



SAN RAFAEL
THE CITY WITH A MISSION

Agenda Item No: 5.g

Meeting Date: September 13, 2021

SAN RAFAEL CITY COUNCIL AGENDA REPORT

Department: Public Works

**Prepared by: Bill Guerin,
Director of Public Works**

City Manager Approval: _____

TOPIC: SOUTHERN HEIGHTS BRIDGE REPLACEMENT

SUBJECT: RESOLUTION APPROVING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A FIRST AMENDMENT TO THE AGREEMENT WITH SUBSTRATE, INC. FOR ADDITIONAL CONSTRUCTION MANAGEMENT, INSPECTION, AND MATERIALS TESTING SERVICES, IN AN ADDITIONAL CONTRACT AMOUNT NOT TO EXCEED \$65,885

RECOMMENDATION: Adopt a resolution approving and authorizing the City Manager to execute a first amendment to the agreement with Substrate, Inc. for additional construction management, inspection, and materials testing services in an amount not to exceed \$65,885, increasing the total not-to-exceed amount under the agreement to \$490,885.

BACKGROUND: Caltrans routinely inspects bridges across the state to ensure the public's safety. Through this process, the Southern Heights Bridge was identified as needing reconstruction to meet current design, structural, and safety standards. In August 2020, the City retained Substrate, Inc. to help facilitate the construction of this project by providing construction management, inspection, and materials testing services. In October 2020, the City awarded the construction contract to Disney Construction, Inc. On December 14th, 2020, Disney Construction, Inc. began construction with an initial estimated completion in September 2021.

ANALYSIS: As of August 2021, the project completion date has been shifted back a total of 25 working days to account for delays related to rain and COVID-19 (10 days) and added change order work (15 days). These added working days have moved the estimated completion date to the end of October 2021 thus necessitating this amendment to the original agreement with Substrate, Inc. to ensure that they are able to

FOR CITY CLERK ONLY

Council Meeting:

Disposition:

continue providing construction management and inspection services for this project. The consultant will be reimbursed \$45,591 for these extra working days.

Additionally, more materials testing has been required on this project than originally estimated. The following is a summary of each test required by Caltrans and an explanation for why this was not included in the original estimate.

1. Skid Test

Caltrans has an approved method of testing surface skid resistance on bridge decks. In recent years, Caltrans normally conducts the test themselves since the testing equipment is very specialized and no consultant labs have been certified to perform it. On other projects, Caltrans has waived this required testing for bridges that are not on the National Highway System (NHS) which is why this test was not originally budgeted for by Substrate, Inc. Recently however, Caltrans notified the City that it would require this test despite Southern Heights being a non-NHS bridge but could not perform the testing themselves. Caltrans staff recommended that the City hire a consultant to perform this testing using the nationally approved procedure instead of the Caltrans method. The estimated cost of this testing is \$9,044.

2. HRC Coupler and Welded Hoop Testing

The pile cages used for the bridge columns had to be spliced because they were not able to be transported to the site in full length due to a roadway constriction caused by a small landslide at 20 Meyer Road. The landslide occurred on November 14, 2020, after the original agreement with Substrate, Inc. was executed. This testing is required by Caltrans as quality assurance for the welded hoops used to connect the two segments of the pile cages and costs \$11,250.

FISCAL IMPACT: The proposed first amendment will increase the professional services agreement total by \$65,885. This amount will be appropriated in the Capital Project Fund 401. City staff will seek reimbursement of these expenses through the Caltrans Highway Bridge Program grant.

OPTIONS: The City Council has the following options to consider relating to this matter:

1. Adopt the resolution as presented.
2. Do not adopt the resolution and provide further direction to staff.

RECOMMENDED ACTION: Adopt a resolution approving and authorizing the City Manager to execute a first amendment to the agreement with Substrate, Inc. for additional construction management, inspection, and materials testing services in an amount not to exceed \$65,885.

ATTACHMENT:

1. Resolution

2. First Amendment to the Professional Services Agreement with Substrate, Inc. for Professional Services for the Southern Heights Bridge Replacement Project, and corresponding Exhibit A (revised scope of work)

RESOLUTION NO.

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN RAFAEL
APPROVING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A FIRST
AMENDMENT TO THE AGREEMENT WITH SUBSTRATE, INC. FOR ADDITIONAL
CONSTRUCTION MANAGEMENT, INSPECTION, AND MATERIALS TESTING
SERVICES, IN AN ADDITIONAL CONTRACT AMOUNT NOT TO EXCEED \$65,885**

WHEREAS, pursuant to City Council Resolution No. 14846, the City of San Rafael and Substrate, Inc. entered into a Professional Services Agreement dated September 17, 2020 for construction management, inspection, and materials testing services associated with the City's project to reconstruct the Southern Heights Bridge, for an amount not to exceed \$425,000 (the "Agreement"); and

WHEREAS, the City requires additional construction management, inspection, and materials testing services from Substrate, Inc. to cover the 25 working days that have been added due to weather, COVID-19, change orders, and additional testing for unanticipated items; and

WHEREAS, staff received a proposal from Substrate, Inc. for the additional required services in a total amount not to exceed \$65,885; and

WHEREAS, staff has reviewed the proposal and found it to be complete and within industry standards; and

WHEREAS, \$65,885 will be appropriated in Capital Project Fund 401 pending reimbursement from the Caltrans Highway Bridge Program grant;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAN RAFAEL

RESOLVES as follows:

1. The Council hereby approves and authorizes the City Manager to execute a first amendment to the Agreement with Substrate, Inc. for additional construction management, inspection, and materials testing services in connection with the Southern Heights Bridge Replacement Project, in the amount of \$65,885 and a revised total contract value not to exceed \$490,885, in the form included with the staff report supporting this resolution, subject to final approval as to form by the City Attorney.

2. The Director of Public Works is hereby authorized to take any and all such actions and make changes as may be necessary to accomplish the purpose of this resolution.

I, **LINDSAY LARA**, Clerk of the City of San Rafael, hereby certify that the foregoing resolution was duly and regularly introduced and adopted at a regular meeting of the Council of said City on the 13th day of September 2021, by the following vote, to wit:

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

LINDSAY LARA, City Clerk

**FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH
SUBSTRATE, INC. FOR PROFESSIONAL SERVICES FOR THE
SOUTHERN HEIGHTS BRIDGE REPLACEMENT PROJECT**

THIS FIRST AMENDMENT to the Professional Services Agreement by and between the **CITY OF SAN RAFAEL** (hereinafter "**CITY**"), and **SUBSTRATE, INC.**, (hereinafter "**CONSULTANT**"), is made and entered into as of the _____ day of _____, 2021.

RECITALS

WHEREAS, pursuant to City Council Resolution No. 14846, the **CITY** and **CONSULTANT** entered into a Professional Services Agreement dated September 17, 2020 for construction management, inspection, and materials testing services associated with the **CITY'S** project to reconstruct the Southern Heights Bridge, for an amount not to exceed \$425,000 (the "Agreement"); and

WHEREAS, the **CITY** requires additional construction management, inspection, and materials testing services from the **CONSULTANT** to cover the 15 working days that have been added due to change orders and additional testing for unanticipated items, and the **CONSULTANT** is willing to provide such services;

AMENDMENT TO AGREEMENT

NOW, THEREFORE, the parties hereby agree to amend the Agreement as follows:

1. Article III of the Agreement, entitled "STATEMENT OF WORK" is hereby amended to include the additional services set forth in **CONSULTANT'S** proposal entitled "Revised Scope of Services" dated August 19, 2021, attached to this First Amendment as Exhibit "A" and incorporated herein by reference.
2. Article V of the Agreement, entitled "ALLOWABLE COSTS AND PAYMENTS" is hereby amended to include additional compensation payable to **CONSULTANT** for the services described in Exhibit "A" to this First Amendment, on a time and materials basis in accordance with the "Revised Cost Proposal Summary & Schedule" included in Exhibit "A", in a

not-to-exceed amount of \$65,885, and to change the total not-to-exceed amount under the Agreement to \$490,885.


