

**AGREEMENT BETWEEN  
CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY  
AND  
CoPLAN, LLC**

This Agreement is entered into this \_\_\_\_\_th of \_\_\_\_\_ 2019, by and between the CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY, a joint powers agency whose members include the County of San Mateo and the twenty incorporated cities and towns within San Mateo County, hereinafter called “C/CAG,” and CoPLAN, LLC, hereinafter called “Consultant.”

**WHEREAS**, C/CAG, is the Congestion Management Agency for San Mateo County;  
and

**WHEREAS**, C/CAG has determined that on-call consultant services are needed to assist C/CAG and its 21-member agencies with the development and implementation of the Congestion Management Program for San Mateo County; and

**WHEREAS**, the purpose of the Congestion Management Program (CMP) is to measure the roadway segments and intersections on the CMP roadway network to determine the change in Level of Service (LOS) from the previous CMP update; and

**WHEREAS**, C/CAG has determined that Consultant has the requisite qualifications to perform this work; and

**WHEREAS**, the total amount available to Consultant under this Agreement is not to exceed \$71,833; and

**WHEREAS**, by adoption of RESOLUTION 19-07, the C/CAG Board of Directors approved the 2019 Congestion Management Program and authorized the C/CAG Chair to execute agreements with Consultant to provide traffic monitoring services to assist C/CAG and its 21 member agencies for 1-year terms, and further authorize the C/CAG Executive Director to negotiate final terms, subject to legal counsel review prior to execution by the C/CAG Chair, in a cumulative amount not to exceed \$71,833.

**NOW, THEREFORE, IT IS HEREBY AGREED** by the parties as follows:

1. **Services to be provided by Consultant.** In consideration of the payments hereinafter set forth, Consultant agrees to perform the services described in Exhibit B, attached hereto (the “Scope of Work”).
2. **Payments.** In consideration of Consultant providing the Services, C/CAG shall reimburse Consultant based on the fee schedule set forth in Exhibit A up to a maximum amount of seven-one thousand eight hundred thirty-three dollars (\$71,833) for Services provided during the Contract Term as set forth below. The hours stated in Exhibit A are

intended to be an estimate of the amount of time Contractor expects to spend on each task. Payments shall be made to Contractor monthly based on an acceptable invoice submitted by Contractor that identifies expenditures and describes services performed in accordance with the agreement. C/CAG shall have the right to receive, upon request, documentation substantiating charges billed to C/CAG.

3. **Contract Materials.** At the end of this Agreement, or in the event of termination, all finished or unfinished documents, data, studies, maps, photographs, reports, and other written materials (collectively referred to as “contract materials”) prepared by Consultant under this Agreement shall become the property of C/CAG and shall be promptly delivered to C/CAG. Upon termination, Consultant may make and retain a copy of such contract materials if permitted by law.
4. **Relationship of the Parties.** It is understood that Consultant is an Independent Consultant and this Agreement is not intended to, and shall not be construed to, create the relationship of agent, servant, employee, partnership, joint venture or association, or any other relationship whatsoever other than that of Independent Consultant.
5. **Non-Assignability.** Consultant shall not assign this Agreement or any portion thereof to a third party, or subcontract with a third party, without the prior written consent of the C/CAG Executive Director. Any such assignment or subcontract without the C/CAG Executive Director’s prior written consent shall give C/CAG the right to automatically and immediately terminate this Agreement without penalty or advance notice.
6. **Contract Term/Termination.** This Agreement shall be in effect as of \_\_\_\_\_  
\_\_\_\_\_th, 2019, and shall terminate on February 29, 2020; provided, however, the C/CAG Chairperson may terminate this Agreement at any time for any reason by providing 30 days’ notice to Consultant. Termination will be effective on the date specified in the notice. In the event of termination under this paragraph, Consultant shall be paid for all services provided to the date of termination, subject to availability of funding. Such payment shall be that prorated portion of the full payment determined by comparing the work actually completed to the work required by the Agreement.
7. **Hold Harmless/Indemnity.**
  - a. *General.* Consultant shall indemnify and save harmless C/CAG and its officers, agents, employees, and servants from all claims, suits, or actions of every name, kind, and description resulting from this Agreement, the performance of any work or services required of Consultant under this Agreement, or payments made pursuant to this Agreement brought for, or on account of, any of the following: (A) injuries to or death of any person, including Consultant or its employees/officers/agents; (B) damage to any property of any kind whatsoever and to whomsoever belonging; (C) any sanctions, penalties, or claims of damages resulting from Consultant’s failure to comply, if applicable, with the requirements set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended; or (D) any other loss or cost, including but not limited to that caused by the concurrent

