	s 041M	. 20 7	Ī.,	

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# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/22/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

this definition does not define the title definition for the definition of such chaofsement(s).						
PRODUCER Risk Strategies	CONTACT NAME:	Cameron Brown				
12801 North Central Expy. Suite 1710	PHONE (A/C, No, Ext):	(214) 323-4602	FAX (A/C, No):	(214) 503-8899		
Dallas, TX 75243	E-MAIL ADDRESS:	certificatedallas@risk-strateg	ies.com			
		INSURER(S) AFFORDING COVERAGE		NAIC#		
	INSURER A : Chart	у	25615			
INSURED	INSURER B: Travelers Casualty Ins Co of America					
Roadway Asset Services, LLC 6001 W Parmer Lane, Ste 370-1102	INSURER C : XL Sp	pecialty Insurance Company		37885		
Austin TX 78727	INSURER D: Trave	ner	25674			
	INSURER E : Phoei		25623			
	INSURER F:					

#### COVERAGES CERTIFICATE NUMBER: 65804665 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL	SUBR WVD		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	s
A	✓ COMMERCIAL GENERAL LIABILITY  CLAIMS-MADE ✓ OCCUR	√	<b>√</b>	6807R281538	12/18/2021	12/18/2022	EACH OCCURRENCE DAMAGE TO RENTED	\$1,000,000 \$1,000,000
	CLAIMS-IMADE Y OCCOR						PREMISES (Ea occurrence) MED EXP (Any one person)	\$5,000
							PERSONAL & ADV INJURY	\$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$2,000,000
	POLICY PRO- JECT LOC						PRODUCTS - COMP/OP AGG	\$2,000,000
	OTHER:							\$
В	AUTOMOBILE LIABILITY	1	/	BA7R282916	12/18/2021	12/18/2022	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
	✓ ANY AUTO						BODILY INJURY (Per person)	\$
	OWNED SCHEDULED AUTOS						BODILY INJURY (Per accident)	\$
	HIRED NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$
							1.00	\$
D	✓ UMBRELLA LIAB ✓ OCCUR	✓	✓	CUP7R283347	12/18/2021	12/18/2022	EACH OCCURRENCE	\$5,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	\$5,000,000
	DED ✓ RETENTION \$10,000							\$
Е	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		✓	UB7R28250A	12/18/2021	12/18/2022	✓ PER OTH- STATUTE ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A					E.L. EACH ACCIDENT	\$1,000,000
	(Mandatory in NH)						E.L. DISEASE - EA EMPLOYEE	\$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$1,000,000
С	Professional Liability		✓	DPS9966118	9/10/2020	9/10/2023	Per Claim/Annual Aggreg	ate \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The claims made professional liability coverage is the total aggregate limit for all claims presented within the annual policy period and is subject to a deductible. Thirty (30) day notice of cancellation in favor of certificate holder on all policies.

Mesa County, their officers, officials, employees are named additional insured on the general and auto liability coverage as required by written contract. A waiver of subrogation is shown in favor of the additional insured on all policies as required by written contract.

Mesa County, their officers, officials, employees 200 S. Spruce P.O. Box 20,000 Grand Junction BO 81502-5013

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

CANCELLATION

Cameron Brown

Augen pu

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Re: Mesa County, CO.

CERTIFICATE HOLDER

# ATTACHMENT E INSURANCE CLARIFICATION

- 1. Contractor agrees to procure and maintain, at its own cost, a policy or policies of insurance/bonds sufficient to insure against all obligations assumed by Contractor pursuant to this agreement and shall not start work under this agreement until such insurance coverage has been obtained and approved in writing by the Board's Contract Administrator.
- 2. Contractor shall require all subcontractors and sub-subcontractors to maintain during the term of this agreement, Commercial General Liability insurance, Comprehensive Automobile Liability insurance, and Workers' Compensation and Employers' Liability insurance, in the same manner as specified for Contractor. Contractor shall furnish subcontractors' certificates of insurance to the Board, with a copy to the Board's Contract Administrator, immediately upon request.
- 3. All insurance policies required hereunder shall include a written thirty (30) day notification of cancellation. In that notice the Board and the Board's Contract Administrator will be notified of any material changes in the insurance policy(s) such as; cancellation, non-renewal, or reduction in coverage or alteration of coverage.
- 4. Nothing herein shall be deemed or construed as a waiver of any of the protections to which the Board or Mesa County shall be entitled pursuant to the Colorado Government Immunity Act, sections 24-10-101, C.R.S., as amended.
- 5. All required insurance coverages must be acquired from insurers authorized to conduct business in the State of Colorado and acceptable to the Board and Mesa County. The insurers must also have policyholders' rating of "A-" or better, and financial class size of "Class VII" or better in the latest edition of Best's Insurance Reports, unless the Board grants specific approval for an exception.
- 6. Contractor shall procure and continuously maintain the minimum insurance coverage listed below, and additional coverage as may apply, with forms and insurers acceptable to the Board. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
  - a. Workers' Compensation and Employer's Liability Including Occupations Disease Coverage in accordance with scope and limits as required by the State of Colorado of \$100,000 each accident; \$100,000 disease each employee; \$500,000 disease policy limit..
  - b. Commercial General Liability, "occurrence form," with minimum limits of ONE MILLION (\$1,000,000) combined single limit, per occurrence for bodily injury, personal injury and property damage. In addition Contractor must either:
    - 1)Agree to provide certificates of insurance evidencing the above coverage for a period of two years after the final payment for the contract

2)Purchase an extended (minimum two years) reporting period endorsement for the policy or policies in force during the term of this contract and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself.

c. Comprehensive Automobile Liability insurance with minimum limits for bodily injury and property damage of not less than ONE MILLION (\$1,000,000) combined single limit per accident.

- d. PROFESSIONAL LIABILITY INSURANCE with an endorsement for work under this Agreement, and coverage of no less than ONE MILLION (\$1,000,000) per claim, and ONE MILLION (\$1,000,000) aggregate for all Design/Build, Professional Service and Design Contracts.
- e. EXCESS LIABILITY/UMBRELLA INSURANCE with a limit no less than ONE MILLION (\$1,000,000) per occurrence/ONE MILLION (\$1,000,000) aggregate, and coverage at least as broad as the primary Commercial General Liability policy.
- 7. The policies required by paragraphs (B) and (C) above shall be endorsed to specify; "Mesa County, their officers, officials, employees and volunteers as ADDITIONAL INSUREDS, as respects liability, on behalf of Contractor, arising out of this Contract." All certificates of insurance are to be submitted on standard "ACORD 25(20140-05)" form.
- 8. Depending on the nature and scope of the services to be provided under this Contract, additional insurance requirements may be specified by the Board. Items listed below, which have been marked with an "X" are required of Contractor by the Board as a condition of this Contract. Contractor initial, placed by the corresponding "X", shall acknowledge the Contractor compliance in meeting the specific insurance requirement(s).

Your Initial	X	
	=	BUILDERS RISK INSURANCE must be in an amount equal to the aggregate total of the initial contract prices in the contracts, as well as any subsequent modifications. The policy must be in Completed Value Form, insuring the entire project for, at least Broad Form coverage including theft. Such Insurance shall remain in effect until 12:00 noon on the day following the date of final acceptance of the entire project, whether or not the building or some part thereof is occupied in any manner prior to final acceptance of the project.
_	_	BID BONDS AND/OR PERFORMANCE BONDS. Bid bond coverage to be determined as a percentage of the total bid. Performance Bond in the amount of 100% of the project contract.
	-	Other insurance as required. If other insurance is required it will be included and referred to as "EXHIBIT E."

# 2022 Pavement Condition Assessment Request For Qualifications RFQ-22-03037

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# SECTION I GENERAL INFORMATION

Section I provides general information to potential Offerors on subjects such as where to submit, number of copies, addenda, proprietary information designation, and other similar administrative elements.

#### 1.1 PRE-SUBMITTAL CONFERENCE

There is no pre-submittal conference for this project.

# 1.2 SUBMISSION OF QUALIFICATIONS

All packets must be submitted in a sealed envelope clearly marked with the firm name, 2022 Pavement Condition Assessment, RFQ-22-03037 and must be received by Mesa County Public Works department prior to the submission deadline. The County will accept electronic submittal via email instead of hard copies. Email should be sent to Connie Hahn, connie.hahn@mesacounty.us prior to the submission deadline.

Sealed offers are to be submitted to:

Connie Hahn
Operations Manager
Mesa County Public Works
200 S. Spruce
P.O. Box 20,000
Grand Junction, CO 81502-5013

# 

Submission Deadline: 5:00 pm (MST) on November 16, 2021

The opening will not be public. Offerors will be notified if their Submittal is not accepted. The Submittal shall remain the property of Mesa County Public Works.

#### 1.3 NUMBER OF COPIES

Consultant shall submit one (1) copy of requested documents. The submittal shall remain the property of Mesa County Public Works. The following materials shall be part of the requested documents:

- 1. Financial and Exception Statement (Attachment A)
- 2. Hourly Rate Schedule (Attachment B)
- 3. Certification of Immigration Compliance (Attachment C)

- 4. Letter of Intent
- Items required by Section III
- If submitting in person, one electronic copy of all submitted documents on Compact Disc (CD) or Digital Versatile Disc (DVD), or Flash Drive and in Portable Document Format (pdf). Electronic copies must include signatures where applicable.

#### 1.4 INFORMATION

All questions regarding the submittal preparation, the selection process, or specifications and interpretations of the terms and conditions of the RFQ, shall be submitted in writing no later than seven (7) calendar days prior to the deadline for submission of offers. Send all questions to Laura Page or Connie Hahn (See 1.16 below).

Following the award of a contract, responses to this solicitation may be subject to release as public information unless the response or specific parts of the response can be shown to be exempt from public information. Offerors are advised to consult with their legal counsel regarding disclosure issues and take the appropriate precautions to safeguard trade secrets or any other proprietary information. Mesa County Public Works assumes no obligation or responsibility for asserting legal arguments on behalf of potential Offerors.

This is not a public bid opening, therefore, Mesa County will not release any information pertaining to the number of offers received, names of Offerors, or pricing until an award is made. Mesa County will confirm receipt of your submittal if requested.

#### 1.5 OFFEROR DUE DILIGENCE

Each Offeror shall judge for themselves as to all conditions and circumstances having relationships to the submittal, and become informed about the unique challenges posed by this project. Failure on the part of any Offeror to make such examination and become informed shall not constitute ground for declaration of not understanding the conditions with respect to making its Submittal.

