

PROPOSAL FOR PAVEMENT MANAGEMENT PROGRAM CONSULTING SERVICES (RFP No. 18-077)

City of Rialto, CA

April 26th, 2018

Submitted by:

Bucknam Infrastructure Group, Inc.

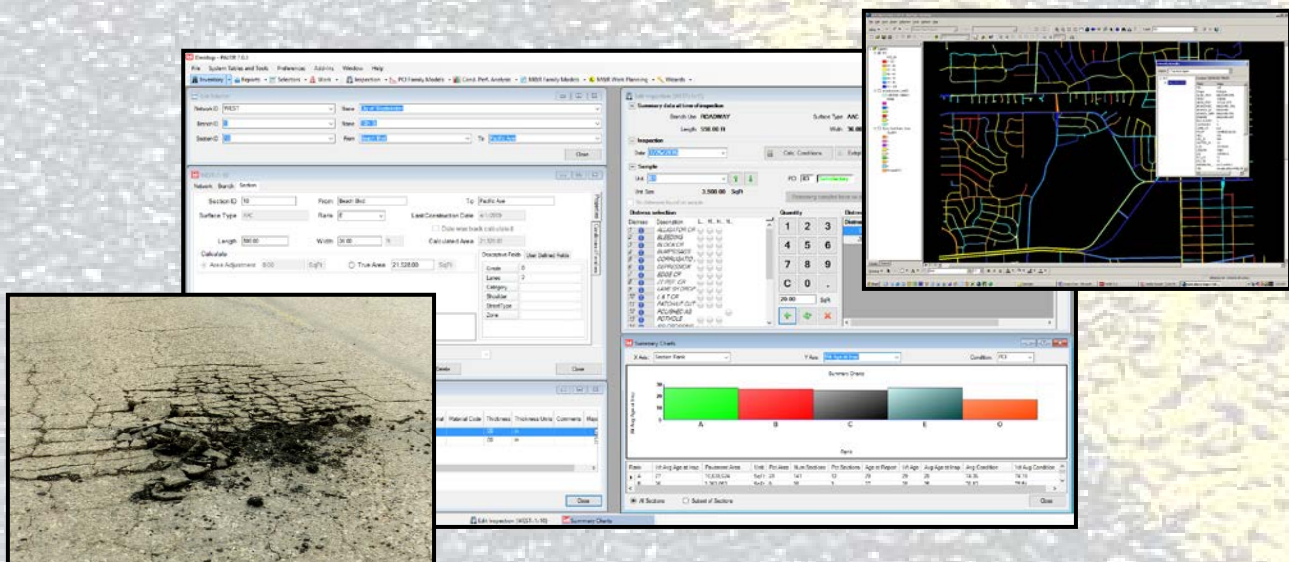


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April 26, 2018

Mr. Robert G. Eisenbeisz, P.E.
Public Works Director/City Engineer
City of Rialto
335 W. Rialto Avenue
Rialto, CA 92376

**Subject: Proposal for Pavement Management Program Consulting Services;
RFP No. 18-077**

Dear Mr. Eisenbeisz,

It is our pleasure to submit our proposal to assist the City of Rialto in the continued, proactive management of your Pavement Management Program (PMP). With the City seeking to move toward stronger infrastructure management methodologies through advanced pavement inspections, neighborhood maintenance scheduling, Capital Improvement reporting (CIP), and GIS implementation, *Bucknam Infrastructure Group, Inc.* has identified a proactive and cost efficient method to assist the City in implementing a successful PMP. Our team will focus our long-term PMP knowledge, extensive San Bernardino County experience and GIS/GPS technologies to optimize the City's maintenance dollars by implementing a manageable and reliable PMP methodology.

Based on our 20+ years of SoCal PMP experience, our project staff can be relied upon to provide outstanding service to the City. This will be accomplished by assisting the City in implementing a common-sense neighborhood M&R schedule, formulating a proactive Arterial CIP budget and providing realistic maintenance recommendations. Our firm is unique in that we provide:

- ❖ Relevant and accurate PMP services based on our ongoing work with numerous Inland Empire, Los Angeles, Orange and San Diego County local agencies such as:
 - o 20 Los Angeles County local agencies (i.e. Ontario, Pomona, La Verne etc.)
 - o 17 Orange County local agencies; and
 - o 10 San Diego/Inland Empire local agencies
- ❖ Our company currently assists five (5) SoCal local agencies with citywide GIS management services which includes day-to-day operations, infrastructure / pavement GIS management, MicroPAVER-GIS management, street right-of-way management, etc.;
- ❖ Army Corps of Engineers ASTM D6433-16 compliant surveying, reporting and pavement analysis on an annual basis;
- ❖ Our project manager has worked within the SoCal Pavement Management industry for over twenty (20) years and has worked extensively with **MicroPAVER**, StreetSaver and CarteGraph PMP software's through turn-key data conversion projects to long-term, proactive pavement CIP scheduling that relies on accurate and cost-efficient bid documentation;

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- ❖ Project/engineering experience that brings the understanding that MicroPAVER results are not set in stone; we proactively use the available data to enhance budget forecasting and CIP/O&M project planning;
- ❖ 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; and
- ❖ Professional Engineering experience through 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 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.

Offeror: Bucknam Infrastructure Group, 3548 Seagate Way, Suite 230, Oceanside, CA 92056; Company FID # 45-2723662

Mr. Steve Bucknam, P.E. (Principal) will be responsible for all project oversight and deliverables (steve@bucknam.net). Mr. Peter Bucknam (Project Manager/Principal Agent) will be providing day-to-day operational and management services; he is authorized to sign the agreement for this contract. He can be contacted at 760-216-6529 (work) 714-501-1024 (cell) or email at peter@bucknam-inc.com.

By selecting *Bucknam Infrastructure Group, Inc.*, the City of Rialto will 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 within the 126 calendar day schedule.

We have already scheduled time for your project and eagerly await our kick-off meeting with City staff and you. This proposal is valid for one-hundred twenty (120) days. The City's RFP, all addendum's and attachments are incorporated in their entirety as part of our proposal and all information submitted within our proposal is true and correct.

Respectfully submitted,

Bucknam Infrastructure Group, Inc.



Peter J. Bucknam
President



Project Understanding

Project Understanding / Approach

As the City of Rialto infrastructure matures, the City's staff is striving to update the City's Pavement Management Program (PMP) through "annual" cost effective condition surveys, engineering unit cost evaluation, Arterial CIP and "neighborhood" budgetary reporting and work history updates within the PMP database. **Bucknam's experience through adherence to scope, schedule and cost have proven itself over the past twenty (20) years of PMP service to over 70 Public Works departments throughout Southern California.**

The City requires a team that will continue to not only resurvey the defined sections using cost-conscious methodologies but will create a comprehensive program that includes the enhancement of your multi-year PMP CIP, neighborhood maintenance, educational training, efficient data for PS&E bid document preparation, stewardship of the PMP, GIS links to the PMP, and the knowledge of the inner workings of the PMP software.

Bucknam will provide these services through our proactive and accurate implementation of your PMP; we will address the City's primary goals of:

- Validating Rialto pavement segmentation, GIS segmentation and section attributes;
- Enhancing the Rialto PMP database with 2014 to 2018 work history data entries;
- Surveying 269.3 miles of Arterial, Collector, Local and Alley streets; provide variance PCI reporting based upon 2014 PCI's vs. 2018;
- Verifying / Updating pavement centerline and metric data (PMP vs. GIS);
- Publishing PMP data through MicroPAVER and/or City's existing GIS Enterprise;
- Generating 2018 Pavement Condition Index (PCI) ratings for each segment;
- Developing a proactive preventative slurry seal / overlay maintenance schedules based on existing capital funding;
- Establishing solid recommendations for current / future maintenance needs;
- Utilizing the City's existing funding to generate a baseline five (5) year Capital Improvement Program (CIP);
- Recommending alternative maintenance budgets that demonstrate realistic return-on-investments (ROI), i.e. Scenarios 1, 2, 3, "actual" budget model, maintain PCI model, etc.

We have defined detailed phases to the scope of work in accordance to the City's RFP;

1. Project Implementation
2. Client Satisfaction
3. Scope of Work (Major Tasks – Section 2)
4. Project Schedule (See Section 5)



Key / Critical PMP Issues and Solutions

Every PMP is unique and carries key elements that need to be assessed, qualified and solved. Bucknam approaches each unique project with no assumptions or canned solutions. From the beginning of the project, Bucknam will assess the City's existing MicroPAVER database, previous Final Reporting, PMP-GIS segmentation and budgetary history to ensure that all possible issues are identified.

