

**AMENDMENT NUMBER ONE
TO PROFESSIONAL SERVICES AGREEMENT
WITH
BUCKNAM INFRASTRUCTURE GROUP, INC.**

This Amendment Number One ("Amendment") is made and entered into this 16th day of October, 2018 ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and BUCKNAM INFRASTRUCTURE GROUP, INC., a California corporation ("Consultant").

WHEREAS, City and Consultant entered into an agreement on January 6, 2015 for Consultant to provide professional engineering services to update the City's Pavement Management Program (the "Agreement"); and

WHEREAS, City and Consultant desire to amend the Scope of Services to include the additional services set forth in Exhibit "A," attached hereto and incorporated herein by this reference; and

WHEREAS, City desires to increase Consultant's maximum compensation accordingly to One Hundred Sixty-Two Thousand Nine Hundred Eighteen Dollars (\$162,918.00).

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. The Scope of Services shall be amended to include the additional services set forth in Exhibit A.
2. Section 2.1 of the Agreement shall be amended to reflect that Consultant's total compensation shall not exceed One Hundred Sixty-Two Thousand Nine Hundred Eighteen Dollars (\$162,918.00). Consultant shall be paid according to the fee schedule set forth in the Agreement and Exhibit A of this Amendment.
3. All terms not defined herein shall have the same meaning and use as set forth in the Agreement.
4. All other terms, conditions, and provisions of the Agreement not in conflict with this Amendment shall remain in full force and effect.

[Signatures appear on following page.]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by and through their respective authorized officers, as of the date first written above.

CITY OF COSTA MESA

Acting *Samara S. Getouneau* Date: *2/4/19*
City Manager

CONSULTANT

[Signature] Date: *1-14-19*
Signature
PETER BUCKNAM / PRESIDENT
Name and Title

ATTEST:

Brenda Green 2/5/19
City Clerk



APPROVED AS TO FORM:

[Signature] ACA Date: *2/4/19*
City Attorney

APPROVED AS TO INSURANCE:

[Signature] Date: *1/24/19*
Risk Management

APPROVED AS TO CONTENT:

[Signature] Date: *1/18/19*
Project Manager

DEPARTMENTAL APPROVAL:

Paga Sekurama
Public Services Director

Date: 1-23-19

APPROVED AS TO PURCHASING:

Kelly
Finance Director

Date: 1/30/19

EXHIBIT A
ADDITIONAL SERVICES

August 31, 2018

Mrs. Cristina Oquendo, E.I.T.
Engineering Division
City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626

Subject: Proposal for Pavement Management Services – FY 2019-2021

Dear Cristina:

It is our pleasure to submit our proposal to assist the City in continuing the proactive management of your Pavement Management Program (PMP). With the City of Costa Mesa's PMP moving toward automation through condition survey updates, Capital Improvement reporting (CIP), and GIS development, *Bucknam Infrastructure Group, Inc.* has identified a proactive and cost efficient method to assist the City in the continued success of the PMP program. Our team will focus our high-end pavement management expertise, annual working knowledge of Costa Mesa's MicroPAVER v7 dataset and GIS technology to optimize the City's management of the essential infrastructure management programs.

Our services will build upon the earlier success of our 2009-18 pavement management program services with cost-conscious pavement inspections, annual work history updates, additional CIP reporting, alternative budgetary reporting, GIS support for the PMP and general database management. Our proactive PMP services will provide quality services such as:

- ❖ Relevant and accurate PMP services based on our ongoing work with the Orange County Transportation Authority (OCTA), Measure M2 compliance (**Bucknam has assisted seventeen (17) OC agencies comply with Renewed Measure M in the past year;**)
- ❖ OCTA Renewed Measure M compliant surveying, reporting and pavement analysis; in January of 2018, Bucknam staff was certified by OCTA as having "**qualified inspectors and firm through 2020**" to prepare Pavement Management Plans compliant with the 2018 OCTA Countywide Pavement Management Guidelines;
- ❖ Local-Orange County knowledge and experience gained through our management of 70 local agency PMP's within Southern California; **Mr. Peter Bucknam is currently serving as Project Manager for numerous Orange County PMP projects (i.e. San Clemente, San Juan Capistrano, Fullerton, La Habra, Costa Mesa, Brea, Fountain Valley, Huntington Beach, Costa Mesa, Tustin, RSM, Laguna Beach, Laguna Hills, Costa Mesa, Westminster and Aliso Viejo)** and he has personally managed over 200 PMP projects over the past twenty years;