Be aware, if the Offeror has obtained this RFQ from any source other than directly from Mesa County, and does not check the web site for any addenda, Mesa County is not responsible for errors in the submittal which may result in submitting a non-responsive proposal.

#### 1.6 CONFIDENTIAL OR PROPRIETARY INFORMATION

If an Offeror believes that parts of a submittal are confidential, then the Offeror must so specify. The Offeror must stamp in bold letters the term CONFIDENTIAL on that part of the offer which the Offeror believes to be confidential. The Offeror must submit in writing specific detailed reasons, including any relevant legal authority, stating why the Offeror believes the material to be confidential. Vague and general claims as to confidentiality will not be accepted. Mesa County will be the sole judge as to whether a claim is general and/or

vague in nature. All submittals and parts of submittals which are not marked as confidential will be automatically considered public information after the contract is awarded. Other submittals or parts of submittals may be considered public information pursuant to Colorado Law.

#### 1.7 AMENDMENT

In the event that it becomes necessary to revise any part of this RFQ, or if additional information is necessary to enable the Offeror to make an adequate interpretation of this RFQ, an addendum to the RFQ will be provided to each potential Offeror who has obtained an RFQ. Addenda to this RFQ may be issued at any time prior to the time set for receipt of the Statement of Qualifications. The Offerors are required to acknowledge receipt of any addenda by submitting a signed copy of each addendum issued. Signed copies must be submitted as part of the signed Statement of Qualifications submittal.

## 1.8 WITHDRAWAL OR MODIFICATION OF OFFERS

Any Offeror may modify or withdraw an offer in writing at any time prior to the deadline for submission of an offer (see 1.2 above) unless otherwise required in the RFQ. Any request for withdrawal of an offer must be signed by the individual who signed the initial submittal.

#### 1.9 ACCEPTANCE

Any offer received shall be considered an offer, which may be accepted by Mesa County based on initial submission without discussions or negotiations.

By submitting a Statement of Qualifications in response to this solicitation the Offeror agrees that any submittal it submits may be accepted by Mesa County at anytime within 90 days from the closing (see 1.2 above).

Mesa County reserves the right to reject any portion or the entire submittal and to waive informalities and minor irregularities in submittals received, and/or to accept any portion of the submittal if deemed in the best interest of Mesa County. Failure of the Offeror to provide in its offer any information requested in the RFQ may result in rejection for non-responsiveness.

#### 1.10 PREPARATION COST

The cost of preparation is not a reimbursable cost. Statement of Qualifications preparation costs and presentation costs shall be at the Offeror's expense and are the Offeror's sole responsibility.

#### 1.11 AWARD

It is the intent of Mesa County to select the firm best qualified and technically able to provide the required services within the project's proposed schedule. Selection of a firm will be made as set forth in Section IV.

#### 1.12 COOPERATIVE PURCHASING/PIGGY-BACK

Purchases as a result of this solicitation are primarily for Mesa County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Proposal. The Scope of Work furnished in this proposal document are for only Mesa County. It does not include work for any other jurisdiction. Mesa County will be responsible only for the award for our jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office as authorized or agreed upon between the provider and the individual entity. Mesa County accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

#### 1.13 CONTRACT ADMINISTRATION

Mesa County Public Works shall be responsible for administration of the contract for compliance and performance with the interpretation of terms and obligations, scope, schedule, and budget.

#### 1.14 SUBSTANTIATIVE SUBMITTALS

The Offeror shall certify (a) that his/her submittal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation; (b) that he/she has not directly or indirectly induced or solicited any other Offeror to put in a false or sham bid; (c) that he/she has not solicited or induced any other person, firm, or corporation from submitting a Statement of Qualifications; and (d) that he/she has not sought by collusion to obtain for himself/herself any advantage over any other Offerors or over Mesa County.

#### 1.15 GOVERNING LAW

The laws of the State of Colorado shall govern any contract executed between the successful consultant and Mesa County. Further, the place of performance and transaction of business shall be deemed to be in the County of Mesa, State of Colorado, and in the event of litigation, the exclusive venue and place of jurisdiction shall be the District Court of the Twenty-First Judicial District, Mesa County, Colorado.

#### 1.16 SCHEDULE OF EVENTS

The schedules of events are as follows:

Advertise Request for Qualifications

Document Available

Pre-Submittal Conference

Written Questions Due Date

Submittal Due Date

Award of Contract (estimate)

Contract Presented to the BoCC (estimate)

Kick-Off Meeting (estimate)

10-17 & 20, 2021

10-18-21

N/A

11-3-21

11-16-21

11-29-21

1-3-22

1-10-22

# 1.17 INQUIRIES

Technical questions about the scope of services, budget and finance, or other project specific question regarding this RFQ shall be in writing and directed to Laura Page. All procurement questions concerning the RFQ process or any contractual questions shall be directed to Connie Hahn. A written response to any inquiry will be provided in the form of an Addendum to the solicitation to each Offeror. All questions shall be submitted in writing no later than seven (7) calendar days <u>prior to the deadline</u> for submission of offers. Questions shall not be permitted after this time, including that time between Statement of Qualification submission, presentations and final selection of a Consultant. Verbal inquiries will not be accepted.

Laura J. Page

Engineering Division Director

200 S. Spruce

P.O. Box 20,000

Grand Junction, CO 81502-5013

970.255.5031

Laura.page@mesacounty.us

Connie Hahn

Operations Manager

200 S. Spruce

P.O. Box 20,000

Grand Junction, CO 81502-5013

970.244.1812

connie.hahn@mesacounty.us

WRITTEN QUESTIONS RELATED TO THIS RFQ SHOULD ONLY BE DIRECTED TO THE MESA COUNTY PUBLIC WORKS DEPARTMENT. ANY CONTACT WITH OTHER MESA COUNTY DEPARTMENTS BY YOUR FIRM WILL BE CONSIDERED GROUNDS TO DISQUALIFY YOUR FIRM'S RESPONSE TO THIS RFQ.

# SECTION II MINIMUM SPECIFICATIONS

#### 2.0 OVERVIEW

The Public Works Department of Mesa County is requesting Statements of Qualifications from qualified firms to develop and deliver a pavement condition assessment for streets within the unincorporated limits of Mesa County after the 2022 overlay paving season. This assessment will **exclude** roadways maintained by the city and towns of Grand Junction, Fruita, Palisade, Collbran and DeBeque, along with State highways. These services may include, but is not necessarily limited to: identification and updating of County inventory of existing street network, data collection, pavement condition assessment, and technical support for data import into County's GIS and Asset Management systems.

The successful Consultant must be prepared to perform services as outlined in below. The submittals will be evaluated by Mesa County. It is the County's goal to select a Consultant who will provide the highest quality of customer service, technical expertise and project management. The award of the contract will be based on the evaluation criteria outlined in Section IV of this RFQ.

#### 2.1 BACKGROUND

Mesa County has approximately 709 centerline (1,435 lane) miles of paved roadway classified as follows:

- Arterials 2,2 centerline miles
- Major Collectors 12.2 centerline miles
- Rural, Local & Minor Collectors 694.6 centerline miles

The County's paved road network is divided into approximately 2,389 segments. A good portion of the local roads are contiguous to, or separated, by the City of Grand Junction roads. The County has never conducted a pavement condition survey.

#### 2.2 SCOPE OF WORK

The overall purpose of this project is to update the County road segment inventory to add any missing segments or eliminate any overlapping segments with the City of Grand Junction, and provide a Pavement Condition Index (PCI) for each road segment along with an overall network score after the 2022 overlay paving season.

The County will provide and share with the Consultant their existing road network files and geodatabases, temporary access to their ESRI shapefiles and other necessary information as needed to complete the following tasks.

The Scope of Work may be modified during the project to meet the County's intended goals.

# Task 1 - Pavement Condition Assessment

- Perform a pavement condition assessment on approximately 1,435 lane miles of roadway to identify pavement distresses and existing road conditions following ASTM D6433-11 Standard Practice for Pavement Condition Index Surveys. The survey shall be completed after the 2022 overlay paving season but while weather conditions are conducive and prior to seasonal snow cover. Data collections shall represent 100 percent coverage.
- Establish a Pavement Condition Index (PCI) for each segment per ASTM D6433 and assess overall County-wide Network Score. Must deliver a complete export file of the network and load it on the County's asset management software.
- Provide geo-referenced digital pavement data collection, videos, and photos. They
  shall be viewable and include inspection aspects necessary to identify pavement
  limits the associated distresses, location of distress, dates and time of inspection,
  and other inspection parameters.
- Perform all data entry and verify the accuracy and integrity of the data. All data
  collected must integrate with the County's GIS centerline base map. All pavement
  data and PCI must be linked to the appropriate section in GIS and asset
  management software.

# Task 2 - Update and Review Pavement Management Software System

- Complete an inventory and verify all street segments within the County's
  database. Update and replace any segment necessary within the database by
  adding new road segments, deleting any segments overlapping with local city and
  towns, and adding any missing gaps contiguous with those municipal roads.
  Verify width, length, and total number of lanes for each segment and update
  network database as necessary.
- Assist County in developing parameters for County's decision trees based upon
  pavement condition assessment, treatments to be incorporate and assigned costs.
  Provide options and recommendations to optimize project selection and
  treatments within the new Pavement Management System.

# Task 3 – Additional Survey – "Optional"

The purpose of this additional survey is to update the County's curb, gutter, and sidewalk assessment management layer in the County's existing ESRI GIS database. The database shows approximately 235 miles of curb, gutter and/or sidewalk. The County will coordinate with the Consultant to provide details on minimum requirements for data collection and deliverables (geo-referenced ESRI vector data shapefiles) to the County.

The attributes to be collected at this time for sidewalk, curb, gutter, and cross drains/fillets, would be the following:

- Location geo-referenced
- Length
- Primary width
- Type
- Associated street segment (Street ID Name, From to)

Note: Conditions of sidewalk will not be surveyed/collected at this time. ADA ramp locations and assessments has already been surveyed by the County.

# SECTION III SUBMITTAL CONTENT

#### 3.0 SUMMARY

Mesa County will be using the evaluation criteria set forth in Section IV of this RFQ to make the award of this contract. All submittals to Mesa County Public Works shall be in a sealed envelope marked: 2022 Pavement Condition Assessment and RFQ-22-03037

#### 3.1 SUBMITTAL FORMAT

The Statement of Qualifications and Letter of Intent shall include the information in the format outlined in this RFQ and be limited to no more than twenty-five (20) pages. The submittal may be printed on double sided pages; however, each printed side shall be counted as one page toward the limit of twenty-five (25). Up to 4 pages of the 25 page limit may be 11x17. The following pages are exempt from this requirement: cover page, Tabs/Divider pages, Financial and Exception, Attachment B (Hourly Rates), Certification of Immigration Compliance Agreement Statement in Section V, signed addenda if issued, table of contents, resumes and references. The text and all supporting information must be provided using 10 point font or larger. Aside from the required pdf copies of the submittal items (as required in Section 1.3), the Statement of Qualifications shall not include electronic media.