active or passive negligence of C/CAG and/or its officers, agents, employees, or servants. However, Consultant's duty to indemnify and save harmless under this Section shall not apply to injuries or damage for which C/CAG has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct. The duty of Consultant to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

The duty to indemnify and save harmless as set forth herein shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

- b. *Intellectual Property.* Consultant hereby certifies that it owns, controls, and/or licenses and retains all right, title, and/or interest in and to any intellectual property it uses in relation to this Agreement, including the design, look, feel, features, source code, content, and/or other technology relating to any part of the services it provides under this Agreement and including all related patents, inventions, trademarks, and copyrights, all applications therefor, and all trade names, service marks, know how, and trade secrets (collectively referred to as "IP Rights") except as otherwise noted by this Agreement.

Consultant warrants that the services it provides under this Agreement do not infringe, violate, trespass, or constitute the unauthorized use or misappropriation of any IP Rights of any third party. Consultant shall defend, indemnify, and hold harmless C/CAG from and against all liabilities, costs, damages, losses, and expenses (including reasonable attorney fees) arising out of or related to any claim by a third party that the services provided under this Agreement infringe or violate any third-party's IP Rights provided any such right is enforceable in the United States. Consultant's duty to defend, indemnify, and hold harmless under this Section applies only provided that: (a) C/CAG notifies Consultant promptly in writing of any notice of any such third-party claim; (b) C/CAG cooperates with Consultant, at Consultant's expense, in all reasonable respects in connection with the investigation and defense of any such third-party claim; (c) Consultant retains sole control of the defense of any action on any such claim and all negotiations for its settlement or compromise (provided Consultant shall not have the right to settle any criminal action, suit, or proceeding without C/CAG's prior written consent, not to be unreasonably withheld, and provided further that any settlement permitted under this Section shall not impose any financial or other obligation on C/CAG, impair any right of C/CAG, or contain any stipulation, admission, or acknowledgement of wrongdoing on the part of C/CAG without C/CAG's prior written consent, not to be unreasonably withheld); and (d) should services under this Agreement become, or in Consultant's opinion be likely to become, the subject of such a claim, or in the event such a third party claim or threatened claim causes C/CAG's reasonable use of the services under this Agreement to be seriously endangered or disrupted, Consultant shall, at Consultant's option and expense, either: (i) procure for C/CAG the right to continue using the services without infringement or (ii) replace or modify the services so that they become

non-infringing but remain functionally equivalent.

Notwithstanding anything in this Section to the contrary, Consultant will have no obligation or liability to C/CAG under this Section to the extent any otherwise covered claim is based upon: (a) any aspects of the services under this Agreement which have been modified by or for C/CAG (other than modification performed by, or at the direction of, Consultant) in such a way as to cause the alleged infringement at issue; and/or (b) any aspects of the services under this Agreement which have been used by C/CAG in a manner prohibited by this Agreement.

