

March 2, 2026

Mr. Yu Tagai
Assistant City Engineer
City of Lake Elsinore
130 South Main Street
Lake Elsinore, CA 92530

Subject: Proposal for Pavement Management Program Update – FY 2026

Dear Yu:

It is our pleasure to submit our proposal to the City of Lake Elsinore for the continued, proactive management of your Pavement Management Plan (PMP). Several key PMP factors deliver an accurate PMP:

- 1) Segment true area accuracy;
- 2) Up-to-date work history;
- 3) Reliable PCI's and
- 4) Relevant unit costs

With the City seeking to continue the strong development/management of the PMP through advanced inspections, Capital Improvement reporting (CIP), GIS enhancement and County compliance, Bucknam Infrastructure Group, Inc. will again utilize our proactive and cost-efficient method to assist the City in the continued advancement of your PMP. Our team will focus our high-end pavement management knowledge, extensive Riverside County experience, MicroPAVER application and GIS/GPS technologies to optimize the City's maintenance and rehabilitation revenues.

Bucknam has served as the City's PMP consultant for the past 15 years (2010 – 2025). 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/Local CIP budget and providing realistic, achievable maintenance recommendations. Our firm is unique in that we provide:

- ❖ Relevant and accurate PMP services based on our ongoing work with numerous Riverside, San Bernardino, San Diego, Los Angeles, and Orange local agencies such as:
 - 20 Inland Empire/San Diego local agencies (i.e. Murrieta, Menifee, Lake Elsinore, La Cresta);
 - 38 Los Angeles County local agencies (42%);
 - 21 Orange County Local agencies (60%); and
 - Army Corps of Engineers ASTM D6433 compliant surveying, reporting and pavement analysis on an annual basis;



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- ❖ Our project manager has worked within the SoCal Pavement Management industry for over twenty-eight (28) years and has worked extensively with MicroPAVER and StreetSaver PMP software's. This includes turn-key data conversion projects to long-term, proactive pavement CIP scheduling that relies on accurate and cost-efficient bid documentation;
- ❖ 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;
- ❖ Use of Bucknam's GIS AC/PCC segment true areas calculations to compare and qualify segment accuracies within the City of Lake Elsinore;
- ❖ Cost effective management methodologies, from the project kickoff through final reporting, gained through our Project Manager's experience and use of Bucknam's MyRoads® dynamic PMP-GIS link;

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.

Mr. Peter Bucknam (Project Manager) 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 Lake Elsinore 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. We have already scheduled time for your project and eagerly await our kick-off meeting with City staff and you.

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. Optional Services

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 Lake Elsinore, it will be essential to establish, up front, the Engineering, Public Works and Street Maintenance/CIP pavement management priorities. Our team will set up a Project Kickoff meeting with staff (e.g. Yu Tagai and staff) 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 NTP / contract is issued.

This effort will build consensus between the Engineering and Public Works / Maintenance departments as well as build stronger ARTERIAL and LOCAL maintenance programs. Additional items to be discussed will include the review and assessment of the existing MicroPAVER pavement plan/data, survey areas based on recent maintenance work and schedules, new construction, data quality, current pavement procedures, historical expenditure levels, and desired service levels.

Task 1.2: Project Status Meetings – Quality Control Program

Status Meetings and Progress Reports

- Minimum of three meetings during the project (kickoff, field review and status 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 222 miles of 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 (this will include 22 miles of arterial / local QC). 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

Scope of Work



street segments. PCI variance reporting will be performed where previous PCI 2022 data will be compared to newly inspected 2026 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.

Since we are collecting distress information on our field Tablets with the Lake Elsinore MicroPAVER database live, our staff will perform several quality control tests within the pavement management software using a sample set of the City of Lake Elsinore's street distress data.