- 3. Except as specifically amended herein, all the other provisions, terms, and obligations of the Agreement between the parties shall remain valid and shall be in full force.

IN WITNESS WHEREOF, the parties have executed this Third Amendment on the day, month, and year first above written.

CITY OF SAN RAFAEL

CONSULTANT: SUBSTRATE, INC.

JIM SCHUTZ, City Manager

By: 


Name: Sundeep Jhutti

Title: President

ATTEST:

and

LINDSAY LARA, City Clerk

By: 

Name: Sundeep Jhutti

Title: President

APPROVED AS TO FORM:

ROBERT F. EPSTEIN, City Attorney



Substrate, Inc

Mr. Theo Sanchez
Project Manager
San Rafael - Department of Public Works
1400 Fifth Avenue, CA 94901

August 19, 2021

Subject: Request for Contract Amendment to Cost Proposal to Provide Construction Management Services for the Southern Heights Bridge Replacement Project – City Project Number – 11282 Fed BRLO-5043 (038)

Dear Mr. Sanchez:

Substrate, Inc has been committed to ensure Disney Construction finishes this project, without sacrificing quality and, it on its way for a completion in the Fall of 2021 – with an estimated substantial completion date of October 31, 2021.

However, as you know, the original cost proposal was based on the contract determined **190 WD**, and currently, the project has **extended to 205 WD due to adding of 15 Change Order Days**. In addition, there were 2 days added due to COVID19 plus 8 rain/wet grade days to date. **The total is 25 Days beyond what was anticipated during the original cost proposal.**

In addition to the days, there were **Specific Required Federal Tests** were not assumed to during the original cost proposal. One Test was the **Skid Test (CT-342)** that was asked to be waived at the beginning of this project as this has been accepted in the past from Caltrans for Non-NHS Municipal Bridge, however, was not waived as a requirement for this project. **This testing comes at a cost of \$9,044.**

The other testing included HRC Coupler Pull Testing (which is required for CT Quality Assurance). This test was required because of the landslide at 20 Meyer Rd, which required the pile cages to be spliced to get around it (see CCO #6). Finally, the pull testing for the Welded Hoops was not foreseen at the time of the original estimate and this scope of work was added to **Miller Pacific Engineering's subcontract**, as they had Smith-Emery perform this work. **This Amendment was for \$11,250 for the HRC Coupler Sampling and Testing and Welded Hoop Testing.**

These needs exceed our currently budget to successfully complete the inspection work, the punchlist items, final progress payments, project filing and closeout, additional federal forms to be filled out, preparation for post construction audit, and post-construction audit paperwork. **This figure includes all work to me performed till project closeout and all remaining inspection work assuming that Disney obtains a substantial completion date of October 31, 2021.**

Therefore, we have submitted our revised Cost Proposal at “**Specific Rates of Compensation**”, which indicates an amendment amount of **Not to Exceed \$65,885**. This cost proposal is valid till **October 31, 2021**. Thanks,

Sincerely,

A handwritten signature in blue ink that reads "Sandeep J. Smith".

Substrate, Inc, President
415-246-4920
sunny@substrateinc.com



Revised Scope of Services

We at Substrate, Inc have found that the successful delivery of a project, begins by providing expert staff support in all three phases of the construction project delivery:

- **Phase 1 – Pre-Construction Services**
- **Phase 2 – Construction Services**
- **Phase 3 - Post-Construction Services**

In each phase, the project will be administered in accordance with Federal and State Procedures, specifically, the Caltrans Local Assistance Program Manual, the Caltrans Construction Manual, and the Caltrans Standard Plans and Specifications. A thorough understanding of Local, State and Federal procedures is a must for any local agency project and this project is no different.

Keep in mind that Substrate, is extremely familiar with Oversight projects and will assist the City in managing the contract in accordance with City Specifications, Caltrans Specifications, and/or Local Assistance Procedures Manual. It is imperative that the construction management firm administer the contract in accordance with Federal and State Procedures, specifically, the Caltrans Local Assistance Procedures Manual, and Caltrans Construction Manual when there are federal funds involved.

The Caltrans Local Assistance Procedures Manual has been prepared to aid California local agencies scope, organize, design, construct and maintain their public transportation facilities when they seek Federal Highway Administration (FHWA) funded federal-aid or state funding. The manual describes the processes, procedures, documents, authorizations, approvals and certifications, which are required in order to receive federal-aid and/or state funds for many types of local transportation projects.

Since almost all of our projects and clients are local agencies, Substrate staff has significant experience with State and Federal Procedures; we manage each phase of our projects (pre- construction, construction and post construction) in accordance with Federal and State Procedures, specifically, the Caltrans Local Assistance Procedures Manual, and Caltrans Construction Manual. We are especially familiar with Chapter 15, Advertise and Award Project, which covers the topics beginning with project supervision, contract time, subcontractors, Engineer's daily reports, projects files, construction records and procedures, safety provisions, labor compliance, equal opportunity employment, disadvantaged business enterprise, contract change orders, material sampling and testing, and traffic safety in the highway and street zones. We also use the guidelines set forth in Chapter 17, Project Completion, to ensure a seamless project closeout.

Revised Scope of Services

We have revised our Scope of Service to match current needs:

Phase 1 – Preconstruction Management Services

Substrate will provide the following services including, but not limited to:

- Coordinate, conduct, and attend the Pre-Construction Conference.
- Review the Contractor's Submittals.
- Set up and conduct a meeting with the Engineer of Record to discuss ideas to expedite work.
- Develop list of anticipated Contractor submittals with milestones by which the submittal will be made and the timeframe allowed for review.
- Take Pre-Construction Photographs and documentation of Pre-Construction Conditions.