Common issues, such as the following items, are typical when an local agency transitions from one team to another:

- **City PMP segmentation issues**

- PMP linear footage vs. GIS segment length;
- City boundary / street ownership;
- Public vs. Private street clarification;
- Missing streets;
- Incorrect "from – to's" / misspelled streets / naming conventions;
- Segment attribute data (i.e. lane count, zones, rank);

Solution – Prior to survey Bucknam will perform a thorough assessment and data research of available City/County data, high frequency communication with City staff to resolve missing data; on-site research and assessment.

- **Work history / historical inspection data**

- Lack of qualified work history

Solution – Prior to survey Bucknam will Identify missing or incomplete work history; provide on-site research of existing as-built data, plans, .pdf's, GIS data.

- **Geographic Information System data**

- Lack of one-to-one match between PMP database and GIS segmentation;
- Missing GIS line work / public street representation;
- Missing alley data;
- City boundary – GIS errors;
- Missing Section ID or mismatching Section ID to PMP database;

Solution – prior to survey Bucknam will provide high communication with Public Works and GIS-IT staff to identify available data, resources and relevant GIS data to correct missing attributes..

These proven solutions have produced over 300 successful PMP throughout southern California since 1997!

Scope of Work



We have defined detailed phases to the scope of work in accordance to the City's RFP;

1. Project Implementation
2. Client Satisfaction
3. Scope of Work (Major Tasks)
4. Project Schedule (See Section 5)

1) Project Implementation

TASK 1.1: 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 Rialto it will be essential to establish, up front, the Public Works Division (Engineering/Maintenance) pavement management priorities. Our team will set a Project Kickoff meeting with the Public Works Director (Mr. Robert Eisenbeisz) and the Public Work Superintendent (Mr. Tony Brandyberry) to further discuss and review in detail the expectations of the project, technical approach, section ID / GIS management & surveys, district/quadrant maintenance, software upgrades & use, deliverables within the scope of work and the review of schedule.

This effort will build consensus between the Maintenance and Public Works staff as well as build stronger ARTERIAL CIP and LOCAL neighborhood maintenance programs that complement large Public Works CIP projects and annual maintenance projects.

The first key topics to be discussed will include the review and assessment of the existing MicroPAVER pavement plan/data; its current and future use, survey areas based on recent maintenance work and schedules, new construction, data quality and condition, current pavement procedures, historical expenditure levels, software implementation and desired service levels.

Deliverable: Meeting minutes, revised project schedule (if necessary)

TASK 1.2: Project Status Meetings - Quality Control Program

Status Meetings and Progress Reports

- Monthly progress status reports will be delivered to City project manager;
- Minimum of three meetings during the project (kickoff, field, and status meetings – 30%, 65% and 100%); and
- Qualified and accurate PCI variance reporting demonstrating PCI variances between 2014 and 2018 inspections.

Scope of Work



PMP 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 (27 miles out of 269.3 miles) of the original 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 2014 PCI data will be compared to 2018 data; if PCI's vary more than three (3) points per year Bucknam staff will assess the potential cause through unrecorded work history, accelerated pavement deterioration and further field assessment, etc.

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

Over the past year, Bucknam has submitted forty (40) compliant PMP reports for SoCal municipalities, they include:

Southern California PMP Clients		
Ontario	Alhambra	El Segundo
Pomona	Culver City	Lomita
RPV	Palmdale	South Gate
South Pasadena	La Habra Heights	Sierra Madre
Monterey Park	Hermosa Beach	South Pasadena
Compton	Lynwood	Norwalk
La Verne	Rosemead	Bellflower
Rancho Palos Verdes	Duarte	San Clemente
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		

Scope of Work



Our field surveys follow the accepted ASTM D6433-16 walking requirements and are proven and continue to be utilized for our SoCal clients shown above. A copy of the QA/QC plan utilized by our staff during the project will be submitted along with the PMP certification documents.

Per the RFP, Rialto requires “certified” PMP inspection staff, our staff attends the OCTA MicroPAVER PMP Distress Training Classes held each winter (FY 2011 thru 2018). **In January 2018 our staff/company was acknowledged as “qualified inspectors and firm” to prepare Pavement Management Plans compliant with the ASTM D6433-16 and OCTA Countywide Pavement Management Guidelines (this compliance runs through June 2020).**

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.

Deliverable: Monthly Project Status reports, field review and project status meetings, QA/QC Plan

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 Engineering and 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

Scope of Work



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 staff to apply to this project in order to meet an aggressive schedule (3 field technicians will drive the proactive schedule).

With a completed survey, our team will work with you to establish a PMP that provides specific, manageable pavement segments, detailed maintenance schedules of needed repairs and cost conscious maintenance recommendations that will assist you in preparing budget estimates required to complete the scheduled work for fiscal year 2018-19 and beyond.

Per the request of the RFP, we have included the Critical Path Method (CPM) Project Schedule within Section 5 of our proposal.

4) Scope of Work (Major Tasks)

TASK 4.1: Update Maintenance and Rehabilitation History

The City will provide Bucknam a complete listing of all major work (overlay, slurry, etc.) in order to update specific section work histories and PCI ratings. Bucknam will review all maintenance and rehabilitation projects completed and/or scheduled by the City since the last update in 2014; this will include work history updates on arterial, collectors, locals and alleys.

Our staff will enter the necessary work history updates as mentioned above (i.e. data entry of maintenance / rehabilitation activities) into your MicroPAVER software. Once the project is completed, our staff will upload the necessary PMP database files at the City.

Deliverable: Update PMP data, Work History report

TASK 4.2: Pavement Condition Surveys

First and foremost, the assessment of the City's pavement segmentation is one of the key priorities for this project. With three years between major inspections it will be essential to verify that all Arterial, Collector, Local and Alley segmentation is up-to-date and that section SF quantities are verified, accurate and reliable.

Once the pavement segmentation has been assessed and verified, the necessary inspections will be performed. It is the City's desire to survey all pavement sections this fiscal year.

Our survey methodology will include one of the following approaches based on the ASTM D6433-16 guidelines:

Scope of Work



1. **Walking** - All sections are surveyed through walking methodologies. Distress types will be collected based upon actual surface conditions and physical characteristics of the segment. Sample locations, distress types, extents and severities 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 sampling guidelines while being flexible to current City practices. Live GIS files will be used to enhance field survey locations, data access and quality control measures.

All sample locations are observed through walking surveys; additional unique conditional factors such as unique distress areas found outside our sample areas will be recorded.

- The inspection of approximately 269.3 miles of Arterial, Collector, Local and Alley streets will be performed;
 - o 100.3 miles Arterial / Collector streets; and
 - o 169.0 miles of Local / Alley streets.
 - On an annual basis, recent slurry seal and overlay maintenance will reduce the amount of necessary survey, Bucknam will coordinate mileage reduction with City prior to survey; and
 - No private streets will be surveyed under this effort.
2. **Automated Digital Roadway Imaging (see [Optional Task 4.8](#))** survey; Bucknam has recently performed this service for the cities of Compton, , RPV, Aliso Viejo, Bellflower, Culver City, Beverly Hills, Palmdale, Fountain Valley, Cypress, RSM, Santa Ana, La Habra Heights, National City and Palm Desert for PMP and ROW inspections. Our staff will establish all inspection sample locations for survey based on ASTM D6433-16 guidelines; **this effort replaces the walking field operations; all pavement condition inspections are then completed in-house through our automated processes. Surveys are quality controlled with field operations.**

Our use of MicroPAVER Tablet units allows our staff to collect pavement data with the City of Rialto's PMP 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 other portions of the project such as CIP reporting, GIS implementation, PMP software 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:

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

- ❖ From/to, indicating the assigned limits of the section, sample test areas, street name, a street codification (i.e. truck route, school zone, maintenance district)
- ❖ Street ranking indicating arterial, collector, local, alley, # of lanes, surface type

Scope of Work



- ❖ Street segmentation implemented continuously from west to east and south to north
- ❖ Historical PCI tracking from previous inspections and 2018 PCI inspections
- ❖ Segment quantities, indicating the length, width, and total true area of the section
- ❖ Structural sections (if available from previous reports or City documents)

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

- ❖ 20 AC & 19 PCC distresses by type, severity and sample area
- ❖ PCI ratings (0-100), taking into account the surface condition, level of distress
 - PCI values will reflect “per segment and overall” results (not per direction of travel);
 - Reporting that indicates PCI current and future performance for the next five years based on performance prediction modeling and local condition;
- ❖ Drainage Condition Rating (standing water, etc.)
- ❖ Traffic volumes (ADT, if available)

In developing the PMP and through our field surveys if our staff modifies or changes any street segment we will notify the City Project Manager and gain approval for such changes before any modifications are made.

We welcome staff members from the City of Rialto to join our surveys.

Under the use of MicroPAVER all pavement data will be entered into the Bucknam’s most current licensed software. 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 PMP database will be placed within your internal Public Works network.