BUCKNAM INFRASTRUCTURE GROUP, INC.
3548 Seagate Way, Suite 230 Oceanside, CA 92056
T. 760.216.6529 F. 760.216.6549
www.bucknam-inc.com

- ❖ Project/engineering experience that brings the understanding that PMP software results are not set in stone; we proactively use the available data to enhance budget forecasting, PCI maintenance triggers, project planning and zone development;
- ❖ Cost effective management methodologies, from the project kickoff through final reporting, gained through our Project Manager's experience and use of GIS tablet-based / digital roadway imaging surveys / ArcGIS Online dynamic PMP-GIS link;
- ❖ Alternative Pavement CIP funding scenario generation and presentation (Bucknam will recommend numerous alternative PMP CIP budget recommendations to the City to identify the greatest ROI for the City);
- ❖ Professional Engineering experience through our Principal/Project Engineer, Mr. Steve Bucknam, P.E. who brings 40+ years of public/private local agency experience. Mr. Bucknam has served as City Engineer, Deputy City Manager, Design Engineer and Utilities Director for numerous public agencies.

As Project Manager, my goal is not just to meet the requirements of this project but establish a living document (Arterial & Local pavement CIP / **Renewed Measure M submittal**) that will be used throughout the term of the CIP as well as implement achievable long-term infrastructure management goals in coordination with City schedules. Our deliverables will be used to strategize and improve upon the City's Pavement CIP for Arterial and Locals.

By selecting *Bucknam Infrastructure Group, Inc.*, the City of Costa Mesa will continue to receive a strong, knowledgeable, innovative, and communicative team with the experience to implement a cost-effective pavement management program. Our handpicked pavement management professionals are committed to delivering quality services to the City. Mr. Peter Bucknam will represent our firm for this project and can be contacted at 760-216-6529 (work) 714-501-1024 (cell) or email at peter@bucknam-inc.com.

Our proposal shall remain valid for ninety (90) days. In order to streamline project management and work schedules, all work efforts will be conducted through our office in Oceanside, CA.

Respectfully submitted,
Bucknam Infrastructure Group, Inc.



Peter J. Bucknam
President/Project Manager



Project Understanding / Approach

We have defined detailed phases to the scope of work;

1. Project Implementation
2. Client Satisfaction
3. Project Schedule
4. Scope of Work (Major Tasks)
5. Additional Services (i.e. Digital Roadway Imaging – Infrastructure)

1) Project Implementation

Task 1.1: Management & Administration – Project Kickoff

The first step in implementing a successful pavement management program truly resides in frequent communication and timely scheduled data updates. For the City of Costa Mesa it will be essential to establish, up front, the Public Works and Street Maintenance/CIP pavement management priorities. Our team will set a Project Kickoff meeting to further discuss and review in detail the expectations of the project, technical approach and the review of schedule and budget. This will be scheduled immediately after the purchase order is issued.

This effort will build consensus between the Street Maintenance and Public Works departments as well as build stronger ARTERIAL and LOCAL long-term maintenance programs.

The first key topics to be discussed will include the review and assessment of the existing MicroPAVER pavement plan/data, Measure M2 compliance, annual survey areas, new construction, PCI range/maintenance triggers, data quality and condition, current pavement procedures, historical expenditure levels, and desired service levels.

During the project several project assessment meetings and project status meetings will be held to ensure that the major scope tasks and project schedule are being adhered to.

Task 1.2: Project Status Meetings – Quality Control Program

Status Meetings and Progress Reports

- Minimum of three meetings during the project (kickoff, field, and status meetings) – minimum of eight (8) hours;
- Field review meetings;
- Monthly progress status reports will be delivered to City project manager.



Quality Control (QC)

We will use a statistical sampling approach for measuring the quality of our field technician’s work.

In this manner, 10 percent of the original annual surveys will be re-surveyed by an independent survey crew, supervised by a field supervisor, and the results will be compared to the original surveys.