The duty of Consultant to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

## 8. **Insurance.**

- a. *General Requirements.* Consultant or its subconsultants performing the services on behalf of Consultant shall not commence work under this Agreement until all insurance required under this section has been obtained. Consultant shall use diligence to obtain such insurance. Consultant shall furnish C/CAG with Certificates of Insurance evidencing the required coverage and there shall be a specific contractual liability endorsement extending Consultant's coverage to include the contractual liability assumed by Consultant pursuant to this Agreement. These Certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to C/CAG of any pending change in the limits of liability or of non-renewal, cancellation, or modification of the policy.
- b. *Workers' Compensation and Employer Liability Insurance.* Consultant shall have in effect, during the entire life of this Agreement, Workers' Compensation and Employer Liability Insurance providing full statutory coverage. In signing this Agreement, Consultant certifies, as required by Section 1861 of the California Labor Code, that (a) it is aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and (b) it will comply with such provisions before commencing the performance of work under this Agreement.
- c. *Liability Insurance.* Consultant shall take out and maintain during the life of this Agreement such Bodily Injury Liability and Property Damage Liability Insurance as shall protect Consultant, its employees, officers and agents while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage that may arise from Consultant's operations under this Agreement, whether such operations be by Consultant or by any sub-consultant or by anyone directly or indirectly employed by either of them. Such insurance shall be

combined single limit bodily injury and property damage for each occurrence and shall be not less than \$1,000,000 unless another amount is specified below and shows approval by C/CAG Staff.

d. *Insurance Limits; Insured Entities; Breach.* Required insurance shall include:

	Required Amount	Approval by C/CAG Staff if under \$ 1,000,000
1. Comprehensive General Liability	\$ 1,000,000	_____
2. Workers' Compensation	\$ Statutory	_____
3. Professional Liability	\$1,000,000	_____
4. Motor Vehicle Liability	\$1,000,000	_____

C/CAG and its officers, agents, employees and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that the insurance afforded thereby to C/CAG, its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy, and that if C/CAG, or its officers, agents, employees, and servants have other insurance against a loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, the C/CAG Chairperson, at his/her option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work and payment pursuant to this Agreement.

9. **Compliance with All Laws.** Consultant shall at all times comply with all applicable federal, state, San Mateo County, and municipal laws, ordinances, and regulations, including without limitation those regarding services to disabled persons, including any requirements of Section 504 of the Rehabilitation Act of 1973. In the event of a conflict between the terms of this Agreement and any applicable State, Federal, San Mateo County, or municipal law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this Agreement. Consultant will timely and accurately complete, sign, and submit all necessary documentation of compliance.
  
10. **Non-discrimination.** Consultant and any subconsultants performing the services on behalf of Consultant shall not discriminate or permit discrimination against any person or group of persons on the basis of race, color, religion, national origin or ancestry, age, sex, sexual orientation, marital status, pregnancy, childbirth or related conditions, medical condition, mental or physical disability or veteran's status, or in any manner prohibited by federal, state or local laws.

11. **Substitutions.** If particular persons or classifications are identified in Exhibit A as working on this Agreement, Consultant will not assign others to work in their place without the prior written consent of the C/CAG Executive Director. Any substitution shall be with a person or classification of commensurate experience and knowledge unless otherwise authorized by the C/CAG Executive Director.
12. **Sole Property of C/CAG.** Work products of Consultant which are delivered under this Agreement or which are developed, produced and paid for under this Agreement, shall be and become the property of C/CAG. Consultant shall not be liable for C/CAG's use, modification or re-use of products without Consultant's participation or for purpose other than those specifically intended pursuant to this Agreement.
13. **Record Retention; Right to Monitor and Audit.**
  - a. Consultant shall maintain all required records relating to services provided under this Agreement for three (3) years after C/CAG makes final payment and all other pending matters are closed, and Consultant shall be subject to the examination and/or audit by C/CAG, a Federal grantor agency, and the State of California.
  - b. Consultant shall comply with all program and fiscal reporting requirements set forth by applicable Federal, State, and local agencies and as required by C/CAG.
  - c. Consultant agrees upon reasonable notice to provide to C/CAG, to any Federal or State department having monitoring or review authority, to C/CAG's authorized representative, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this Agreement, and to evaluate the quality, appropriateness, and timeliness of services performed.
14. **Permits/Licenses.** If any license, permit, or approval is required to perform the work or services required by this Agreement, Consultant bears the responsibility to obtain said license, permit, or approval from the relevant agency at Consultant's own expense prior to commencement of said work/services. Failure to do so will result in forfeit of any right to compensation under this Agreement.
15. **Merger Clause; Amendments.** This Agreement, including Exhibits A and B attached hereto and incorporated herein by reference, constitutes the sole agreement of the parties hereto with regard to the matters covered in this Agreement, and correctly states the rights, duties and obligations of each party as of the document's date. Any prior agreement, promises, negotiations or representations between the parties not expressly stated in this Agreement are not binding. All subsequent amendments shall be in writing and signed by the C/CAG Chair. In the event of a conflict between the terms, conditions or specifications set forth herein and those in Exhibit A or B attached hereto, the terms, conditions or specifications set forth herein shall prevail.