3. Section Distress and PCI Reporting

Once inspections are completed, we will generate a draft Pavement Condition Index (PCI) Report for City staff to review. The City and our staff will review these reports to ensure that all inventory data is correct and the project is running smoothly.

Our submittal will include:

1. PCI Variance report comparing 2014 PCI’s to 2018 PCI’s (will be performed annually)
2. Street centerline miles, lane miles, and pavement area
 - a. Reported as an entire network
 - b. Reported by functional classification (arterial, collector, local, alley)
3. Current street network Pavement Condition Index ratings

Scope of Work



- a. Report as an entire network
 - b. Reported by functional classification (arterial, collector, local, alley)
4. Pavement segment tabular listing for the entire street network
 - a. PCI Report – sorted by PCI (worst to best)
 - b. PCI Report – sorted alphabetically
5. Creation of pavement performance curves and definitions for maintenance strategies, decision tree models and pavement life-cycle analysis
6. PCI report will be signed and sealed by our registered engineer

Deliverable: Citywide PCI Reports (30%, 65% and 100% status PCI reports), PCI Variance report

DEVELOP RECOMMENDED IMPROVEMENT PROGRAM

TASK 4.3: Maintenance and Rehabilitation, History and Decision Tree

In regard to the pavement maintenance that has been performed by in-house staff as well as through contractual maintenance, our staff will review all street activities that have been performed since the last major PMP update (FY 2014). All street maintenance data will be entered into MicroPAVER to improve upon section deterioration projections that will in turn enhance the recommendations for the upcoming budgetary analysis and CIP reporting.

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/unit costs that are currently being used by the City. This effort is typically scheduled for when our pavement surveys reach 65% complete.

Based on the City's current available budget, AC & PCC applications/costs 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. The maintenance strategies that are typically reviewed are localized stop gap maintenance, slurry seals, rehabilitation and reconstruction (R&R), the expected improvement in pavement condition, the life-cycle extension that would result and the unit costs for maintenance.

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 recommended 2018-2023 maintenance programs/scenarios. Bucknam will provide an engineering discussion that includes priority listings as well as several sets of priority / cost-benefit analysis scenarios.

We will establish a maintenance "decision tree" that will be used to generate pavement recommendations that match current 2018 maintenance approaches. This will be accomplished by assessing/updating the unique and individual deterioration curves within the database based on functional class (i.e. arterial, collector, local, alley) and age. Our staff will review the Rialto's

Scope of Work



deterioration curves that have been developed based on historical pavement condition, inspection, surface type, and road class. The curves will be modified based on 2018 PCI's.

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

Our staff will also recommend updates to the City's arterial/residential maintenance neighborhood approach. We will focus on projecting budgets and maintenance recommendations for all streets within maintenance "neighborhoods"; this will allow us to proactively schedule maintenance efforts throughout the 5-year CIP as well as achieve the desired level of PCI across the City.

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

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

- Assessing the City's current PMP funding sources (i.e. Gas Tax, SB1, General fund, etc.);
- Present pavement conditions; Desired levels of service and available resources;
- Scheduling with the City's maintenance neighborhoods and other capital projects (water, sewer) ;
- Accrued backlog levels and stabilization of maintenance backlog; and
- Future routine maintenance needs based on projected deterioration rates.

The primary emphasis of this task is to maximize the programming of street maintenance projects 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 Draft and Final PMP reports will include:

- Executive Summary / Findings and Recommendations;
- Purpose statement for PMP to establish goals and objectives;
- Assessment of current and projected pavement condition (condition analysis and prediction modeling);
- Pavement Condition Index (PCI) reports;
- Multiple CIP scenarios identifying arterial and residential maintenance (per section & district) recommendations (slurry, overlay, recon, etc.) associated with contingency costs; City will provide funding source budget allocations;
- Recommendations for residential maintenance in "groupings" or neighborhoods; and
- GIS mapping.

Scope of Work



Deliverable: Hierarchy model of pavement maintenance decision tree, two (2) copies of the Draft Pavement Management Program Report

TASK 4.4: Budgetary Analysis and Final PMP Reporting

We will deliver the Final Report to the City which will be essential for staff use/reference and beneficial for elected officials/upper management. The report will be prepared in a format that uses the information delivered by PMP in conjunction with the information and analysis performed by our team. 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 5-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;
 - Current / Actual budget 5-year projection (citywide approach);
 - Identification of annual funding to maintain current PCI after 7-years;
 - Increase current PCI within 5 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 METRO; and
- The PMP will be presented to the Rialto City Council and/or upper management and we will support Rialto staff in the development of the presentation; **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. In summary, the final report will include:

Final Report Deliverables
Executive Summary outlining the completed project
Methodologies utilized for field survey and budget analysis
Work history of completed street maintenance, rehabilitation and reconstruction
Current PCI's by section
Condition distribution by functional classification
Projected annual road maintenance R&R programs for streets over a five-year period based on Task 4.4 scenarios
Analysis that allows for City to measure cost impact due to deferred maintenance
GIS map exhibits and program scenarios as required
Present and future PCI rating and a five-yr work program

Scope of Work



Deliverable: Upon final approval, three (3) 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 of the Final PMP database and will install it at the City.

TASK 4.5: PMP – GIS Link / Mapping

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. Bucknam will acquire the City's street centerline from City and/or County sources; this will allow our staff to immediately utilize the file and prepare for internal PMP editing, survey and reporting. 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 PMS report:

- PCI values for every section
- Work History identifications
- 5-yr Arterial / Local Rehabilitation and Slurry Seal Programs
- Functional classification maps

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 PMS 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 PMS-GIS maps are represented within the City's GIS enterprise.

We can also provide this data to the City's GIS Enterprise.

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

TASK 4.6: PMP Training and Technical Support

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



Scope of Work

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.

Technical support will include the provision of twelve (12) months of PMP support upon completion of the project. Bucknam will provide quality and accurate use of the in-house operation of MicroPAVER software. Once the City has approved the Final PMP Report under this year's work effort, this service will become active. Our typical On-Call services 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, operational use
- GIS Enterprise assessment, management, implementation, support

The agreement will include the provision of onsite and telephone support for the City staff.

Deliverable: PMP software training, field and internal technical support

OPTIONAL SERVICES

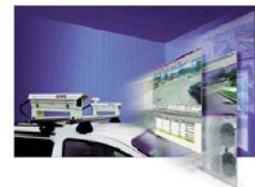
TASK 4.7: Presentation to the City Council (Optional)

As a pro-bono effort, Bucknam will prepare and present the PMP to the City Council and/or upper management. This effort will include the development and finalization of a PowerPoint presentation (approved by City staff); the report will reflect all data collected and reported on during the project.

Deliverable: Delivery of PowerPoint presentation, assistance with presentation to City Council

TASK 4.8: Automated Digital Roadway Imaging (Optional)

As an alternative survey methodology, our staff will implement a pavement survey methodology that will support Task 4.2 efforts as well as implement a proactive and cost efficient GPS survey methodology





Scope of Work

that will allow for the collection of numerous Rialto (City owned) assets and their GPS locations using “one” set of digital imagery (e.g. seven citywide infrastructure surveys for the cost of one).

With verification of street segmentation, the inspection of approximately 269.3 miles will be surveyed. ASTM D6433 - Army Corp of Engineers AC and PCC distress types will be collected based upon actual surface conditions and physical characteristics of the segment while being flexible to current City practices.

Our automated digital imaging allows technicians to collect the following:

- Continuous pavement imaging (images taken every 5 meters, competition typically surveys at every 8 meters/25 feet intervals)
- ASTM D6433-16 AC and PCC distresses (e.g. linear/transverse cracking, alligator, patching, bleeding, block cracking, etc.
- Surface roughness ratings (IRI); rutting depth (full width of lane or street), if called out by the City as needed
- Imaging captures 100% of each pavement segment (not just one lane)
- Data transfers seamlessly to your PMP database
- 2mm pixel images allows for centimeter horizontal and vertical accuracy

The first survey process will involve the mobile GPS vehicle taking approximately two-week’s time to survey the Rialto street network; additionally, the vehicles drive the posted speed limits. The images that are collected are taken by using Sony digital stereographic cameras (4 to 6 cameras) positioned on the vehicle. The images have a resolution of 2448 x 2050 and are geo-referenced by means of inertial GPS equipment contained within the van; images are taken every 4 to 6 meters, 15 ft. intervals. All images taken are owned by the City and can be used for future data extraction within the Feature Extraction software.

Survey vehicles are equipped with digital measuring instrumentation (DMI) that will be used to verify all pavement section lengths and widths. Our vehicles can be equipped with road roughness rating equipment, strip mapping cameras and are set to record 360 degree street imaging.