Over the past two years, Bucknam has submitted over seventy-five (75+) PMP compliant reports for local municipalities, they include:

San Diego, Riverside, San Bernardino County PMP Clients		
Menifee	La Cresta HOA	Murrieta
Lake Elsinore	Hemet	Rialto
Indian Wells	Rancho La Quinta HOA	Palm Springs
Redlands	Big Bear Lake	Cathedral City
Vista	Solana Beach	National City
Barstow	Ontario	Indian Wells - FAMD
Coronado	Palm Desert	
Orange County PMP Clients (Current)		
Brea	La Palma	Rancho Santa Margarita
Costa Mesa	Orange	Tustin
Laguna Hills	Laguna Beach	Westminster
Fountain Valley	San Juan Capistrano	La Habra
Huntington Beach	Laguna Woods Village	Fullerton
Seal Beach	Santa Ana	Placentia
Buena Park	Cypress	Stanton
	Garden Grove	
Los Angeles County PMP Clients (Current)		
Long Beach	Alhambra	El Segundo
Duarte	Culver City	Lomita
Rancho Palos Verdes	Downey	Glendora
Signal Hill	Pomona	Sierra Madre
Monterey Park	Hermosa Beach	South Pasadena
Compton	Lynwood	Norwalk
Monrovia	Rosemead	Bellflower
Lawndale	Covina	Beverly Hills
La Verne	South Gate	La Habra Heights
San Marino	Temple City	South El Monte
West Covina	Commerce	Lakewood
Gardena	Manhattan Beach	Whittier
	Bell	

Every year our staff has attended the OCTA MicroPAVER Distress Training Classes held from 2011 thru 2026.

In February 2026 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 2028).

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 Public Works / Street Maintenance departments. Project success is created by delivering on three main factors;

- Adherence to scope tasks and deliverables
- Performing to the standard set by the Project Schedule; and
- 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: Project Schedule - Management & Administration

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 a proactive schedule. **See key milestone dates from the project schedule below (fiscal year will change accordingly):**

- Project Kickoff – April, 2026
- Survey Start / Completion – April – July, 2026
- Delivery of draft PMP – July, 2026
- City comments returned to Consultant – July, 2026
- Delivery of City CIP Final Report – August, 2026
 - Lake Elsinore’s CIP data/Final Report, reporting and revenue projections will be submitted by August, 2026

4) Scope of Work (Major Tasks)

TASK 4.1: Update Maintenance & Rehabilitation History

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 2022 PMP update. This data will be entered into

Scope of Work

MicroPAVER to enhance pavement deterioration analysis, deferred backlog calculations, PCI's and the recommendations for the upcoming budgetary analysis and CIP reporting.

TASK 4.2: Pavement Condition Surveys

MPAH (Arterial / Collector and Local) Survey

First and foremost, the assessment of the City's pavement segmentation is one of the key priorities for this project. With four years between major inspections, it will be essential to verify that all Arterial, Collector and Local segmentation is up-to-date and that section true area SF quantities are verified, accurate and reliable. This will be completed by utilizing Bucknam's cloud-based learning technology (AI) to initially quantify square footages for each pavement section (see sample above).



Bucknam's use of cloud-based learning technology is initiated by providing the AI with the City of Lake Elsinore's most recent aerial image; in doing so, all AC and PCC pavement true areas are initially calculated. These calculations are possible due to the cloud-based learning tech's inherent working knowledge of how to recognize edge-of-pavement, surface types, medians, bus pads and AC/PCC surface limits.

This ability will allow Bucknam to review, adjust and obtain the necessary quality control measurements for each defined Lake Elsinore PMP segments and to perform segment true area SF variance reports. This will in turn create more accurate PCI's, engineering project cost estimations, total centerline / square footages of the network as well as for each unique pavement segments (shown as an optional task).

We will review/assess new and/or missing streets previously excluded from the last PMP update and create the necessary segmentation within the Lake Elsinore PMP database + GIS links.

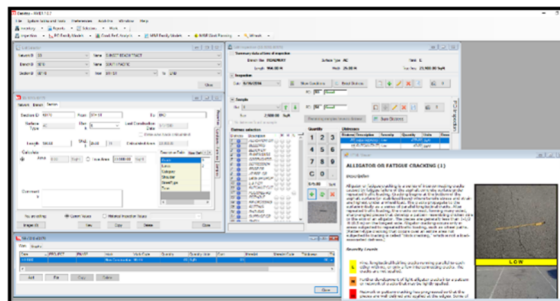
Once the pavement segmentation has been assessed and verified, the necessary inspections will be performed. Our survey methodology will include the following approach based on ASTM D6433 and the City's cost / benefit analysis:

1. **Walking** - All sections are surveyed through "two-pass test" walking methodologies. AC/PCC 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 & the Army Corp of Engineers AC/PCC sampling guidelines while being flexible to current City requirements.