16. **Governing Law.** This Agreement shall be governed by the laws of the State of California, without regard to its choice of law rules, and any suit or action initiated by either party shall be brought in the County of San Mateo, California.
17. **Notices.** All notices hereby required under this agreement shall be in writing and delivered in person or sent by certified mail, postage prepaid and addressed as follows:

City/County Association of Governments of San Mateo County  
555 County Center, 5th Floor  
Redwood City, CA 94063  
Attention: Jeffrey Lacap

Notices required to be given to Consultant shall be addressed as follows:

CoPLAN, LLC  
5508 Sandalwood  
McKinney, TX 75070  
Attention: Steve Taylor

IN WITNESS WHEREOF, the parties hereto have affixed their hands on the day and year first above written.

**CoPLAN, LLC (Consultant)**

By \_\_\_\_\_  
Date

**City/County Association of Governments of San Mateo County (C/CAG)**

By \_\_\_\_\_  
Maryann Moise Derwin  
C/CAG Chair  
Date

C/CAG Legal Counsel

By \_\_\_\_\_  
Matthew J. Sanders, C/CAG Counsel



Exhibit A

CONSULTANT BILLING RATES

Hourly billing rates and staff for CONSULTANT and SUBCONSULTANT(S) are included on the following pages.

<p style="text-align: center;"><i>Fee proposal for</i></p> <p style="text-align: center;"><i>Required Scope of Work</i></p> <p style="text-align: center;"><i>City/County Association of Governments (C/CAG) of San Mateo</i></p> <p style="text-align: center;"><i>2019 LOS Monitoring Program</i></p> <p style="text-align: center;"><i>Personnel</i></p>		2019 LOS Monitoring Team										
		Project Manager Steve Taylor	Data Management and GIS Brian Hoeschen	72-hour Tube Counts	Intersection Turning Movement Counts (2-people)	Intersection Turning Movement Counts (1-person)	Travel Time Data Collectors					
								\$83	\$60	\$155	\$225.00	\$200.00
										118.43%	10%	
1	Collect Available Data	2						2	\$166.00	\$196.59	\$36.26	\$398.85
	Collection Available Data from Caltrans & C/CAG	2						2	\$166.00	\$196.59	\$36.26	\$398.85
2	Conflation of INRIX Data	50	96	23	10	6		146	\$16,925.00	\$11,736.41	\$2,866.14	\$31,527.55
	Conflate INRIX Data for 2019 corridors	24	80					104	\$6,792.00	\$8,043.77	\$1,483.58	\$16,319.34
	Process & QC INRIX Dataset	24	16					40	\$2,952.00	\$3,496.05	\$644.81	\$7,092.86
	Perform & Code Intersection (Ped & Bike Incl) TMC and 72-hour counts	2		23	10	6		2	\$7,181.00	\$196.59	\$737.76	\$8,115.35
3	Conduct Level of Service (LOS) Calculations	24						24	\$1,992.00	\$2,359.13	\$435.11	\$4,786.24
	Calc LOS consistent with prev studies for trending analysis	24						24	\$1,992.00	\$2,359.13	\$435.11	\$4,786.24
4	Incorporate Exemptions	8						8	\$664.00	\$786.38	\$145.04	\$1,595.41
	Coordinate with C/CAG to determine inter-regional trips from model	4						4	\$332.00	\$393.19	\$72.52	\$797.71
	Reflect reduction in trips in LOS tables for applicable roadway segments	2						2	\$166.00	\$196.59	\$36.26	\$398.85