Our QC process involves checking the field crews’ work in a “blind study” fashion. Quality control checks will be performed at the end of each survey week. This will ensure that all field personnel are properly collecting distresses and pavement quantities for all street segments.

PCI variance reporting will be performed where previous PCI 2016 data will be compared to newly inspected 2019 PCI data; if PCI’s vary more than ten (10) points per year Bucknam staff will assess the potential cause through unrecorded work history, accelerated pavement deterioration, etc. Bucknam will record/log any discrepancies between the previous and current PMP databases (any corrections/changes to the database shall not be made without prior City staff approval).

Since we are collecting distress information on our field Tablets with the Costa Mesa MicroPAVER database live, our staff will perform several quality control tests within the pavement management software using a sample set of the City of Costa Mesa’s street distress data. This will ensure that all system and analysis settings as well as City recommendations and standards are being followed.

All general draft and final reporting will follow the OCTA “Countywide Pavement Management Program, Guidelines Manual. Over the past year, Bucknam has submitted seventeen (17) OCTA Measure M2 compliant reports for OC municipalities, they include:

Orange County PMP Clients		
Brea	Irvine	RSM
Costa Mesa	Aliso Viejo	Tustin
Laguna Hills	Laguna Beach	Westminster
Fountain Valley	San Juan Capistrano	La Habra
Huntington Beach	Newport Beach	Fullerton
La Palma	San Clemente	

Our surveys follow the accepted OCTA procedure requirements. A copy of the QA/QC plan utilized by our staff during the project will be submitted along with the PMP certification documents. Our staff has already attended the OCTA PMP Distress Training Classes held in November, 2011, 2012, 2013, 2014, 2015, 2016 and 2017. In January 2018 our staff was acknowledged as “qualified inspectors and firm” to prepare Pavement Management Plans compliant with the OCTA Countywide Pavement Management Guidelines (this compliance runs through June 2020; see documentation at the end of our scope of work).

Scope of Work



Registered Engineer / Lead Engineer

Mr. Steve Bucknam, P.E. will supervise all operations, review all completed data and prepare and sign a final report incorporating the results of our pavement evaluation and conditions. We will provide engineered recommendations for pavement rehabilitation and replacement based upon field data and analysis.

2) Client Satisfaction

Task 2.1: Project Deliverables

Shown throughout our Scope of Work, each Task is summarized with project deliverables. Client satisfaction will derive from frequent communication with the Project Manager and key staff members from the Public Works and Street Maintenance departments. Project success is created by delivering on three main factors;

1. Adherence to scope tasks and deliverables
2. Performing to the standard set by the Project Schedule; and
3. Controlling costs. Our Project Manager will follow each of these factors throughout the duration of the project

Deliverable: Project Status Updates, as stated in Task 1.2

3) Project Schedule

Task 3.1: Work Flow / Project Schedule

Our project schedule shows each major task identified in our scope of work, as well as quality control milestones and meetings. Bucknam currently has ample, certified staff to apply to this project in order to meet an aggressive schedule (three field technicians will drive the proactive schedule).

Task Name	1 Oct	15 Oct	29 Oct	12 Nov	26 Nov	10 Dec	24 Dec	7 Jan	21 Jan	4 Feb	18 Feb	4 Mar	18 Mar	1 Apr	15 Apr	29 Apr
1) Project Implementation																
Task 1.1 - Project Kickoff	X															
Assess PMP data / Establish Survey																
Task 1.2 - Project Status Meetings - Quality Control																
Project Status Meetings						X		X				X			X	
2) Client Satisfaction																
Task 2.1 - Project Deliverables						X		X				X			X	
3) Project Schedule	X															
Task 3.1 - Work Flow/Project Schedule																
4) Scope of Work																
Task 4.1 - MicroPAVER Management-Work History																
Assessment of MicroPAVER																
Task 4.2 - Pavement Condition Surveys																
PCI Reporting							30%		65%				100%			
Quality Control Checks																
Develop Recommended Improvement Program																
Task 4.3 - Maintenance & CIP/Budgetary Analysis																
Update Maintenance & Rehab Activities																
Task 4.4 - Citywide CIP Report / OCTA Compliance Reports																
City Review of Draft Final Report																
Project Status Meeting									X				X			X
Delivery of Final CIP Report																
Task 4.5 - Mapping and GIS																
Task 4.6 - MicroPAVER Training																
Task 4.7 - Costa Mesa Hwy Roads PMP Web-Portal																
Task 4.8 - As-Needed Services																