Phase 2 – Construction Management Services

Working under the direction of the City, our staff will provide the following tasks for your project(s):



- Assist in administration of Contract Documents;
- Conduct quality assurance inspection in accordance with Contract Documents and in accordance with the Caltrans Construction Manual.
- Provide materials testing and testing frequencies in accordance with the Caltrans Construction Manual;
- Monitor Project safety;
- Coordinate and manage the Project public outreach program;
- Provide communication and coordination between City, Contractor, Caltrans, regulatory permitting agencies, and utility companies;
- Coordinate with City design engineer to review Contractor submittals;
- Provide documentation and reporting in accordance with the Caltrans Local Assistance Procedures Manual;
- Maintain a daily inspector's report that records the hours worked by laborers and equipment. The report will include a narrative description of the Contractor's operation and location of work and any other pertinent information. Daily report forms will be in compliance with the Caltrans Construction Manual;
- Enforce labor compliance by preparing daily reports with required information, monitoring certified payrolls and doing spot check labor surveys and interviews;
- Review Project environmental documentation and compliance of Storm Water Pollution Prevention Plan (SWPPP) in accordance with the Caltrans Construction Manual. Coordinate routine inspections with City staff as needed;
- Coordinate source inspection as required;
- Provide review and inspection of Contractor's work for compliance with Contract Documents on a daily basis;
- Monitor and document corrective actions taken by the Contractor needed for work deemed non-compliant with the Contract Documents;
- Review Contractor's compliance with all regulatory permits and mitigation measures;
- Review Contractor's compliance with workplace safety and health standards and notification of non-compliance
- Review Contractor's survey layouts;
- Coordinate and monitor Contractor's detours, lane closures, and staging plans;
- Review and manage Contractor change orders;
- Review and manage insurance claims;
- Provide review and analysis of Contractor's construction Project management schedule; and
- Process monthly quantity verifications and Contractor pay estimates.
- Maintain Project records in accordance with Caltrans Construction Manual and Local Assistance Procedures Manual.
- **Additional Inspection Services required for 25 WD time extension and Punchlist Activities assuming Substantial Completion date of October 31, 2021, and one-week punchlist.**
- **Sampling and Testing of HRC Couplers for CIDH Cages performed by MPEG.**
- **Sampling and Testing of Welded Hoops for CIDH Cages performed by MPEG.**
- **Caltrans Skid Test (CT-342) perform by ARA.**

Phase 3 – Post - Construction Management Services

Substrate, Inc will provide the following services to the City:

- Coordinate and prepare final inspection and punch-list. Monitor and verify completion of punch list items;
- Prepare Red-Line As-builts;
- Prepare final reporting in accordance with the Caltrans Local Assistance Procedure Manual and City



Substrate, Inc

requirements.

- Provide Project files to the City.
- Prepare and make recommendations for final progress payment and acceptance;
- Finish Post-Construction Checklist for Caltrans.
- Complete all audit paperwork for upcoming Federal Audit.
- Attend post-construction Audit with Caltrans.
- Complete all CM related federal forms and completion records per LAPM Chapter 17.
- Package all Deliverables

SOUTHERN HEIGHTS BOULEVARD BRIDGE REPLACEMENT PROJECT - CITY OF SAN RAFAEL

REVISED COST PROPOSAL SUMMARY & SCHEDULE

Name	Company	Classification	Cons Services		Subtotal Labor Hrs 2021	Bill Rates 2020/2021	Total
			Oct-21	Nov-21			
Sunny Jhutti, PE, SE	Substrate, Inc	RE/Structure Rep	64	24	88	\$ 176.83	\$ 15,561.04
Edwin Eckberg	Substrate, Inc	Full Time Inspector	160	40	200	\$ 150.15	\$ 30,030.00
Materials Testing	Miller Pacific	Subconsultant Tester				Labor+ODC	\$ 11,250.00
Skid Test (CT-342)	ARA	ODC Vendor				ODC	\$ 9,044.00
						Subtotal	\$ 65,885.04
Assumptions: Known 25 WD added to contract. Anticipated Contract Substantial Completion Date of October 31st						NTE (Labor + ODC)	\$ 65,885.00
One week of project close out in November. Punchlist Inspection and File Completions.							
MPEG Amendment 1 - HRC Coupler Sampling and Testing. Welded hoops Testing						Total Plus Amendment	\$ 490,885.00
Skid Test (CT-342) by ARA							
Date: 8/19/2021							



**SUB CONSULTANT AGREEMENT –
Amendment #1**

Between

Substrate, Inc

And

Miller Pacific Engineering Group

For

Materials Inspection Services

Southern Heights Blvd Bridge Replacement Project

City of San Rafael

Project No. BRLO 5043(038)

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SUB CONSULTANT AGREEMENT

This **Sub Consultant Agreement**, effective [October 8, 2020](#) by and between Dynamic Dzyne Associates, Inc dBA Substrate, Inc, a California corporation having an office located at 270 Crest Rd in Novato, California 94945 herein after referred to as “Consultant”, and [MPEG](#), having an office located at [504 Redwood Blvd, Suite 220, Novato, CA 94947](#) hereinafter referred to as “Sub Consultant”.

WITNESSETH:

WHEREAS, Consultant has been contracted to provide construction management services to the [City of San Rafael \(Client\)](#) for [Southern Heights Blvd Bridge Replacement Project](#) referred to as (the “Project”); and

WHEREAS, Consultant and Sub Consultant mutually desire to enter into an agreement for Sub Consultant to perform certain of the Prime Contract services in accordance with the terms and conditions of this Subcontract Agreement.

NOW THEREFORE, in consideration of the mutual covenants hereinafter set forth and for other good and valuable consideration, THE PARTIES AGREE AS FOLLOWS:

ARTICLE 1. DEFINITIONS

It is understood that when the following words and phrases are used herein, each shall have the meaning set forth below:

- Sub Consultant: [Miller Pacific Engineering Group \(MPEG\)](#)
- Consultant: Substrate
- Client: [City of San Rafael \(CSR\)](#)
- Project Manager: [Sunny Jhutti, PE, SE](#), or his successor as appointed or designated in writing by the Consultant.
- Contractor: The Construction Contractor selected to perform the construction of the Project.
- Prime Contract: [Contract Agreement between Substrate, Inc and City of San Rafael](#)
- Sub Consultant Agreement: Referred to as Subcontract Agreement or Subcontract
- Project: A discrete, defined undertaking with specific time, budget and technical performance goals as detailed in the contract documents and otherwise known as [Southern Heights Blvd Bridge Replacement](#).
- Sub Consultant(s): Subconsultant(s) are those persons/firms retained by Consultant to assist in performing and providing the Services as listed in [“Exhibit A” the Prime Contract Agreement with City of San Rafael](#).
- Scope of Work: “Scope of Services” as defined in the Prime Contract and in the individual Work Authorization, [“Exhibit B”](#) attached in this Sub Consultant Agreement.

ARTICLE 2. DESCRIPTION OF SERVICES

Sub Consultant accepts the relationships of trust and confidence established between Sub Consultant and Consultant by this Sub Consultant Agreement. Sub Consultant agrees to furnish its best efforts at all times and in a professional manner in performing the Work. The Work performed by Subconsultant under this Subcontract shall conform to the standard of care set forth in the Prime Contract, or in the absence of such standard in the Prime Contract, to generally acceptable professional standards.

The general scope of work for this subcontract shall be as described in the Prime Contract, as it now exists or may be modified, including but not limited to those services set forth in the Prime Contract hereto.

All of Sub Consultant's Work will be subject to Consultant acceptance after such Work has been checked and approved by Sub Consultant. Unless otherwise agreed by Consultant, Sub Consultant shall sign all drawings and calculations as checked and approved prior to submitting for Consultant review. Notwithstanding Consultant acceptance of the Work or any pertinent data, Sub Consultant shall be and remain fully responsible for the Work, the adequacy and completeness of the Work and any such drawings and calculations, and Sub Consultant shall not be relieved from any duties or responsibilities under this Subcontract on account of such acceptance by the City of San Rafael.

ARTICLE 3. TASK ORDERS AND WORK AUTHORIZATIONS

Consultant reserves the right to request resumes and background information of the qualified individuals assigned to the project by Sub Consultant. Consultant and/or CSR will determine the most qualified individuals from the resumes submitted, and reserves the right to interview individuals as deemed necessary to make a suitable selection. Consultant and/or CSR may, at their sole discretion, reject individuals with or without cause, request additional resumes for consideration, or select personnel from the resumes submitted for consideration.

