City of Emeryville
CALIFORNIA

PROFESSIONAL SERVICES CONTRACT

FIRST AMENDMENT

THIS FIRST AMENDMENT TO THE PROFESSIONAL SERVICES CONTRACT ("Amendment") is effective as of this _____ day of 5/19/2021, 2021, by and between **THE CITY OF EMERYVILLE**, a municipal corporation, ("City") and **MNS ENGINEERS, INC.(FORMERLY S&C ENGINEERS, INC)** ("Contractor"), individually referred to as a "Party" and collectively as the "Parties".

WITNESSETH THAT

WHEREAS, the City and Contractor entered into a Professional Services Contract dated October 17, 2017 ("Contract") for the purpose of retaining the services of Contractor to provide Construction Management and Inspection Services related to the construction of the South Bayfront Pedestrian Bicycle Bridge Project; and

WHEREAS, City executed said Professional Services Contract with S & C Engineers, Inc. and effective April 1, 2018 S&C Engineers was acquired by MNS Engineers, Inc., and

WHEREAS, the City and Contractor desire to amend the Contract; and

WHEREAS, the public interest will be served by this Amendment.

NOW, THEREFORE, the Parties hereto do mutually agree as follows:

1. AMENDMENT

The Parties agree to amend the Contract as checked below:

1.1 Exhibits A and B

☑ Exhibit A of the Contract is hereby amended in its entirety and replaced with **Exhibit A-1**;

AND

☑ Exhibit B of the Contract is hereby amended in its entirety and replaced with **Exhibit B-1**.

FOR CITY USE ONLY			
Contract No.	20124E-0117-PW01	CIP No.	16475006; 17237003
Resolution No.	21-30	Project No.	N/A

1.2 Termination Date

☐ The Parties desire to extend the termination date. Section 1.3 of the Contract is hereby amended to extend the termination date to *NEW END DATE*.

1.3 Total Compensation Amount

☑ The Parties desire to increase the Total Compensation Amount as set forth in Section III.B of the Contract by **SEVENTY-FIVE THOUSAND FOUR HUNDRED SEVENTY-FIVE DOLLARS AND NO CENTS ($75,475.00)**. The total amount paid under the Contract as compensation for Services performed and reimbursement for costs incurred shall not, in any case, exceed **TWO MILLION SIX HUNDRED FORTY FOUR THOUSAND ONE HUNDRED SIX DOLLARS AND NO CENTS ($2,644,106.00)**.

2. CONTINUING EFFECT OF CONTRACT

Except as amended by this Amendment, all other provisions of the Contract remain in full force and effect and shall govern the actions of the Parties under this Amendment. From and after the date of this Amendment, whenever the term “Contract” appears in the Contract, it shall mean the Contract as amended by this Amendment.

3. ADEQUATE CONSIDERATION

The Parties hereto irrevocably stipulate and agree that they have each received adequate and independent consideration for the performance of the obligations they have undertaken pursuant to this Amendment.

4. SEVERABILITY

If any portion of this Amendment is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

5. WAIVER

The City’s failure to enforce any provision of this Amendment or the waiver in a particular instance shall not be construed as a general waiver of any future breach or default.

SIGNATURES ON FOLLOWING PAGE

6. SIGNATURE PAGE TO PROFESSESIONAL SERVICES CONTRACT FIRST AMENDMENT

IN WITNESS WHEREOF the City and the Contractor have executed this Contract, which shall become effective as of the date first written above.

Approved As To Form:
DocuSigned by:
Andrea Visweswara
AD9DE6E6283E4B7...
City Attorney

Dated:
5/19/2021 , 2021

CITY OF EMERYVILLE
DocuSigned by:
Christine Daniel
B023BA190D284E2...
Christine S. Daniel, City Manager

Dated:
3/24/2021 , 2021

MNS ENGINEERS, INC.
DocuSigned by:
D7A4F4B73D14483...
(Signature)
James A. Salvito, President and CEO

Exhibit A-1

Scope of Work

A. Description of Required Services Construction management personnel are required in support of the CITY project to construct the South Bayfront Pedestrian Bicycle Bridge. The CONTRACTOR is to provide qualified engineering personnel to perform construction project management, inspection and Quality Assurance services. The CONTRACTORS personnel will be assigned to the project during all hours of construction and/or as required by the CITY and will work under the direction of the CITY Project Manager.

Typical duties to be performed by the CONTRACTOR personnel will Include but not be limited to the following:

1) Performing the duties of a Resident Engineer/Structures Representative, including construction inspection, quality assurance, quantity calculations, preparation of contract change orders, materials sampling and control, and insuring compliance with project plans and specifications.

2) Perform engineering calculations and review falsework plans, shoring plans, and working drawings per Caltrans Standards.

3) Identify actual and potential problems associated with the construction project and recommend sound engineering solutions.

4) Preparing calculations, records, reports, and correspondence related to project activities.

5) Assisting in the review and oversight of the Contractor’s final as-built plans during and at the completion of project.

B. Personnel and Performance Requirements CONTRACTOR personnel will remain on the CITY construction project on a full-time basis or as requested by the CITY until completion and acceptance of the construction project by the CITY.

C. Equipment and Materials to be Provided by the CONTRACTOR The CONTRACTOR shall provide the following:

1) All necessary computers, cell phones, internet access (provided by Construction Contractor as part of project trailer

facilities), instruments, tools, and safety equipment required of its personnel to perform their work accurately, efficiently and safely.

2) Caltrans manuals and Standards as listed in Section F., "Standards" below and forms and other policies and procedures to be followed by the Contractor's personnel in the performance of the work.

D. Materials to be Provided by the CITY The CITY will provide the CONTRACTOR with the following: 1) Approved project plans, special provisions, and applicable City administrative policies and procedures for the project.