All sample locations are observed through walking surveys; samples areas will typically cover a minimum of 20% of the total section area and will be 2,500 SF +/- 1,000 SF in size. As defined by the City, the following pavement sections are to be surveyed for the upcoming 2026 PMP update:

- The inspection of approximately 222 centerline miles of Arterial / Collector and Local segments will be performed;

Our use of **MicroPAVER-Tablet units** allows our staff to collect pavement data with the City of Lake Elsinore'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 True Area SF calcs, 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 (County survey guidelines will be followed):

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

- Street Name, from/to, indicating the assigned limits of the section, street ID codification
- Street ranking indicating arterial, collector, local, # of lanes, surface type
- Historical PCI tracking from previous 2022 inspections and 2026 PCI inspections
- Segment quantities, indicating the length, width, and total area of the section

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

- ASTM D6433 20 AC & 19 PCC distresses by type, severity and extent
- Sampling/conditional data typically pulled from within edge-of-pavement to edge-of-pavement
- PCI ratings (0-100), taking into account the surface condition, level of distress

We welcome staff members from the City of Lake Elsinore to join our surveys. All pavement data will be entered into the active 2026 MicroPAVER software. Data management will be performed in-house at our Oceanside office.

4. **Section Distress and PCI Reporting**

Upon 60% 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 will provide the conditional/section measurement data, sourced within MicroPAVER, for the City to review and prioritize needed street maintenance/rehabilitation projects. 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.);
- Work history report; and
- GIS Maps presenting PCI presenting PCI findings by section.

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

Deliverable: Citywide PCI reports

DEVELOP RECOMMENDED MASTER PLAN OF STREETS

TASK 4.3: Preparation of Multi-Yr Pavement CIP – Final Report

With the City desiring to update and develop a comprehensive multi-year Pavement CIP (FY 2026-2031), our staff will review all pavement treatments that were previously recommended as well as currently being applied in 2026. Through our experience in developing numerous pavement CIP reports on a yearly basis, we will support City staff through each essential phase of the development of the PMP-CIP. These services will include:

- Review and verification of maintenance applications / unit costs per SF;
- Review of annual funding sources, availability and status;
- Analysis of alternative pavement materials and applications for possible use by the City in upcoming years; and
- Assistance with County Pavement Compliance reporting

We will assist the City by preparing Forecast Maintenance / Rehabilitation (FMR) report in a format that uses the information found in the PCI reports in conjunction with the PMP application/unit cost identified by our team. The FMR report will include:

- Current inventory and pavement conditions indices (PCI) shown in tabular and GIS layouts for all road classes and surface types (pavement condition report, priority listings);
- Assessment of current unit costs for PMP applications of AC/PCC treatments as well as future costs over the multi-year CIP program;
- Projected annual maintenance/rehabilitation program for recommended streets, within the defined CIP term, that demonstrate the greatest return on investment on conditions and use of annual revenues;
- Budgetary scenario options will be included in our FMR reporting, they typically include:
 - #1 – Model current “actual budget” funding against found 2026 conditions
 - #2 – Model a recommended report that proactively increases the City’s weighted PCI and lowers deferred backlog of maintenance/rehabilitation

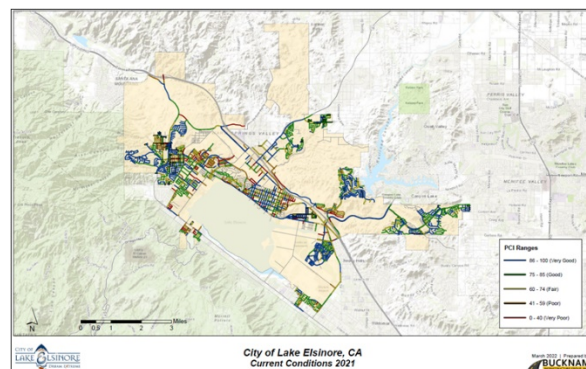
- #3 – Model a maintain PCI budget to demonstrate what annual revenues are needed to sustain the PMP asset at today’s conditions
- Identification of potential funding sources for the street rehabilitation projects;
- Recommendations for each section and/or neighborhood zones will be identified that will include maintenance type, estimated costs and encumbered inflation;
- A distinct and separate section will identify the City’s annual slurry seal program that will cover yearly priority recommendations, neighborhood programs and annual estimated costs;
- A detailed breakdown of deferred maintenance (backlog) which will allow the City to measure and understand its impact based on applied annual funding levels;
- Final FMR GIS mapping will include: recommended maintenance year, specific minor/major recommendations, PCI’s; and