The PCI conditional surveys will be performed by the Bucknam team (in-house, with 20% field QC review) that is experienced and trained in pavement condition assessment using LambdaTech’s “Feature Extraction” software. Bucknam will measure specific distress types from the digital image set. A listing of the field attributes that will be collected during the survey is listed above in Task 4.2. The quality of the imagery and its GIS / record collecting capabilities within the software provided allows the technician to accurately identify the required pavement distresses defined by the pavement software and the project (distresses are collected in-house). All pavement GIS data associated with each pavement section will be entered into the City’s working software. If the City elects to collect other street and ROW assets under this contract these assets will be collected at the same time as the pavement.

Beyond the pavement survey capabilities, the City will be able to collect other infrastructure assets in the future such as:

Scope of Work



- **2018-19 Sign Inventory (Warning, Regulatory, Guide, City Unique signs, etc.;**
- **Right-of-Way assets;**
- **Street lights, Catch Basins, Manhole/Water Valves; and**
- **Pavement markings, legends and other ROW features.**

A tremendous costs savings that reaches \$300,000 over the next 3 years.



Staff Qualifications – Project Team

Project Team – Key Staff

The *Bucknam* pavement management team’s local agency expertise is demonstrated through:

- ❖ Our experience of managing pavement projects over the past twenty (20) years;
- ❖ Assisting cities comply with County PMP Propositions/Measures
- ❖ Implementing MicroPAVER throughout Southern California
- ❖ Extensive Los Angeles, Riverside, Orange, San Diego and Inland Empire PMP project management experience;
- ❖ Our understanding of public works projects from the “city” side through City Engineer and Public Works Director experience;
- ❖ Implementing a realistic, proactive and sustainable PMP methodology that matches your agencies needs and goals.

Bucknam will bring our extensive experience to the City of Rialto by building upon our knowledge and understanding of your PMP goals. Mr. Bucknam’s pavement team includes ten (10) dedicated, qualified managers and field technicians that have served under his management for over twenty years on PMP projects. His team of inspectors will update your PMP through sound Army Corps of Engineers - MicroPAVER inspection methodologies. Mr. Bucknam’s experience covers the management and implementation of infrastructure management programs that exceeds 43,850 miles of pavement for more than 75 cities and 300+ PMP projects.

Based on the scope of work related to this project, our team brings a tremendous amount of experience to the City of Rialto regarding field and in-house training for MicroPAVER, StreetSaver and CarteGraph and innovative survey methodologies (i.e. Tablet-based walking/windshield and/or automated digital roadway imaging). We bring a wealth of experience through projects, pavement application knowledge and relationship building through trust and adherence to schedule.

No key person designated to this project will be removed or replaced w/o prior written consent from the City

Bucknam – Key Project Team / Experience

STEVE BUCKNAM, P.E., Principal-in-Charge, will be responsible for the overall performance of the project, day-to-day management and provide quality assurance review. Mr. Steve Bucknam is a licensed Civil Engineer (LIC #20903) and will oversee all tasks for this project. Mr. Bucknam is a former Deputy City Manager for Public Works and City Engineer of Norwalk, and City Engineer in Arcadia and Pacifica, California. He has over 45 years of professional experience and has managed street maintenance, reconstruction and improvement programs. He has developed and administered Street maintenance and improvement programs in those cities as well as the City of Newport Beach where he served as Design Division head. He has extensive experience in capital program planning, pavement construction and budgeting for street improvement programs.



Staff Qualifications – Project Team

PETER BUCKNAM, Project Manager, has managed numerous pavement management projects over the past 18 years in the Southern California region and will be the technical Project Manager for Rialto's PMP project. Within this time he has served as project manager for seventy agencies in the Southern California. Peter is committed to the project from the receipt of the notice-to-proceed through completion and furthermore he is a certified PMS software trainer on MicroPAVER and performed numerous training sessions for local agencies. **He has performed over 50 training workshops covering software's such as MicroPAVER, StreetSaver and CarteGraph. Our niche team of PMP experts allows our Project Manager and staff to survey the network in eight (8) weeks and deliver the Final PMP Report prior to the City's deadline.**

He brings his expertise to cities through converting, implementing, updating, and enhancing pavement management programs; this covers 20+ years (10 with Bucknam Infrastructure Group, 5 with Bucknam & Associates and 5 with Berryman and Henigar).

Mr. Bucknam has spoken at numerous conferences pertaining to pavement practices, surveying, management and GIS integration as well as conducted numerous City Council pavement studies.

As the City moves into the "program management" phase for its pavement program, Mr. Bucknam brings his experience of working with individual cities for numerous years, where he has assisted cities from the onset (turn-key, data conversion) to high-end pavement management and GIS integration and County compliance. Our staff is proud of the numerous long-term, on-call PMP support contracts we continue to serve with local agencies (e.g. Lake Elsinore, Ontario, Fountain Valley, Huntington Beach, Newport Beach, and Rancho Santa Margarita, Irvine, John Wayne Airport).

Mr. Bucknam will bring new, fresh and proactive recommendations to this project (i.e. zone maintenance) and will identify realistic program management and fiscal goals to assist the City in its upcoming CIP. Our team brings proven conversion and survey methodologies that efficiently and accurately update all pavement data within the City's PMP. The City will receive recommendations that are sound and achievable, rather than timid or unrealistic.

PATRICK MULLEN, GIS Planner, will oversee all GIS and PMP data migration prior and during the project. He drives all GIS creation, PMP mapping, editing and deliverables for the project and is our key staffer for the ArcGIS Online web-hosting services that we provide. Mr. Mullen has been involved with over 82 pavement management projects within San Bernardino, LA, San Diego and Orange counties.

COLIN ANDERSON, Lead Field Technician, will be the lead field surveyor for this project. His responsibilities will include surveying, quality control, and working with our management staff ensuring the updated PMP database is complete. He has been involved with over 62 pavement management projects and brings his wealth of PMP software, GIS and inspection experience to this project. **Colin is a certified ASTM D6433-16 inspector for MicroPAVER.**

DAN LIPINSKI, Field Technician, will be a supportive field surveyor for this project. His responsibilities will include surveying, quality control, and working with our management staff ensuring the updated PMP database is complete. He has been involved with over 35 pavement management projects and brings his wealth of PMP software, GIS and inspection experience to this project. **Dan is a certified ASTM D6433-16 inspector for MicroPAVER.**



Staff Qualifications – Project Team

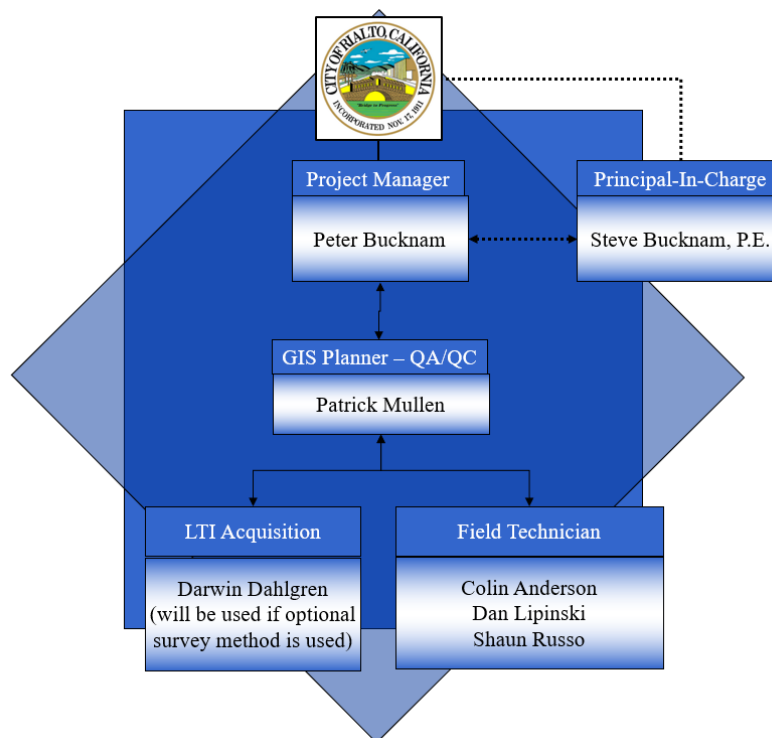
SHAUN RUSSO, Field Technician, will be a supportive field surveyor for this project. His responsibilities will include surveying, quality control, and working with our management staff ensuring the updated PMP database is complete. Mr. Russo has been involved with over 21 pavement management projects and brings his wealth of PMP software, GIS and inspection experience to this project. **Shaun is a certified ASTM D6433-16 inspector for MicroPAVER.**

With three technicians on this project that are trained in the Army Corps of Engineers survey methodology and available to begin work immediately; our survey schedule will be expedited.

Our team will be able to survey the entire 269.3 miles of pavement within eight (8) weeks' time due to our familiarity with the Rialto PMP network, experience, availability and manpower.