Scope of Work



We anticipate the annual PMP services to start in September of each year and will be completed by March of the following year. See key milestone dates from the project schedule below (fiscal year will change accordingly):

- Project Kickoff – October 1, 2018
- Survey Completion – February 2, 2019
- Delivery of draft PMP – March, 2019
- City comments returned to Consultant – March, 2019
- Delivery of Annual City Final Report – March 30, 2019
 - All necessary OCTA data, reporting and revenue projections will be submitted prior to June 30, 2020 (no later than March, 2020-even year submittal)
 - No OCTA compliant report submittal is necessary for June 20, 2019
- Submittal to OCTA of MicroPAVER Certification conforming to Renewed Measure M2 Eligibility Guidelines – March, 2020
- Implementation of MicroPAVER version 7.0 – Any time after acceptance of Final PMP
 - One copy of the MicroPAVER database will be delivered
 - My Road Costa Mesa Web-portal application will be provided to the City
 - All pavement and GIS data pertinent to the project deliverables will be submitted with the Final PMP report

4) Scope of Work (Major Tasks)

TASK 4.1: *MicroPAVER Management – Work History*

On an annual basis the City's Public Works staff has provided relevant work history data in the form of completed slurry seal, overlay and reconstruction plan sets, Excel spreadsheet listings and site location maps. Our project manager will continue to work with Mrs. Cristina Oquendo and Mr. Baltazar Mejia on acquiring these types of data sources.

Bucknam will assess available Costa Mesa resources to verify all necessary newly constructed streets and enter them into the Costa Mesa MicroPAVER database.

Based on the pavement maintenance that has been performed by in-house staff as well as contractual rehabilitation/maintenance, our staff will review all street activities that have been performed since the 2017 PMP update. This data will be entered into MicroPAVER v7 to enhance pavement deterioration analysis, PCI's and the recommendations for the upcoming budgetary analysis and CIP reporting.



TASK 4.2: Pavement Condition Surveys

With the City seeking to continue a biennial survey and reporting schedule we have demonstrated below our survey schedule for FY 2019-20 thru FY 2021-22. Once the pavement segmentation has been assessed and verified, the necessary annual inspections will be performed. According to the Bucknam's ongoing survey schedule and OCTA guidelines, the following Costa Mesa survey schedule will be utilized:

- **FY 2019-20 Survey** - The inspection of approximately 79 miles of MPAH, Arterial /Collector segments will be performed; OCTA compliant reporting will be provided prior to June 2020;
 - **FY 2020-21 Survey** – No inspection will be performed; City may requested small and/or specific amounts of pavement sections to be surveyed based on project needs. In these cases, the City can utilize the Task 4.8 “As-Needed PMP Services” to complete these work efforts;
 - **FY 2021-22 Survey** - The inspection of approximately 79 miles of MPAH, Arterial /Collector segments will be performed; additionally, the inspection of approximately 156 miles of Residential and 14.8 miles of Alley segments will be performed. Alley sections will be surveyed within the appropriate zones; no private streets will be surveyed under this effort (City maintains 127 unique alley sections). Additionally, the City maintains 40 unique parking lots within the City; these will be surveyed if required
 - OCTA compliant reporting will be provided prior to June 2022
1. **Walking/Windshield** All sections are surveyed through walking/windshield methodologies. Distress types will be collected based upon actual surface conditions and physical characteristics of the segment. Surveying methods will be conducted by remaining consistent with ASTM D6433-16 MicroPAVER & the Army Corp of Engineers sampling guidelines while being flexible to current City requirements.