E. Standards 1) Construction inspection and contract administration shall be in accordance with current Caltrans Construction Manual and its revisions, the Bridge Construction Records and Procedures Manual the Manual, the Manual of Test (3 Volumes), Manual of Traffic Controls for Construction and Maintenance Work Zones, the Caltrans Standard Specifications and Standard Plans, and the project plans and special provisions.

G. Work to be Performed by the CITY and Design Consultants The CITY will furnish a representative to perform the usual functions of a Project Manager. The Design Consultants will be responsible to respond to RFI's, Submittals, review and approve shop drawings and approve the erection procedure for the steel tied arch bridge span.

H. Project Progress To ensure an understanding of contract objectives, meetings between the CITY and the CONTRACTOR will be held as often as necessary.

All work objectives, the work schedules, the terms of the contract and any other related issues will be discussed, and any problems resolved.

Task 1 – Construction Management

1.1 Construction Management

CONTRACTOR shall furnish a CONSTRUCTION MANAGER to coordinate all CONTRACTOR operations with CITY, including but not limited to tracking progress of the work and administering subcontracts.

CONSTRUCTION MANAGER shall provide overall project management coordination, and supervision of project staff to facilitate the performance of the work in accordance with standards and requirements of the CITY and other applicable standards and requirements. CONSTRUCTION MANAGER shall prepare and submit weekly project progress reports to CIYY Project Manager.

Deliverables: • Weekly Progress Reports

1.2 Coordination and Meetings

CONSTRUCTION MANAGER shall conduct regular weekly meetings with CITY, and as required the Designer "Biggs-Cardosa Associates, and the environmental design consultant "EKI Water and Environmental", and AECOM, Archeological Services Consultant.

CONSTRUCTION MANAGER will conduct weekly progress meetings with the Contractor, City, the designer, EKI, and representatives of applicable adjacent properties, Union Pacific Railroad (UPRR), and other agencies. Construction Manager

shall be responsible for preparation of agendas and meeting minutes, communications and distribution to all applicable parties.

Deliverables: • Meeting notices, agendas, and minutes

1.3 Administration

CONSTRUCTION MANAGER shall provide weekly reports on the project status, including, but not limited to, schedule, contract budget, general progress on project tasks, and project issues and concerns including and not limited to review of RFI, construction submittals, progress payments, preparation of change order.

CONSTRUCTION MANAGER shall maintain project files using the Caltrans Uniform System in electronic format. CONSTRUCTION MANAGER will be responsible for adherence to all applicable City administrative policies and procedures to be provided by the City.

Deliverables: Project Files

1.4 Documentation

Ensure effective and consistent documentation of the CONSTRUCTION MANAGER and Contractor's activities on daily basis including conversations and meetings related to the project, changed conditions, change orders, work progress, weather, status of Contractor's major equipment, and all other items that may be necessary for reviewing progress payments, evaluating and processing change orders, and resolving issues that may lead to formal claims.

The appropriate level of documentation will include both written text and digital images. Video and still digital cameras indicating time and date are to be utilized. The documentation system shall make full use of contemporary computer hardware and software as the means of document creation, distribution, and control.

Deliverables: • Daily work diaries • Miscellaneous CM Reports • Negotiate and prepare contract change orders as needed • Prepare monthly quantity estimates for progress payments • Review and coordinate contractor submittals including: UPRR Submittals, Temporary shoring plans, Falsework drawings, Prestressing shop drawings, Pile placement Plans, Steel arch bridge erection plan, Concrete mix designs and aggregate gradings, Joint seal assembly shop drawings, Payment Requests, Keep a record of all changes to verify Contractor's redline markups for inclusion into final record drawings to be prepared by the Designer

Task 2 – Construction Phase Services

The Construction Manager/Resident Engineer/Inspectors provided by the CONTRACTOR shall monitor the operations of the Construction Contractor and Subcontractors for compliance with contract documents and document field construction

operations. Construction Management/Engineering services shall include the following activities:

2.1 Monitoring of Construction Operations for Contract Compliance

1. Bridge Construction 2. Earthwork (embankment, structure excavation and backfill) 3. Cast-in-Steel Shell Pile driving, rebar and concrete placement 4. Pre-cast concrete pile driving 5. Form construction and placement (abutments, columns, superstructure) 6. Reinforcing steel placement (abutments, columns, superstructure) 7. Concrete delivery, placement, and curing 8. Falsework construction and grade checking 9. Deck finishing 10. Railing installation 11. Concrete finishing 12. Joint seal assembly installation 13. Asphalt grading and placement 14. Arch steel bridge erection and construction 15. Landscaping and irrigation 16. Lighting 17. Excavation of contaminated material and backfilling

2.2 Materials Testing

1. Field technician services for QA observation, testing and documentation during earthwork, including embankment placement, structure backfill, trench backfill, and subgrade preparation.

2. Field technician services for QA sampling and testing during structural concrete placements, including testing for penetration (slump), air-content, unit weight, yield and temperature, and molding compressive strength specimens (cylinders). Samples will handled, cured, and tested in accordance with specified test methods.

3. Part-time batch plant QA inspection services during production of structural concrete including checking mix design, checking aggregate batch weights, checking water/cement ratio, visual inspection of aggregates and sampling aggregates if necessary.

4. Laboratory testing of the soil, aggregates, and Portland cement concrete materials, maximum density/optimum moisture, sieve analysis, sand equivalent, cleanness value, R-value and concrete compressive strength testing.

5. Preparation of QA field observation reports and test data sheets. Documents will be made available to City as requested.

6. QA offsite source inspection of fabrication of steel arch bridge

2.3 General

The Resident Engineer/Inspector shall be present at the project site on a full-time basis to provide a satisfactory level of monitoring the work.