ARTICLE 4. INDEPENDENT CONTRACTOR

Sub Consultant is retained as an individual independent contractor, not an employee or agent of Consultant or CSR, and shall be responsible for its own work. The personnel furnished by Subconsultant to perform the Sub Consultant's scope of work shall be deemed to be exclusively employees of Sub Consultant; and said employees shall be paid and controlled by the Sub Consultant for all services performed in connection with this Subcontract. Sub Consultant shall be fully responsible for all obligations and reports covering Social Security, Unemployment Insurance, Worker's Compensation, Income Tax, Prevailing Wages and other reports and deductions required by any applicable State or Federal law or any and all other laws and regulations governing such matters.

ARTICLE 5. PERIOD OF SERVICE

The period of service shall begin on October 1, 2020 on an "as-needed" basis. Services may be terminated in accordance with the applicable provisions of this Subcontract. During the period of service, Sub Consultant agrees that all communications with the Client (City's Director Public Works, or his designee) relating to

contractual matters, payments, staffing needs and project management matters require a written approval from the Consultant. However, for technical work the Sub Consultant are required directly to communicate with the Consultant or its designee. The Consultant will not be responsible for Sub Consultant's technical field work performed by Sub Consultant employees including work site safety and all construction engineering, inspection, and other work performed by the Sub Consultant. Failure to comply with Article 5, the Consultant reserves its right to exercise Article 14 Termination (Termination for Cause).

ARTICLE 6. COMPENSATION

Fixed Hourly Rate under this Sub Consultant Agreement shall be as described under the terms of the Exhibit 10H, and Form 10A, "**Exhibit B**" to this Subcontract. In no event shall compensation exceed the total amount of this Subcontract or the combined total amount of all executed Task Orders and Work Authorizations for this Subcontract Amendment. Total compensation for this **contract amendment is not to exceed \$11,250.00**. Scope of work is listed in Exhibit A of the Prime Consultant Agreement, but it includes Source Inspection Material Testing pursuant to the 2018 Caltrans Standard Specifications. The project is Federally Funded.

Additional Testing includes: **Sampling and Testing of HRC Couplers and Sampling and Testing of CIDH Pile Cage Welded Hoops.**

At such time that it is determined that eighty percent (80%) of the stated Subcontract amount is, or will be, exhausted by the issued Task Orders and Work Authorizations under this Agreement, plus any outstanding claim for additional services or costs by the Sub Consultant, Sub Consultant shall inform the Project Manager in writing and in a timely manner of their request for additional funds, providing a projection to completion. Additional amounts will be authorized at the sole discretion of the Project Manager.

All compensation paid to Sub Consultant shall comply with all the provisions listed in "**Exhibit A**" of the Prime Contract Agreement for the Project.

ARTICLE 7. CHANGES/AMENDMENTS

Consultant may, at any time, make changes in the work within the general scope of this Sub Consultant Agreement and Work Authorizations and/or executed Task Orders. All changes to this Sub Consultant Agreement or its Work Authorizations, including, but not limited to, the scope of services, schedule, Period of Service, compensation and other attachments/exhibits, shall be issued in writing by Consultant. Any costs incurred by Sub Consultant without proper contractual authorization or direction from an authorized representative of Consultant shall be considered non-reimbursable.

In the event any direction from Consultant is considered by Sub Consultant to be a change or an additional Work Authorization or Task Order, Sub Consultant shall notify Consultant in writing of the impact on cost, schedule and scope and shall include other relevant information. Consultant may reject any request for an adjustment if it is asserted more than twenty (20) days after the Subconsultant received the direction. No adjustments shall be allowed if asserted after final payment under this Subcontract.

ARTICLE 8. INDEMNIFICATION

Notwithstanding any provision of this Agreement to the contrary, Sub Consultant agrees to indemnify, hold harmless, and defend Consultant and the **CSR** from and against all claims, demands, damages, losses, costs, expenses (including attorneys' fees), fines, or penalties arising out of, related to, or as a consequence of, or alleged to arise out of, relate to, or be a consequence of any negligent act, error, or omission to act on the part of the Sub Consultant or its employees, agents, or independent contractors, or the invitees of any of them.

ARTICLE 9. WORKSITESAFETY

In addition to any safety requirement set forth in the Subconsultant Agreement or established by the Client, Sub Consultant agrees that for all services performed by agents or employees of Sub Consultant at the worksite

designated by this Sub Consultant Agreement, that the person(s) assigned to supervise, manage or provide said services shall have knowledge of Cal OSHA Work Site Safety Requirements prior to undertaking the performance of said services, and Sub Consultant shall assure that Cal OSHA Work Site Safety Requirements are followed in the performance of said services. Should a claim or alleged violation of a Cal OSHA Safety Requirement arise regarding an undertaking or service provided by the Subcontractor as set forth in its scope of work, Sub Consultant shall be primarily liable for said claim, and will indemnify, defend and hold Consultant harmless against such claim of a safety violation, or any cause of action based upon an allegation of a violation of a Cal OSHA Safety Requirement, as set forth in Article 8.

ARTICLE 10. INVOICING PROCEDURES AND RECORDS

Payment shall be subject to receipt of detailed invoices and subject to approval of Consultant's Project Manager or his designee. Receipt of payment from CSR for Sub Consultant's work is a condition precedent on payment by Consultant to Sub Consultant. Consultant will pay Sub Consultant only after receipt of certified payrolls and within thirty (30) days of receiving payment from CSR for Sub Consultant's work. Sub Consultant hereby acknowledges that it relies on the credit of CSR, not Consultant, for payment of its work. Consultant shall take all steps which are in its judgment reasonable and appropriate to collect all fees due from CSR. Sub Consultant shall retain without restriction and may exercise at its sole discretion whatever rights, including design professional and mechanic's lien rights, which it may have to collect its fees directly from CSR or others. Consultant shall be liable for Sub Consultant's fees only after and to the extent Consultant has collected the Prime Contract fees, however, it being the intention of the parties that ultimately Sub Consultant should recover its fees, if at all, from CSR with Consultant serving as an intermediary, and not to put Consultant at risk for the nonpayment of Sub Consultant fees generated for the benefit of CSR.

Acceptance by Sub Consultant of final payment for services covered under this Sub Consultant Agreement shall operate as a release of Consultant from all claims against Consultant for additional compensation arising from services provided under this Sub Consultant Agreement.

Sub Consultant shall submit monthly invoices in the form specified by Consultant no later than the fifth (5th) day of each month for inclusion in Consultant invoice to CSR. Sub Consultant shall provide employee timesheets, certified payrolls and fringe benefit statements with each invoice, pursuant to and in compliance with State Labor Laws.

In compliance with Federal regulations, the Sub Consultant shall maintain timesheets and records showing standard payroll rates and other cost documentation related to the performance of this Sub Consultant Agreement, as well as other related documentation. For purposes of auditing the Sub Consultant's costs, written data supporting actual costs shall be made available within a reasonable time during the Sub Consultant Agreement period and for a period of three (3) years thereafter.

ARTICLE 11. SUBCONTRACTING

Sub Consultant is not authorized to subcontract any portion of this work. Any future approval for subcontracting will be specifically authorized by Consultant in an Amendment to this Sub Consultant Agreement and include additional Sub Consultant Agreement provisions related to lower tier subcontractors.

