

**PROFESSIONAL SERVICES AGREEMENT**  
**[On-Call Traffic Engineering Services]**

**THIS PROFESSIONAL SERVICES AGREEMENT** (the "Agreement") is made at Orange, California, on this \_\_\_\_ day of \_\_\_\_\_, 2025 (the "Effective Date") by and between the CITY OF ORANGE, a municipal corporation ("City"), and MINAGAR & ASSOCIATES, INC., a California corporation ("Contractor"), who agree as follows:

1. **Services.** Subject to the terms and conditions set forth in this Agreement, Contractor shall provide general on-call traffic engineering services to the reasonable satisfaction of City the services set forth in Exhibit "A," which is attached hereto and incorporated herein by reference. As a material inducement to City to enter into this Agreement, Contractor represents and warrants that it has thoroughly investigated and considered the scope of services and fully understands the difficulties and restrictions in performing the work. The services which are the subject of this Agreement are not in the usual course of City's business and City relies on Contractor's representation that it is independently engaged in the business of providing such services and is experienced in performing the work. Contractor shall perform all services in a manner reasonably satisfactory to City and in a manner in conformance with the standards of quality normally observed by an entity providing such services to a municipal agency. All services provided shall conform to all federal, state and local laws, rules and regulations and to the best professional standards and practices. The terms and conditions set forth in this Agreement shall control over any terms and conditions in Exhibit "A" to the contrary.

Larry Tay, City Traffic Engineer ("City's Project Manager"), shall be the person to whom Contractor will report for the performance of services hereunder. It is understood that Contractor's performance hereunder shall be under the supervision of City's Project Manager (or his/her designee), that Contractor shall coordinate its services hereunder with City's Project Manager to the extent required by City's Project Manager, and that all performances required hereunder by Contractor shall be performed to the satisfaction of City's Project Manager and the City Manager.

2. **Compensation and Fees.**

a. Contractor's total compensation for all services performed under this Agreement, shall not exceed ONE HUNDRED THOUSAND DOLLARS and 00/100 (\$100,000.00) without the prior written authorization of City.

b. The above compensation shall include all costs, including, but not limited to, all clerical, administrative, overhead, insurance, reproduction, telephone, travel, auto rental, subsistence and all related expenses.

3. **Payment.**

a. As scheduled services are completed, Contractor shall submit to City an invoice for the services completed, authorized expenses and authorized extra work actually performed or incurred.

b. All such invoices shall state the basis for the amount invoiced, including services completed, the number of hours spent and any extra work performed.

c. City will pay Contractor the amount invoiced within thirty (30) days of receipt of all deliverables.

d. Payment shall constitute payment in full for all services, authorized costs and authorized extra work covered by that invoice.

4. **Change Orders.** No payment for extra services caused by a change in the scope or complexity of work, or for any other reason, shall be made unless and until such extra services and a price therefor have been previously authorized in writing and approved by City as an amendment to this Agreement. City's Project Manager is authorized to approve a reduction in the services to be performed and compensation therefor. All amendments shall set forth the changes of work, extension of time, and/or adjustment of the compensation to be paid by City to Contractor and shall be signed by the City's Project Manager, City Manager or City Council, as applicable.

5. **Licenses.** Contractor represents that it and any subcontractors it may engage, possess any and all licenses which are required under state or federal law to perform the work contemplated by this Agreement and that Contractor and its subcontractors shall maintain all appropriate licenses, including a City of Orange business license, at its cost, during the performance of this Agreement.

6. **Independent Contractor.** At all times during the term of this Agreement, Contractor shall be an independent contractor and not an employee of City. City shall have the right to control Contractor only insofar as the result of Contractor's services rendered pursuant to this Agreement. City shall not have the right to control the means by which Contractor accomplishes services rendered pursuant to this Agreement. Contractor shall, at its sole cost and expense, furnish all facilities, materials and equipment which may be required for furnishing services pursuant to this Agreement. Contractor shall be solely responsible for, and shall indemnify, defend and save City harmless from all matters relating to the payment of its subcontractors, agents and employees, including compliance with social security withholding and all other wages, salaries, benefits, taxes, exactions, and regulations of any nature whatsoever. Contractor acknowledges that it and any subcontractors, agents or employees employed by Contractor shall not, under any circumstances, be considered employees of City, and that they shall not be entitled to any of the benefits or rights afforded employees of City, including, but not limited to, sick leave, vacation leave, holiday pay, Public Employees Retirement System benefits, or health, life, dental, long-term disability or workers' compensation insurance benefits.

7. **Contractor Not Agent.** Except as City may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, to bind City to any obligation whatsoever.



8. **Designated Persons.** Only those qualified persons authorized by City's Project Manager, or as designated in Exhibit "A," shall perform work provided for under this Agreement. It is understood by the parties that clerical and other nonprofessional work may be performed by persons other than those designated.

9. **Assignment or Subcontracting.** No assignment or subcontracting by Contractor of any part of this Agreement or of funds to be received under this Agreement shall be of any force or effect unless the assignment has the prior written approval of City. City may terminate this Agreement rather than accept any proposed assignment or subcontracting. Such assignment or subcontracting may be approved by the City Manager or his/her designee.

10. **Time of Completion.** Except as otherwise specified in Exhibit "A," Contractor shall commence the work provided for in this Agreement within five (5) days of the Effective Date of this Agreement and diligently prosecute completion of the work in accordance with the time period set forth in Exhibit "A" hereto or as otherwise agreed to by and between the representatives of the parties.

11. **Time Is of the Essence.** Time is of the essence in this Agreement. Contractor shall do all things necessary and incidental to the prosecution of Contractor's work.