2.4 Work to be Performed by Others

1. Construction Staking

A. Construction staking will be provided by the Contractor.

2. Miscellaneous

A. Biggs-Cardosa will perform City Building Department requirement for Special Inspection of modifications to the existing parking structure steel truss bridge.

B. EKI will provide inspection and air monitoring for soil remediation work.

C. AECOM will provide archeological monitoring.

2.5 UPRR Coordination

Provide SUBCONTRACTOR, “Zephyr UAS”, to provide coordination with UPRR to facilitate the review and approval of the submittal of the Main Bridge Pick and Erection submittals.

Task 3 – POST-CONSTRUCTION PHASE SERVICES

3.1 Project Closeout

Following substantial completion of all work, conduct a final walk-through with the Contractor and all applicable project participants. Develop a final punchlist to be sent to the Contractor. The list will include repair of any outstanding property damage. Require the Contractor to obtain sign-off from outside agencies or owners confirming that restoration has been completed and permit requirements have been satisfied.

Completed contractor redline markups will be verified, additional information added from inspector markups and provide to Designer to develop final record drawings. After deductions for liens and uncompleted punchlist work, final payment will be recommended to the City. All project files will be delivered to the City after final payment has been processed.

Deliverable:

Redline drawings

Revision Date -March 18, 2021
Revision #2

CITY of EMERYVILLE - CM SERVICES FOR SOUTH BAYFRONT PEDESTRIAN BICYCLE BRIDGE PROJECT

MNS Engineers' Schedule & Cost Proposal

	2017			2018												2019												2020		
Constructibility Review	C. R.																													
Advertise/Bid/Award Support			Advertise - Bid - Review - Award																											
NTP - Construction						Construction																								
Closeout																								Closeout						

	2017			2018												2019												2020		
	4th Qtr			1st Qtr			2nd Qtr			3rd Qtr			4th Qtr			1st Qtr			2nd Qtr			3rd Qtr			4th Qtr			1st Qtr		
Hours by Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Position																														
*Principal-In-Charge (Mike Chan)	8	8	8	8	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4							
RE/Structures Repr. (Thom Loomis)	40	40	40	40	40	200	160	160	160	100	160	160	200	160	200	160	160	200	160	160	160	200	160	100	80	100				
Asst. RE (Said Najafi)	40	40	20	20	20	200	160	160	160	200	160	160	200	160	200	160	160	200	160	160	160	200	160	100	80	100				
OE & Field Inspection (Nathan Norwood)						200	160	160	160	200	160	160	200	160	200	160	160	200	160	160	160	200	160	200	160	100				
Constructability Support (Andy Kleiber)	40	40																												
Scheduler (Bob Knickerbocker)						40	20	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
Total Estimated Hours by Month	128	128	68	68	68	644	504	488	488	508	488	488	608	488	608	488	488	608	488	488	488	608	488	404	320	300	0	0	0	0
Total Hrs By Quarter	324			780			1480			1484			1704			1584			1464			1500			620		0		

	2020	Hours				Rates			Total		
	1st Qtr										
Hours by Month	Apr	Total	2017	2018	2019	2017	2018	2019	2017	2018	2019
Position											
*Principal-In-Charge (Mike Chan)		112	24	56	32	$ 254.46	$ 267.18	$ 280.54	$ 6,107.04	$ 14,962.25	$ 8,977.35
RE/Structures Repr. (Thom Loomis)		3500	120	1740	1640	$ 217.22	$ 228.08	$ 239.49	$ 26,066.40	$ 396,860.94	$ 392,755.48
Asst. RE (Said Najafi)		3540	100	1800	1640	$ 227.89	$ 227.89	$ 239.28	$ 22,789.00	$ 410,202.00	$ 392,426.58
OE & Field Inspection (Nathan Norwood)		3580	0	1760	1820	$ 148.60	$ 156.03	$ 163.83	$ -	$ 274,612.80	$ 298,173.33
Constructability Support (Andy Kleiber)		80	80	0	0	$ 218.22	$ 229.13	$ 240.59	$ 17,457.60	$ -	$ -
Scheduler (Bob Knickerbocker)		128	0	92	36	$ 177.12	$ 185.98	$ 195.27	$ -	$ 17,109.79	$ 7,029.89
		0	0	0	0				$ -	$ -	$ -
Total Estimated Hours by Month	0	10940	324	5448	5168				$ 72,420.04	$ 1,113,747.78	$ 1,099,362.63
Total Hrs By Quarter	0	10940	324	5448	5168						

Additional Electrical Inspection =	$ 27,523.33
MNS CM Cost =	$ 2,285,530.45
Alta Vista Solutions (QA) =	$ 270,000.00
Zephyr UAS, Inc. =	$ 47,952.00
3% Markup on Subconsultants =	$ 9,538.56
ODC's =	$ 5,000.00
Total CM Cost =	**$ 2,645,544.34**

Notes:

Hrs proposed above assume the following: 18 months of construction per RFP. Advertise - Dec. 2017 for 60 days, Bid opening in late Jan. 2018, and Award - Feb. 2018. NTP in 2/20/18. Begin Construction March 2018 and complete by end of Augustr of 2019. This time frame doesn't include any extensions for weather impacts or construction delays. Assume 3 months to close out project. Actual hours and cost will be dependent on the actual construction schedule as determined by the construction contractor.
Hrs are also based on contractor working normal 8 hour work shifts
Hrs for scheduler are for review of initial baseline construction schedule for project submitted by the contractor and monthly updates
Hrs do not include construction claim support for claims filed by Contractors after acceptance of contract.
Hrs do not include time extensions due to CCO's, Weather impacts, Right of Way delays or other delays.
The above estimate doesn't include any OT hrs. However, should OT hours be required due to contractor's schedule, non-exempt employees are subject to OT regulations (Time and half & double time). Premium portion will be added to straight time billing rate.
The above cost proposal has no costs for RE office as it assumes that the contract specifications will require the Contractor to provide a construction trailer for the RE as part of the construction bid.