	Collect and Document transit travel times from providers thru C/CAG	2						2	\$166.00	\$196.59	\$36.26	\$398.85
5	Conduct Carpool Travel Time Surveys	2						20	\$1,066.00	\$196.59	\$232.85	\$1,495.44
	Perform HOV travel time runs (No GPS just elapsed time)							20	\$900.00	\$1,065.87	\$196.59	\$2,162.46
	Process HOV travel time runs	1						1	\$83.00	\$98.30	\$18.13	\$199.43
	Produce HOV tabular travel times	1						1	\$83.00	\$98.30	\$18.13	\$199.43
6	Evaluate Bicycle and Pedestrian Measures	9						9	\$747.00	\$884.67	\$163.17	\$1,794.84
	Coordinate with C/CAG to document Bike/Ped programs	1						1	\$83.00	\$98.30	\$18.13	\$199.43
	Bicyclist and Pedestrian Count and Crashes	8						8	\$664.00	\$786.38	\$145.04	\$1,595.41
7	Collect and Analyze Transit Ridership Data	2						2	\$166.00	\$196.59	\$36.26	\$398.85
	Coordinate with C/CAG to collect & document ridership values from providers	2						2	\$166.00	\$196.59	\$36.26	\$398.85
8	Analyze Data	31	28					59	\$4,253.00	\$5,036.83	\$928.98	\$10,218.81
	Detailed analysis as identified by C/CAG	16						16	\$1,328.00	\$1,572.75	\$290.08	\$3,190.83
	County Gateway AADT	4	8					12	\$812.00	\$961.65	\$177.37	\$1,951.02
	Severe Freeway Delay	8	16					24	\$1,624.00	\$1,923.30	\$354.73	\$3,902.03
	Peak Period Gateway Speed	2	4					6	\$406.00	\$480.83	\$88.68	\$975.51
	Causes of Crashes	1						1	\$83.00	\$98.30	\$18.13	\$199.43
9	Prepare Documentation	32	20					52	\$3,856.00	\$4,566.66	\$842.27	\$9,264.93
	Prepare Draft & Final Report	32	20					52	\$3,856.00	\$4,566.66	\$842.27	\$9,264.93
10	Prepare Access Database Deliverable	1	8					9	\$563.00	\$666.76	\$122.98	\$1,352.74
	Prepare Access Database for added flexibility	1	8					9	\$563.00	\$666.76	\$122.98	\$1,352.74
11	Attend Meetings	24	8					32	\$2,472.00	\$2,927.59	\$539.96	\$5,939.55
	Two meetings/presentations in San Mateo	24	8					32	\$2,472.00	\$2,927.59	\$539.96	\$5,939.55
Exp	Expenses	\$3,060							\$3,060.00			\$3,060.00
Base CMP Scope Hrs		185	160	23	10	6	20	365	\$35,930.00	\$29,554.21	\$6,349.01	\$71,833.21

Exhibit B

SCOPE OF WORK

## SCOPE OF SERVICES

### 1. Collect Available Data

CONSULTANT, with assistance as needed from C/CAG, shall request performance data currently available for the CMP roadway system and intersections from Metropolitan Transportation Commission (MTC), the California Department of Transportation (Caltrans) and from the Public Works and Planning Departments of C/CAG member agencies to help reduce the data collection effort.

### 2. Conduct Counts/Surveys

CONSULTANT shall conduct 2019 intersection turning movement counts, including bicycle and pedestrian movements, at the 16 CMP intersections including:

1. Bayshore & Geneva
2. SR 35 & John Daly Blvd.
3. SR 82 & Hillside/John Daly
4. SR 82 & San Bruno Ave.
5. SR 82 & Milbrae Ave.
6. SR 82 & Broadway
7. SR 82 & Park-Peninsula
8. SR 82 & Ralston
9. SR 82 & Holly
10. SR 82 & Whipple Ave.
11. SR 84 & University
12. SR 84 & Willow
13. SR 84 & Marsh Rd.
14. SR 84 & Middlefield
15. SR 92 & SR 1
16. SR 92 & Main St.