12. **Reserved.**

13. **Delays and Extensions of Time.** Contractor's sole remedy for delays outside its control, other than those delays caused by City, shall be an extension of time. No matter what the cause of the delay, Contractor must document any delay and request an extension of time in writing at the time of the delay to the satisfaction of City. Any extensions granted shall be limited to the length of the delay outside Contractor's control. If Contractor believes that delays caused by City will cause it to incur additional costs, it must specify, in writing, why the delay has caused additional costs to be incurred and the exact amount of such cost at the time the delay occurs. No additional costs can be paid that exceed the not to exceed amount stated in Section 2.a, above, absent a written amendment to this Agreement.

14. **Products of Contractor.** The documents, studies, evaluations, assessments, reports, plans, citations, materials, manuals, technical data, logs, files, designs and other products produced or provided by Contractor for this Agreement shall become the property of City upon receipt. Contractor shall deliver all such products to City prior to payment for same. City may use, reuse or otherwise utilize such products without restriction.

15. **Equal Employment Opportunity.** During the performance of this Agreement, Contractor agrees as follows:

a. Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, mental or physical disability, or any other basis prohibited by applicable law. Contractor shall ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, national origin, mental or physical disability, or any other basis prohibited by applicable law.



Such actions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, a notice setting forth provisions of this non-discrimination clause.

b. Contractor shall, in all solicitations and advertisements for employees placed by, or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, mental or physical disability, or any other basis prohibited by applicable law.

c. Contractor shall cause the foregoing paragraphs (a) and (b) to be inserted in all subcontracts for any work covered by this Agreement, provided that the foregoing provisions shall not apply to subcontracts for standard commercial supplies or raw materials.

16. **Conflicts of Interest.** Contractor agrees that it shall not make, participate in the making, or in any way attempt to use its position as a consultant to influence any decision of City in which Contractor knows or has reason to know that Contractor, its officers, partners, or employees have a financial interest as defined in Section 87103 of the Government Code. Contractor further agrees that it shall not be eligible to work as the design/build firm for the project that is the subject of this Agreement.

17. **Indemnity.**

a. To the fullest extent permitted by law, Contractor agrees to indemnify, defend and hold City, its City Council and each member thereof, and the officers, officials, agents and employees of City (collectively the "Indemnitees") entirely harmless from all liability arising out of:

(1) Any and all claims under workers' compensation acts and other employee benefit acts with respect to Contractor's employees or Contractor's subcontractor's employees arising out of Contractor's work under this Agreement, including any and all claims under any law pertaining to Contractor or its employees' status as an independent contractor and any and all claims under Labor Code section 1720 related to the payment of prevailing wages for public works projects; and

(2) Any claim, loss, injury to or death of persons or damage to property caused by any act, neglect, default, or omission of Contractor, or person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages due to loss or theft sustained by any person, firm or corporation including the Indemnitees, or any of them, arising out of, or in any way connected with the work or services which are the subject of this Agreement, including injury or damage either on or off City's property; but not for any loss, injury, death or damage caused by the active negligence or willful misconduct of City. Contractor, at its own expense, cost and risk, shall indemnify any and all claims, actions, suits or other proceedings that may be brought or instituted against the Indemnitees on any such claim or liability covered by this subparagraph, and shall pay or satisfy any judgment that may be rendered against

the Indemnitees, or any of them, in any action, suit or other proceedings as a result of coverage under this subparagraph.

b. To the fullest extent permitted by law, and as limited by California Civil Code 2782.8, Contractor agrees to indemnify and hold Indemnitees harmless from all liability arising out of any claim, loss, injury to or death of persons or damage to property to the extent caused by its negligent professional act or omission in the performance of professional services pursuant to this Agreement.

c. Except for the Indemnitees, the indemnifications provided in this Agreement shall not be construed to extend any third party indemnification rights of any kind to any person or entity which is not a signatory to this Agreement.

d. The indemnities set forth in this section shall survive any closing, rescission, or termination of this Agreement, and shall continue to be binding and in full force and effect in perpetuity with respect to Contractor and its successors.

**18. Insurance.**

a. Contractor shall carry workers' compensation insurance as required by law for the protection of its employees during the progress of the work. Contractor understands that it is an independent contractor and not entitled to any workers' compensation benefits under any City program.

b. Contractor shall maintain during the life of this Agreement the following minimum amount of comprehensive general liability insurance or commercial general liability insurance: the greater of (1) One Million Dollars (\$1,000,000) per occurrence; or (2) all the insurance coverage and/or limits carried by or available to Contractor. Said insurance shall cover bodily injury, death and property damage and be written on an occurrence basis.

c. Contractor shall maintain during the life of this Agreement, the following minimum amount of automotive liability insurance: the greater of (1) a combined single limit of One Million Dollars (\$1,000,000); or (2) all the insurance coverage and/or limits carried by or available to Contractor. Said insurance shall cover bodily injury, death and property damage for all owned, non-owned and hired vehicles and be written on an occurrence basis.

d. Any insurance proceeds in excess of or broader than the minimum required coverage and/or minimum required limits which are applicable to a given loss shall be available to City. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of Contractor under this Agreement.

e. Each policy of general liability and automotive liability shall provide that City, its officers, officials, agents, and employees are declared to be additional insureds under the terms of the policy, but only with respect to the work performed by Contractor under this Agreement. A policy endorsement to that effect shall be provided to City along with the certificate of insurance. In lieu of an endorsement, City will accept a copy of the policy(ies) which evidences



that City is an additional insured as a contracting party. The minimum coverage required by Subsection 18.b and c, above, shall apply to City as an additional insured. Any umbrella liability insurance that is provided as part of the general or automobile liability minimums set forth herein shall be maintained for the duration of the Agreement.