We recommend that you include concise, but complete information about your firm, emphasizing why you believe your firm to be uniquely qualified for this project. Short listed firms will be required to make a formal, in person presentation to the Selection Committee. Mesa County may make a selection of the successful Offeror based on ranking of the presentations without consideration of rankings from the original submittals.

#### 3.2 SUBMITTAL REQUIREMENTS

Submittals shall contain the experience and technical qualifications of the Offeror in relationship to the Scope of Work. Along with a Letter of Intent, the submittal shall contain the following:

- Project Approach
- Proposed Schedule
- Organization and Project Team Qualifications
- Quality Control Methods
- Attachment A Financial and Exceptions Statement
- ➤ Attachment B Hourly Rate Schedule
- Attachment C Certification of Immigration Compliance
- Signed Addenda, if applicable

#### 3.3 PROJECT APPROACH

Describe in detail how your team will approach managing and completing the project by addressing the following items:

- Describe the equipment and methods used in conducting the condition assessment survey.
- Describe which asset management software your process is compatible with.
- 3. Describe your company's approach to processing and importing the data obtained from the survey into the asset management software.
- Describe the methods used in ensuring that only the County's assets are surveyed and imported into the asset management software and not those assets of other entities or private owners.
- Describe how your company will go about reviewing and updating the County's inventory of assets.
- Describe your company's approach to assisting the County in developing decision trees for maintenance and improvement plans to be inputted in the asset management software.
- 7. Describe data conversion and entry issues that your product typically encounters when being entered into and utilized by the asset management software.
- 8. Describe potential cost savings to the County and the City if the company selected is also providing the same services for the City of Grand Junction in the same time frame.

#### 3.4 PROPOSED SCHEDULE

Provide an estimated schedule for the pavement distress data collection, processing and input of the data into the County's asset management software, and providing final deliverables. Describe staffing plan to implement, support, and administrate your proposed solution. Identify key roles and responsibilities. Include both vendor and County resources. Submit a description of the staffing availability and include information that supports your firm's capacity to accomplish the services in the required time frame.

## 3.5 ORGANIZATION AND PROJECT TEAM QUALIFICATIONS

Submit a general description of the company's background and experience. Discuss your firm's knowledge and experience in providing the services required by the scope of this RFQ. Clearly identify why your firm would be best suited for the project and the optional task outlined within this proposal.

Submit a list of five similar projects conducted by your firm and the project team that will be assigned to this project. Include project name, goals and outcomes of the project, the agency, contact information, contract amount, start and completion dates, compliance with project schedule, and personnel assigned from your team.

Quality personnel are a key component to the successful completion of the project and will be an important factor in the decision for awarding this contract. Information provided shall include but is not limited to:

- Organizational chart of company and/or project team
- Identification of key personnel and home office location(s)
- Professional qualifications, certifications, resumes and functions of personnel who will be assigned to the project
- Specific related project experience of personnel

In the event the consultant desires to change any key personnel during the contract period the consultant must submit for approval a written request demonstrating extraordinary circumstances prior to such change. In addition, Mesa County may remove any key personnel from the consultant's design team if that person is deemed unsuitable or a hindrance to the cooperative completion of the Project.

# 3.6 QUALITY CONTROL METHODS

The Offeror should include a detailed description of the plans and measures in which they use appropriate Quality Control methods and manages the data collection process to provide data that meets ASTM D6433 standards. Pavement condition assessments must be consistent and repeatable and conducted in conditions that support the collection of high-quality information.

Quality of the work product at the time delivered is essential in reducing the time delays caused by extensive and unnecessary County review or manipulation of data for use. It is the duty of the Project Team to ensure that deliverables have been thoroughly reviewed and any errors are corrected prior to delivery.

#### 3.7 EXCEPTIONS

See Attachment A – Financial and Exception Statement in Section V and indicate that there are no exceptions taken to any of the terms, conditions or specifications of these RFQ documents. Exceptions taken to these documents or contracts must be clearly stated on a separate sheet of paper and returned with your submittal.

Note: All potential Offerors are advised that the exceptions taken may be considered during the evaluation phase which may affect the final scoring of submittals. Offerors stipulating that the County must use their contract or agreement may be determined non-responsive and their submittal determined unacceptable.

#### 3.8 INSURANCE CLARIFICATION

The selected Consultant shall require all subcontractors and sub-subcontractors to maintain during the term of this agreement; Commercial General Liability insurance, Comprehensive Automobile Liability insurance, and Workers' Compensation and

Employers' Liability insurance in the same manner as specified for Consultant. The Consultant shall furnish subcontractors' certificates of insurance to the County, with a copy to the County's Contract Administrator, immediately upon request. Please refer to Attachment C.

#### SECTION IV EVALUATION CRITERIA

#### 4.0 EVALUATION CRITERIA

The following criteria will be used in the evaluation of the Statement of Qualifications:

Criteria
Project Approach
Proposed Schedule
Organization & Project Team Qualifications
Quality Control Methods

Submittals will be evaluated on the criteria listed above. The Offerors with the highest scores will then proceed for further evaluation.

The County reserves the right to reject any and all Statement of Qualifications and to waive any formality in Statement of Qualifications received, to accept or reject any or all of the items in the Statement of Qualifications, and award the job in whole or in part, if it is in the best interest of the County.

#### 4.1 SELECTION COMMITTEE

A Selection Committee will screen all submittals. Submittals will be evaluated based on completeness and the evaluation criteria as outlined above. The Selection Committee will determine which submittals are acceptable or unacceptable. The County, in writing will notify participating firms whose submittals are deemed unacceptable. Those firms offering submittals deemed to be acceptable by the selection committee will be evaluated on the criteria outlined in 4.0.

#### 4.2 EVALUATION PROCESS

Initial ranking of Offerors will be performed based upon the written Statement of Qualifications received based on the criteria described in 4.0. A selection may be made based upon the Statement of Qualifications. If the selection committee decides to interview a short list consisting of the top Offeror(s) as rated by the Statement of Qualifications will be developed. Those short listed Offerors may be requested to give a presentation and interview for the selection committee to determine the final selection. If interviews with more than one firm are requested scores and ranks from the initial ranking will not carry over into the presentation and interview stage of the selection process but will be reset for the short listed Offerors. The short listed Offeror(s) will be scored and re-ranked based on their presentations and response to interview questions after the presentations. It may be possible the selection committee may request an interview with a single firm prior to final selection solely to clarify interpretation of the Statenbent of Qualifications.

The Offeror with the highest ranking will be selected to perform the required services (hereinafter the Consultant) and will be notified by telephone and in writing. Those Offerors who are not selected will be notified in writing. Questions regarding the Statement of Qualifications received and the evaluation of those submittals and the following presentations will be permitted only after the Contract for award has been fully executed.

#### 4.3 AWARD OF CONTRACT

Once a Consultant is selected, Mesa County will enter into price negotiations with the Consultant to obtain a fair and reasonable price for the anticipated work. It is anticipated that a pre-negotiation audit will be prepared for price negotiation of this contract. In the event the selected Consultant and Mesa County can't agree on a contract price, Mesa County will begin price negotiations with the second highest scoring qualified Consultant. This process will continue until a contract price is successfully negotiated pursuant to C.R.S.A. § 24-30-1404.

#### Department of Public Works

Administration - Development Services - Engineering - Traffic

Solid Waste Management - Road & Bridge - RTPO - Fleet 200 S. Spruce Street • P.O. Box 20,000 • Grand Junction, Colorado 81501 Phone (970) 244-1765

Nov. 5, 2021

#### Addendum #1 RFQ-22-03037 2022 Pavement Condition Assessment

This addendum to the Request for Proposals for the above reference project supersedes all contrary and conflicting information which is hereby supplemented or revised in certain particulars as follows:

Questions received to date and answers:

- Can the County confirm which Asset Management Software or pavement management software Q. they currently have? What inventory items are identified within the Software (To's/From's Length's/Width's, Surface Type, Segment Rank, Work History, etc.)?
- A. The County is still in the process of selecting and contracting with the Asset Management Software company which will provide a pavement management software or integration with one. We plan on having the survey update the County's existing Road Segment spreadsheet that will be provided to the selected firm. Per Section 3.3, proposers are to indicate which asset management software their process is compatible with.
- Q. Section 3.1 of the RFQ shows both 25 and 20 when referring to the maximum page limit. Can the County confirm the maximum number of pages for the submittal is 25?
- The maximum number of pages for the submittal is 25. 1.
- Q. If there was an "old" payement management system, can you provide the name of that system as well?
- The County does not have an "old" pavement management system and has never conducted a A. condition assessment.
- Q. Can you provide an approximate date for the completion of the 2022 paying season?
- 1. Completion varies but the overlay project is generally completed around July or August. Next year's overlay will be conducted in the western portion of the valley. A list of those streets being overlaid will be provided to the selected firm.
- It was not mentioned within the RFQ, is Mesa County looking for specifically Automated or Q. Manual Survey techniques?
- Section 2.2. Task 1. indicates that the Scope of Work will require providing geo-referenced digital Α. pavement data collection, videos and photos, so the assumption is that Automated Survey techniques will be used.