2019 three-day (72-hour) machine counts will be conducted at 21 CMP arterial and rural highway segments including:

1. SR 1 - Linda Mar Blvd. to Frenchmans Creek Rd. (south of Etheldore St.)
2. SR 1 - Frenchmans Creek Rd. to Miramontes (between Terrance and Grandview)
3. SR 1 – Miramontes Rd. to Santa Cruz County line (north of SR 84)
4. SR 35 – San Francisco County line to Sneath (north of John Daly)
5. SR 35 – Sneath to I-280 (between San Bruno & I-280)
6. SR 35 – I-280 to SR 92 (between Bunker Hill & SR 92)
7. SR 35 – SR 92 to SR 84 (approx. 2 miles south of SR 92)
8. SR 35 – SR 84 to Santa Clara County line (south of SR 84)
9. SR 82 – between 42<sup>nd</sup> Street and 3<sup>rd</sup> Street (2 locations)
10. SR 82 – between 42<sup>nd</sup> Street and 3<sup>rd</sup> Street (2 locations)
11. SR 82 – SR 84 to Glenwood Ave. (south of SR 84)

12. SR 82 – Glenwood Ave. to Santa Cruz Ave. (between Glenwood & Oak Grove)
13. SR 82 – Santa Cruz Ave. to Santa Clara County line (between Santa Cruz & Ravenswood)
14. SR 84 – SR 1 to Portola Rd. (east of Skyline/SR 35)
15. SR 84 – Portola Rd. to I-280 (west of Kings Mountain Rd.)
16. SR 84 – I-280 to Alameda de Las Pulgas (east of I-280)
17. SR 84 - Alameda de Las Pulgas to US 101 (east of Middlefield)
18. SR 84 – US 101 to Willow (east of Marsh)
19. SR 84 – Willow to University (east of Willow)
20. SR 84 – University to Alameda County line (east of University)
21. SR 92 – SR 1 to I-280 (east of Main)
22. SR 109 – Kavanaugh to SR 84 (south of SR 84)
23. SR 114 – US 101 to SR 84 (south of SR 84)

For the 2011 and 2013 CMP Monitoring Report, travel time runs were conducted using the floating car method. In the floating car method, the driver of the test vehicle “floats” with the traffic to represent the average vehicle by attempting to safely pass as many vehicles that pass the test vehicle.

Travel time runs were conducted during the morning and afternoon peak periods on all applicable roadway segments; runs were only conducted on Tuesdays, Wednesdays, or Thursdays, and school district spring break periods were avoided. A minimum of five (5) runs were made in each direction during each peak period. During the travel time runs, GPS equipment recorded position and time at one-second intervals. The driver of the test vehicle drove the speed limit if no other cars were present and at the school zone speed limit if a school zone speed limit was in effect at the time of the travel time run.

Travel time surveys were conducted during the AM and PM weekday peak periods for the 83.2 centerline miles of freeways to measure average speeds. A minimum of five (5) complete runs were conducted for each freeway segment in each direction including:

- SR 92 (I-280 to Alameda County line) – 11.5 miles
- US 101 (San Francisco County line to San Clara County line) – 32.9 miles
- I-280 (San Francisco County line to San Clara County line) – 27.8 miles
- I-380 (I-280 to Airport Access Rd.) – 2.0 miles
- SR 1 (San Francisco County line to Linda Mar Blvd.) – 9.0 miles

As a result of the 2014 San Mateo INRIX analysis, the use of a private sector dataset provided by MTC has been used in place of the freeway travel time runs. The dataset will be for a 3-month period including March - May in order to be consistent with the travel time runs of the previous studies.

INRIX provides regional data coverage and relatively complete coverage of the full freeway network in San Mateo County. INRIX has a strong background in traffic research from the origins in Microsoft. Their iPhone application is a leader on Apple’s App Store validating their credibility.