In case of heavy rain that can potentially delay scheduled street inspections, our team includes two (2) additional certified PMP inspectors that can be added to our Field Technician team above, if necessary.

Team Organization Chart



Staff Qualifications – Project Team



Team Resumes

Peter J. Bucknam / Project Manager
Director of Infrastructure Management – GIS



EDUCATION

B.A., Geography – Urban Planning, San Diego State University, 1997

PROFESSIONAL DATA

Member, American Public Works Association

Member, Maintenance Superintendents Association

Chair, Transportation Committee, Inland Empire Report Card (ASCE) – 2005/06 & 2008/09

Co-Chair, Member APWA Committee for Street and Technology 2003-2015

Certificate of Professional Development – ASTM D6433-16; MicroPAVER

Certificate of Completion – OCTA MicroPAVER / StreetSaver Distress Training (2011 thru 2018)

NASSCO – Certificate, National Pipeline Assessment Certification Program (PACP)

QUALIFICATIONS / EXPERIENCE OVERVIEW

Peter Bucknam is an expert in infrastructure project management, training, planning, resource management, implementation and program management. He has over twenty years' experience in the area of Geographic Information Systems and infrastructure asset management. Mr. Bucknam has managed a wide range of infrastructure project tasks including the collection and input of infrastructure survey data, preparation of Public Works capital improvement program projections and reports, infrastructure/software needs assessments, GIS/GPS data collection, data conversion and quality control.

Mr. Bucknam has performed infrastructure management services to over 70+ local agencies and is currently serving as project manager for numerous pavement management programs throughout Southern California. He has personally served as project manager for 220+ PMP projects throughout Riverside, San Bernardino, San Diego, Orange and Los Angeles counties. He has worked with over 25 Los Angeles cities and he is currently working with sixteen (16) of the 34 Orange County agencies regarding Measure M2 MicroPAVER compliance.

His project level and management experience covers: pavement/sidewalk management, Traffic Control Device Inventories (TCDI), GIS implementation, Traffic Signal surveys, Right-of-Way (ROW) surveys, and ADA survey/compliance. In managing over 200 infrastructure projects in the past sixteen years, Mr. Bucknam has used a diverse amount of software to assist local agencies implement infrastructure management programs and GASB 34. These programs include MicroPAVER, MTC StreetSaver, LambdaTech's GPSVision, CartéGraph, ESRI products, Crossroads, Lucity, GBA Master Series, and MapInfo.

Prior to joining *Bucknam Infrastructure Group, Inc.*, Mr. Bucknam served as Director of Infrastructure Management-GIS with an Engineering consulting firm where he managed numerous public works infrastructure/ROW projects ranging from surveying, maintenance life-cycles, cost & benefit analysis, financing and construction cost estimating. This included researching, surveying, converting and implementing multiple phase pavement management projects which provided better management practices, data efficiencies and GIS functionality within local governments and maintenance facilities. In addition, he provided technical (software) support for the on-going citywide PMS projects as well as developing capital improvement plans/budgets for integrating Tablet-GIS data management functionality into future maintenance efforts.

SAMPLE OF PETER BUCKNAM'S PROJECT MANAGEMENT EXPERIENCE (1997-2018)

- 2018 Pavement Management Program, City of Fullerton

- 2018 Pavement Management Program, City of La Palma
- 2018 Pavement Management Program, City of Fountain Valley
- 2018 Citywide GIS Operation & Maint. Services, City of Fountain Valley
- 2018 Citywide GIS Operation & Maint. Services, City of Alhambra
- 2018 Storm Drain GIS Program, City of Westminster
- 2018 Sign Inventory Program, City of Palmdale
- 2018 Pavement Management Program, City of Westminster
- 2018 Pavement Management Program, City of Huntington Beach
- 2018 Pavement Management Program, City of Aliso Viejo
- 2018 Pavement Management Program, City of Laguna Beach
- 2017 Pavement Management Program, City of Duarte
- 2017 Pavement Management Program, City of Lomita
- 2017 Pavement Management Program, City of Lake Elsinore
- 2017 Pavement Management Program, City of Lynwood
- 2017 Pavement Management Program, City of Compton
- 2017 Pavement Management Program, City of South Gate
- 2017 Pavement Management Program, City of La Habra
- 2016 Pavement Management Program, City of Pomona
- 2016 Pavement Management Program, City of Laguna Beach
- 2016 Pavement Management Program, City of Alhambra
- 2016 Public Works PMP Financing Study, City of Fullerton
- 2016 Pavement Management Program, City of San Clemente
- 2001-18 Pavement Management Program, City of Ontario
- 2016 Pavement Conversion – MicroPAVER to StreetSaver, City of Rancho Santa Margarita
- 2016 Pavement Management Program, City of Aliso Viejo
- 2016 Pavement Management Program, City of Huntington Beach
- 2016 Pavement Management Program – City of Santa Ana
- 2016 Pavement Management Program, City of Westminster
- 2016 Pavement Management Program, City of Fullerton
- 2015 Pavement Management Program, City of Culver City
- 2015 Pavement Management Program, City of Monterey Park
- 2015 Pavement Management Program, City of Seal Beach
- 2015 GIS Program Management, City of Tustin
- 2015 Pavement Management Program, City of Norwalk
- 2015 GIS Program Management, City of Menifee
- 2015 Pavement Management, City of Menifee
- 2015 Pavement Management Program, City of South Pasadena
- 2015 Pavement Management Program, City of Rosemead
- 2015 Sign Inventory Program, City of Beverly Hills
- 2015 Pavement Management Program, City of San Juan Capistrano
- 2014 Pavement Management Program, City of Bellflower
- 2014-17 Pavement Management Program, City of Hermosa Beach
- 2014 Pavement Management Program, City of Arcadia
- 2008-15 Pavement Management Program, City of Santa Ana
- 2006-16 Pavement Management Program, John Wayne Airport
- 2014 Pavement Management Program, City of Lomita
- 2014 Pavement Management Program, City of Sierra Madre
- 2014 Pavement Management Program, City of Westminster
- 2014 Pavement Management Program, City of Aliso Viejo

C. Stephen Bucknam, Jr., P.E., Principal-in-Charge

EDUCATION

B.S., Civil Engineering, Loyola University of Los Angeles, 1967
M.S., Environmental Engineering, Loyola University of Los Angeles, 1972



PROFESSIONAL DATA

Registered Professional Engineer, States of California (No.20903) and Washington (No.17310)
California State Community College Teaching Credential
Fellow, American Society of Civil Engineers
Former, City Engineer, Deputy City Manager, City of Norwalk
Member, Board of Directors – Urban Water Institute
Life Member, American Public Works Association
Member, Water Environment Foundation
Member, University of California Irvine, Civil & Environmental Engineering Affiliates
Honorary Member, Chi Epsilon

EXPERIENCE OVERVIEW

Over forty years' experience in the administration, management, planning, design and construction management of public works and development programs and projects including: water and wastewater projects, pavement management programs, transportation, drainage, including: program management, master planning, infrastructure planning and maintenance programming, environmental studies, street, highway, alley, storm drain, water and sewer system design, rate studies, emergency planning, facilities design, groundwater studies, wells, reservoirs, site studies, pump stations, lift stations, intergovernmental negotiations and agreements, hydrology, treatment facilities, building design, grants, regulatory permitting, system appraisals, R/W negotiations, acquisitions and documentation, project management, production control, operations studies, capital improvement programming and budgeting, hydroelectric projects, underground utilities, assessment districts, surveying, mapping, legal testimony to public boards, commissions and councils, and direction of technical advisory committees to joint powers agencies and water districts.

Transportation / Streets – Highways - Traffic

Served as Contract City Engineer for the City of Arcadia responsible for long range advanced planning of the City's transportation engineering program. Directed the preparation of the City's Transportation Master Plan which identified, consistent with the City's General Plan the transportation related needs under these requirements so of AB 1600 nexus constraints.

Acted as Principal in charge over a Pacific Coast Highway (SR-1)/Newport Boulevard (SR-55) interchange, City of Newport Beach. Project involves a study of various alternatives, conventional and unconventional, for improvements to the existing interchange.

Restraints include limited right-of-way, environmental challenges (e.g., Newport channel bridge widening, "Arches" liquor store and restaurant property acquisition, and existing bridge aesthetics), and potential hazardous waste issues. Alternatives were evaluated and selected to include in the PSR. Included project coordination with various agencies and sub consultants, and oversight of concept geometries, cost estimating, and report preparation.

Conceptual study, Project Study Report, and Project Report for I-710/Firestone Boulevard interchange modification and Firestone Boulevard improvements for City of South Gate. Also involved a feasibility study which included preparation of a traffic study, conceptual plans for several types of interchanges, construction cost estimates, and preliminary Caltrans Project Study Report. Prepared ISTE National Highway System funding application for authorization and appropriation. Coordination with Caltrans District 7.