**f.** Contractor shall maintain during the life of this Agreement professional liability insurance covering errors and omissions arising out of the performance of this Agreement with a minimum limit of One Million Dollars (\$1,000,000) per claim. Contractor agrees to keep such policy in force and effect for at least five (5) years from the date of completion of this Agreement.

**g.** The insurance policies maintained by Contractor shall be primary insurance and no insurance held or owned by City shall be called upon to cover any loss under the policy. Contractor will determine its own needs in procurement of insurance to cover liabilities other than as stated above.

**h.** Before Contractor performs any work or prepares or delivers any materials, Contractor shall furnish certificates of insurance and endorsements, as required by City, evidencing the aforementioned minimum insurance coverages on forms acceptable to City, which shall provide that the insurance in force will not be canceled or allowed to lapse without at least ten (10) days' prior written notice to City.

**i.** Except for professional liability insurance coverage that may be required by this Agreement, all insurance maintained by Contractor shall be issued by companies admitted to conduct the pertinent line of insurance business in California and having a rating of Grade A or better and Class VII or better by the latest edition of Best Key Rating Guide. In the case of professional liability insurance coverage, such coverage shall be issued by companies either licensed or admitted to conduct business in California so long as such insurer possesses the aforementioned Best rating.

**j.** Contractor shall immediately notify City if any required insurance lapses or is otherwise modified and cease performance of this Agreement unless otherwise directed by City. In such a case, City may procure insurance or self-insure the risk and charge Contractor for such costs and any and all damages resulting therefrom, by way of set-off from any sums owed Contractor.

**k.** Contractor agrees that in the event of loss due to any of the perils for which it has agreed to provide insurance, Contractor shall look solely to its insurance for recovery. Contractor hereby grants to City, on behalf of any insurer providing insurance to either Contractor or City with respect to the services of Contractor herein, a waiver of any right to subrogation which any such insurer may acquire against City by virtue of the payment of any loss under such insurance.

**l.** Contractor shall include all subcontractors, if any, as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor to City for

review and approval. All coverages for subcontractors shall be subject to all of the requirements stated herein.

**19. Termination.** City may for any reason terminate this Agreement by giving Contractor not less than five (5) days' written notice of intent to terminate. Upon receipt of such notice, Contractor shall immediately cease work, unless the notice from City provides otherwise. Upon the termination of this Agreement, City shall pay Contractor for services satisfactorily provided and all allowable reimbursements incurred to the date of termination in compliance with this Agreement, unless termination by City shall be for cause, in which event City may withhold any disputed compensation. City shall not be liable for any claim of lost profits.

**20. Maintenance and Inspection of Records.** In accordance with generally accepted accounting principles, Contractor and its subcontractors shall maintain reasonably full and complete books, documents, papers, accounting records, and other information (collectively, the "records") pertaining to the costs of and completion of services performed under this Agreement. City and its authorized representatives shall have access to and the right to audit and reproduce any of Contractor's records regarding the services provided under this Agreement. Contractor shall maintain all such records for a period of at least three (3) years after termination or completion of this Agreement. Contractor agrees to make available all such records for inspection or audit at its offices during normal business hours and upon three (3) days' notice from City, and copies thereof shall be furnished if requested.

**21. Compliance with all Laws/Immigration Laws.**

**a.** Contractor shall be knowledgeable of and comply with all local, state and federal laws which may apply to the performance of this Agreement.

**b.** If the work provided for in this Agreement constitutes a "public works," as that term is defined in Section 1720 of the California Labor Code, for which prevailing wages must be paid, to the extent Contractor's employees will perform any work that falls within any of the classifications for which the Department of Labor Relations of the State of California promulgates prevailing wage determinations, Contractor hereby agrees that it, and any subcontractor under it, shall pay not less than the specified prevailing rates of wages to all such workers. The general prevailing wage determinations for crafts can be located on the website of the Department of Industrial Relations ([www.dir.ca.gov/DLSR](http://www.dir.ca.gov/DLSR)). Additionally, to perform work under this Contract, Contractor must meet all State registration requirements and criteria, including project compliance monitoring.

**c.** Contractor represents and warrants that it:

(1) Has complied and shall at all times during the term of this Agreement comply, in all respects, with all immigration laws, regulations, statutes, rules, codes, and orders, including, without limitation, the Immigration Reform and Control Act of 1986 (IRCA); and



(2) Has not and will not knowingly employ any individual to perform services under this Agreement who is ineligible to work in the United States or under the terms of this Agreement; and

(3) Has properly maintained, and shall at all times during the term of this Agreement properly maintain, all related employment documentation records including, without limitation, the completion and maintenance of the Form I-9 for each of Contractor's employees; and

(4) Has responded, and shall at all times during the term of this Agreement respond, in a timely fashion to any government inspection requests relating to immigration law compliance and/or Form I-9 compliance and/or worksite enforcement by the Department of Homeland Security, the Department of Labor, or the Social Security Administration.

d. Contractor shall require all subcontractors or subconsultants to make the same representations and warranties as set forth in Subsection 21.c.

e. Contractor shall, upon request of City, provide a list of all employees working under this Agreement and shall provide, to the reasonable satisfaction of City, verification that all such employees are eligible to work in the United States. All costs associated with such verification shall be borne by Contractor. Once such request has been made, Contractor may not change employees working under this Agreement without written notice to City, accompanied by the verification required herein for such employees.

f. Contractor shall require all subcontractors or sub-consultants to make the same verification as set forth in Subsection 21.e.

g. If Contractor or subcontractor knowingly employs an employee providing work under this Agreement who is not authorized to work in the United States, and/or fails to follow federal laws to determine the status of such employee, that shall constitute a material breach of this Agreement and may be cause for immediate termination of this Agreement by City.

h. Contractor agrees to indemnify and hold City, its officers, officials, agents and employees harmless for, of and from any loss, including but not limited to fines, penalties and corrective measures City may sustain by reason of Contractor's failure to comply with said laws, rules and regulations in connection with the performance of this Agreement.