Rates are based on the following:
OH = 132.52%
Fee = 10%
Annual Billing rate escalation - 5%

Exhibit B-1

Schedule of Rates

Updated: 12/30/20

MNS Engineers, Inc.

Loaded Hourly Rates

Personnel	2017	2018	2019	2020	2021
Michael Chan	$ 254.46	$ 267.18	$ 280.54	$ 280.54	$ 294.57
Tom Loomis	$ 217.22	$ 228.08	$ 239.49	$ 239.49	$ 251.46
Asst. RE	$ 227.89	$ 239.28	$ 251.25	$ 251.25	$ 263.81
Scheduler	$ 177.12	$ 185.98	$ 195.27	$ 195.27	$ 205.03
Office Engineer/Inspector	$ 148.60	$ 156.03	$ 163.83	$ 163.83	$ 172.02
Inspector	$ 148.60	$ 156.03	$ 163.83	$ 163.83	$ 172.02
Inspector OT @1.5XST	$ 222.90	$ 234.05	$ 245.75	$ 245.75	$ 258.04
Electrical Inspector	N/A	N/A	N/A	N/A	$ 172.02

Other Direct Costs	Unit	Unit Cost
Description	Actual	Actual
Postage, outside reproduction, etc.		

Alta Vista Solutions
COST PROPOSAL
South Bayfront Pedestrian Bicycle Facility
Sub-Consultant: February 28, 2020

Fringe Benefit %	Overhead %	General Administration %		Combined %				
NORMAL		0.00%	+	0.00%	+	0.00%	=	141.01%
OVERTIME		0%		N/A		N/A		N/A FEE %
10%								

BILLING INFORMATION **CALCULATION INFORMATION**

Name/Classification	Loaded Hourly Billing Rates		Effective Date of Hourly Rate		% Escalation Increase	Actual Hourly Rate and /or Hourly Rate	Hourly Range for Class
	Straight	Overtime	From	To			
Frank Cannizzaro	201.48	N/A	7/1/2017	12/31/2017	N/A	$76.00	N/A
PE Project Manager	201.48	N/A	1/1/2018	12/31/2018	5.00%	$76.00	
Exempt	211.56	N/A	1/1/2019	12/31/2019	5.00%	$79.80	
	222.14	N/A	1/1/2020	12/31/2020	5.00%	$83.79	
	233.24	N/A	1/1/2021	12/31/2021	5.00%	$87.98	
Erin Mock	145.81	N/A	7/1/2017	12/31/2017	N/A	$55.00	N/A
Deputy Project Manager/Structure Material Representative	145.81	N/A	1/1/2018	12/31/2018	5.00%	$55.00	
Exempt	153.10	N/A	1/1/2019	12/31/2019	5.00%	$57.75	
	160.76	N/A	1/1/2020	12/31/2020	5.00%	$60.64	
	168.80	N/A	1/1/2021	12/31/2021	5.00%	$63.67	
Jessica Forbes	119.30	N/A	7/1/2017	12/31/2017	N/A	$45.00	N/A
Assistant Material Reprersentative/Project Engineer	119.30	N/A	1/1/2018	12/31/2018	5.00%	$45.00	
Exempt	125.26	N/A	1/1/2019	12/31/2019	5.00%	$47.25	
	131.53	N/A	1/1/2020	12/31/2020	5.00%	$49.61	
	138.10	N/A	1/1/2021	12/31/2021	5.00%	$52.09	
Mike Foerder	172.32	N/A	7/1/2017	12/31/2017	N/A	$65.00	N/A
NDT Level III Technician Field Support	172.32	N/A	1/1/2018	12/31/2018	5.00%	$65.00	
Exempt	180.94	N/A	1/1/2019	12/31/2019	5.00%	$68.25	
	189.99	N/A	1/1/2020	12/31/2020	5.00%	$71.66	
	199.50	N/A	1/1/2021	12/31/2021	5.00%	$75.25	
Steel Inspector (CWI, NDT Level II)	137.86	N/A	10/1/2017	12/31/2017	N/A	$52.00	N/A
Non-Exempt	137.86	N/A	1/1/2018	12/31/2018	5.00%	$52.00	
	144.75	N/A	1/1/2019	12/31/2019	5.00%	$54.60	
	151.99	N/A	1/1/2020	12/31/2020	5.00%	$57.33	
	159.60	N/A	1/1/2021	12/31/2021	5.00%	$60.20	
Michael Bennett	148.46	N/A	10/1/2017	12/31/2017	N/A	$56.00	N/A
Paint Inspector (NACE Level II)	148.46	N/A	1/1/2018	12/31/2018	5.00%	$56.00	
Non-Exempt	155.89	N/A	1/1/2019	12/31/2019	5.00%	$58.80	
	163.68	N/A	1/1/2020	12/31/2020	5.00%	$61.74	
	171.87	N/A	1/1/2021	12/31/2021	5.00%	$64.83	
Roadway Materials Inspector (CTM/ASSHTO Certified)	124.60	N/A	10/1/2017	12/31/2017	N/A	$47.00	N/A
Non-Exempt	124.60	N/A	1/1/2018	12/31/2018	5.00%	$47.00	
	130.83	N/A	1/1/2019	12/31/2019	5.00%	$49.35	
	137.37		1/1/2020	12/31/2020	5.00%	$51.82	
	144.25	N/A	1/1/2021	12/31/2021	5.00%	$54.82	
Technical Expert (Concrete/Steel/Coatings)	251.86	N/A	10/1/2017	12/31/2017	N/A	$95.00	N/A
Exempt	251.86	N/A	1/1/2018	12/31/2018	N/A	$95.00	
	251.86	N/A	1/1/2019	12/31/2019	N/A	$95.00	
	251.86	N/A	1/1/2020	12/31/2020	N/A	$95.00	
	251.86	N/A	1/1/2021	12/31/2021	N/A	$95.00	