#### Department of Public Works

Administration – Development Services - Engineering – Traffic Solid Waste Management – Road & Bridge – RTPO – Fleet 200 S. Spruce Street • P.O. Box 20,000 • Grand Junction, Colorado 81501 Phone (970) 244-1765

- Q. Section 1.3 copies are to be one. Can this be an electronic pdf copy emailed to the designees, Laura Page or Connie Hahn?
- A. Per Section 1.2, the County will accept electronic submittal via email instead of hard copies. Email should be sent to Connie Hahn, <u>connie.hahn@mesacounty.us</u> prior to the submission deadline.
- Q. What is the version and supplier of the County's GIS and Asset Management System? (Section 2.0). How current are the GIS shapefiles?
- A. See response above on the Asset Management System. The County's GIS is Enterprise ArcGIS 10.7.1. Most of our data is not shapefile, but is ArcSDE feature class that can be exported to shapefile format. Some data is current some has not been updated in years hence the request in Task 2 to update and verify all street segments and Task 3 (optional) to update the curb, gutter, and sidewalk database.
- Q. You mention in Task 2 Update and Review Pavement Management Software System, the development of parameters for decision trees, etc., within the new PMS. Do you presently own a system, and is it already implemented? If so, what is the name of the PMS and version of the software?
- A. The County does not have a PMS currently. Per Section 3.3, proposers are to indicate which asset management software their process is compatible with and describe their company's approach to assisting the County in developing decision trees for maintenance and improvement plans to be inputted in the asset management software.
- Q. Shortlisted firms may be required to make a formal in-person presentation. When do you expect these presentations to be scheduled?
- A. If presentations are required in order to determine final selection, they will be scheduled for the first part of December in order to award contract the first part of January.
- Q. The City of Grand Junction indicated that they would not be collecting data in 2022 and that it would be in 2023. How many cycles are planned for the data collection? Will the County elect to collect data each year in the future?
- A. Mesa County plans to collect data approximately every 5 years. If the City of Grand Junction elects to use the same firm for collection as the County, data collection efforts will be coordinate so that it occurs at the same time for both entities.
- Q. Is there an estimate number of County lane miles that fall in City of Grand Junction jurisdiction?
- A. There is approximately 110 centerline miles that fall within the City limits. We do not have an accurate count of lane miles at this time but assume the majority is two lane.

#### Department of Public Works

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MESA

COUNTY

Administration – Development Services - Engineering – Traffic Solid Waste Management – Road & Bridge – RTPO – Fleet 200 S. Spruce Street • P.O. Box 20,000 • Grand Junction, Colorado 81501 Phone (970) 244-1765

- Q. Does the County require that data collection be performed in both directions and all lanes? For example, if there are two lanes in a direction, does the data need to be collected in both lanes? Do turning lanes need to be collected to achieve 100% coverage?
- A. Data needs to be collected in all travel lanes except turn lanes.

Please note that all addenda must be acknowledged on page 15 in the bid documents. Bids will be rejected if they do not follow the instructions provide in the RFP.

All remaining requirements of the Request for Proposals remain unchanged.

Provided By:

Laura J. Page, PE Engineering Division Director

I Bart Williamson, CEO of RAS, acknowledge receipt of Addendum 1.

Bart Williamson, CEO

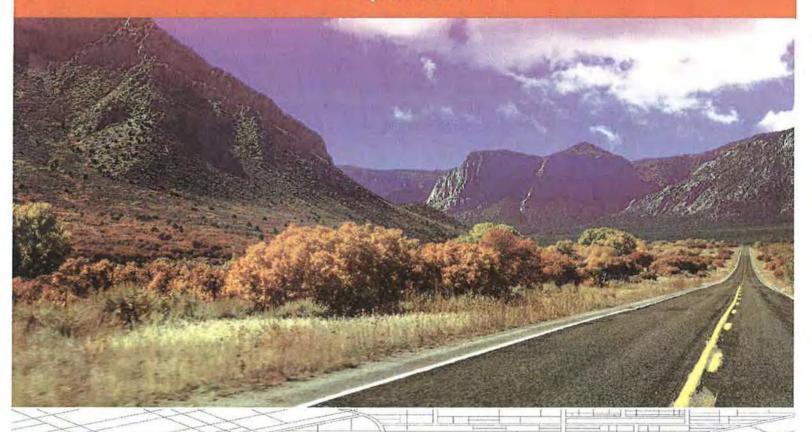
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# Mesa County Proposal for 2022 Pavement Condition Assessment RFQ-22-03037



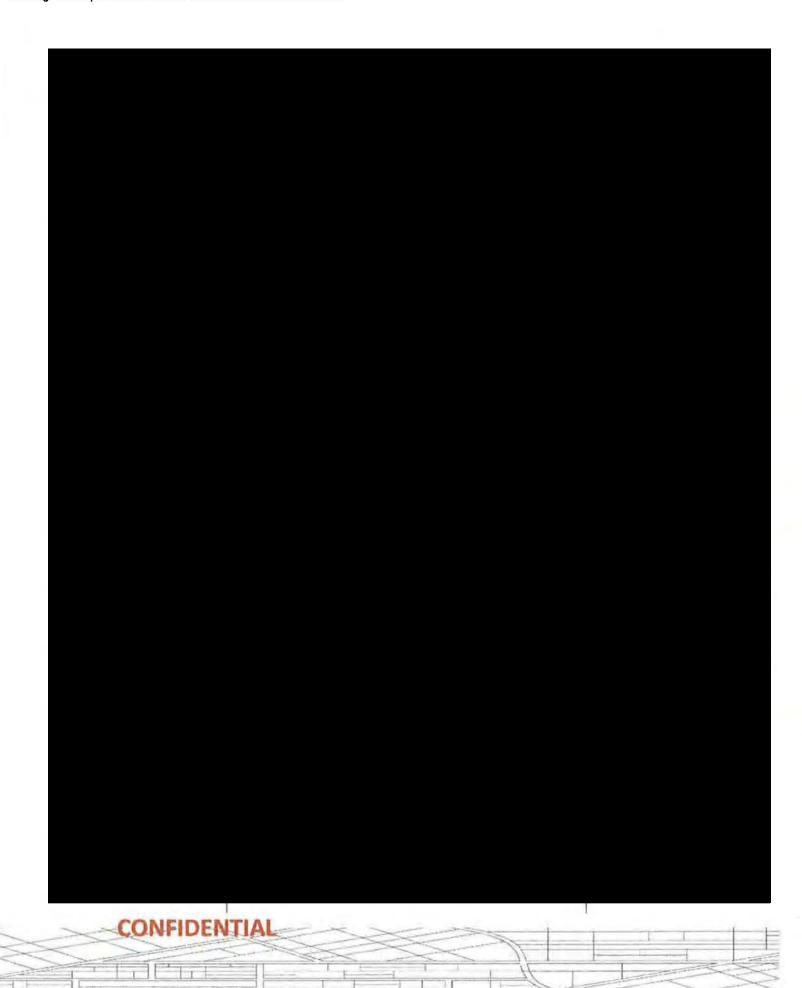


#### Prepared by:

Roadway Asset Services, LLC.
6001 W Parmer Lane
Suite 370-1102
Austin, Texas 78727
bwilliamson@roadwayassetservices.com
210-837-5249

CONFIDENTIAL

Roadway Asset Services, LLC ★ 6001 W Parmer Lane #370-1102 ★ Austin, TX 78727 ★ 210-837-5249



#### Project Overview

RAS understands the project will consist of conducting a pavement condition assessment for 709 centerline miles of paved roadways. The roadway network inventory consists of 2.2 centerline miles of arterials, 12.2 centerline miles of major collectors, and 694.6 miles of rural, local, and minor collectors. RAS will identify any missing segments or overlapping roads with the City of Grand Junction. RAS understands that the County desires to conduct a County-wide automated, a 100% continuous linear pavement distress survey using calibrated Roadway Asset Collection (RAC) testing vehicles focusing on existing conditions of pavement and documenting all existing cracking, to collect a full array of pavement condition data to inventory the County's current pavement condition information. The condition data will be complimented with GPS coordinated and multiple view digital images. RAS proposes as part of the automated data collection that digital images will be recorded at 15-25 feet maximum intervals with an automated data collection survey vehicle equipped with a Laser Crack Measurement System (LCMS-2) for automated pavement data acquisition, Ladybug 360 camera system for capturing right-of-way imagery and a laser profiler which includes line lasers for capturing full lane rutting and roughness data. The raw data will be collected and aggregated to the segment level that will be loaded into the County's existing GIS and Cartegraph, Operations Management System (OMS). The data will be delivered in accordance with the U.S. Army Corps of Engineers data protocols, commonly referred to as ASTM D 6433.

#### Equipment and Method for Collecting Data

RAS will conduct the pavement assessment by collecting images using their LCMS-2 system for local streets with a single-pass and for collector and arterial streets with a double-pass collection. A continuous linear survey will be performed for the entire network. As part of the pavement data collection, we will use the images from the Ladybug 360 camera system to capture the width of pavement for each street segment to compare with the existing database information. We can provide the widths for streets with width changes by noting locations of changes by stations and measuring each section of change, and the addition of lanes or turn lanes.



Roadway Asset Collection Vehicle

To complete the automated pavement condition survey and right-of-way asset inventory, the RAS team proposes to use one or more state-of-the-art RAC vehicles, equipped with:

- Second-generation Pavemetrics Laser Crack Measurement System (LCMS-2, provides 1mm resolution pavement imagery) for automatic and continuous measuring of pavement cracking, texture, rutting geometrics, and other pavement distresses,
- The LCMS camera is a laser array providing images used to evaluate data that conforms with ASTM D6433 protocols, which uses two 1-millimeter resolution line scan cameras to provide a customized digital condition rating system to collect user defined severity/extent-based pavement distresses and rutting,
- The pavement distresses, density, and severities collected with the LCMS are used to calculate a
  Pavement Condition Index (PCI) digital condition rating for represent the condition of 100% of
  the driven lanes within the pavement network,
- A class 1 inertial profiler (Used to capture dual-wheel path International Roughness Index (IRI) measurements) and measuring both wheel track ruts simultaneously. The profiler has gone through ASTM E-950 is certification in accordance with ASTM D-6433. Additionally, RAS' inertial profiler has been independently certified by the National Center for Asphalt Technology (NCAT) in accordance with AASHTO R-56. With these two certifications RAS can guarantee the accuracy and repeatability of all collected roughness data.
- Point Gray Ladybug 5+ 32MP 360 camera (Utilized for accurate ROW asset capture and extraction and pavement QA/QC) with is far superior to multiple mounted independent HD cameras others use, and collects roadside attribute on the fly,
- Linear distance measuring to within +/-0.5%, and
- Applanix POS/LV with DGPS (Provides accurate internal GPS navigation for geo-locating pavement and right of way asset information).