Deliverable: One (1) digital copy of the draft Final PMP Report to be reviewed by the City. One (1) copy of the Final Pavement Management Program Report will be delivered to the City once all comments addressed. Digital copies of project GIS files will also be delivered to the City.

TASK 4.4: PMP Mapping and GIS

As an enhancement and proactive approach to this project, our staff will update the existing 2022 PMP - GIS link between MicroPAVER, MyRoads® and the City’s GIS system (see 2022 Lake Elsinore PCI map to the right). The maps described below will be incorporated into the City’s Final PMP report:

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



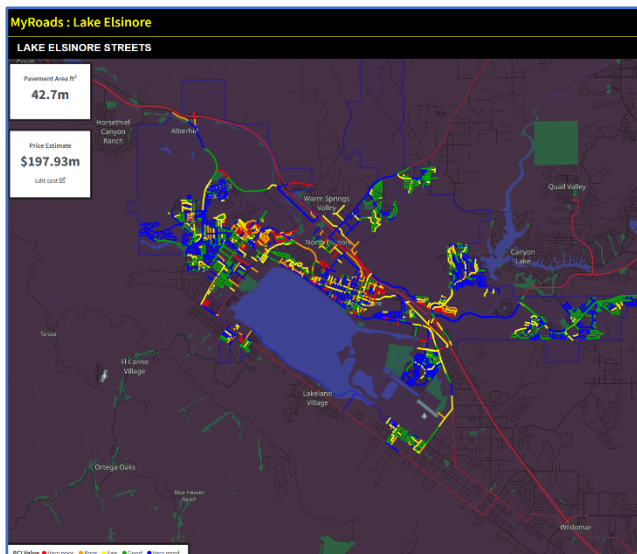
Once the City has approved the Pavement Condition Report, we will update the necessary MicroPAVER - GIS linkages. By using the unique ID’s within the PMP and the City’s ESRI street shapefile ID’s, we will create a one-to-one match for each pavement section in the GIS. Our staff will coordinate all project deliveries with Engineering, Public Works and the GIS department to ensure that the most current and accurate PMP - GIS maps are represented within the City’s GIS enterprise.

We can also provide this data to the City’s ESRI ArcGIS Online software (if owned) or can provide these mapping services through Bucknam Web-GIS MyRoads® portal supported through ArcGIS Online. **Deliverable: Complete GIS files/themes based on list above (shapefiles).**

TASK 4.5: Lake Elsinore MyRoads® PMP Web-Portal

Lake Elsinore MyRoads® PMP Web-Portal

Bucknam’s MyRoads® PMP web-portal is a great match for Lake Elsinore’s PMP today and the future. **Our application brings your PMP data to life within a dynamic dashboard!** Bucknam now provides all our PMP clients with a unique and agency driven “MyRoads®” web-portal that provides instantaneous access to your pavement management database. This “dashboard” allows users to toggle through individual sections via GIS Lasso map selections, zone queries, rank selection and PCI ranges to review all section metrics, latest/previous inspections, work histories and filtered PCI reports. To cap it off, your selections/queries also generate preliminary engineering costs estimations for slurry, overlay and reconstruction projects and provides you with the predictive PCI as if the work is complete.



Bucknam has shown the 2026 Lake Elsinore MyRoads® account in active use!

This tool will be accessed by City staff simply through a Username/Password methodology. As changes are made to the Lake Elsinore PMP database the MyRoads® dataset is changed to reflect work history edits, PCI inspections and section changes.