BSK Associates - January 1, 2020 to December 31, 2021 Prevailing Wage Schedule of Fees

PERSONNEL RATES

PROFESSIONAL STAFF

Principal	$ 236.00
Senior Professional	$ 210.00
Project Professional II	$ 194.00
Project Professional I	$ 163.00
Staff Professional II	$ 147.00
Staff Professional I	$ 131.00
Seismic GIS	$ 184.00
GIS Specialist	$ 131.00
Information Specialist II	$ 147.00
Information Specialist II	$ 131.00
CAD	$ 95.00
Project Administrator	$ 90.00

EQUIPMENT

Nuclear Gauge (Day)	$ 58.00
Ultrasonic Weld Equipment (Day)	$ 58.00
Torque Wrench (Day)	$ 58.00
Proof Load Equipment (Day)	$ 58.00
Rebar Locator / Pachometer	$ 105.00
Hand Auger (Day)	$ 210.00
Water Meter (Day)	$ 53.00
Drilling Kit - Paint, stakes and lath - (Project)	$ 26.00
Drilling Supplies - Reuse of tubes/caps (Project)	$ 263.00
Manometer (Day)	$ 210.00
Double Ring Infiltrometer (Day)	$ 525.00

ANALYSIS SOFTWARE USAGE FEES

gINT (Project)	$ 53.00
LPile (Project)	$ 53.00
APile (Project)	$ 53.00
SHAFT (Project)	$ 53.00
GROUP (Project)	$ 105.00
Cliq (Project)	$ 53.00
LiquefyPro (Project)	$ 53.00
LiqIT (Project)	$ 53.00
NovoLIQ (Project)	$ 53.00
Slide (Project)	$ 105.00
Settle3D (Project)	$ 105.00
ArcGIS (Project)	$ 53.00
EZ-FRISK (Per Project Site / Site Class)	$ 500.00

TECHNICAL STAFF (PREVAILING WAGE)

Field Supervisor	$ 163.00
Group 1 - Special Inspector	$ 146.00
Group 2 - Special Inspector	$ 138.00
Group 3 - Engineering Technician	$ 126.00
Group 4 - Technician	$ 110.00
Ground Penetrating Radar Scanning Technician	$ 275.00
Core Drilling Technician	$ 200.00
Floor Flatness Testing Technician	$ 180.00
Sample Pickup / Transportation / Delivery	$ 103.00
Laboratory Technician	$ 103.00
Administrative Assistant / Clerical	$ 82.00
Litigation support	1.5x standard rate

BASIS OF CHARGES FOR FIELD TECHNICIAN SERVICES

Field Work from 0 to 4 hours	Bill 4 hours
Field Work from 4 to 8 hours	Bill 8 hours
Field Work over 8 hours / Saturdays	Bill time and a half
Sundays, holidays and over 12 hours	Bill double time
Swing shift (4:00pm to Midnight)	Add $15.00 per hour
Graveyard Shift	Add $20.00 per hour
Show-up time (no work performed)	Bill 2 hours
Sampling or cylinder pickup, minimum charge	Bill 2 hours

DIR/PREVAILING WAGE ADMINISTRATION FEES (MONTHLY,

Certified Payroll / DIR Upload	$ 300.00
Non-Performance Certified Payroll / DIR Upload	$ 100.00
Subcontractor Management / Compliance Forms	$ 100.00
Additional LCP Tracker or Other Compliance Software	$ 200.00
Additional Special Forms, as required	$ 150.00

REIMBURSABLES

Mileage (Portal to Portal)	$ 0.88
Per Diem (as required)	$ 150.00
Bridge Toll	Cost + 15%
Parking Fees	Cost + 15%
Subconsultant/Subcontractor Services, Vendors, and Expenses	Cost + 15%
Project Administration Fees	7% of Invoice
DIR Administration Fees	3% of Invoice
Project Setup (Project)	$500.00

MATERIALS LABORATORY TESTS

SOILS

Moisture Density Curves

Standard Proctor, 4" (ASTM/AASHTO)	$ 244.00
Modified Proctor, 4" Mold (ASTM/AASHTO)	$ 244.00
Modified Proctor, 6" mold (ASTM D1557)	$ 259.00
Caltrans Maximum Wet Density (CT 216)	$ 222.00
Check Point	$ 141.00

Particle Size Analysis

Sieve Analysis w/ Wash (ASTM D422)	$ 176.00
Minus #200 Wash, Soil (ASTM D1140)	$ 86.00
Hydrometer Analysis (ASTM D422)	$ 232.00
Double Hydrometer (ASTM D4221)	$ 324.00
Specific Gravity of Soil (ASTM D854)	$ 166.00
Visual Classification (ASTM D2488)	$ 45.00
Sand Equivalent (ASTM D2419)	$ 130.00
% Organics in Soil (ASTM D2974)	$ 142.00

Atterberg Limits / Swell Tests

Plasticity Index (ASTM D4318)	$ 227.00
Shrinkage Limits of Soils (ASTM D427)	$ 211.00
Expansion Index of Soils (UBC No. 29)	$ 244.00

Moisture Density Test

Tube Density	$ 51.00
Moisture Content of Soils (ASTM D2216)	$ 45.00

"R" Value Determination

R-Value of Soils (CT 301)	$ 411.00
R-Value of Treated Materials (CT 301))	$ 455.00