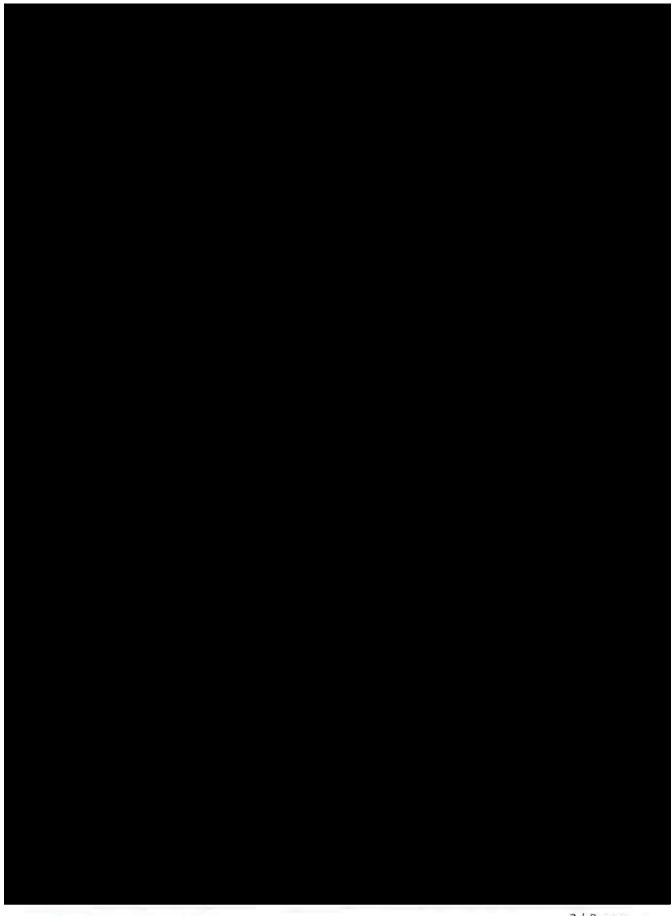
All subsystems for the RAC vans are integrated using International Cybernetics Corporation's (ICC) collection core with tight synchronization between all data streams on the truck in real-time, referenced to both time and distance. All sensor locations are referenced to the vehicles reference point, together with the GPS and IMU, using 3D translations and rotations. This allows the final world coordinates of all sensor data streams to be calculated.

#### BENEFITS OF THE RAC VEHICLE

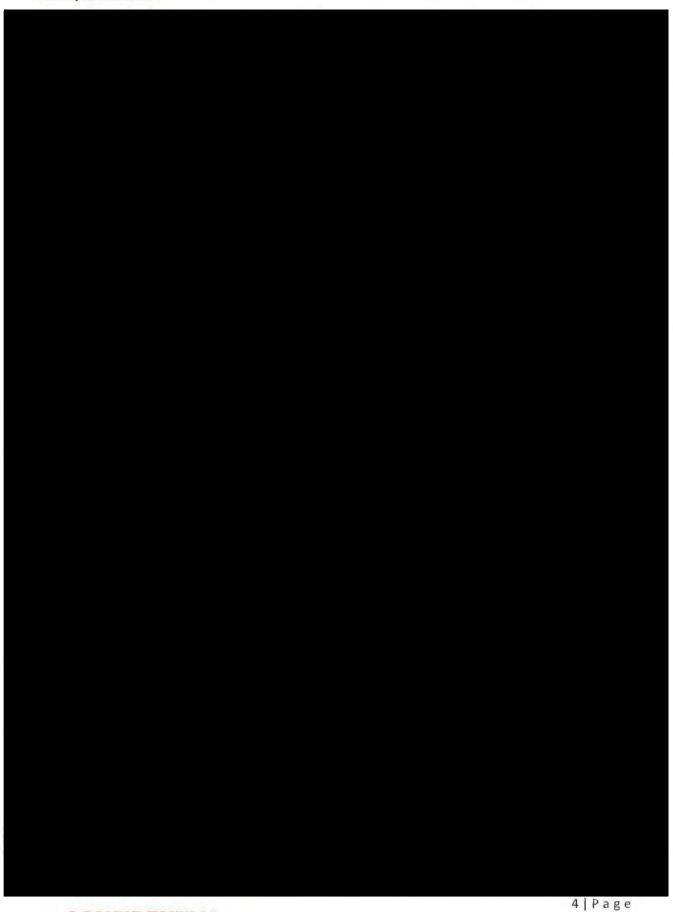
All subsystems for the RAC van are integrated using ICC's collection core with tight synchronization between all data streams on the truck in real-time, referenced to both time and distance.

All sensor locations are referenced to the vehicles reference point, together with the GPS and IMU, using 3D translations and rotations. This allows the final world coordinates of all sensor data streams to be calculated.

Additionally, the RAC vehicle's profiler has received independent inertial profiler certification for accuracy and repeatability from the National Center for Asphalt Technology at Auburn University.

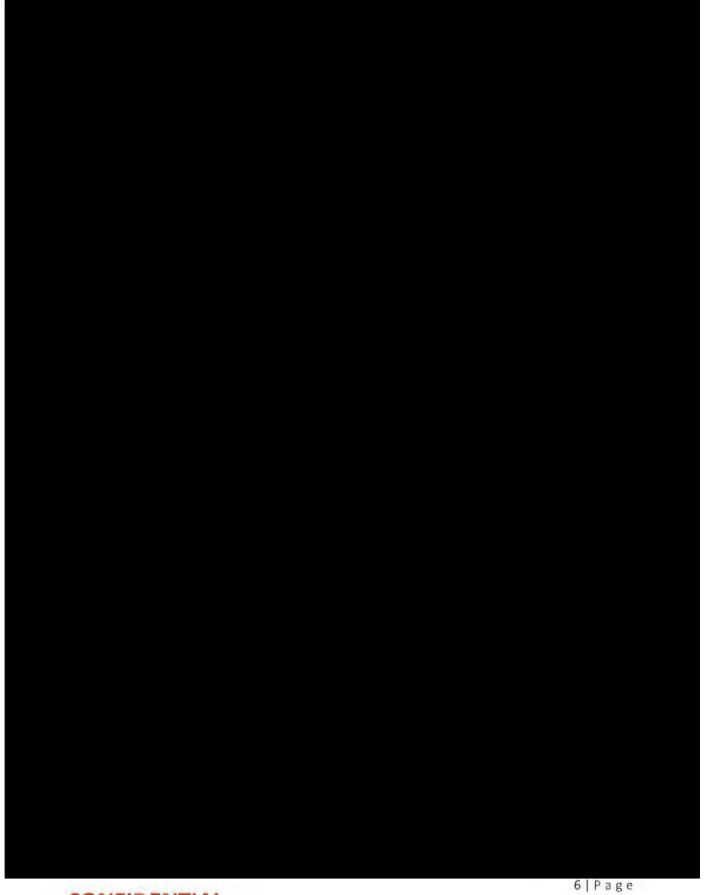






















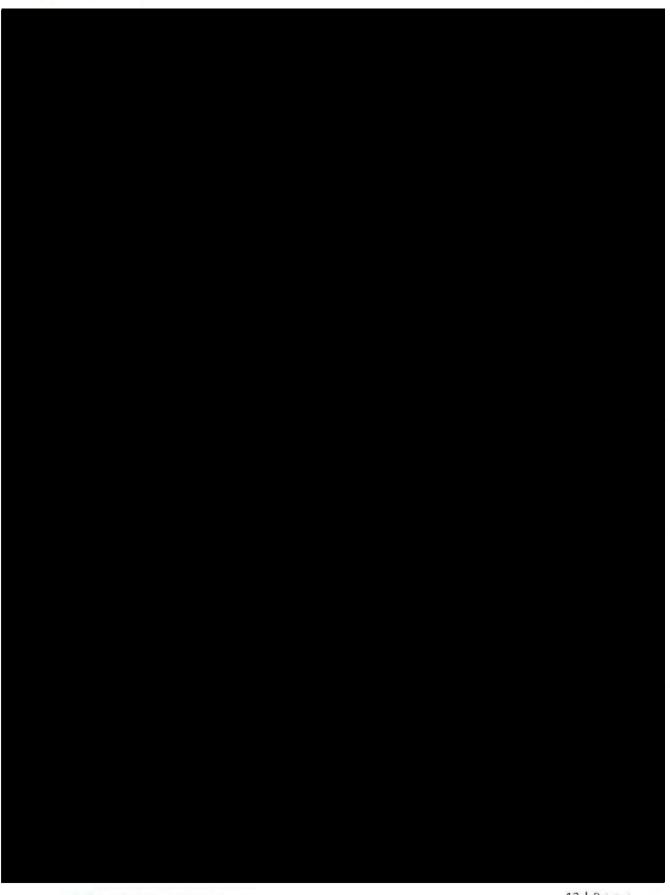












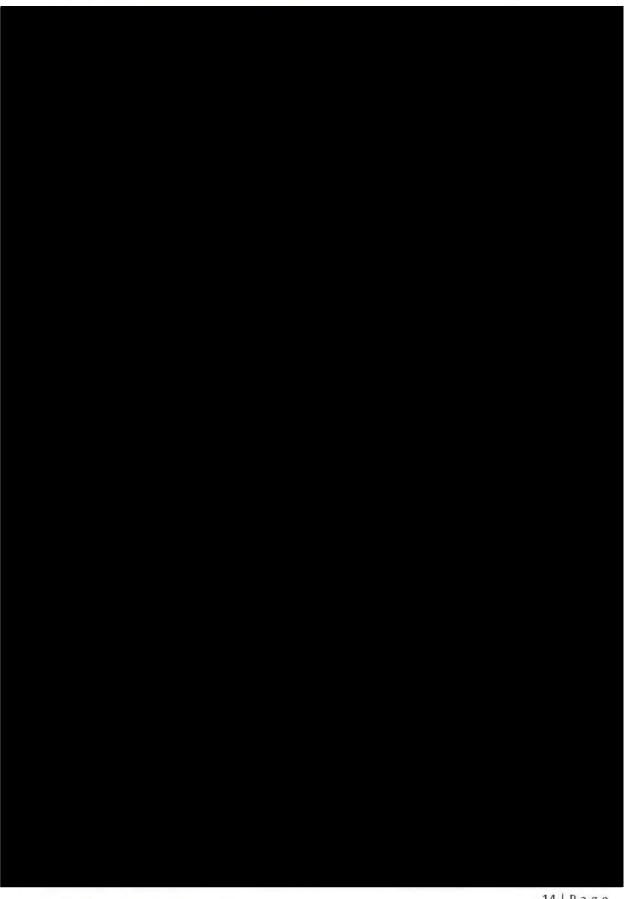








Mesa County 2022 Pavement Condition Assessment

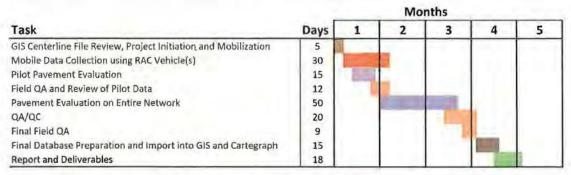


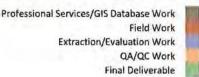
## Proposed Schedule



#### Schedule

RAS would anticipate slightly more than 4-month duration on the project. Monthly progress meetings will be held, or more frequently if the County desires, to ensure clear expectations, understanding of the project requirements and deliverables, and to facilitate open communication. The chart below provides an outline of our anticipated schedule and project milestones.