The biggest advantage with data from sources such as INRIX is the comprehensive nature of the dataset. Instead of being limited by spot samples for a short period of the year, C/CAG would be able to analyze annual average of speeds or temporal results for all applicable roadways in the network.

This private sector analysis compared the 2013 travel time study results with those of INRIX for the same period. 37 freeway directional CMP segments were compared. The results of the comparison on those freeways included an average difference of 4.2%. Therefore, for the first time in San Mateo County, the freeway performance will be evaluated using the data provided by INRIX through MTC. This dataset, which is anticipated to include over 150 million records, will be conflated against the linear reference system and segmentation developed in 2011.

### 3. Conduct Level of Service (LOS) Calculations

In order to be consistent with previous studies through 2013, the CONSULTANT shall once again calculate the levels of service for the CMP roadway system and intersections utilizing the methods according to the Highway Capacity Manual (2000 HCM).

### 4. Incorporate Exemptions

CONSULTANT shall re-evaluate locations that are found to exceed their LOS Standard and account for the required exemptions (interregional traffic - trips originating from outside the County, traffic from low and very low income households, traffic from development within ¼ mile of transit stations, etc.) A link analysis will be conducted using the San Mateo County model to estimate traffic reductions caused by the exemptions. Locations with LOS Standard violations will be forwarded on to C/CAG for deficiency plan notification.

### 5. Conduct Travel Time Surveys for Single-Occupant Automobiles, Carpools, and Transit on Route 101 Corridor

CONSULTANT shall use the travel times surveys conducted during the Task 2 to represent travel times for single-occupant automobiles. Five (5) travel time surveys for carpools will be conducted in both directions for the HOV lanes on U.S. 101 during both AM and PM peak periods. The HOV lane does not currently extend the full length of US 101 between within San Mateo County, so the INRIX data will be used to represent the balance of the run outside the current limits. Transit schedules will be used to estimate travel times via bus and rail. Transit agencies will be contacted to confirm that the schedules are reflective of actual travel times.

### 6. Evaluate Bicycle and Pedestrian Measure

CONSULTANT shall review the CMP CIP projects to ascertain whether pedestrian and bicycle travel is accommodated in new transportation projects.

### 7. Collect and Analyze Transit Ridership Data

CONSULTANT shall collect available ridership data from SamTrans, BART, and CalTrain. The data will be used to compare ridership among the different transit modes.

### 8. Analyze Data

CONSULTANT shall coordinate with C/CAG and analyze study data in order to evaluate various potential scenarios including: implemented projects since 2017 study, comparison and

trends between 2017 and 2019 data sets, specific bottleneck analysis, corridor analysis, etc.). Additional performance measures will be added this year based on anticipated requirements by the state for CMP. Those performance measures include County Gateway AADT, Severe Freeway Delay, Peak Period Gateway Speed, and Causes of Crashes.

#### 9. Prepare Documentation

CONSULTANT shall prepare and submit a draft report of the monitoring process including tables and maps. All of the level of service calculations and collected data will be submitted in a Technical Appendix.

Deliverable: electronic draft report for C/CAG review and final report (electronic) reflecting any written comments made by staff; technical appendix including summary tables and intersection analysis.

#### 10. Prepare Access Base Deliverable

In order to maximize the accessibility of the project data, in addition to the hardcopy report and appendix as included in Task 9, the CONSULTANT shall prepare a deliverable that may include GIS shapefiles and/or Microsoft Access Databases. The final deliverable will be coordinated with C/CAG in order to match the deliverable with the staff and planned users. The C/CAG staff will be provided instruction on the use of the deliverable.

Deliverables: GIS databases and all support reference layers used to produce analysis and figures; Microsoft Access database suitable for staff use in addition to GIS files

#### 11. Attend Meetings

CONSULTANT will hold monthly coordination meetings with C/CAG staff to highlight progress and preliminary results. CONSULTANT shall attend one committee meeting during the study to present the final results.