Consolidation Tests

Consolidation (ASTM D2435)	$ 433.00
Consolidation , Extra Points (ASTM D2435)	$ 58.00
Collapse Potential of Soils (ASTM D2435)	$ 211.00
Remolded Consolidation (ASTM D2435)	$ 368.00
One-Dimen Swell of Soil (ASTM D4546)	$ 135.00

California Bearing Ratio (CBR)

CBR at 100% (ASTM D1883 or AASHTO T-180)	$ 530.00
CBR at 95% (ASTM D1883 or AASHTO T-180)	$ 1,028.00

Permeability Tests

Rigid Wall Permeability (ASTM D2434)	$ 292.00
Flexible Wall Permeability (ASTM D5084)	$ 455.00
Remolded Flexwall Perm (ASTM D5084)	$ 579.00

Soil Corrosivity Tests

Minimum Resistivity of Soils (CT 643)	$ 146.00
pH	$ 68.00
Soluble Sulfate, Chloride and Sulfide	$ 135.00
Oxidation Reduction of Soil	$ 58.00

Soil Cement Tests

Freeze Thaw Abrasion (ASTM D560)	$ 649.00
Wetting-Drying Abrasion (ASTM D559)	$ 616.00
Preparation of Freeze-Thaw or Wetting-Drying Tests	$ 779.00
Soil Cement Compression (ASTM D1633)	$ 249.00
Cement Content Soil Cement (ASTM C1084)	$ 249.00

Other

Sample Preparation	$ 68.00
Crumb Test Disperstion (ASTM D6572)	$ 81.00
Pinhole Dispersion Test (ASTM)	$ 259.00
Sand Density Calibration (ASTM D1566)	$ 97.00

Unconfined Compression

Unconfined Compression (ASTM D2166)	$ 130.00

Shear Tests

Direct Shear, Undisturbed (ASTM D3080)	$ 227.00
Direct Shear, Remolded (ASTM D3080)	$ 271.00
Triaxial Compression Testing	QUOTE

Exhibit B

BSK Associates - January 1, 2020 to December 31, 2021 Prevailing Wage Schedule of Fees

MATERIALS LABORATORY TESTS

AGGREGATES

Sieve Analysis Coarse or Fine (ASTM C136)	$ 86.00
Sieve Analysis w/ Fineness Modulus	$ 92.00
Minus 200 Wash, Aggregates (ASTM C117)	$ 86.00
Specific Gravity/Absorption (ASTM C127)	$ 166.00
Specific Gravity/Absorption (ASTM C128)	$ 166.00
Organic Impurities (ASTM C40)	$ 86.00
% Lumps/Friable Particles (ASTM C142)	$ 84.00
% Flat and Elongated (ASTM D4791)	$ 130.00
Fine Aggregate Angularity (AASHTO 304)	$ 84.00
Moisture Content (ASTM D2216)	$ 45.00
Aggregate Wt., pcf Compacted (ASTM C29)	$ 81.00
Aggregate Wt., pcf Loose (ASTM C29)	$ 68.00
Abrasion by LA Rattler, Small Size (ASTM C131)	$ 244.00
Abrasion by LA Rattler, Large Size (ASTM C131)	$ 297.00
Sodium Sulfate Soundness, Per Sieve (ASTM C88)	$ 113.00
Sodium Sulfate Soundness, Min. Charge (ASTM C88)	$ 362.00
Relative Mortar Strength of Sand (ASTM C87)	$ 443.00
Sand Equivalent (ASTM D2419 OR CT 217-I)	$ 130.00
Durability Index (CT 229)	$ 259.00
Potential Reactivity of Aggregates	QUOTE
Cleanness Value of Aggregate (CT 227)	$ 187.00
Hydrometer (ASTM D422 OR CT 205-E)	$ 232.00
% Crushed particles (CT 205)	$ 171.00
Lightweight Pieces (ASTM 123)	$ 227.00

HOT MIX ASPHALT

Mix Design, HVEEM	$ 3,212.00
Mix Design, Marshall	$ 3,807.00
JMF Mix Design, Superpave / Caltrans	$ 9,275.00
JMF Verification - HMA - Superpave / Caltrans	$ 5,375.00
JMF Production Startup - Superpave / Caltrans	$ 5,000.00
RAP Material Testing - Additional Fee	$ 650.00
Rubberized RHMA Material - Additional Fee	$ 1,500.00
Hamburg Wheel Track (AASHTO T324)	$ 2,726.00
Gyratory Compaction (AASHTO T312)	$ 347.00
AC Content by Centrifuge (ASTM D2172)	$ 297.00
AC / Ash Correction (ASTM D2172 / CT382)	$ 297.00
AC Content-Ignition (ASTM D6307 / CT382 / AASHTO T308)	$ 232.00
Moisture Content of Asphalt (CT 370)	$ 68.00
Gradation/Extraction Aggregate (ASTM D5444)	$ 141.00
Film Stripping	$ 92.00
Compaction/Preparation of HMA Briquette (CT 304)	$ 227.00
Stabilometer Value (CT 366 / AASHTO T246)	$ 182.00
AC Core Specific Gravity (ASTM D2726)	$ 58.00
AC Core Specific Gravity - Paraffin Coated (AASHTO T275)	$ 159.00
AC Max Density Rice Method (ASTM D2041)	$ 259.00
Tensile Strength Ratio (AASHTO T283)	$ 1,136.00
Moisture Vapor Susceptibility (CT 307)	$ 211.00
AC Surface Abrasion (CT 360)	$ 519.00
Index Retained Strength (ASTM D1074-D1075)	$ 465.00
AC Hveem Maximum Density (CT 375)	$ 465.00
Marshall Stability and Flow (ASTM D6927)	$ 259.00
Calculated AC Maximum Density (CT 367)	$ 103.00
Marshall Maximum Density, 50 Blows (ASTM D6926)	$ 302.00
Examination of AC Cores	$ 35.00
Thickness Determination of AC Cores	$ 23.00
AC Tensile-Strength Premixed ASTM D4867	$ 671.00
AC Tensile-Strength Lab Mixed ASTM D4867	$ 790.00