All sample locations observed through our surveys cover 20% of a pavement sections area or slabs; additional street factors such as unique distress areas found outside our sample areas will be recorded. Other key elements of our surveys consider the following:

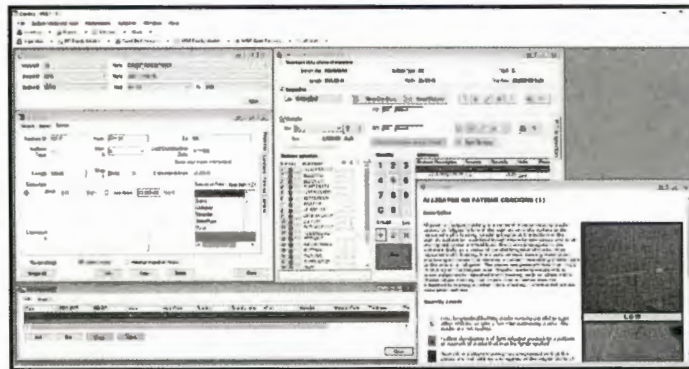
- Recent slurry seal and overlay maintenance on sections within the survey limits will reduce total mileage of survey – TBD; and
- No private streets will be surveyed under this effort.

Scope of Work



Our use of MicroPAVER-Tablet units allows our staff to collect pavement data with the City of Costa Mesa's MicroPAVER database live in the field. At the end of the day all electronic data is transferred to our office for quality control and management.

Our Tablet methodology sets us apart from the competition since we are using a paper-less inventory process to enter data; this in turn generates cost savings to enhance the project schedule and other portions of the project such as CIP reporting, MicroPAVER training and on-call services.



Roadway Verification Survey - A listing of the field attribute data that is updated/verified during the survey for the pavement management database is listed below (OCTA survey guidelines will be followed):

2. Field Attribute Data (updated and/or verified)

- From/to, indicating the assigned limits of the section, sample test areas, street name, street codification
- Street ranking indicating local, alley, arterial, collector, # of lanes, surface type
- Historical PCI tracking from previous inspections and 2019 PCI inspections
- Segment quantities, indicating the length, width, and total true area of the section
- ADT volumes (if available from previous reports or City documents)

3. Conditional data will be evaluated for all street segments and will include:

- MicroPAVER 20 AC & 19 PCC distresses by type, severity and sample area
- PCI ratings (0-100), taking into account the surface condition, level of distress
- Other known or found environmental issues (standing water, site condition, etc.)

We welcome staff members from the City of Costa Mesa to join our surveys. All pavement data will be entered into the City's most current licensed software (version 7, in-hand now). If the City has not obtained the most recent version of MicroPAVER we will assist the City in purchasing the software upgrade. All items listed above will be maintained by our staff for the duration of this project. Data management will be performed in-house at our Oceanside office. At the completion of the project, the MicroPAVER database will be placed within your information services/communication network.

4. Section Distress and PCI Reporting

Upon 50% and 100% completion of the required condition surveys, we will prepare draft PCI Reports and PCI GIS maps that document the conditions of all pavement segments. This report

Scope of Work



will provide the necessary information within MicroPAVER for the City to use and manipulate projected street rehabilitation and maintenance projects.

Included in the report will be updated pavement performance curves and maintenance decision models. The City and our staff will review the PCI reports to ensure that all inventory data is correct and the project is running smoothly.

Our PCI Reporting will include:

- PCI Report – Sorted by Name (A to Z), PCI Order (0-100), Zone (1, 2, 3, etc.);
- Pavement segment and PCI “Variance Report” (sections showing +/- 10 PCI variance);
- Graphical representation of conditions;
- Condition Report Analysis for each segment;
- Work history report; and
- GIS Maps presenting PCI findings by Zone and by section.

Once the City has reviewed, assessed and commented on the draft report, we will address all comments made and deliver the final reports.

Deliverable: Citywide PCI reports, compliant OCTA PCI reports, PCI Variance report

DEVELOP RECOMMENDED IMPROVEMENT PROGRAM

TASK 4.3: Maintenance & CIP/Budgetary Analysis

We will assist the City in developing the most cost-effective preventative maintenance, repair and rehabilitation strategies possible. This will be accomplished by meeting with the City to discuss and strategize maintenance activities that are currently being used by the City. Based on the City’s current AC & PCC applications, Geotech reports and other maintenance practices used we will conduct an historical and prospective analysis on the conditional and financial impact these practices have on the pavement network. Based on our fiscal and deterioration analysis, we will present our results and recommendations to City staff. This analysis will become an essential building block for the projected seven-year CIP/maintenance programs. The City is required to submit OCTA compliant, seven-year projections by June 30, 2020; Bucknam will deliver all necessary reporting by March, 2020.