Mr. Bucknam has served as the working Principal / Civil Engineer for all pavement management related projects that Bucknam has performed. This includes projects listed below:

- 2018 Pavement Management Program, City of La Palma
- 2018 Pavement Management Program, City of Fullerton
- 2018 Pavement Management Program, City of Fountain Valley
- 2018 Citywide GIS Operation & Maint. Services, City of Fountain Valley
- 2018 Citywide GIS Operation & Maint. Services, City of Alhambra
- 2018 Storm Drain GIS Program, City of Westminster
- 2018 Sign Inventory Program, City of Palmdale
- 2018 Pavement Management Program, City of Westminster
- 2018 Pavement Management Program, City of Huntington Beach
- 2018 Pavement Management Program, City of Aliso Viejo
- 2018 Pavement Management Program, City of Laguna Beach
- 2017 Pavement Management Program, City of Duarte
- 2017 Pavement Management Program, City of Lomita
- 2017 Pavement Management Program, City of Lake Elsinore
- 2017 Pavement Management Program, City of Lynwood
- 2017 Pavement Management Program, City of Compton
- 2017 Pavement Management Program, City of South Gate
- 2017 Pavement Management Program, City of La Habra 2016
- 2017 Pavement Management Program, City of Alhambra
- 2016 Public Works PMP Financing Study, City of Fullerton
- 2016 Pavement Management Program, City of San Clemente
- 2016 Pavement Management Program, City of Pomona
- 2016 Pavement Management Program, City of Laguna Beach
- 2016 Pavement Management Program, City of Ontario
- 2016 Pavement Conversion – MicroPAVER to StreetSaver, City of Rancho Santa Margarita
- 2016 Pavement Management Program, City of Aliso Viejo
- 2016 Pavement Management Program, City of Huntington Beach
- 2016 Pavement Management Program – City of Santa Ana
- 2016 Pavement Management Program, City of Westminster
- 2016 Pavement Management Program, City of Fullerton
- 2015 Pavement Management Program, City of Culver City
- 2015 Pavement Management Program, City of Monterey Park
- 2015 Pavement Management Program, City of Seal Beach
- 2015 GIS Program Management, City of Tustin
- 2015 Pavement Management Program, City of Norwalk
- 2015 GIS Program Management, City of Menifee
- 2015 Pavement Management, City of Menifee



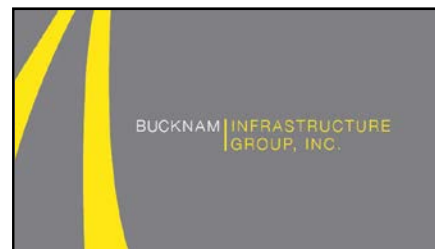
Firm Qualifications

Bucknam Infrastructure Group, Inc. (est. 2011, CA S-Corporation) has a full-service office in Southern California and is committed to building stronger relationships with government organizations through frequent communication and team building. Founded by Mr. Peter Bucknam (peter@bucknam-inc.com), our firm builds long-term partnerships with agencies that expect and require accuracy, efficiency, and integrity in all aspects of community services. Our experienced staff is committed to ensuring that immediate and long-term goals are met and are a top priority in the development of pavement management, infrastructure management, financial, geographic information systems (GIS), and facility management projects.

Our full-service Infrastructure Management - GIS Division provides comprehensive engineering and infrastructure management services (includes ten dedicated division staff members), as well as database management, pavement / ROW field inspection services, and GIS automation and management. Our staff consists of registered civil engineers; former Director of Public Works-City Engineers and maintenance specialists who can help implement solutions based upon your specific facility/infrastructure needs and will provide assistance through each step of your project.

Our extensive professional experience within local agencies includes:

- **Pavement – CIP Management (PMP)**
- **Pavement Data Conversion**
- **Pavement Condition Surveys**
- **PMS/GIS Coordination**
- Inland Empire PMP Compliance Reporting
- Los Angeles County (METRO) PMP compliance
- OCTA Measure Renewed Measure M PMP Compliance Reporting
- Citywide GIS Management Services
- GIS Operations and Maintenance Services
- Intranet GIS Implementations
- GIS Custom Applications
- Public Works Management
- ADA Self-Evaluation/Transition Planning
- GASB 34 Compliance/Reporting
- Public Right-of-Way inventories
- Deflection Testing / Coring Management
- Sidewalk Condition Assessment Services
- Automated Pavement Management / GPS Digital / Stereo Surveys
- Traffic Control Device Inventory/Sign Inventories
- Infrastructure Management Grant Assistance
- Maintenance Management Programs
- Record Retention Services



In addition to the extensive knowledge and experience of our infrastructure management professionals, *Bucknam Infrastructure Group, Inc. (Bucknam)* provides a broad scope of



Firm Qualifications

administrative, inspection, construction management, civil engineering, and GIS services to public agencies.

The extensive experience of *Bucknam* staff, coupled with its service to more than 75 cities and other public agencies, assures our clients that the firm is a broad based resource with an understanding of today's infrastructure issues and knows how to provide the necessary solutions to public agencies in today's complex governmental environment.

Bucknam commits to providing its clients with personalized service. By selecting *Bucknam*, the City of Rialto will receive a strong, knowledgeable, innovative, and communicative team with the experience to implement a cost-effective management program. Our handpicked management professionals are committed to delivering quality services to the City. Our primary and responsible office for this project is located in Oceanside, CA.

We bring a wealth of experience to the City through our successful track record, pavement management knowledge through application, and relationship building through trust and adherence to schedule. Mr. Bucknam has the authority to bind the company to the City's contractual agreement. We look forward to working with you on your project.

Delineation of Bucknam Infrastructure Group's Strengths

As Bucknam approaches twenty-one (21) years of pavement management experience, our firm is distinct and unique in the fact that we have continued to improve upon our long-term local agency client based throughout Orange County. Building and establishing long-term client relationships through PMP management is a clear delineation of our professional services.

Bucknam's experience and qualifications directly related to this project and other key delineation strengths include:

- Providing PMP services to 10+ Inland Empire/San Diego local agencies in the past five years;
- Providing PMP services to 25+ Los Angeles County local agencies in the past two years;
- Providing PMP services for 17 of the 34 Orange County local agencies in the past two years;
- Staff / Firm is certified through OCTA and MTC for use and management of MicroPAVER / StreetSaver respectively
 - Bucknam is ASTM D6433-16 certified through OCTA until June, 2020 for PMP services to local agencies;
- Focused managers / field technicians that perform infrastructure management services at cost-competitive rates and deliver quality products;
- Local presence (Laguna Niguel / Oceanside offices) allows our firm to be on-site within an hour to respond La Palma requests and needs;
- Proven local agency/Public Works PMP economic ROI regarding long-term Pavement CIP's recommendations, implementation, maintenance applications and increased PCI's



Firm Qualifications

Relevant Project Experience

The following project experience presents our description of work, its relevance in completing similar projects for numerous other agencies, Prop. A & C, METRO compliance, OCTA Measure M & M2 PMP experience, PMP software training expertise, and the broad knowledge of our pavement project team. Our project team brings over 75 years of public/private engineering and data management experience to the City of Rialto. This includes over 300+ PMP projects covering turn-key projects, simply training of City staff with pavement management methods, County Measure/Proposition compliancy, financial strategies and Capital Improvement Programs.

Mr. Steve Bucknam, P.E. (Principal) and Mr. Peter Bucknam (PM), have worked with over half the cities within Orange County, 25+ Los Angeles county local agencies, seven (7) San Diego County local agencies, and ten (10) Inland Empire County cities regarding pavement management projects. Our PMP team successfully managed the OCTA Pavement Management Software project where he interviewed all 35 Orange County agencies regarding their unique PMP needs and successfully approved MicroPAVER for County wide use.

Over the past twenty years, we have worked on numerous projects similar to Rialto's current PMP project. We have listed five (5) similar "long-term" pavement management projects that cover the same task descriptions as listed in your RFP (were managed by our listed Project Management team – See Project Team, Section 2).

1. FY 2013/17 – City of Compton, "Citywide Pavement Management Program-GIS"
2. FY 2001/19 – City of Ontario, "Citywide Pavement Management Program-GIS"
3. FY 2008/19 – City of Irvine, "Citywide Pavement Management Program – GIS"
4. FY 2008/18 – John Wayne Airport (County of Orange) Pavement Management Program
5. FY 1998/18 – City of Fountain Valley, "Citywide PMP, GIS Intranet Implementation"

Bucknam Infrastructure Group, Inc.