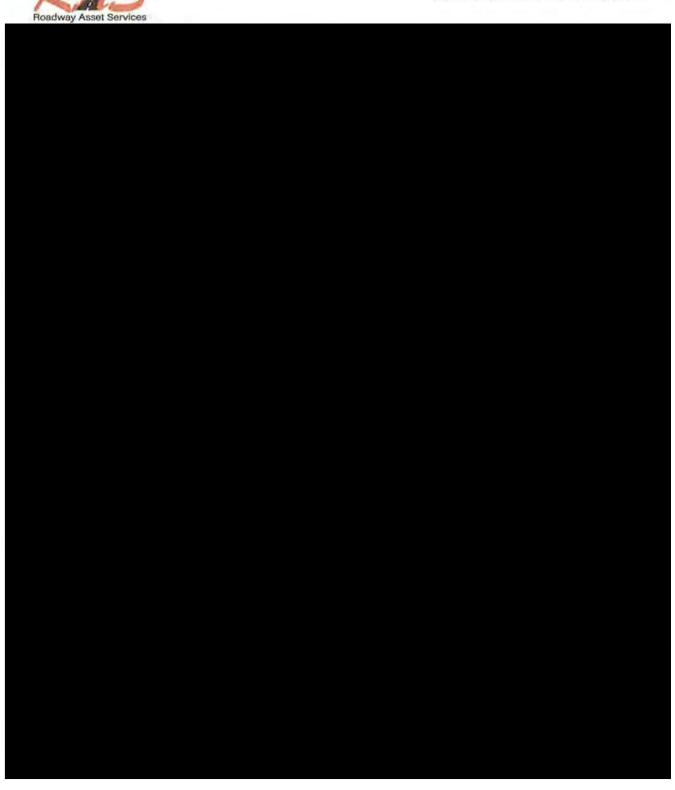


The RAS team will conduct pavement survey work on dry pavement and in lighting conditions that ensure accurate crack detection. We will collect imagery during daylight hours only, with no rain, fog, or snow visibility obstructions. Any road segment that exhibits low image quality due to lighting will be recollected.

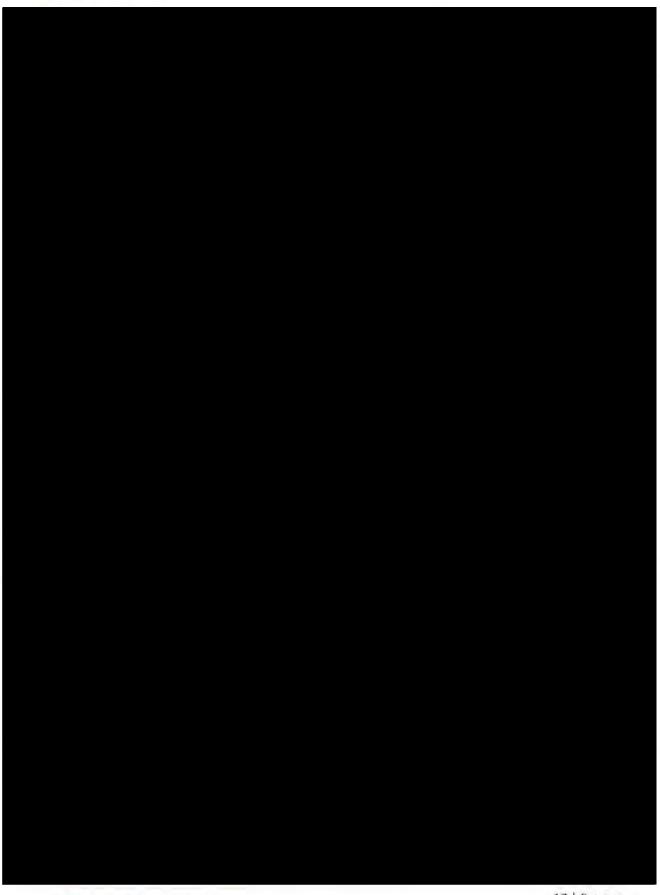
One way RAS optimizes its field data capture is by collecting pavement condition data 7 days a week which allows our team to remain ahead of schedule when events such as storms or other weather-related events do occur. Additionally, RAS can mobilize additional crews to Mesa County to quicken the collection process if needed. The RAS team will provide a safe and cost-effective collection and extraction methodology that will save time and money with this project while meeting or exceeding the County's expectations on both time and budget. The RAS management team has an outstanding record completing projects similar in size and scale on time and within budget.

# Organization and Project Team Qualifications











Bart Williamson, FCLS will serve as the Project Principal and act as the Quality Manager ensuring timely and quality deliverables. Bart will work closely with Scot to coordinate project needs and assure that equipment and resources are available to provide a successful project. Mr. Williamson has led many asset management needs assessments, pavement condition surveys, and ROW inventories during his career.

Rafael Rivera will serve as the Data Collection Manager and has overseen over 100,000 miles of automated pavement and ROW data collection field efforts and will be overseeing the daily operation of the field crews to assure quality collection and efficient operation. He will communicate with the PM to update schedules and determine when more resources may be needed to keep the project on schedule. Rafael will be responsible for initiating and reviewing the evaluation process for pavement and delivery of the results and databases for final review by QA/QC and the final pavement condition survey report.

Sandra Marrero, El is a Pavement Engineer performing the firm's roadway asset collection projects with a pavement analysis component, evaluating pavement conditions, processing pavement ratings, preparing reports, performing maintenance budget scenarios, and reporting the results of project finding in meetings and discussing with Clients.

# Project Manager Scoti Gordon, P.E. JAM Data Collection Manager Rafael Rivera Pavement Engineer Sandra Marrero, Et Data Collection Field Crew Winfred Rooks Data Quality/Integration Tom Brennenian, GISP

The RAS Team will provide the pavement condition assessment from our Texas, Tennessee and Florida oiffce location. Each staff resume indicates the office they will be working from.



#### G. SCOT GORDON, PE, IAM

PROJECT MANAGER, PAVEMENT ENGINEERING MANAGER

Mr. Gordon serves as President and Lead Pavement Engineer at Roadway Asset Services. Mr. Gordon has 30 years of experience in asset management, transportation engineering, geotechnical engineering, and construction materials testing including pavement design and optimization for transportation networks. As a professional engineer, he has managed numerous projects such as design/build highway projects, airfield pavement and other government projects. He is an expert in the design, evaluation, monitoring, and research of pavement as well as pavement rehabilitation and soil stabilization. Scot has completed numerous projects related to pavement management system implementation, pavement condition surveys, sign management surveys, sidewalk condition surveys, and road assessment utilizing LiDAR. The following is a brief list of projects he has managed.

#### **KEY PROJECTS**

Chicago Metropolitan Agency for Planning (CMAP) - Pavement Data Collection and Pilot Pavement Management Program

The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization for seven counties and 284 communities of northeastern Illinois. Mr. Gordon served as the Project Manager for the project designed to collect data and assess the pavement condition for 5,153 miles of roadway for all federal-aid local jurisdiction roads in the CMAP region. Mr. Gordon also served as the Sr. Pavement Engineer, providing pavement data collection and condition rating, as well as ROW data collection. All data was formatted to meet the "National Performance Management Measures for Assessing Pavement Condition," 23 CFR 490 Subpart C, including International Roughness Index (IRI), rutting, cracking, and faulting. Pavement Condition Index (PCI) was calculated per the ASTM D6433-11 Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys. Mr. Gordon provided field validation with the CMAP staff to ensure the accuracy of the pavement survey results.

City of Indianapolis, Indiana - Pavement Management Services

Mr. Gordon served as the Project Manager and Sr. Pavement Engineer for the City of Indianapolis in delivery of a pavement assessment for the City's 4,394 test miles of roadway. The pavement condition survey included a set of pre-defined parameters to develop both a segment and network level index (number) that correlates to existing pavement surface conditions. This project used the ASTM D6433-11 pavement condition analysis method to determine the road segment and network PCI. As the Sr. Pavement Engineer, Mr. Gordon provided field validation with the City staff to ensure the accuracy of the pavement survey results. Mr. Gordon also worked with the City to evaluate the budget needs of the arterial network to submit to IDOT for additional maintenance funding using PAVER software. The City also collected and rated ROW assets including sidewalks and ADA ramps.



FIRM Roadway Asset Services Dallas, Texas

EXPERIENCE 30 years

#### **EDUCATION**

M.E., Civil Engineering, Texas A&M University, 1990 B.S., Civil Engineering, Texas A&M University, 1989

REGISTRATIONS
--CO Professional Engineer,
Certificate Number:30239

TX Professional Engineer,
Certificate Number:88099
-MD Professional Engineer,
Certificate Number:33493
-FL Professional Engineer,
Certificate Number:83979
-NC Professional Engineer,
Certificate Number:46459
-NM Professional Engineer,
Certificate Number:26330
-GA Professional Engineer,
Certificate Number:45916
-Institute of Asset Management
Certified

Professional Affiliations
-American Council of
Engineering Companies
-Tarrant County Board of
Directors, 2015-present
-American Society of Highway
Engineers, DFW Section
Treasurer, 2015-2017
-American Council of
Engineering Companies,
Colorado
Board of Directors, 2000-2001
-Charles County Chamber of
Commerce, Board of Directors,
2009-2010

#### City of Pueblo, Colorado - Pueblo Street Assessment Project

Mr. Gordon is serving as the Project Manager/Pavement Engineer for this project to carry out the City's Street Assessment Project. The project consists of using our fleet of RAC vans to collect the pavement condition index per the ASTM D6433 for 644 test miles of City maintained roadways. The survey is being conducted using International Roughness Index (IRI) and Pavement Condition Index (PCI) procedures as the basis for rating the physical condition of streets.

#### City of Salt Lake City, Utah-Pavement Condition Survey 2021

RAS is performing the 2021 pavement condition survey for the City of Salt Lake City's 730 test mile network. RAS is completing the survey using its fleet of RAC vehicles. The pavement condition survey is being completed in accordance with the ASTM D6433. RAS will be providing GIS based deliverables and importing the data into **Cartegraph**. RAS is performing a pilot study, provide a final report and will assist the City in presenting data to City Council regarding various funding amounts and how they can improve the City's PCI and its level of service to the general public. RAS is also completing a pilot study utilizing mobile LiDAR to assess two corridors within the City. Mr. Gordon is the Project Manager.