**22. Governing Law and Venue.** This Agreement shall be construed in accordance with and governed by the laws of the State of California and Contractor agrees to submit to the jurisdiction of California courts. Venue for any dispute arising under this Agreement shall be in Orange County, California.

**23. Integration.** This Agreement constitutes the entire agreement of the parties. No other agreement, oral or written, pertaining to the work to be performed under this Agreement shall be of any force or effect unless it is in writing and signed by both parties. Any work performed



which is inconsistent with or in violation of the provisions of this Agreement shall not be compensated.

**24. Notice.** Except as otherwise provided herein, all notices required under this Agreement shall be in writing and delivered personally, by e-mail, or by first class U.S. mail, postage prepaid, to each party at the address listed below. Either party may change the notice address by notifying the other party in writing. Notices shall be deemed received upon receipt of same or within three (3) days of deposit in the U.S. Mail, whichever is earlier. Notices sent by e-mail shall be deemed received on the date of the e-mail transmission.

“CONTRACTOR”

Minagar & Associates, Inc.  
23282 Mill Creek Road, East Tower, Ste. 120  
Laguna Hills, CA 92653  
Attn.: Fred Minagar

Telephone: 949-707-1199  
E-Mail: minagarf@minagarinc.com

“CITY”

City of Orange  
300 E. Chapman Avenue  
Orange, CA 92866-1591  
Attn.: Larry Tay, City Traffic Engineer

Telephone: 714-744-5525  
E-Mail: ltay@cityoforange.org

**25. Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures transmitted electronically shall have the same effect as original signatures.

**[Remainder of page intentionally left blank; signatures on next page]**

IN WITNESS of this Agreement, the parties have entered into this Agreement as of the year and day first above written.

**“CONTRACTOR”**

MINAGAR & ASSOCIATES, INC.,  
a California corporation

\*By: *Fred Minagar*  
Printed Name: Fred Minagar  
Title: President/Secretary

\*By: *Fred Minagar*  
Printed Name: Fred Minagar  
Title: VP/Treasurer

**“CITY”**

CITY OF ORANGE, a municipal corporation

By: \_\_\_\_\_  
Daniel R. Slater, Mayor

ATTEST:

\_\_\_\_\_  
Pamela Coleman, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Nathalie Adourian, City Attorney



**\*NOTE:**

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City requires the following signature(s) on behalf of the Contractor: (1) the Chairman of the Board, the President or a Vice-President, AND (2) the Secretary, the Chief Financial Officer, the Treasurer, an Assistant Secretary or an Assistant Treasurer. If only one corporate officer exists or one corporate officer holds more than one corporate office, please so indicate. OR The corporate officer named in a corporate resolution as authorized to enter into this Agreement. A copy of the corporate resolution, certified by the Secretary close in time to the execution of the Agreement, must be provided to City.

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**EXHIBIT "A"**

**SCOPE OF SERVICES**

[Beneath this sheet.]

## **SECTION III**

### **SCOPE OF WORK**

**RFP NO. 24-25.24**



### **SECTION III: SCOPE OF WORK**

All work shall be conducted on an as needed basis when requested in writing by the City Traffic Engineer or designated representative and according to the timeframe specified by the City. Work performed by the Consultant that has not be specifically identified and authorized by the City, will not be compensated.

The scope of work includes, but is not limited to:

- Traffic studies for capital projects
- Traffic and/or parking study review for private developments
- Traffic signal design
- Traffic control plan preparations
- Plan check for capital/development projects and traffic control plans
- Street light design and plan check
- Signing and striping plan preparation and plan check
- Traffic signal and street lighting construction inspection
- Construction management and construction engineering
- Technical support for funding and grant application
- Grant funding oversight
- Intelligent transportation systems (ITS) design
- Traffic signal timing and coordination studies
- Traffic counts and data collection
- Neighborhood traffic calming studies, warrant studies, and traffic investigations
- Special studies, civil design, and on-site support services may be requested
- General municipal traffic engineering services

The City of Orange manages 160 traffic signals, over 8,000 streetlights, over 20 miles of fiber optic network, the Traffic Management Center (TMC), radar feedback signs, pedestrian crossing and overhead flashers, and other devices to facilitate the safety of the public and efficiency of traffic. The City of Orange expects consulting firms to have thorough knowledge in traffic signal, ITS systems, street light design to perform required services. Firms are also expected to understand federal/state/local funding and policies, as well as Orange County Transportation Authority (OCTA) Comprehensive Transportation Funding Program (CTFP) requirements. The ideal firm(s) will have expertise in the areas above or may specialize in one or more subareas and will be capable to provide technical services associated with the general traffic engineering needs of the City of Orange.

All design work and improvement plan check services shall be performed by or under the responsible charge of a California License Professional Engineer (Civil, Traffic, and/or California License Land Surveyor as applicable) eligible to prepare and sign such plans. Successful firms will be required to enter into the City's standard professional services agreement (attached) and obtain an Orange business license. Any changes requested to the City's standard agreement must be noted in the response to the RFP for the City's consideration.