ARTICLE 12. SUCCESSORS AND ASSIGNEES

Sub Consultant shall not assign, sublet, sell, transfer or otherwise dispose of any interest in this Sub Consultant Agreement without prior written approval of Consultant.

This Sub Consultant Agreement shall be binding upon and inure to the benefit of the parties hereto, their successors and permitted assignees, but shall not inure to the benefit of any third party or other persons, other than CSR.

ARTICLE 13. SUSPENSION OF WORK

Consultant may, as a result of a Suspension of Work Order from CSR, by written order to Sub Consultant, require Sub Consultant to suspend, delay, or interrupt all or any part of the Work called for by this Sub Consultant Agreement. Any such order shall be specifically identified as a "Suspension of Work Order" issued pursuant to this Article. Consultant may order a Suspension of Work to the Sub Consultant at any time giving the Sub Consultant a two (2) day notice if actions taken by Sub Consultant is deemed disruptive to the work ordered by the Client.

ARTICLE 14. TERMINATION

Termination for Convenience

Consultant shall have the right to terminate this Subcontract at any time by giving at least ten (10) days advance written notice to Sub Consultant. If the Sub Consultant Agreement is terminated for any reason other than cause, Consultant will pay Sub Consultant in accordance with the terms and conditions of the Sub Consultant Agreement all sums actually due and owing from Consultant for all services performed and expenses incurred up to the date of the written notice of termination. No additional costs will be paid to the Sub Consultant to effect such termination.

Termination for Cause

This Sub Consultant Agreement may be terminated for cause upon two (2) days written notice should Subconsultant fail substantially to perform in accordance with the terms of this Subcontract. If the Subcontract is terminated for cause, Consultant shall pay Sub Consultant in an amount to cover all services performed and expenses incurred in full accordance with the terms and conditions of this Sub Consultant Agreement up to the effective date of termination.

Failure to Complete Subcontract

In the event that the Sub Consultant fails to complete the Sub Consultant Agreement within the specified time or within authorized extensions, the Sub Consultant Agreement may be terminated and Consultant shall not thereafter pay or allow to the Sub Consultant any further compensation for any labor, supplies, or material furnished under Sub Consultant Agreement. Consultant may proceed to complete such work either by re-subcontracting or otherwise and the Sub Consultant shall be liable to Consultant for all loss or damage which it may suffer on account of the Sub Consultant failure to complete Sub Consultant Agreement within such time.

The termination of the Prime Contract shall automatically terminate this Sub Consultant Agreement as well. Regardless of why this Agreement is terminated, if necessary or appropriate to facilitate Consultant fulfilling of its Prime Contract obligations, then Sub Consultant shall permit Consultant to take possession of whatever drawings, working papers, calculations or other documents and things, including those fixed in any electronic medium, which have been provided to or generated by or on behalf of Sub Consultant concerning the Project.

ARTICLE 15. OWNERSHIP OF DOCUMENTS

Sub Consultant agrees that all documents, reports, materials, or other subject matter, including the original thereof, developed, prepared, procured, or produced in the rendition of the services under this Sub Consultant Agreement shall be the property of Consultant, unless otherwise set forth in the Prime Contract, and all such documents, reports, materials, or other subject matter shall be delivered to Consultant upon completion of this Sub Consultant

Agreement, or upon any termination or cancellation thereof, prior to final payment. Sub Consultant may retain at its own expense a record copy of all such documentation.

ARTICLE 16. INFORMATION, RECORDS AND REPORTS

Sub Consultant shall provide all information and reports required by Federal regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by Consultant or CSR. Sub Consultant shall permit CSR and/or Consultant to inspect and audit all data and records of Sub Consultant relating to performance under this Sub Consultant Agreement. Sub Consultant undertakes not to use any software for which the proper license has not been duly obtained and filed with the Consultant.

ARTICLE 17. FINDINGS CONFIDENTIAL

Any documents, reports, information, or other data and materials available to or prepared or assembled by Sub Consultant or subcontractors under this Sub Consultant Agreement shall not be made available to any person, organization, or entity by Sub Consultant without consent in writing from Consultant unless required by law or court order.

ARTICLE 18. CONFLICT OF INTEREST

Sub Consultant covenants that it presently has no interest, and shall not have any interest, direct or indirect, which would conflict in any manner with the performance of services required under this Sub Consultant Agreement.

ARTICLE 19. INCORPORATION OF CITY OF SAN RAFAEL AGREEMENT

To the extent applicable to the work to be performed by Sub Consultant under this Sub Consultant Agreement; the provisions of the Prime Contract, addenda, amendments and other documents forming a part of the Prime Contract are hereby incorporated into this Subcontract with the same force and effect as though set forth in full. Sub Consultant shall be bound to Consultant to the same extent that Consultant is bound to CSR, by all of the terms and provisions of Prime Contract Agreement, and by all decisions, rulings, and interpretations of CSR or its authorized representative. A copy of the Prime Contract Agreement is attached as *Exhibit A*.

In the event of direct conflict between CSR Agreement, as defined above, and the provisions of this Sub Consultant Agreement, the greater requirement of the Sub Consultant shall control, or if that is an inapplicable standard, then the Prime Contract shall control.

ARTICLE 20. GOVERNING LAW/DISPUTES

This Subcontract shall be governed by and construed under the laws of the State of California.

Consultant and Sub Consultant shall attempt to resolve any and all disputes concerning the Agreement first by informal face-to-face negotiations, and then by formal mediation. Mediation fees, if any, shall be divided equally among the parties involved. In all events, however, Sub Consultant shall expeditiously carry out Consultant directions concerning the Project; and Sub Consultant hereby waives any right to cease or suspend its performance at any time when so doing would hinder Consultant ability to meet its obligations concerning the Project. In the event litigation and/or disputes develop between Consultant and Sub Consultant concerning or arising out of this

Sub Consultant Agreement, then the prevailing party shall be entitled to recover from the other reasonable attorney's fees and litigation costs. The "prevailing party" means the party determined by the court to have most nearly prevailed, even if such party did not prevail in all matters, not necessarily the one in whose favor a judgment is rendered.