#### City of Albuquerque, New Mexico – Pavement Condition Survey and Asset Inventory in the Public ROW

Mr. Gordon is serving as the Project Manager for this mobile image data collection project for the City's 4,548-mile network. The project consists of collecting a field survey of the pavement condition for the City's network as well as a ROW asset inventory for several assets including traffic signs, guardrail, sidewalks, ADA ramps, sidewalk obstructions, pavement markings, pavement striping, medians, bike lanes and driveways. RAS is using its fleet of RAC vehicles to complete the pavement condition survey. Scot is performing a pilot and field QA/QC during the duration of the project. The pavement condition is being performed in accordance with the ASTM D6433.

#### City of San Antonio, Texas - Pavement Management Services

Mr. Gordon was the Project Manager/Pavement Engineer for the City project, which consisted of collecting right-of-way assets and pavement condition surveys. The team provided efficient and cost-effective data extraction in a GIS environment that was seamlessly integrated into the City's **Cartegraph** asset management system and deployed throughout the City to proactively manage its asset infrastructure. This project included mobile data collection of the City's 4,100 centerline mile network. Mr. Gordon worked with the City to optimize it's pavement preservation plans among 10 City Council Districts focusing on bringing each district to a baseline minimum of a PCI of 70.

#### City of Durham, North Carolina-Pavement Condition Survey 2021

Mr. Gordon served as the Project Manager/Pavement Engineer for this project which included automated data collection for pavement condition surveys per the ASTM D6433, budget analysis and maintenance optimization for the City's approximately 700-mile pavement network. The scope of service included complete roadway pavement data collection with images and video, perform pavement condition rating and assessment, develop pavement management repair recommendations and reports. Mr. Gordon worked with the City on the PCI results, and interpretation of these in addition to preparing and presenting results to the City Council for budget planning. The project also includes a traffic sign inventory

#### **Pavement Design and Consultation Projects**

- Texas Turnpike Authority State Highway 130 Tollway Lead Pavement Designer
- Texas DOT State Highway 45SE Tollway Lead Pavement Designer
- Texas DOT IH-35E/IH-30 Dallas Horseshoe Managed Lanes Project Lead Pavement Designer
- Pavement Information Management Systems (PIMS) Software Development
- Metropolitan Government Pavement Engineer's Council Design Standards and Specification Research & Development, Denver, Colorado
- E-470 Toll Road, Douglas County, Colorado
- I-70, Glenwood Canyon, Colorado
- Evaluation of Streets, City of Glenrock, Wyoming
- Asphalt Study, Wyoming, Utah and Colorado

#### KEY PUBLICATIONS

Co-Author, Use of Recycled and Waste Fibers in Asphalt Concrete, Procedures of: Recovery and Effective Reuse of Discarded Materials and By-Products for Construction of Highway Facilities, Denver, Colorado, 1993, with D. V. Holmquist and T. W. Kennedy

Co-Author, *User's Guide for Pavement Information Management System*, <u>A manual for the PIMS computer software</u>, 1995, with Darrel V. Holmquist

Author, Use of Recycled Carpet Fibers in Asphalt Concrete, a presentation to the Recycling of Fibrous Textile and Carpet Waste seminar at Georgia Institute of Technology, Atlanta, Georgia, 1997, Presentation

Author, MGPEC Design Procedure, comparison of the MGPEC Design Procedure to the AASHTO Design Procedure, a presentation to the Colorado Association of Geotechnical Engineer, 1997, Presentation

Co-Author, Development of Pavement Design Concepts, Vol. II, Report to the Metropolitan Government Pavement Engineers Council of Denver, Colorado, 1998, with D. V. Holmquist

Co-Author, Pavement Design Standards and Construction Specifications, Vol. I, Report to the Metropolitan Government Pavement Engineers Council of Denver, Colorado, 1998, with D. V. Holmquist

CO-Author, Field Procedures Manual for the Soils Division of CTL/Thompson, Inc., Research paper comprising the final submission required of persons enrolled in the ASFE Fundamentals of Professional Practice, Class No. 09, 2000, with Robert W. Thompson

Author, Denver Area Aggregate Base Courses, <u>Presentation and Procedures of: International Center for Aggregates Research 8th Annual Symposium, Denver, Colorado, 2000, Presentation</u>

Author, Making a Pavement Management System Work for You, a presentation at the Colorado Asphalt Producers Association Pre-Conference for Local Agency Session, "Pavement Management for the Local Agency," in Denver, Colorado, 2001, Presentation



#### BART WILLIAMSON, FCLS

CHIEF EXECUTIVE OFFICER-PROJECT PRINCIPAL

Mr. Williamson brings over 30 years of management experience in a wide variety of projects and programs that include public works, insurance and transportation on a national level. He has developed an in-depth understanding of business processes and politics that are germane to governments. Mr. Williamson has assisted with asset management needs assessments, management of pavement condition survey and ROW collection projects and overseen client deliverables.

#### **KEY PROJECTS**

#### City of Salt Lake City, Utah - Pavement Condition Survey 2021

RAS is performing the 2021 pavement condition survey for the City of Salt Lake City's 730 test mile network. RAS is completing the survey using its fleet of RAC vehicles. The pavement condition survey is being completed in accordance with the ASTM D6433. RAS will be providing GIS based deliverables and importing the data into **Cartegraph**. RAS is performing a pilot study, provide a final report and will assist the City in presenting data to City Council regarding various funding amounts and how they can improve the City's PCI and its level of service to the general public. RAS is also completing a pilot study utilizing mobile LiDAR to assess two corridors within the City. Mr. Williamson is the Assistant Project Manager.

City of Albuquerque, New Mexico – Pavement Condition Survey and Asset Inventory Mr. Williamson is serving as the Assistant Project Manager for this mobile image data collection project for the City's 4,548-mile network. The project consists of collecting a field survey of the pavement condition per the ASTM D6433 for the City's network as well as a ROW asset inventory for several assets including traffic signs, guardrail, sidewalks, ADA ramps, sidewalk obstructions, pavement markings, pavement striping, medians, bike lanes and driveways. RAS is using its fleet of RAC vehicles to complete the survey.

#### City of Cheyenne, Wyoming - Pavement Condition Survey Project

Mr. Williamson served as the Client Manager for the automated pavement condition survey for the City. The project included collecting pavement condition data per the ASTM D6433 for the 337 centerline miles of roadway within the City, measuring the width of each street section and importing the data into the City's PAVER pavement management system.

#### City of Greenville, South Carolina-Pavement Condition Survey

Mr. Williamson is serving as the Assistant Project Manager for the City's pavement condition survey and ROW asset inventory for 608 miles of City and South Carolina DOT maintained roadways. The ROW asset inventory consists of sidewalks, bike lanes and pavement markings. The pavement condition survey is being completed with the RAS RAC vehicles and is being performed per the ASTM D6433.

#### Bexar County (San Antonio) Texas - Pavement and ROW Asset Management

Mr. Williamson was the project manager for four automated data collection projects for Bexar County which consisted of collection of roadway asset data related to the County's pavement network and traffic infrastructure including signs, sidewalks, pavement markings and guardrails. The network was collected utilizing an automated data collection vehicle to capture street level images for use in pavement and asset extraction. The image database was comprised of industry standard JPEGs, with geo-referenced information being delivered via an Esri geodatabase and linked to the County's **Cartegraph** asset management system.



#### FIRM

Roadway Asset Services Austin, Texas

#### EXPERIENCE 30 years

#### EDUCATION

B.S., Business Marketing Honors and Distinction Indiana University, 1989



#### RAFAEL RIVERA DATA COLLECTION MANAGER

Mr. Rivera has over 10 years of experience in the design and testing of mechanical components using CAD software and quality assurance practices in the engineering environment. Mr. Rivera's positions have included automated data collection manager, vehicle operator, pavement analyst, LiDAR analyst and GIS analyst.

#### **KEY PROJECTS**

#### City of Austin, Texas-Traffic Sign Inventory

Mr. Rivera is the Data Collection Manager for the automated mobile data collection of the City's 5,000-mile roadway network. Mr. Rivera is also responsible for providing QA/QC of the traffic sign deliverables before importing them into the City's asset management software.

#### Colorado DOT- Roadway Imaging and Asset Inspection Services

Mr. Rivera was the Data Collection Manager for the statewide network collection of the state's roadway network which consisted of 12,000 miles of roads. Additionally, Mr. Rivera worked with data formatting for consumption of data into the state's pavement management system as well as performing QA/QC to conform to the HPMS requirements.

#### City of Pueblo, Colorado - Pueblo Street Assessment Project

Mr. Rivera is serving as the Data Collection Manager for this project to carry out the City's Street Assessment Project. The project consists of using the RAS fleet of RAC vans to collect the pavement condition index per the ASTM D6433 for 644 test miles of City maintained roadways. The survey is being conducted using International Roughness Index (IRI) and Pavement Condition Index procedures as the basis for rating the physical condition of streets.

City of Albuquerque, New Mexico – Pavement Condition Survey and Asset Inventory Mr. Rivera is serving as the Data Collection Manager for this mobile image data collection project for the City's 4,548-mile network. The project consists of collecting a field survey of the pavement condition for the City's network as well as a ROW asset inventory for several assets including traffic signs, guardrail, sidewalks, ADA ramps, sidewalk obstructions, pavement markings, pavement striping, medians, bike lanes and driveways. RAS is using its fleet of RAC vehicles to complete the pavement condition survey. The pavement condition is being performed in accordance with the ASTM D6433.

#### Montgomery County, Tennessee-Pavement Condition Survey

Mr. Rivera is the Data Collection Manager for the Montgomery County Highway Department's pavement condition survey of the County's 750 centerline miles of roadway. RAS is completing the survey in accordance with the ASTM D6433 utilizing its fleet of RAC vehicles to collect the pavement condition data and ROW images. RAS is working with the County to provide a baseline PCI for the County to begin its pavement preservation.

#### Anderson County, South Carolina-Pavement Condition Assessment

RAS is performing a pavement condition assessment utilizing its fleet of RAC vehicles for a portion of the County maintained roads. The pavement condition assessment is being conducted per the ASTM D6433 and the data is being imported into **Cartegraph**. RAS is also completing a traffic sign inventory. Rafael is the Data Collection Manager for this project.