In summary, MyRoads® allows the user perform the following dynamic functions:

- Query specific pavement segment(s) to view current/historic PCI, work history inspection;
- Filter for pavement sections within a defined zone, PCI range and/or functional class;
- Select a pavement section or grouping of section through the on-board GIS tool;
- Enter slurry, overlay & reconstruction unit costs to determine preliminary cost of maintenance and resulting citywide PCI
 - Display critical street / sidewalks / signs / ROW assets along pavement section(s) that are critical to Engineering Bid development and solicitation (ADA ramps, utilities, manholes, trees, etc.)
- Displays all final GIS project maps (PCI, work history, 5-yr forecasted maintenance, etc.)
- Bucknam will train Lake Elsinore staff on the simple use of the MyRoads® dashboard.

5) Optional Services

TASK 4.6: As-Needed PMP Support Services

Pavement Management Program Support

With the City utilizing a triennial management schedule for PMP street inspections, in between surveys, Bucknam will provide annual as-needed PMP support services. Additional As-Needed services typically include:

- Annual pavement section work history data entry/publication
- 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 MyRoads® / MicroPAVER training

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

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 \$69,400 for an five-month term. We have included our fee schedule below for the City consideration.

	Description	Principal	Project Manager	GIS Manager	Field Technician(s)	Admin	Total by Task
	2026 Base Fee	\$331/hr	\$239/hr	\$178/hr	\$117/hr	\$105/hr	
Task 1	Kick-off Meeting PMP Services						
Task 1.1	Project Kick-off		2		1		\$595
Task 1.2	Project Status Meetings - Quality Control Program		1	1	32		\$4,161
Task 2	Client Satisfaction						
Task 2.1	Project Deliverables	1	3	1	1	1	\$1,448
Task 3	Project Schedule						
Task 3.1	Project Schedule - Management & Administration		1		2		\$473
Task 4	Scope of Work						
Task 4.1	Update Maintenance and Rehabilitation History						
	Pavement Work History Data Entry		1		12		\$1,643
Task 4.2	Pavement Condition Surveys						
Task 4.2a	AC/PCC True Area SF Calculation						\$5,950
	Arterial and Local Street Survey (Citywide - 222 miles)		4	1	338		\$40,680
Task 4.3	Preparation of Multi-Yr Pavement CIP - Final Report	1	26	3	3	1	\$7,535
Task 4.4	PMP Mapping and GIS						
	PMP - GIS Layer Update/Publication		1	6	4		\$1,775
Task 4.5	Lake Elsinore MyRoads® PMP Web-Portal						\$500
	Reimbursables (printing, materials, mileage)						\$4,640
	All deliverables will become property of the City of Lake Elsinore						
	All Tasks are negotiable						
	Total Hours per Staff	2	39	12	393	2	
	Total 2026 Base Fee	\$ 662	\$ 9,321	\$ 2,136	\$ 45,981	\$ 210	\$69,400
	Optional Tasks						
Task 4.6	As-Needed PMP Support Services		8	16	40		\$9,440
Additional services outside of this contract will be negotiated with the City where we will use the Standard Hourly Rate Schedule							
	*Notes / Assumptions:						
All	All Tasks - Bucknam and Inspectors are qualified through ASTM D64333 / OCTA until FY 2028						
Task 4.2a	AC/PCC True Area SF Calculation can be utilized as an optional service						
Task 4.4	Bucknam will work with the City's IT/GIS staff to ensure all GIS data is published within City's GIS Enterprise						

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.

Standard Hourly Rate Schedule

Category	Rate
Principal	\$ 331
Pavement Management Project Manager	239
Senior Project Manager	230
Management Analyst	190
Project Engineer / Planner	180
Sr. Engineer / GIS Manager / Sr. Inspector	178
Assistant Engineer / Sr. Technician / GIS Analyst	165
CADD Operator	125
Field / GIS Technician	117
Administrative Assistant	107
Clerical / Word Processing	107
 <u>Reimbursables</u>	
Mileage	\$0.83/mile
Subconsultant Services	Cost + 15%
Reproduction	Cost + 15%
Travel & Subsistence	Cost + 15%
Fees & Permits	Cost + 15%
Computer Services (External)	Cost + 15%

Rates Effective 1/1/26



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