ARTICLE 21. SUBCONSULTANT'S INSURANCE

- A. Without limiting Sub Consultant's indemnification obligations, Sub Consultant shall provide, pay for, and maintain in force at all time during the performance of the services insurance to protect himself, Consultant, and the Client: from claims arising under Workman's (Worker's) Compensation; from claims for damages because of bodily injury including personal injury, sickness or disease or death of any person; from claims for damages resulting from injury to or destruction of property, including loss of use thereof; and from claims arising out of the performance of professional services, or as a consequence thereof, caused by error, omission, or negligent act for which Subcontractor, its employees, agents, subcontractors, and material suppliers, or the invitees of any of them, may be responsible.
- B. Sub Consultant shall provide, pay for, and maintain in force at all times during the performance of the services insurance **in compliance with the insurance requirements of the Prime Contract.** In the event the Prime Contract does not contain any insurance requirements, or to the extent such insurance requirements contained in the Prime Contract are less than the following insurance requirements, Sub Consultant shall provide, pay for, and maintain the following insurance:
 - i. Workers' Compensation Insurance as may be required by all state and federal workers' compensation acts, the Federal Longshoremen's and Harbor Workers' Compensation Act, the Outer Continental Shelf Act and such other acts as may be applicable to the Work performed hereunder.
 - ii. Employers' Liability Insurance with amounts required by law or \$100,000 whichever is greater.
 - iii. Commercial General Liability Insurance covering liabilities for death and personal injury and liabilities for loss of or damage to property with combined single limit of One Million (\$1,000,000.00) Dollars per occurrence and Two Million (\$2,000,000.00) Dollars in the aggregate.
 - iv. Automobile Public Liability Insurance with a minimum One Million (\$1,000,000.00) Dollars per occurrence coverage for both bodily injury and property damage.
 - v. Professional Liability Insurance with limits of liability not less than One Million (\$1,000,000.00) Dollars per occurrence and (\$1,000,000.00) Dollars in the aggregate.
- C. Sub Consultant shall submit to Consultant certificates of insurance evidencing such policies upon the signing of this Subcontract. The certificates provided to Consultant shall specifically state that Consultant shall be given thirty (30) days notice prior to cancellation or material change in policy coverage.
- D. Except with respect to Professional Liability Insurance and Worker's Compensation Insurance, Subcontractor shall name Consultant and the Client as additional insured on all insurance policies required above.
- E. Sub Consultant shall also require its subcontractors, if any, who will perform work on the Project to procure and maintain the insurance specified above, naming Consultant and the Client as an additional insured, and to furnish Consultant proof thereof.

Sub Consultant Obligations

Sub Consultant shall not violate or knowingly permit to be violated any conditions of the policies of issuance provided to CSR under the term of this Agreement and shall at all times satisfy the requirements of the issuance companies issuing them.

For insurance purposes, Sub Consultant agrees to keep and maintain an accurate and classified record of its payroll, to furnish to CSR and to the insurance company or companies full and accurate payroll data information in accordance with the requirements of the insurance company or companies, and to permit its books and records to be examined and audited periodically by the insurance company or companies or CSR and their respective representatives.

Sub Consultant acknowledges and understands that Consultant in reliance on the provisions of this Sub Consultant Agreement, is placing its trust and confidence in Sub Consultant, and that Sub Consultant's duties toward the Consultant is that of a fiduciary. Therefore, Sub Consultant agrees not to: (1) directly or indirectly, hire, solicit or encourage an employee of Consultant to leave the employ of Consultant; (2) directly or indirectly, hire, solicit or encourage any other consultant to cease work with Consultant or (3) directly or indirectly solicit or encourage a client of Consultant to refrain from doing any business with Consultant.

Notices, Costs, Losses

All policies of insurance that Sub Consultant is required under the terms of this Sub Consultant Agreement to secure and maintain shall be endorsed to provide that the insurance company shall notify CSR, Consultant and the named insured, at least thirty (30) days prior to the effective date of any cancellation or modification of such policies.

The cost of the premiums for the insurance specified above to be secured and maintained by Sub Consultant shall be considered a part of the Sub Consultant costs and has been taken into account in determining the Compensation and hourly rates specified in "Exhibit A" of this Sub Consultant Agreement.

Sub Consultant shall require all policies of insurance that are in any way related to the Project and secured and maintained by Sub Consultant to include clauses providing that each underwriter shall waive all of its rights of recovery, under subrogation or otherwise, against CSR and the Consultant.

ARTICLE 22. PROHIBITED INTEREST

No member, officer, agent, or employee of CSR or Consultant during his or her tenure or for one year thereafter shall have any interest, direct or indirect, or shall be approached directly or indirectly regarding prospective employment by Sub Consultant without specific written authorization by Consultant. Violation of this article will result in termination of this Sub Consultant Agreement for cause.

ARTICLE 23. NON-WAIVER

No failure or waiver or successive failures on the part of either party hereto, their successors or permitted assignees, in the enforcement of any condition, covenant, or article of the Sub Consultant Agreement shall operate as a discharge of any such condition, covenant or article nor render the same invalid, nor impair the right of either party hereto, their successors or permitted assigns, to enforce the same in the event of any subsequent breaches by the other party hereto, its successors or permitted assignees.

ARTICLE 24. NOTICES OR DEMANDS

Any notice or demand to be given any one party to the other shall be given in writing per person service, telegram, express mail, Federal Express, DHL or any other similar form of courier or delivery service, or mailing in the United States Mail, postage prepaid, certified, return receipt requested and addressed to such party as follows:

Consultant
Substrate, Inc
270 Crest Rd
Novato, CA 94945
Attn: Sundeep Jhutti, PE, SE

Sub Consultant:
Miller Pacific
Engineer Group
504 Redwood Blvd, Suite 220
Novato, CA 94947
Attn: Scott Stephens

Either party may change the address at which such party desires to receive written notice of such change to any other party. Any such notice shall be deemed to have been given and effective, on delivery to the notice address then applicable for the party to which the notice is directed; provided, however, that refusal to accept delivery of a notice or the inability to deliver a notice because of an address change which was not properly communicated shall not detract or delay the giving of notice.

ARTICLE 25. PATENTS AND COPYRIGHTS

No drawings and specifications, as instruments of services developed by Sub Consultant as part of its work under this Sub Consultant Agreement, shall be the subject of an application for patent, copyright or trademark by or on behalf of Sub Consultant.

ARTICLE 26. SEVERABILITY

If any one or more of the provisions contained in this Agreement, for any reason, are held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision hereof and this Sub Consultant Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

ARTICLE 27. NO THIRD PARTY RIGHTS

Nothing contained herein shall be deemed to create any contractual relationships between the Sub Consultant and CSR or any of the other contractors, subcontractors, or material suppliers on the Project, nor shall anything contained herein be deemed to give any third party any claim or right of action against Consultant or Sub Consultant which does not otherwise exist without regard to the Sub Consultant Agreement, other than CSR.

ARTICLE 28. EXTENT OF AGREEMENT

This Sub Contract Agreement, including the Work Authorizations(s), represents the entire and integrated agreement between Consultant and Sub Consultant and supersedes all prior negotiations, representations or agreements, whether written or oral.

IN WITNESS WHEREOF, the parties have made and executed this Sub Consultant Agreement as of the day and year first written above.

Substrate, Inc

Miller Pacific Engineering Group



Signature

Sundeep Jhutti

Signature

Scott Stephens

Print Name

President

Print Name

President

Title

1/21/2021

Title

January 21, 2021

Date

Date

ATTACHMENTS:

Exhibit A: Prime Contract

Exhibit B: Proposal



August 4th, 2021

Sunny Jhutti, PE, SE
Resident Engineer
Substrate, Inc - <https://substrateinc.com/>
Structural Engineering | Construction Management
415.246.4920

REF: Pavement Non-Destructive Friction Testing in San Rafael, CA

Dear Mr. Jhutti,

ARA is pleased to provide the following proposal for friction testing. ARA will mobilize its 1295 Pavement Friction Tester to conduct non-destructive friction testing (NDT).

The goal is to determine the Skid Numbers on the road. Due to the short length of the bridge, it is likely only one to two test values can be recorded with each pass of the friction test rig.

Please note that it is **VERY important** that the road be free of personnel and equipment for 300-500ft before the test area and 300ft after the test area to allow safe acceleration and deceleration of the friction testing equipment. If the roads are open to traffic we do not require traffic control.

Please call if you have any further questions. Thank you for the opportunity to offer our services.