Each specific assignment under an on-call engineering services contract will be compensated on either lump sum or time-and-materials basis. The method of compensation will be specified in writing by the City at the time the assignment is given.

Generally, response times related to plan checks for the initial review shall be completed within **ten (10) working days**, unless otherwise directed by the City. Each subsequent plan check shall be completed within 5 working days unless otherwise directed by the City.

The scope of work will vary by project, and will be further defined in a project specific request by the City of Orange, but may generally include the following:

- **Design Plans** – Develop or assist with development of final design plans associated with traffic signals and street light systems. These plans include, but are not limited to: traffic signal plans, Intelligent Transportation Systems plans, traffic signal interconnect plans, and street light plans.
- **Program Management / Construction Management / Construction Inspection** – Services related to the City's Capital Improvement Program, which will typically include traffic signal and street light improvements, but may also include ancillary roadway rehabilitation, roadway widening, ADA access and handicap ramps, parkways, drainage and drainage structures, storm drain utilities, signage and striping, parks, and other miscellaneous facilities. A thorough understanding of the NPDES regulations and grant regulations, including Federally funded program compliance is required. Project manager and inspector must be able to coordinate with outside agencies such as adjacent cities, Caltrans, and various utility companies.
- **Transportation Analysis** – Specialized traffic studies to assess proposed projects within a short time frame. Typical studies would include travel demand or traffic forecasting of proposed roadways, street widening or intersection improvement projects. Studies will analyze diversion of traffic due to substantial long term construction projects. Analysis will incorporate pedestrian and bicycles. Additional studies could be needed to provide technical support for grant and funding applications.
- **Traffic Signal Corridor Coordination Studies** – Conduct studies that analyze the performance of traffic signal timing on street corridors. These studies shall include before and after analysis to quantify the level of improvement to the expected as a result of the project.
- **Simulation Modeling** – Provide computer simulation of corridors or road networks as needed utilizing microsimulation software. Training may also be included with these projects.
- **Traffic Counts** – Perform data collection as needed within short time frames including ADT's, 12-hour counts, intersection turning movement counts, occupancy rates, speed/delay runs, pedestrian and bike counts, parking turnover, etc.
- **Statewide Planning Efforts** – Specialized studies and analysis in support of various regional and statewide initiatives involving traffic signal improvements, timing, and coordination.
- **Research and Outreach** – Assist staff in producing reports and making presentations on transportation related topics.
- **Neighborhood Traffic Calming** – Assist staff in processing requests for traffic calming measures. This includes but is not limited to street and neighborhood evaluation, data collection, recommendations, design, and coordination/communication with residents.
- **Review for Private Developments** – Assist staff in reviewing plans and reports for private development projects. This includes but is not limited to: traffic signal plans, striping plans, street light plans, and various traffic studies. Coordination with project owners or design teams on behalf of the City may be requested.



## **Deliverables**

The specific scope of work for each task/project will be provided in a written transmittal from a City of Orange representative along with, in most cases, a follow-up phone call and, if necessary, a meeting to discuss the specific needs of the assignment. Within five business days of receipt of transmittal, the Consultant will be expected to provide the City with a proposed level of support along with a NOT TO EXCEED cost. A fully-executed amendment to the on-call contract may be required along with an authorization to proceed prior to commencement of work.

Consultant is expected to have a close working relationship with City staff and remain very accessible throughout the contract duration. The Consultant shall act as an extension of City staff.

A member of the consulting firm will be required to attend meetings with other jurisdictions, City departments, or public outreach events if an individual project requires extra coordination.



Through analysis of traffic volume counts and field observations, it was determined that the existing weekday conditions for the subject intersection did not fulfill the minimum warrant criteria and thus, the subject intersection was not converted to a multi-way stop control.

**Client Information: City of Colton**

**Tel: (909)370-5065**

**Email: vortiz@coltonca.gov**

**Project Duration: 2005-Present**

**Total Cost Charged: \$50,000/Year**

## Section 4: Project Approach

The City of Orange is looking for qualified consultants to provide traffic engineering services, which may include Traffic Impact Reports, Level of Service (LOS) and Vehicle Miles Traveled (VMT) Analyses, Intersection or Traffic Signal Design, and Parking Analyses. Minagar & Associates, Inc. is adequately equipped to serve the City, as it has the skills and services as detailed in the figure and sections below.