We will establish/update a maintenance “decision tree” that will be used to generate pavement recommendations that match current fiscal year maintenance approaches/City practices. This will be accomplished by assessing/updating the unique and individual PCI ranges and deterioration curves within MicroPAVER based on functional class (i.e. arterial, collector, local) and age.

Our staff will review the Costa Mesa’s deterioration curves that have been developed based on historical pavement condition, inspection, surface type, and road class. The curves will be modified based on current pavement conditions. The strategies that are typically reviewed are rehabilitation and reconstruction (R&R), localized maintenance, slurry seals, and various overlay types, the expected improvement in pavement condition, the life-cycle extension that would result and the unit costs for maintenance.

Scope of Work



All maintenance practices/unit costs will be integrated into MicroPAVER and will be derived from the most recent construction bids for pavement rehabilitation. We will account for inflation rates when long-term revenues projections are made.

Our Project Manager and Principal will work closely with City in defining repair and rehabilitation strategies during each fiscal year and within each Zone defined by the City. Once the repair/rehabilitation strategies have been defined, the identification of a seven year Forecasted Maintenance schedule will be generated.

The recommended budget scenarios will be identified on the basis of several criteria:

- Assessment and review of the City's Pavement CIP
- Present pavement conditions; Desired levels of service and available resources
- Projected / Forecasted PCI's per section
- Cost benefit of individual strategies (e.g. maintain PCI in 7-years, etc.)
- Scheduling with the City's major CIP projects (water, sewer, etc.)
- Budgetary recommendations that satisfy OCTA Local Match Reduction guidelines
- Future routine maintenance needs based on projected deterioration rates
- Renewed Measure M and AHRP objectives and improving citywide weighted PCI

The primary emphasis of this task is to maximize the scheduling of street maintenance using the most cost-effective strategies available and taking into account a life-cycle cost analysis. A working "draft" Final Report will be generated for City staff to review. The report will include an executive summary, the PCI Report as well as draft budgetary findings and recommendations.

Deliverable: Two copies of the Draft Pavement Management Program Report

TASK 4.4: Citywide CIP / OCTA Compliance Reports

We will deliver the Final Report to the City which will be essential for staff reference and use as well as presented in a way that is beneficial for elected officials/upper management. Costa Mesa is a "even-year" submittal.

This report will assist the City in complying with OCTA and its most recent Countywide PMP Guideline requirements (April 2018).

The report will be prepared in a format that uses the information delivered by MicroPAVER in conjunction with the information and analysis performed by our team (identical to the report we delivered to OCTA every even year). The report will provide the City with information on:

- Current inventory and pavement conditions indices (PCI) for all road classes
- Projected annual rehabilitation programs for street maintenance for a 7-yr period (ARTERIAL and LOCAL Forecast Maintenance Reports) that show the largest return on investment and acceptable levels of service;
- Modeling and comparison of budget scenarios typically include:

Scope of Work



- Current / Actual budget 7-year projection (citywide approach)
- Identification of annual funding to maintain current PCI after 7-years
- Increase current PCI within 7-years
- Gradual, Frontloaded, Constrained and Unlimited funding analysis
- Strategies and recommendations for the City's maintenance programs and procedures, including a preventative maintenance schedule;
- Supporting documentation required by OCTA; and
- A detailed breakdown of deferred maintenance (backlog).

We will make a presentation of the results from the 2019 PMP update to City personal and/or City Council if necessary-pro bono.

Registered Engineer

Mr. Steve Bucknam, P.E. will supervise all operations, review all completed data and prepare and sign a final report incorporating the results of our pavement evaluation and conditions. We will provide engineered recommendations for pavement rehabilitation and replacement design based upon field data and analysis.