REINFORCING STEEL

Tensile & Bend of Rebar, #3 - #8	$ 153.00
Tensile & Bend of Rebar, #9 - #11	$ 153.00
Bend Test of Rebar	$ 63.00
Slip and Tensile Rebar Couplers (CT 670)	$ 222.00
Tension Test of Welded Wire Fabric	QUOTE
Bend Test of Welded Wire Fabric	QUOTE
Weld Shear Test, Welded Wire Fabric	QUOTE
PT Cable Tensile and Elongation (ASTM A416 or A421)	$ 281.00
PT Cable Preparation	QUOTE

CONCRETE

Cement Content Concrete (ASTM C1084)	$ 390.00
Chemical Test (ASTM C150)	QUOTE
Set Times Cement-Vicat Needle (ASTM C191)	$ 324.00
Specific Gravity of Hydraulic Cement (ASTM C191)	$ 156.00
Lineal Shrinkage Set of 3 (ASTM C157)	$ 411.00
Compression Test of Concrete - 1 (ASTM C39)	$ 35.00
Compression Test of Concrete - 4 (ASTM C39)	$ 141.00
Compression Test of Core (ASTM C42)	$ 63.00
Preparation of Specimens, Sawing	$ 70.00
Compressive Strength of Shotcrete Panel	$ 330.00
Proportion of Cement in Concrete (ASTM C85)	$ 362.00
Flexural Test Per Beam (ASTM C78)	$ 92.00
Splitting Tensile Strength of Concrete (ASTM C496)	$ 92.00
Unit Weight Lt Wt Concrete (ASTM C567)	$ 58.00
"AZ" Test-Reinforced Concrete Pipe "Life Factor"	$ 81.00
9 Pt Core Measurements, Each (ASTM C174)	$ 35.00
Compressive Strength of Gunite	$ 63.00
Concrete Trial Batches	QUOTE
Unit Weight & Abs Concrete (ASTM D642)	$ 130.00
Accelerated Curing of Concrete (ASTM C684)	$ 259.00
Cylinder Molds (each)	$ 7.00
Storage of Concrete Cylinders for more than 45 Days	$ 60.00
RH Probe	$ 60.00
Calcium Chloride Kit	$ 40.00
Mixing Water (pH, elec. conductance, chloride, sulfate)	$ 103.00
Contact Soil (pH, elec. conductance, chloride, sulfate)	$ 124.00

MASONRY

Concrete Masonry Units Testing (ASTM C90)

Compression Test Pavers, Single	$ 80.00
Compression Test Composit CMU Prism	$ 171.00
Specific Gravity and Unit Weight	$ 119.00
Moisture Content	$ 55.00
Compression Test, Masonry Units (ASTM C140)	$ 108.00
Absorption / Moisture Content (ASTM C140)	$ 108.00
Linear Shrinkage (ASTM C426)	$ 417.00
Masonry Core Shear Test (Title 24)	$ 113.00
Masonry Core Compression/Shear Test (Title 24)	$ 194.00
Compression Test Brick, Each (ASTM C67)	$ 81.00
Absorption/ Unit Wt. of Brick (ASTM C67)	$ 81.00
Compression Test Grout (Set of 3 or 4)	$ 124.00
Compression Test Mortar (Set of 3 or 4)	$ 113.00

WELDING AND STRUCTURAL STEEL

Welder Qualification Testing

Welder / Procedure Welder Qualification Testing	QUOTE
Face Bend of Steel	$ 63.00
Root Bend of Weld Coupon	$ 63.00
Side Bend of Weld Coupon	$ 63.00
Tensile Test of Steel Coupon	$ 86.00
Bend Test of Steel Coupon	$ 74.00
Machining Charges (Per Coupon)	QUOTE
Brinell Hardness of Steel (ASTM E10)	$ 103.00
Rockwell Hardness of Steel (ASTM E18)	$ 103.00
Bolt Ultimate Load	$ 146.00
Bolt Hardness (set of 3)	$ 103.00
Nut Hardness (set of 3)	$ 103.00
Washer Hardness (set of 3	$ 103.00
Proof Loading, bolt or nut	$ 146.00

FIREPROOFING

Cohesion/Adhesion Fireproofing Materials	$ 130.00
Dry Density Fireproofing (ASTM E605)	$ 98.00

Escalation: **The billing rates presented herein will be increased by 3% annually on July 1st of each year subsequent to the execution of an agreement.**

Exhibit B

APPLIED MATERIALS & ENGINEERING, INC.
980 41st Street
Oakland, CA 94608
Tel: (510) 420-8190
FAX: (510) 420-8186
e-mail: info@appmateng.com