<b>1 Traffic Signal Design &amp; Signal Timing/Synchronization</b>	
<ul style="list-style-type: none"> <li>Traffic Control Device Design</li> <li>Traffic Control Device Operation Assessments</li> <li>Traffic Engineering &amp; Signal Upgrade Studies</li> </ul>	<ul style="list-style-type: none"> <li>Plans, Specifications, &amp; Estimates (PS&amp;E)</li> <li>Interconnect Design (fiber, wireless, etc.)</li> <li>Computer Modeling, Simulation, &amp; Signal System Design</li> </ul>
<b>2 Intelligent Transportation Systems (ITS)</b>	
<ul style="list-style-type: none"> <li>ITS Planning</li> <li>ITS Design and Implementation Services</li> <li>ITS Architecture Expansion</li> </ul>	<ul style="list-style-type: none"> <li>CCTV, ATMS, Video Detection &amp; Fiber-Optic Communication Systems</li> <li>Traffic Signal Interconnect Expansion</li> </ul>
<b>3 Municipal Engineering</b>	
<ul style="list-style-type: none"> <li>Traffic Counts</li> <li>Traffic Management Plans (TMP)</li> <li>Engineering &amp; Traffic Surveys (E&amp;TS)</li> <li>Radar Speed Surveys</li> </ul>	<ul style="list-style-type: none"> <li>Identification of Grant Opportunities/Applications</li> <li>Research for Federal &amp; State Infrastructure Grants</li> </ul>
<b>4 Transportation Planning</b>	
<ul style="list-style-type: none"> <li>Traffic Impact Analysis Studies</li> <li>Review Development Proposals</li> <li>Studies to ensure compliance with City/County/State codes and standards</li> <li>EIS/EIR/EA review</li> </ul>	<ul style="list-style-type: none"> <li>Demand modeling, rail/transit studies</li> <li>Assist in Approval of Proposed Development Projects/CUPs</li> <li>Review/recommend land use applications</li> <li>Pedestrian &amp; Bicycle Studies</li> </ul>
<b>5 Systems Evaluation &amp; Support Services</b>	
<ul style="list-style-type: none"> <li>Evaluation of Signal Re-timing</li> <li>Evaluation of Synchronization Implementations</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation of ITS improvement</li> <li>Before/After Studies for Transportation Improvements</li> </ul>
<b>6 Temporary Traffic Control &amp; Construction Work Zone Plans (TCP)</b>	
<ul style="list-style-type: none"> <li>Traffic Control Plans (TCP)</li> <li>Electrical Engineering Services</li> </ul>	<ul style="list-style-type: none"> <li>Construction Management and Inspection</li> </ul>







The following pages elaborate on Minagar's approach and methodology in each category of traffic engineering services shown above.

**① On-Call Traffic Signal Design & Signal Timing/Synchronization Services**

Our on-call traffic signal services generally cover the following aspects in the technical design, preparation of plans, construction documents, and timing charts:

- Traffic Signal Timing & Optimization
- Traffic Signal Design & Modification
- Construction Engineering Management for Signal Projects
- Plans, Specifications, & Estimates (PS&E)
- Interconnect Design (fiber, wireless, etc.)
- Computer Modeling, Simulation, & Signal System Design

**Intersection Traffic/Pedestrian Signal & Street Lighting Improvements** Our traffic & pedestrian signal design projects generally proceed in the following manner for PS&E delivery:

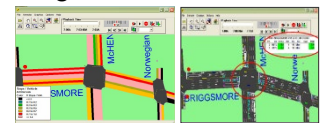
- (1) preliminary analysis (utilizing existing data or collected field data),
- (2) conceptual design,
- (3) 90% signal/signing/stripping design plans and cost estimates,
- (4) preparation of specifications & special provisions,
- (5) 100% PS&E delivery with construction plans, and
- (6) bid/advertisement services if required by the lead agency.



General provisions & technical specifications are prepared with the agency's boilerplate specifications. All final plans & specs, signed and sealed by our California Registered Civil engineers, will conform to local (City/County/APWA Greenbook) and/or state (Caltrans) guidelines and plan preparation manuals. Final signed/sealed plans are submitted on 24"X36", 4-millimeter Mylar sheets, or on vellum medium if requested by the agency.

Our signing and striping plans are prepared in accordance with the latest California Manual on Uniform Traffic Control Devices (CA-MUTCD 2014) and Caltrans Standard Plans (2018). All proposed signage and pavement markings items are identified on our plans both by construction note and MUTCD code.

**Traffic Signal Timing/Synchronization/Coordination** Traffic signal timing and coordination of signalized intersections and arterial corridors is the staple of our firm's expertise. We utilize *SYNCHRO*® 11.0 and *SimTraffic*® 11.0 micro-computer simulation modules to build traffic signal network models, analyze intersections/systems, conduct and fine-tune simulations, and develop optimized traffic signal timing plans to deploy in the field. Minagar & Associates, Inc. is a leading national authority on the application, utilization, and training of **Synchro** software, training 88 cities and all Southern California districts for the past 10 years. Our traffic modeling services include preparing a baseline model of the existing signal network based on existing field and office data collection, developing a set of optimized proposed peak hour timing plans, modifying the timing and coordination plans based on lead-agency comments, and conducting final fine-tuning efforts based on on-site/field implementations, as well as:



- *Review of existing conditions*, such as roadway geometries, striping and lane configurations, traffic signal control information, as well as inventories and inspections;



- *Review of deficiencies*, such as parking prohibitions, excessive pedestrian/bicyclist traffic, sources of congestion, and/or unusual traffic generating conditions;
- *Development of an effective highway model*, and
- *Development of operational SimTraffic micro-models*.

Minagar is experienced in using Synchro to analyze the operating conditions of various intersection types, including queuing, delay per vehicle, average speed, and vehicles denied entry. If, based on the traffic study, queue lengths increase when compared to the existing design, a recommendation regarding signal timing will also be included in the traffic study report.

**Implementation** of our optimized/synchronized timing includes:

- *Revising/Optimizing Traffic Signal Timings*: We have consistently provided successful signal timing strategies to numerous agencies and projects, particularly in the areas:
  - Cycle Lengths and Offsets;
  - Left-turn phasing rotations, protected left-turn phase re-service;
  - Timing Parameters to include full accommodation for pedestrian traffic within splits; and
  - Time-of-day start and stop intervals as recommended for the various timing plans.
- *Inputting Revised/Optimized Traffic Signal Timings*: Our field and traffic signal timing staff can provide installation of new signal timings, including:
  - Full traffic engineering implementation services, or as technical support to local agencies;
  - Utilization of existing interconnect systems during implementation; and
  - Development of time-based signal coordination techniques.