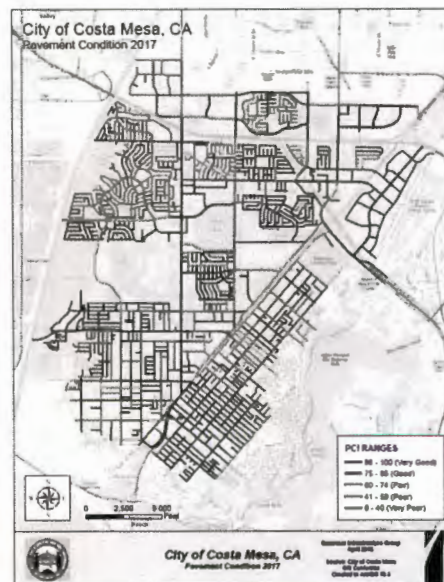
Deliverable: Two (2) bound copies of the Final Pavement PMP Report (plus one original signed by our Registered Engineer, CA No. 20903), in binder and electronic form (.pdf), will be sent to the City. Bucknam will provide one (1) DVD copy that includes all final reporting documents, MicroPAVER .e65 PMP database and GIS files.

TASK 4.5: Mapping and GIS

As an enhancement and proactive approach to this project, our staff will update the existing Pavement-GIS link between MicroPAVER and the City's GIS system. Our staff established this link in 2010 and has updated the unique PMP-GIS layer every year. Our staff will review, with City staff, all ongoing upcoming capital projects that may impact the GIS mapping delivered for this project.

The maps described below will be incorporated into the City's Final PMP report:

- PCI values for every section (24 x 36 color)
- Work History identifications (24 x 36 color)
- 7-yr Arterial / Local Rehabilitation and Slurry Seal Programs (24 x 36 color)



Scope of Work



- Functional classification maps (24 x 36 color)

Once the City has approved the Pavement Condition Report, we will update the necessary MicroPAVER-GIS linkages (street names will be shown on all maps). By using the unique ID's within the PMP and the City's ESRI street shapefile ID's, we will create a one-to-one match for each pavement section in the GIS. Our staff will coordinate all project deliveries with the Public Works and the GIS division to ensure that the most current and accurate PMP-GIS maps are represented within the City's GIS enterprise (see 2017 Costa Mesa PMP map above).

Deliverable: Complete GIS files/themes based on list above (shapefiles).

TASK 4.6: Costa Mesa My Roads PMP Web-Portal

Costa Mesa My Roads Web-Portal

Bucknam now provides all our MicroPAVER clients with a unique and agency driven "My Roads" web-portal that provides instantaneous access to your MicroPAVER database. This "dashboard" allows users to toggle through individual sections, Zones, ranks, etc. to review all section metrics, latest/previous inspections, generate filtered PCI reports and identify potential maintenance costs based upon your unique needs.



Bucknam has shown above the current "My Roads" actively working! This tool will be accessed by City staff simply through a Username/Password methodology. As changes are made to the Costa Mesa MicroPAVER database the My Roads dataset is immediately changed to reflect work history edits, PCI inspections and section changes.



Additional Services (Optional)

TASK 4.7: MicroPAVER Training

MicroPAVER Training

With PMP software use being one of the key components to a successful PMP implementation, we will provide City staff with quality, certified training and the necessary skills needed to maintain the PMP. Bucknam will provide City staff with all collected pavement/GIS data, as well as updated operation manuals for both field data collection and software use. Based on the number of future users, our staff will deliver as many copies as needed by City staff to facilitate the program. Peter Bucknam, who is certified in the use of MicroPAVER, will conduct comprehensive multi-day training sessions covering implementation, interfacing with the system, PMP methodologies, field survey practices, PCI calculations, budget needs analysis and editing/updating the database. This is estimated to consist of a minimum of 8 hours of training.

Training typically involves one (1) day of training on the PMP software and GIS linkages. There is no minimum or maximum amount of people that can be trained under this methodology. We can train one key individual or an entire classroom using a City training facility pending on your needs; the intent of this training is to empower and allow City staff to continue updating the PMS database on their own after this project is completed.

TASK 4.8: As-Needed PMP Services

Pavement Management Program Support

With the City implementing a biennial PMP management schedule Bucknam will provide annual PMP support that will cover data previously submitted by our staff. If additional services outside the identified scope of work above are requested Bucknam will provide timely and proactive services to the City. Additional As-Needed services typically include:

- Additional budget scenarios, general reporting, deterioration studies
- Additional visual inspections above the mileage amount indicated in Task 4.2
- Additional pavement management – GIS mapping
- Additional MicroPAVER training, operation use

Also, if requested, Bucknam will assess and review the City's upcoming maintenance schedule for that fiscal year. The agreement will continue to include the provision of onsite and telephone support for the City staff.