2019 LABORATORY FEE SCHEDULE

	UNIT TEST COSTS	Per Set
1	Cylinder Compression Test, per set 4	$390.00
2	Flexural Strength, each	$240.00
3	PT Concrete Cylinders, per set 6	$360.00
4	PT Strand Tensile, each	$350.00
5	Shotcrete cores for Nozzleman Qualifications, per set of 3, 6"Øx9" thick)	$1,500.00
6	Shotcrete Cores,production, per set of 3 includes pick-up	$280.00
7	Masonry Mortar, per set of 3	$180.00
8	Masonry Grout, per set of 3	$200.00
9	Masonry Composite Prisms, per set of 3	$750.00
10	Masonry Block Compression, each	$150.00
11	Masonry Block Absorption & Unit Weight, each	$175.00
12	High Strength Grout, per set of 6	$240.00
13	Reinforcing, tensile tests (up to # 10), each	$110.00
14	Reinforcing, tensile tests (# 10-14), each	$120.00
15	Reinforcing, bend tests, each	$110.00
16	Mechanical or Welded Splice, each	$400.00
17	High Strength Bolts, strength, per set of 3	$375.00
18	High Strength Nuts, strength, per set of 3	$375.00
19	High Strength Washers, hardness, per set of 3	$375.00
20	Fireproofing Bond Strength, each	$375.00
21	FRP Tensile Properties ASTM D3039, per set	$650.00
22	FRP Bond Strength ASTM D7522, per set	$750.00
23	Moisture Density Curve, Each	$450.00
24	Fireproofing Density, each	$110.00
25	Fireproofing Bond Strength, each	$375.00
26	FRP Tensile Properties ASTM D3039, per set	$650.00
27	FRP Bond Strength ASTM D7522, per set	$750.00
28	Moisture Density Curve, Each	$350.00
29	Sieve Analysis, each	$300.00
30	Sand Equivalent, each	$140.00
31	Soundness using Sodium or Magnesium Sulfate, each	$2,000.00
32	Durability Index, each	$230.00
33	Hveem Preparation, per ste of 3	$490.00
34	Cleanness Value, each	$240.00
35	Moisture Content, each	$65.00
36	Perecent Crushed Particle, each	$240.00

37	Flat & Elongated Particles, each	$260.00
38	Plasticity Index of Soils, each	$275.00
39	R-value, each	$400.00
40	Amount Finer than #200, each	$250.00
41	Unit Weight of Aggregate, each	$180.00
42	Organic Impurites in Sand, each	$160.00
43	Stabilometer Value, field sample, per set of 3	$475.00
44	Theoretical Maximum Density, per two tests	$460.00
45	Asphalt Content, each	$260.00
46	Asphalt Content- Calibration Factor, each	$360.00
47	HMA Air Voids, each	$75.00
48	HMA Bulk Specific Gravity, per set of 3	$225.00
49	Hamburg Wheel Tracker, each	$1,600.00
50	HMA Tensile Strength Ratio, each	$1,500.00
51	Gyratory Compaction, per ste of 3	$950.00
52	LA Abrasion, each	$700.00
53	Fine Angularity, each	$250.00
54	Void in Mineral Aggregate, each	$250.00
55	Dust Proportions, each	$230.00
56	Uncompacted Void, each	$220.00
57	Specific Gravity of Fine Aggregate, each	$210.00
58	Specific Gravity of Coarse Aggregate, each	$230.00
59	Superpave Production Testing, each	$4,500.00
60	Superpave JMF Verfication or Production Startup, each	$7,500.00
61	Marshall Compaction, set of 3	$750.00
62	Marshall Stability, set of 3	$450.00
63	Dry Preparation of Disturbed Soil and Soil-Aggregate Samples for Testing	$285.00
64	Particle Size Analysis of Soils	$250.00
65	Calculations Pertaining to Gradings and Specific Gravities	$160.00
66	Definitions of Terms Relating to SG	$110.00
67	Soil and Aggregate Sample Preparation	$110.00
68	Mechanical Analysis of Soils	$250.00
69	Apparent Specific Gravity of Fine Aggregate	$210.00
70	Specific Gravity of Soils	$250.00
71	Field & Laboratory Resistivity & pH Measurements for Soil &Water	$260.00
72	Reducing Samples of Aggregate to Testing Size	$110.00
73	Minimum Laboratory Soil Resistivity	$220.00
74	pH of Soil for Use in Corrosion Testing	$110.00
75	Prep of Bituminous Mixes	$490.00
76	Sieve Analysis of Mineral Filler for Hot Mix Asphalt (HMA)	$240.00
77	Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using SSD Specimens	$255.00
78	Bulk Specific Gravity of Compacted HMA Using Paraffin-Coated Specimens	$270.00
	End	

Zephyr UAS, Inc. Rate Schedule

Position	Hourly Rate
Jacqueline Patterson	$303.00
Marc Canas	$303.00
Alfred Yalda	$208.00
James Craft	$208.00

Emeryville South Bayfront Ped/Bike Bridge Project
Scope of Work and Cost Proposal for Electrical Inspection
Date: 12/14/20

Scope of Work:
Provide inspection of electrical work as shown and specified in the project contract plans and specifications

	Hourly Rate	Hours	
electrical Inspector	$172.02	160	$27,523.33
		Total	**$27,523.33**

July 24, 2020

Mr. Michael K. Chan, PE
Principal Construction Manager
MNS Engineers, Inc.

PROJECT DESCRIPTION: Railroad Coordination Services

Dear Mr. Chan:

It is our pleasure to provide you with a cost proposal to provide the following services to MNS Engineers, Inc. on behalf of City of Emeryville CA:

1. UPRR Railroad Coordination
2. Submittal Reviews / Permit Reviews

Zephyr UAS, Inc. (ZUI) is a small firm that aims to provide efficient and cost-effective rail engineering and construction management services. ZUI's team includes professionals with extensive experience with railroad projects. Our firm provides engineering services ranging from feasibility studies, requiring conceptual design and analysis to final design including preparation of PS&E packages, permit processing and construction management services.

SCOPE / FEE:

Item	Cost
Railroad Coordination	(see attached detail)
TOTAL:	**$47,952.00**

Deliverables:
N/A

PAYMENT TERMS: Payment terms will be consistent with prime agreement.

SIGNATURES

Zephyr UAS, Inc.	**MNS Engineers, Inc.**
Signature: Jacqueline L. Patterson	**Signature:** _____
By: Jacqueline L. Patterson, PE	**By:** _____
Title: Vice President	**Title:** _____
Date: 07/24/2020	**Date:** _____