Sincerely,

Applied Research Associates

Phillip R. Donovan, PhD, PE
Principal Engineer
Applied Research Associates
165 S. Chestnut St
Ventura, CA 93001
Phone: (719)649-9505

William R. Vavrik, Ph.D., P.E.
Vice President

1 PROJECT UNDERSTANDING

Applied Research Associates, Inc. (ARA) understands that you would like friction testing conducted on a bridge on Southern Heights Blvd in San Rafael, CA. Testing is to be completed in 1 lane in each direction.

Skid resistance testing will be conducted in all lanes using our 1295 PFT. The testing and will be performed in accordance with ASTM E274 and then correlated to the California Coefficient of Friction Number (f).

We will provide a written report showing tests results in electronic (PDF) format by email. We will come to the site with a full tank of water to complete the testing.

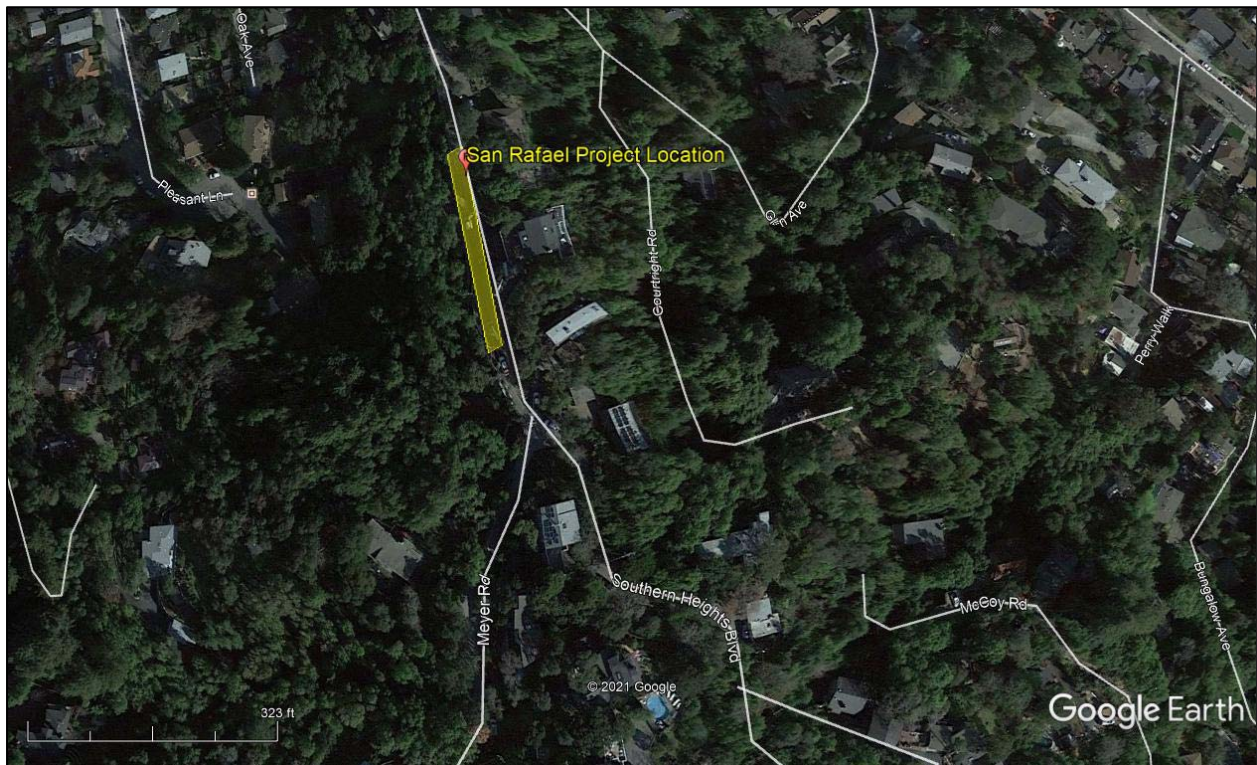


Figure 1. Friction Testing Location

2 SCOPE OF SERVICES

ARA will provide Friction testing and data analysis.

Skid resistance testing will be conducted in all lanes using our 1295 PFT. The testing and will be performed in accordance with ASTM E274 and then correlated to the California Coefficient of Friction Number (f).

The ASTM E501 standard rib tire will be used for the testing and water will be applied to the pavement ahead of the test tire to provide a 0.5 mm water film depth in accordance with E274. Please note that the typical test speed is 40mph for ASTM E274, but because the speed limits are lower for these roads, the testing will be completed and reported at the posted speed limits.

The skid number (SN) for each test will be reported as well as the average for each uniform section.

The correlation equation between the SN40R value and the California Coefficient of Friction Number (f) is from the State of California Report Number 633126-7 Skid Tester Correlation Study from October of 1971.

$$SN40R = 15.1 + 81.5f \text{ or } f = \frac{SN40R - 15.1}{81.5}$$

A summary of the non-destructive testing plan for the road is shown below:

ARA Equipment	Pavement Friction Tester (PFT)
Type of testing	ASTM E274 Skid resistance
Frequency	Minimum test frequency of 250ft, minimum of 3 tests per lane
Estimated number of test points	6 – 10 points
Testing time (hours)	3-5 hours

The PFT tank should not have to be filled with water in the field. Typically, no traffic control is needed for the skid resistance testing unless required by California DOT. If traffic control is required it shall be provided by the prime contractor in accordance with California DOT requirements. Note that, depending on the test speed, we may require up to 500ft at the beginning and the ending of the test area for safe acceleration and deceleration.

After collecting and analyzing the data, a letter report will be provided including the SN and California Coefficient of Friction for the reporting frequency shown in the above table. All data will be referenced with a distance from the start point of the section and GPS coordinates. A Google Earth file will be provided showing the location of the collected data.

3 PROJECT SCHEDULE

It is anticipated that testing will be completed in 1 day. Please note we require 3 weeks' notice to proceed to schedule the equipment and technician for the testing.

4 DELIVERABLES

A letter report will be provided including the SN and California Coefficient of Friction results. All data will be referenced with a distance from the start point of the section and GPS coordinates. A Google Earth file will be provided showing the location of the collected data.

5 PROJECT PRICE

ARA will provide the services noted in this proposal on a firm fixed price basis according to the following price. **Please note that there are two prices shown, one if this project is combined with a second project and one if we have to mobilize individually for this test.**



COMBINED MOBILIZATION with another project		
Bridge Friction Testing on Southern Heights Blvd in San Rafael, CA		
Task	Item	Price
Task 1 - Friction Testing	Item 1 - Project Management	\$825
	Item 2 - Mobilization	\$2,992
	Item 3 - Friction Data Collection	\$3,579
	Item 4 - Data Processing	\$1,029
	Item 5 - Data Submittal	\$621
Total		\$9,044
INDIVIDUAL MOBILIZATION		
Bridge Friction Testing on Southern Heights Blvd in San Rafael, CA		
Task	Item	Price
Task 1 - Friction Testing	Item 1 - Project Management	\$825
	Item 2 - Mobilization	\$3,520
	Item 3 - Friction Data Collection	\$3,579
	Item 4 - Data Processing	\$1,029
	Item 5 - Data Submittal	\$621
Total		\$9,572

ARA will invoice after submittal of the results for payment to be made within 30 days of receipt of invoice (Net 30).

6 GROUND RULES AND ASSUMPTIONS


ARA's offering is based on the following ground rules and assumptions. Should any of these be adjusted during negotiations, the proposed offer, including pricing may be subject to change.