Citywide Pavement Management Program

City of Compton (2013-2017)

Mr. Glen Kau, Director of Public Works – **recently moved Hermosa Beach** - (310) 318-0238
205 South Willowbrook Avenue, Compton, CA 90220 gkau@hermosabch.org

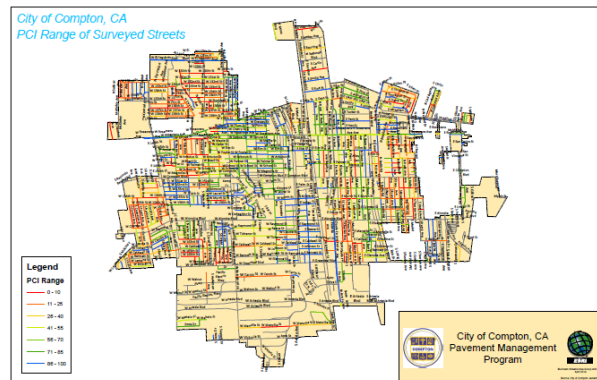
In 2013, Bucknam was contracted to perform a citywide pavement management inventory for the City of Compton. This project consisted off a complete turn-key effort in "re-segmenting" the City's PMP network, converting previous PCI inspection data, performing an ASTM D6433 based survey, implementation of MicroPAVER and GIS integration. Bucknam utilized our Digital Roadway Imaging to collect all necessary street conditional imaging and completed our internal PCI condition assessments as well as performed a citywide sign inventory from the same image data!



Firm Qualifications

In working with Public Works staff Bucknam was able to quickly and accurately implement a pavement management program that was well-received by staff. Additionally, our services included a complete evaluation of the City's PMP budget, short-term and long-term budgetary analysis (Actual, Maintain and Recommended budgets) and GIS services that linked the City's MicroPAVER database to the City's GIS enterprise.

Since the project completed Bucknam has provided technical and management support services to the PMP. Bucknam was recently selected in 2017 to perform another citywide PMP update (Project Cost: \$60,500).

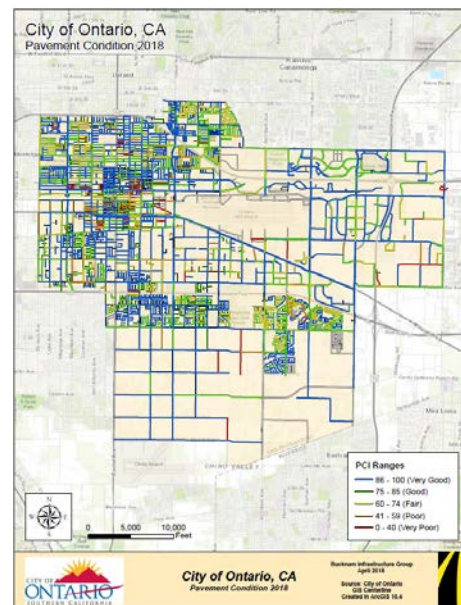


Citywide Pavement Management Program City of Ontario (2001-2019)

Mr. Bill Braun, Public Works Project Manager - (909) 395-2129
303 East "B" Street, Ontario, CA 91764; bbraun@ontarioca.gov

Our Project Manager, Mr. Peter Bucknam, has worked with the City of Ontario and their Pavement Management Program since 2001. Through twelve (12) unique PMP updates, several City project managers Bucknam has provided solid, accurate and proactive PMP services to the City. Since 2008, Bucknam has been awarded several three-year PMP contracts that have allowed our team to increase the City's PCI from the 50's to the 80's.

On an annual basis, Bucknam provides identical PMP services that are listed within your agency's RFP. This includes PMP software and work history updates, PCI inspections, CIP and Operations & Maintenance budgetary analysis / reporting and GIS services. Bucknam is currently under contract with the City through 2019 (Annual PMP Project Cost: \$45,000)



Firm Qualifications

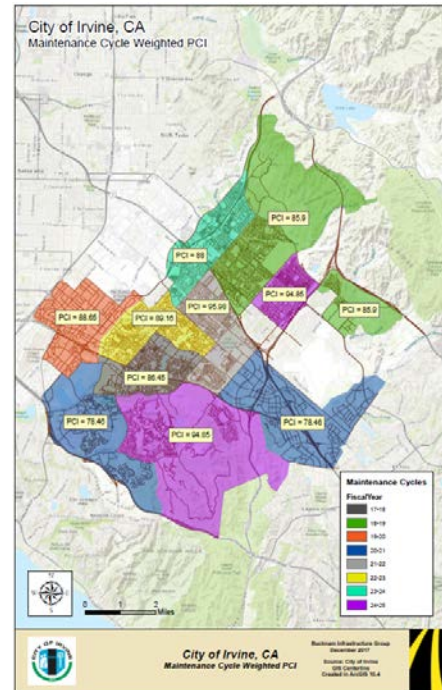


Citywide Pavement Management Program Update City of Irvine (2008-2019)

Mr. Joe Dillman, Public Works Street Supervisor – (949) 724-7696
6427 Oak Canyon, Irvine, CA 92618 (jdillman@ci.irvine.ca.us)

Bucknam was recently selected by the City of Irvine to perform a citywide conversion of their previous CHEC pavement software to MicroPAVER as well as perform 400 miles of pavement survey.

Our staff developed a citywide capital improvement plan that proactively developed an OCTA Measure M2 compliant MPAH network and a local maintenance zone program that will garner the greatest return-on-investment for the City. All MicroPAVER data was be linked to the City's GIS system through the GBA Master Series software. Since 2008 Bucknam has provided annual PMP As-Needed Services to ensure all PMP data is accurate and relevant to the City's Strategic PMP Business Plan. Based on our assessment, conversion and implementation efforts, the City contracted with our firm through fiscal year 2019 for pavement management services; our 11th year of service to the City!



Additionally, our staff is currently performing pavement management and inspection services on all designated “off-street” bike and trail pathways, park sidewalk and facility hardscapes. Our firm will be supporting the City with PMP services through fiscal year 2019. (Biennial Project Cost: \$70,000)

John Wayne Airport (JWA), Orange County Pavement Management Program Update – 2008 thru 2018)

Mr. Sean Lally, A/E Project Manager – (949) 252-6013
3160 Airway Avenue, Costa Mesa, CA 92626 (slally@ocair.com)

Bucknam was selected by the John Wayne Airport to perform a facility-wide pavement survey which includes all PCC aprons, taxiways and AC runways. Our staff will be assessing previous MicroPAVER inspection and survey efforts that have been performed over the past six plus years as well as assist JWA staff develop a new FAA required capital improvement program through the use of MicroPAVER. Our work efforts have covered a three-year term and assisted JWA staff in implementing a MicroPAVER-GIS based system to enhance the PMP. Based on the success of our initial project, Bucknam was been awarded a three additional three-year extensions for PMP services (Project Cost: \$65,000).

Firm Qualifications

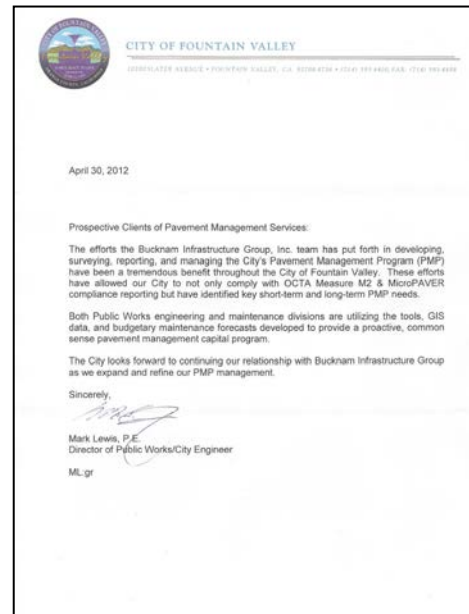


Citywide Pavement Management Program City of Fountain Valley (1998-2018)

Mr. Mark Lewis, Director of Public Works / City Engineer – (714) 593-4435
10200 Slater Avenue, Fountain Valley, CA 92708 (mark.lewis@fountainvalley.org)

Mr. Peter Bucknam has managed the City of Fountain Valley's pavement management program for over eighteen (18) years and is currently finishing the 2017-18 annual update for the City's MPAH Measure M2 compliance. Mr. Bucknam has overseen ten (10) phases of pavement survey, built the City's Pavement-GIS layer, and assisted the City in accomplishing the overlay of more than 90% of the City's arterial network. Initially, our firm converted all pavement data from CarteGraph to MicroPAVER based on the use of the program from surrounding agencies and its integration into the City's GIS Enterprise program.

Residential "neighborhood" maintenance zone management is now the focus of the program where our project team is performing survey, coring and the reorganization of the City's slurry/overlay zones to create a more attainable, proactive residential maintenance program (Project Cost: \$26,000). Bucknam also serves as the City's GIS consultant where we provide citywide GIS services to all departments within the City. This includes Public Works, Utilities, Planning, Police, Fire and Code Enforcement.