**Signal Timing Improvement Strategies** for the intersection/arterial/signal network will be provided to the lead agency in addition to our synchronization/coordination efforts, such as:

- Providing technical support to the agency’s traffic signal maintenance staff
- Interfacing with adjacent jurisdictions for jointly owned or operated signals

The Minagar & Associates, Inc. Team also provides evaluations of currently used time-referencing equipment for all traffic signal controllers along a given corridor to determine the recommended type of time clocks (e.g., GPS clocks, WWV, etc.) to be utilized for accurately coordinated time-referencing, especially across jurisdiction boundaries.

We are also experienced in providing procurement recommendations for new/updated traffic signal controller units and/or assemblies, prior to the implementation of signal timings. This includes on-site assistance for turn-on activity of new equipment, as well as “fine-tuning” of traffic signal timings/settings and thorough logs and records of all changes carried out prior to the implementation to the satisfaction of the lead agency.

**2 On-Call Civil Engineering Services**  
**INTELLIGENT TRANSPORTATION SYSTEMS (ITS) DESIGN & DEPLOYMENT**

Improvements, relocation, expansion of existing ITS facilities. Intelligent Transportation Systems (ITS) projects can include a variety of improvements. Our recent ITS projects have included:







- ITS Architecture Expansion
- ITS Planning & Design
- Preparation of Plans, Specifications, & Estimates (PS&E)
- CCTV camera deployment
- VDS camera deployment
- Dynamic Message Signs (DMS)
- Advanced Traffic Management Systems (ATMS)
- Systems Communication/Traffic Signal Interconnect Expansion
- Homeland Security
- Traffic Management/Operations Center (TMC/TOC) Deployment

Our procedures for designing and deploying ITS improvement projects typically follow those outlined in the previous section for traffic signal PS&E delivery. At the start of the design stage, the public agency usually has an idea of what needs to be deployed, based on previous master-planning efforts. If none are available, Minagar & Associates, Inc. will coordinate with the agency to develop appropriate ITS improvements, including FHWA ITS Architecture & Systems Engineering compliance and meeting all of Caltrans Environmental requirements.

**③ On-Call Civil Engineering Services**  
**MUNICIPAL TRAFFIC ENGINEERING & SUPPORT SERVICES**

For 19 years, Minagar & Associates, Inc. has provided on-call professional traffic engineering and municipal support services to public agencies. In the capacity of City Traffic Engineer, our team provides consulting to the lead agency on transportation and traffic-related matters, providing services, reports, materials and other resources which are normally assigned to the Engineering Division/Section. Related services include:

- Traffic Counts
- Traffic Management Plans (TMP)
- Engineering & Traffic Surveys (E&TS)
- RFP Work Scope Development
- Expert Witness Services
- Civil/Structural Engineering Support of Highway Facilities
- Collaborating with City, County, Caltrans staff, & local law enforcement agencies
- Attending City Council, Transportation Commission, & other public meetings
- Short- and long-range planning, providing recommendations, and establishing goals and budgets for traffic impact mitigation;

**④ On-Call Transportation Planning Services**

Our transportation planning services bridge the gap between community planning and engineering judgment and include the following, and are described in more detail below.

- Traffic Impact Analysis Studies
- Review Development Proposals
- Demand modeling, rail/transit studies
- Conduct studies to ensure the appropriate compliance with City, County and State codes, standards, regulations, etc.
- EIS/EIR/EA review — compliance with design requirements and standards
- Parking/Toll Road/Financial studies
- Assist in preparing conditions of approval for proposed development projects/CUPs
- Evaluate and provide recommendations for developer-proposed mitigation measures
- Review/recommend land use applications

**Demand Modeling** Our demand modeling services include development and application of the local or regional demand model using available existing data on its roadways, transit ridership and network information, socioeconomic characteristics, vehicular volumes, average travel times, and planned/programmed projects in the near-term or horizon forecast scenarios.

**Traffic Forecasting**





- **Trip Generation:** Estimation of vehicular trips to be generated from the proposed project;
- **Trip Distribution:** Includes developing a model to determine the projected paths of future trips;
- **Trip Assignment:** Identification of the magnitude and direction of project vehicular trips;
- **Traffic Scenarios:** Involves developing particular “target years” and “conditions” to analyze with respect to important milestones in both the construction phasing of the project and future conditions of the County, such as the choice of target years or application of any trip credits;
- **Environmental Clearance and Traffic Congestion Mitigation:** Includes determining a project's traffic impacts and developing solutions reduce this through mitigation measures. Consultation with lead agency staff and Caltrans (if under state right-of-way) shall also be pursued as needed, so that reviews may be expedited and conflicts and/or misunderstandings are reduced in both the local agency review process as well as any Caltrans encroachment permit processes.

**Parking Studies** Local municipalities generally have parking codes by which new or modified development must abide. Beyond the “black and white” parking code, however, a number of issues can arise which require studying a given site’s current parking situation, and forecasting its future parking conditions. Our typical parking study approach takes this into account and consists of the following steps:

1. Conduct on-site baseline parking accumulation surveys during peak periods of development to determine the magnitude and patterns of existing parking activity. The time frame(s) for these surveys will be verified with the lead agency at the start of each parking study project.
2. Determine peak hour and day at the site from the parking surveys.
3. Estimate projected parking demand of the proposed development based on the Institute of Transportation Engineers’ (ITE) and/or Urban Land Institute’s (ULI) parking methodologies.
4. Compare local agency parking requirements with existing and forecasted parking demand, then determine if the site will provide an adequate parking supply under fully built-out conditions.
5. Provide recommendations and/or strategies to improve on- and/or off-site parking conditions.