OCTA PMP QUALIFICATIONS /CERTIFICATIONS

Shown below is OCTA's verification that Bucknam Infrastructure Group, Inc. is prequalified to prepare Pavement Management Plans. Bucknam is "qualified" until June, 2020.

From: Brianna Martinez [mailto:bmartinez@octa.net] |
Sent: Tuesday, February 27, 2018 9:25 AM
To: Peter Bucknam <peter@bucknam-inc.com>

"Sent on behalf of Harry Thomas, OCTA Planning"

Good morning,
Here are the currently prequalified pavement inspection consultants and agencies:

- **March 23, 2016 – Expires June 30, 2018**
 - Bucknam Infrastructure Group
 - City of Cypress
 - Civil Source, Inc.
 - Dynatest
 - Fugro
 - GIE
 - NCE
 - Onward Engineering
 - City of Orange
- **April 21, 2017 – Expires June 30, 2019**
 - Adhara Systems, Inc.
 - Fugro Roadware, Inc.
 - GMU
 - Harries & Associates
 - IMS
 - Marker Geospatial
 - NCE
 - Twining
 - Vanderhawk
- **February 15, 2018 – Expires June 30, 2020**
 - Bucknam Infrastructure Group
 - Dynatest

Best,
Brianna Martinez

Scope of Work



Proposed Fee

Task Items 1 through 4 can be accomplished on a **time and materials not to exceed** basis in accordance with the standard hourly rate schedule attached. Our anticipated fee including labor and reimbursable expenses is projected to be \$72,019 for a three-year period. Should the City desire to increase the service level above the hours outlined above for the Task items 1 through 4 or require other services not described herein, a fee adjustment would be negotiated and mutually agreed upon by both parties. We have included our fee schedule below for the City consideration.

	Description	Principal	PMP Project Manager	GIS Planner	Field Technician(s)	Admin	Total by Task
	Primary Services	\$250/hr	\$175/hr	\$130/hr	\$84/hr	\$75/hr	
Task 1	Project Implementation						
Task 1.1	Management & Administration - Project Kick-off		2	2			\$610
Task 1.2	Project Status Meetings - Quality Control Program		3	3	32		\$3,603
Task 2	Client Satisfaction						
Task 2.1	Project Deliverables	1	1	1	8	2	\$1,377
Task 3	Project Schedule						
Task 3.1	Work Flow / Project Schedule	1	1	2	2		\$853
Task 4	Scope of Work						
Task 4.1	MicroPAVER Management-Work History						
Task 4.2	Pavement Condition Surveys (2019-2022 Arterial/Local)						
	2019-20 Pavement Survey 79 MPAH-Arterial miles		8	6	96		\$10,244
	2020-21 Pavement Survey - No survey required		0	0	0		\$0
	2021-22 Pavement Survey 79 Arterial, 156 Local & 14 Alley miles		18	16	332		\$33,118
	- 249 miles total						
	Parking Lot Inspections						
	- 40 Parking Lots (1.6 million SF)						TBD
Task 4.3	Maintenance & CIP/Budgetary Analysis		8	4	2		\$2,088
Task 4.4	Citywide CIP / OCTA Compliance Reports						
	2020 Biennial Reporting	2	24	6	4	2	\$5,966
	2022 Biennial Reporting	2	24	6	4	2	\$5,966
Task 4.5	Mapping and GIS		6	8	16		\$3,434
Task 4.6	Costa Mesa My Roads PMP Web-Portal						\$1,500
	Reimbursables (printing, materials)						\$3,260
	All deliverables will become property of the City of Costa Mesa						
	All Tasks are negotiable						
	Total Hours per Staff	6	95	54	496	6	
	Total Base Fee (four Year Term)	\$ 1,500	\$ 16,625	\$ 7,020	\$ 41,664	\$ 450	\$72,019
	Additional Services						
Task 4.7	MicroPAVER Training		3	2	5		\$1,205
Task 4.8	As-Needed PMP Services		12	16	60		\$9,220
	Additional services outside of this contract will be negotiated with the City where we will use the Standard Hourly Rate Schedule						