Additional local agencies our project manager and staff have worked with over the past ten years regarding Pavement Management Programs:

Previous Pavement Management Program Clients (FY 2006 to 2016)		
City of Santa Ana	City of El Segundo	City of Cathedral City
City of Temecula	City of Sierra Madre	City of Westminster
City of Burbank	City of Alhambra	City of San Clemente
City of Pico Rivera	City of Yorba Linda	City of Beverly Hills
City of Los Alamitos	City of Tustin	City of Santa Barbara
City of Stanton	City of Rancho Palos Verdes	City of Palmdale
City of Culver City	City of Moreno Valley	City of Arcadia
City of Carlsbad	City of Cypress	City of Huntington Park
City of Costa Mesa	City of Diamond Bar	City of La Habra
City of La Habra Heights	City of Lake Elsinore	City of Lomita
City of National City	OCS	OCTA
City of Norwalk	City of Orange	City of Palm Desert
City of Pomona	City of Rosemead	City of Santee



Project Schedule

Project Schedule

Our Critical Path Method (CPM) project schedule shows each major task identified in our scope of work, as well as quality control milestones and meetings. Our Project Manager will oversee all aspects of the project schedule including annual accountability, adjustment and management as well as support the project schedule and management through weekly updates and internal project meetings.

This proactive schedule will ensure that the City receives all necessary PMP deliverables 126 calendar days from the notice-to-proceed. Per the RFP, Bucknam is assuming the NTP will be July 2, 2018.

Task Name	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	15-Oct	22-Oct	29-Oct
BASE SCOPE OF WORK																		
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 - Update Maintenance and Rehabilitation History																		
Assessment of MicroPAVER																		
Task 4.2 - Pavement Condition Surveys - 269.3 Miles																		
PCI Reporting						30%				65%				100%				
Quality Control Checks																		
Develop Recommended Improvement Program																		
Task 4.3 - Maintenance & Rehab, History and Decision Tree																		
Update Maintenance & Rehab Activities														X				
Task 4.4 - Budgetary Analysis and Final PMP Reporting																		
City Review of Draft Final Report																		
Project Status Meeting																X		
Delivery of Final CIP Report																	X	
Task 4.5 - PMP-GIS Link/Mapping																		
Task 4.6 - PMP Training and Technical Support																		
OPTIONAL SERVICES																		
Task 4.7 - PMP Presentation to City Council																		X
Task 4.8 - Automated Digital Roadway Imaging - 269.3 miles																		

See key “annual” milestone dates from the project schedule above:

- Project Kickoff – July 2, 2018
- Survey Start and Completion – July 16 thru October 1, 2018
- Delivery of draft PMP – October 8, 2018
- City comments returned to Consultant – October 22, 2018
- Delivery of City CIP Final Report – October 29, 2018
 - o Rialto CIP data/Final Report, reporting and revenue projections will be submitted by October, 2018
- Implementation of PMP software/database – Any time after acceptance of Final PMP
- All pavement and GIS data pertinent to the project deliverables will be submitted with the Final PMP report, October, 2018

Cost Proposal



Cost Proposal

Bucknam Infrastructure Group, Inc. has included a time and materials, not-to-exceed proposed fee for the City consideration (**separate envelope #2**). Our fee follows the described tasks shown within the Scope of Work. Bucknam is willing to lock in our billing rates for the next three-years of PMP service. All billings will be sent to the City on a monthly basis.

As indicated within our fee, all tasks are negotiable.

ATTACHMENT A

NOTE: THIS FORM MUST BE COMPLETED AND INCLUDED INSIDE ENVELOPE #1, "WORK PROPOSAL"

**REQUESTS FOR PROPOSALS (RFP) # 18-077
Pavement Management Program Consulting Services**

SIGNATURE AUTHORIZATION

PROPOSER: BUCKNAM INFRASTRUCTURE GROUP

- A. I hereby certify that I have the authority to submit this Proposal to the City of Rialto for the above listed individual or company. I certify that I have the authority to bind myself/this company in a contract should I be successful in my proposal.


SIGNATURE

- B. The following information relates to the legal contractor listed above, whether an individual or a company. Place check marks as appropriate:

1. If successful, the contract language should refer to me/my company as:

☐ An individual;
☐ A partnership, Partners' names: _____

☐ A company;
☒ A corporation

2. My tax identification number is: 45-2723662

ADDENDA ACKNOWLEDGMENT:

Acknowledgment of Receipt of any Addenda issued by the City for this RFP is required by including the acknowledgment with your proposal. Failure to acknowledge the Addenda issued may result in your proposal being deemed non-responsive.

In the space provided below, please acknowledge receipt of each Addenda:

Addendum(s) # 1 is/are hereby acknowledged.

Attachment B

NOTE: THIS FORM MUST BE COMPLETED AND INCLUDED INSIDE ENVELOPE #1, "WORK PROPOSAL"

**REQUESTS FOR PROPOSALS (RFP) # 18-077
Pavement Management Program Consulting Services**

Business Concerns Information

The Proposer shall furnish the following information. Additional sheets may be attached, if necessary.

- (1) Name: BUCKNAM INFRASTRUCTURE GROUP
- (2) Address: 3548 SEABATE WAY, SUITE 230 OCEANSIDE CA 92056
- (3) Phone No.: 760-216-6529 Fax No.: _____
- (4) E-Mail: PETER@BUCKNAM-INC.COM
- (5) Type of Firm: (Check all that apply)
☐ Individual ☐ Partnership ☒ Corporation
☐ Minority Business Enterprise (MBE) ☐ Women Business Enterprise (WBE)
☐ Small Disadvantaged Business (SDB) ☐ Veteran Owned Business
☐ Disabled Veteran Owned Business ☐ Other
- (6) Business License: ☐ Yes ☒ No License Number: _____
- (7) Tax Identification Number: 45-2723662
- (8) Number of years as a firm practicing the requested services: 7
- (9) Three (3) projects of this type recently completed:
- Type of project: PAVEMENT MANAGEMENT PROGRAM - BIS
Contract Amount: \$45,000 Date Completed: 4-1-2018
Owner: CITY OF ONTARIO, CA Phone: 909-395-2129; BILL BRAUN
- Type of project: PAVEMENT MANAGEMENT PROGRAM - BIS
Contract Amount: \$78,000 Date Completed: 2-1-2018
Owner: CITY OF IRVINE, CA Phone: 949-724-7696; JOE DILLMAN
- Type of project: PAVEMENT MANAGEMENT PROGRAM - BIS
Contract Amount: \$26,000 Date Completed: 4-1-18
Owner: CITY OF FOUNTAIN VALLEY Phone: 714-593-4435; MARK LEWIS
- (10) Person who reviewed the RFP for your firm:
Name: PETER BUCKNAM Date of Review: 4-18-18

ATTACHMENT C

NOTE: THIS FORM MUST BE COMPLETED AND INCLUDED INSIDE ENVELOPE #1, "WORK PROPOSAL"

REQUESTS FOR PROPOSALS (RFP) # 18-077 Pavement Management Program Consulting Services

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The Consultant, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, and manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
- Does not have a proposed debarment pending; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining Proposer responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions.

Consultant Name: BUCKNAM INFRASTRUCTURE GROUP

PETER BUCKNAM

4-25-18

(Date)



(Signature)

PETER BUCKNAM PRESIDENT

(Name & Title)

ATTACHMENT D

NOTE: THIS FORM MUST BE COMPLETED AND INCLUDED INSIDE ENVELOPE #1, 'WORK PROPOSAL'

**REQUESTS FOR PROPOSALS (RFP) # 18-077
Pavement Management Program Consulting Services**

**DISCLOSURES REQUIRED BY PERSONS OR ENTITIES
CONTRACTING WITH THE CITY OF RIALTO**

Pursuant to Rialto Municipal Code section 2.48.145, all persons or business entities supplying any goods or services to the City of Rialto shall disclose whether such person or entity is related to any officer or employee of the City by blood or marriage within the third degree which would subject such officer or employee to the prohibition of California Government Sections 87100 et. seq., Fair Political Practices Commission Regulation Section 18702, or Government Code Section 1090.

By submitting this proposal, or supplying any goods or services to the City, the undersigned hereby attests under penalty of perjury, personally or on behalf of the entity submitting this proposal or supplying any goods or services to the City, as well the entity's officers, representatives and the undersigned, that it/they have no relationship, as described above, or financial interests, as such term is defined in California Government Section 87100 et. seq., Fair Political Practices Commission Regulation Section 18702, or Government Code Section 1090, with any City of Rialto elected or appointed official or employee, except as specifically disclosed immediately below:

Vendor/Contractor/Consultant:

BUCKNAM INFRASTRUCTURE GROUP

**City of Rialto Official/
Employee Name(s)**

**The nature of the relationship with the
person listed is:**

By:



Name:

PETER BUCKNAM

Title:

PRESIDENT