**Mitigation Planning & Impact Fee Analysis**

- **Recommendation of Mitigation Measures:** Customized mitigation measures techniques shall be recommended if the subject project exceeds acceptable impact thresholds.
- **Preparation of Mitigation Plans:** This may include plans, schematics, or diagrams such as Signal Modification Plans (1:20 scale), Signing & Striping Plans (1:40 scale), or Parking Layouts.
- **Impact Fees:** As required by the Agency, we will also conduct an impact fee analysis to determine the fair-share contribution of traffic improvements to be apportioned to a given developer. Because the methodology for determining impact fees can vary by city, county, etc., our staff will meet with the lead agency on the approved method for calculating impact fees.

**5 On-Call Systems Evaluation Services**

Minagar & Associates, Inc. provides systems evaluation services for measuring the

- Evaluation of signal re-timing/synchronization implementations
- Evaluation of ITS improvements
- Before/After Studies for Transportation Improvements







Our most common systems evaluations consist of performing “Before/After” studies, which measure improvements (travel time, mobility, fuel consumption, etc.) resulting from project implementation.

**“Before/After” Studies and Reports** We usually perform two performance evaluation studies: (1) a field "floating car survey" study of field-collected traffic data, and (2) a comparison of computer-generated traffic simulation models (Synchro/SimTraffic 11.0). Both are used to identify improvements in the "before" & "after" Measures of Effectiveness (MOEs).



**Performance Evaluation of Regional Surface Transportation Improvements Projects (RSTI)**

We also provide RSTI evaluation services, which involve quantifying and evaluating the benefits and impacts of a given completed surface improvement project on the surrounding transportation network. These include studies such as:

- *Signal Analyses*, which measure the improved signal(s) operation & performance and may use field data such as turning movement counts (TMCs), cycle lengths, signal phasings, etc.,
- *Arterial Analyses*, which measure improved traffic flow along a given arterial, and
- *Unsignalized Intersection Analyses*.

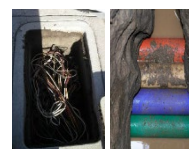
**6 On-Call Temporary Traffic Control/Work Zone Plans Services**

**Traffic Control Plan (TCP) Services** Minagar & Associates, Inc.’s TCPs are prepared in accordance with Caltrans requirements, the WATCH Manual, and/or the governing Agency’s Standard Plans, if applicable. Our TCPs are comprehensively prepared to show exact location and limits of construction activity, follow the various staging/phasing of the project, indicate changing hours of operation and parking restrictions, show lane closures and placement of temporary traffic controls, and include details on construction activity and equipment being used as part of construction to assist in the Agency’s review.

**Construction Engineering Management (CEM) and Inspection** Minagar & Associates, Inc. offers licensed and certified Professional Engineers and Class A, B and C electrical contractors to provide on-site, on-call construction management and inspection services to work on a “moving operation” construction team. These services include, but are not limited to:

- Providing on-standby professional consulting services to resolve all construction issues;
- Monitoring, inspecting & ensuring the compliance of all Contractor’s work; and
- Providing Public Relations (PR) services to local businesses regarding construction.

**Electrical Engineering Services** Minagar & Associates, Inc. provides electrical engineering services, including field inspection of equipment and existing conditions. Our licensed and certified engineers and contractors provide field inspection and fine-tuning services for electrical systems, recommendations on traffic signal upgrades, and offer public agencies procurement services in purchasing new signal equipment and providing an in-depth analysis of the Agency’s current traffic operations and means for improvement.





# MINAGAR & ASSOCIATES, INC.

ITS - Traffic/Civil/Electrical Engineering - Transportation Planning - Homeland Security - CEM



## City of Orange 2025 Schedule of Rates

	CLASSIFICATION	HOURLY BILLING RATE	Raw/ Actual/ Payroll RATE	Effective date of hourly rate	
				From	To
1	Principal-in-Charge	\$243.25	\$87.27	01/01/2025	12/31/2025
2	Project Director	\$243.25	\$87.27	01/01/2025	12/31/2025
3	Principal Engineer	\$243.25	\$87.27	01/01/2025	12/31/2025
4	Senior Project Manager	\$205.82	\$73.84	01/01/2025	12/31/2025
5	Field Manager/ Construction Manager	\$131.18	\$47.06	01/01/2025	12/31/2025
6	City Traffic Engineer	\$185.19	\$66.44	01/01/2025	12/31/2025
7	Principal Systems/ Electrical Engineer	\$186.03	\$66.74	01/01/2025	12/31/2025
8	Senior Designer/Engineer/Planner	\$172.26	\$61.80	01/01/2025	12/31/2025
9	Project Engineer/Planner	\$102.94	\$36.93	01/01/2025	12/31/2025
10	Traffic/Transportation Engineer	\$77.52	\$27.81	01/01/2025	12/31/2025
11	Assistant Traffic/Transp. Engineer	\$73.17	\$26.25	01/01/2025	12/31/2025
12	Engineering Assistant	\$64.61	\$23.18	01/01/2025	12/31/2025
13	Planning Assistant	\$58.53	\$21.00	01/01/2025	12/31/2025
14	Admin Assistant/Intern	\$58.53	\$21.00	01/01/2025	12/31/2025

Updated Jan. 1, 2025

### NOTES:

- Non-commuter Mileage is per Current IRS Annual Mileage Rate.
- Telephone & Equipment are included in the above Hourly Costs.
- Cost Escalation shall be applied per Los Angeles/Orange County Metropolitan Area CPI Indices
- Project Reimbursable Expenses are billed at Cost.
- Direct Costs are billed at Cost Plus 5%.

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