1. ARA anticipates a fixed price contract.
2. The assumed period of performance is summer 2021.
3. ARA will submit one invoice after the submittal of the results to the client with payment terms of net30.
4. ARA anticipates that the terms and conditions part of this proposal will govern.
5. One (1) testing day is a normally a total of eight (8) working hours either day or night. An additional \$51.09 per hour (\$408.72 per 8-hour shift) will be added for night testing. Each additional hour of testing would involve \$333. Overtime rates (\$51.09 added to standard rate) will be charged for each additional hour exceeding the 8-hour day or 40-hour week. Standby time will be charged at \$245 per hour.
6. ARA requires the following support for the effective completion of this project:
 - a. Any permits will need to be provided by the prime contractor.
 - b. Traffic control will need to be provided by the prime contractor.
 - c. The testing requires dry pavement. Any standby time during wet pavement conditions where there is standing water will be charged in accordance with the rates shown above. Scheduling requires two weeks' notice to proceed.
7. This proposal is valid for a period of 90 days from the date of the proposal. We reserve the right to review our scope if an agreement to provide our services has not been reached within the 90-day period.



7 ACCEPTANCE OF PROPOSAL

Your signature below indicates your acceptance of this proposal in accordance with the scope, price, schedule, and the terms and conditions contained herein, and will create a binding agreement between you and ARA. This acceptance will act as a notice to proceed.

Acceptance and Authorization	
Name (print)	Sundeep Jhutti
Title	President
Signature:	
Date:	8/15/2021



TERMS & CONDITIONS

Applied Research Associates, Inc. (ARA) agrees to perform the specified work with the professional skill and care ordinarily provided by firms practicing in the same or similar locality under the same or similar circumstances. The parties acknowledge that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

1. INDEPENDENT CONTRACTOR

ARA will act as an independent contractor and not as Client's agent for any purpose whatsoever, and will have no authority to make any commitments on behalf of Client or to bind Client in any way whatsoever.

2. PROJECT SUPERVISION AND ASSIGNMENT

ARA shall have wide discretion in the methods used to perform any assigned tasks unless specified otherwise. ARA will cooperate with the Client to the extent possible to arrange for consultations between the Client, ARA personnel, and others engaged in rendering services to the Client related to ARA's performance under this agreement. ARA agrees that no tasks shall be performed or expenses incurred without specific authorization of the Client.

3. OWNERSHIP OF DOCUMENTS

All data, information, software, hardware, and documents produced by ARA under this agreement shall remain the property of ARA and may not be used by the Client for any endeavor outside of the scope of this agreement without the written consent of ARA, unless otherwise noted in this agreement.

4. ACCESS TO PROJECT SITE

If required for the performance of this effort, ARA will be granted timely access to the project site as needed. If traffic control or protection is required, it shall be provided by the Client or specific provisions will be made for ARA to provide traffic control or protection at an additional price. ARA will take precautions to minimize damage when performing its work, but ARA is not responsible for any items destroyed as a necessary part of the work.

5. PAYMENT

ARA will invoice monthly and at the completion of the project, with payment due net 30 days. Interest will be charged on amounts outstanding more than 30 days. The interest rate will be 1½ percent per month, compounded until paid. In the event of late payment, the Client agrees to pay all collection costs, legal expenses and attorneys' fees incurred by ARA in collecting payment, including interest. In the event that some portion of the invoice is disputed, payment for the undisputed portion of the invoice will be made within 30 days. If the Parties are unable to reach agreement regarding the disposition of the disputed portions of the invoice within 21 days, the matter will be resolved according to the Dispute Resolution clause of this agreement.

6. HIDDEN CONDITIONS OR HAZARDOUS MATERIALS:

If ARA has reason to believe that a hidden condition may exist, ARA shall notify the client who shall authorize and pay for all costs associated with the investigation of such condition and if necessary, all costs necessary to correct such condition. If (a) the client fails to authorize such investigation of the correction after due notification, or (b) ARA has no reason to believe that such condition exists, the Client is responsible for all risks associated with this condition, and ARA shall not be responsible for the existing condition nor any resulting damages to persons or property. ARA shall have no responsibility for the discovery, presence, handling, removal, disposal or exposure of persons to hazardous materials of any form.

7. TERMINATION OF SERVICES:

This agreement may be terminated upon 10 days written notice by either party. In the event of termination, the Client shall pay ARA for all services performed to the date of termination, all reimbursable expenses and reasonable termination expenses.

8. CONFIDENTIALITY

Each party agrees not to use the other's proprietary information for any purpose other than for the performance of this Agreement. Proprietary information is defined as information concerning techniques, processes, inventions, research and development, and cost data in written form with each sheet thereof marked with an appropriate legend indicating its proprietary nature and delivered by one party to another. Any other use of such proprietary information by the recipient shall be made only upon receipt of the prior written consent from an authorized representative of the other party.



9. INDEMNIFICATION

Each party (indemnitor) shall indemnify and hold harmless the other party (indemnitee) from and against any and all (including third party) claims, damages, losses and expenses (including reasonable attorney's fees) arising out of or resulting from the performance of services, to the proportional extent that any such claims, damage, loss or expense is caused by the negligent act or omission and/or liability of the indemnitor, anyone directly or indirectly employed by the indemnitor.

10. CONSEQUENTIAL DAMAGES

Neither Party shall be liable to the other for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by breach of contract, willful misconduct, negligent act or omission, or other wrongful act of either of them.

11. FORCE MAJEURE

Neither party shall be liable for any failure of or delay in performance of its obligations under this Subcontract to the extent such failure or delay is due to circumstances beyond its reasonable control, including, without limitation, acts of God, acts of a public enemy, fires, floods, wars, civil disturbances, sabotage, accidents, insurrections, blockades, embargoes, storms, explosions, labor disputes, acts of any governmental body, failure or delay of third parties or governmental bodies from whom a party is obtaining or must obtain approvals, authorizations, licenses, franchises or permits, or inability to obtain labor, materials, power, equipment, or transportation (collectively referred to herein as "Force Majeure"). Each party shall use its reasonable efforts to minimize the duration and consequences of any failure of or delay in performance resulting from a Force Majeure event.

12. GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of New Mexico, excluding its principles of conflicts of laws. The United Nations Convention for the International Sale of Goods is expressly excluded from this Agreement, and shall have no force or effect on the parties.

13. DISPUTE RESOLUTION

Any controversy or claim arising out of or relating to this agreement, or breach thereof, which may be properly submitted to arbitration, shall be settled by arbitration. The substantially prevailing party shall be entitled to recover from the non-prevailing party all costs and expenses and attorney's fees it incurred in connection with any suit or legal or administrative action or appeal with respect to this order or the transaction under it.

14. NO THIRD PARTY RIGHTS

This Agreement shall not create any rights or benefits to parties other than Client and ARA. No third party shall have the right to rely on ARA opinions rendered in connection with the Services without ARA written consent and the third party's agreement to be bound to the same conditions and limitations as Client.

16. COMPLETE AGREEMENT; MODIFICATIONS

This Agreement constitutes the entire Agreement of the parties hereto, and all previous communications between the parties, whether written or oral with reference to the subject matter of this Agreement, are hereby canceled and superseded. No modification of this Agreement shall be binding upon the parties hereto, unless such is in writing and duly signed by the respective parties hereto.