FIRM Roadway Asset Services Cleveland, Tennessee

10 years

#### **EDUCATION**

B.S., Mechanical Engineering, University of Central Florida, 2011

B.S., Aerospace Engineering, University of Central Florida, 2016



#### Sandra Marrero, E.I.

PAVEMENT ENGINEER

Ms. Marrero is a Pavement Engineer for Roadway Asset Services. She who works on the firm's roadway asset collection projects with a pavement analysis component. Sandra has over two years of experience evaluating pavement conditions, processing pavement ratings, preparing reports, performing maintenance budget scenarios, and reporting the results of project finding in meetings and discussing with the Client. Her software experience includes Cartegraph, dTIMS, PAVER, VUEWorks, EarthShaper, ArcGIS, AutoCAD, Civil 3D and the Microsoft Office suite.

#### **KEY PROJECTS**

#### City of San Antonio, Texas - Professional Asset Management Services

Ms. Marrero worked on the team to perform the follow-up pavement modeling in **Cartegraph**. The previous collection was completed with pavement data collection vehicles to obtain pavement imagery to meet

this requirement to identify and quantify pavement distresses as well as longitudinal profile and International Roughness Index data for the City and its 4,121 centerline miles of streets. Condition rating of the pavement to facilitate the development of the Street Maintenance Program is also part of the professional services. Additionally, other asset data such as guardrails, signage, pavement striping, and pavement markings were collected. Ms. Marrero performed quality assurance and quality control services for the project. Ms. Marrero is currently working with the City's pavement modeling and consulting.

#### Montgomery County, Tennessee-Pavement Condition Survey

Ms. Marrero is serving as a Pavement Engineer for the Montgomery County Highway Department's pavement condition survey of the County's 750 centerline miles of roadway. RAS is completing the survey in accordance with the ASTM D6433 utilizing its fleet of RAC vehicles to collect the pavement condition data and ROW images. RAS is working with the County to provide a baseline PCI for the County to begin its pavement preservation. Additionally, the pavement condition index data is being integrated and imported into the County's newly selected pavement management software, Streetlogix.

#### City of Durham, North Carolina-Pavement Condition Survey

Ms. Marrero is serving as a Pavement Engineer for this project which included automated data collection for street pavement condition surveys, condition evaluation and preparation of a budget analysis and maintenance optimization for the City's approximately 770-centerline mile pavement network. The pavement network was evaluated in accordance with the ASTM D6433 standards. The project also includes a traffic sign inventory and cross walk inventory.

#### Travis County (Austin), Texas - Roadway Management Survey

Ms. Marrero worked as the Pavement Engineer to perform evaluation of pavement conditions to identify and quantify pavement distresses as well as longitudinal profile and International Roughness Index data for the County for 2,600 roadbed test miles of streets. This project used the ASTM D6433-11 pavement condition analysis method to determine the road segment and network PCI. Ms. Marrero performed quality assurance and quality control services for the project. The pavement data was imported into **Cartegraph**.



FIRM Roadway Asset Services Orlando, Florida

EXPERIENCE 7 years

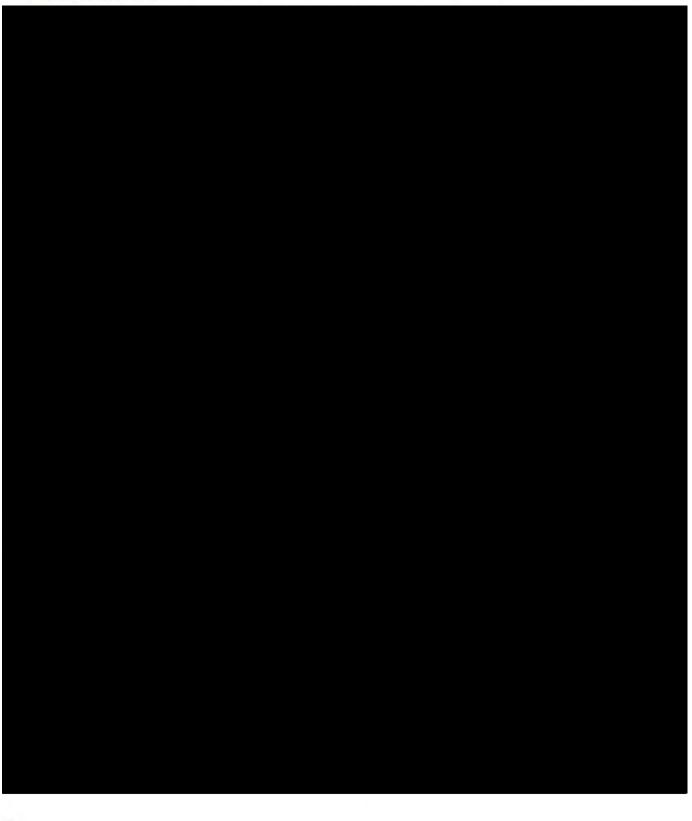
### EDUCATION B.S., Civil Engineering, University of Puerto Rico, 2013

REGISTRATIONS
-FL Engineer Intern,
Certificate
Number:1100023293

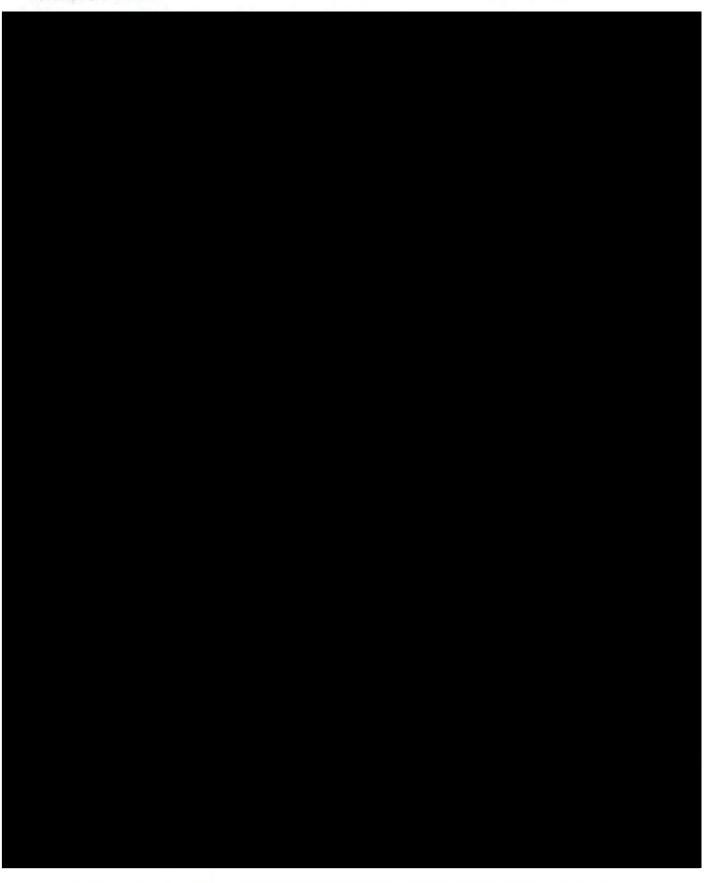




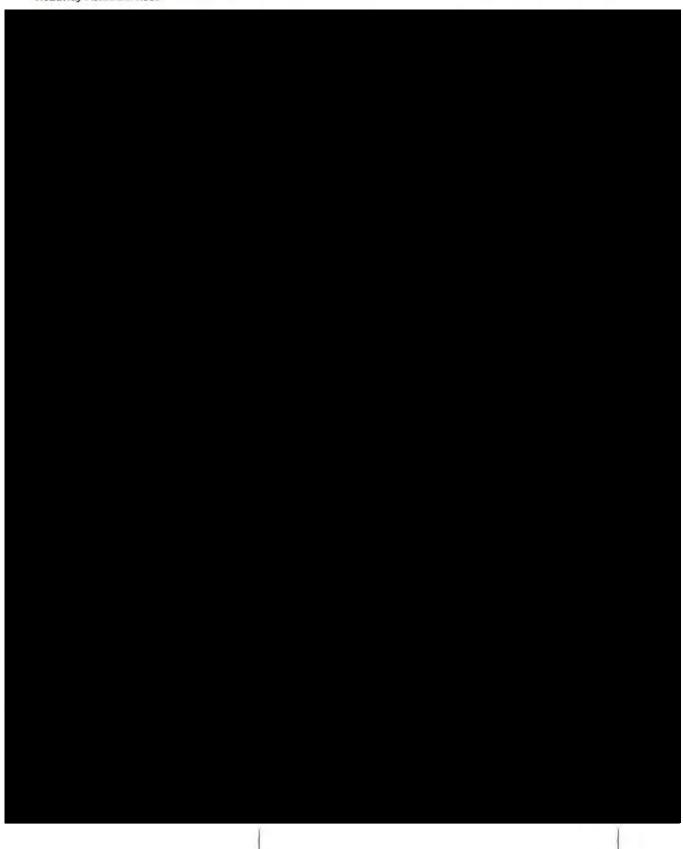




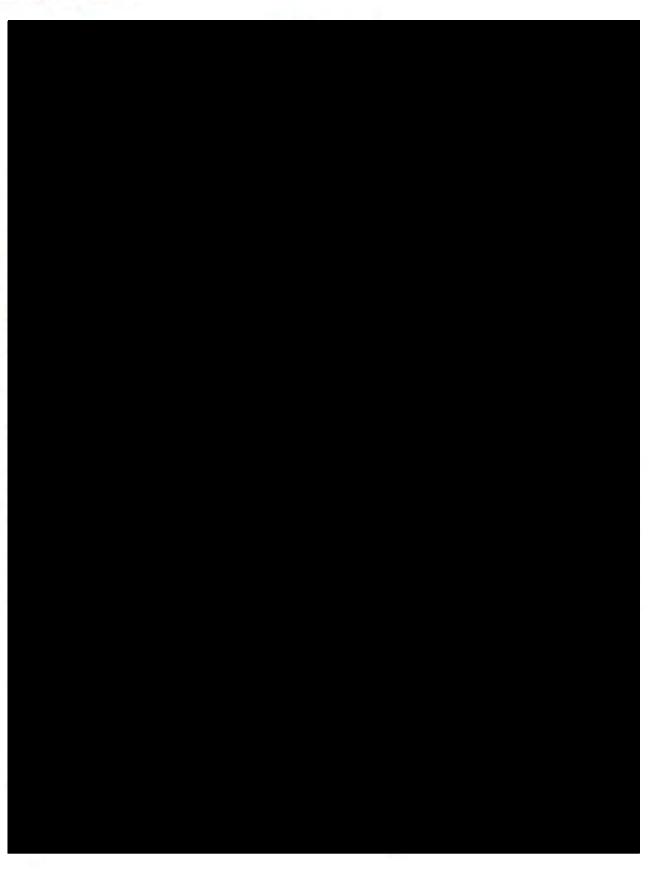












# Quality Control Methodology





