

**MEMORANDUM OF UNDERSTANDING
BETWEEN
SAN MATEO COUNTY TRANSPORTATION AUTHORITY
AND CITY/COUNTY ASSOCIATION OF GOVERNMENTS
OF SAN MATEO COUNTY
FOR THE 2019 STATE HIGHWAY CONGESTION AND SAFETY PERFORMANCE
ASSESSMENT**

This MEMORANDUM OF UNDERSTANDING (“MOU”) is entered into as of the 14th day of February 2019, by and between the San Mateo County Transportation Authority (AUTHORITY), a public agency, and the City/County Association of Governments of San Mateo County (C/CAG), a public joint powers agency (each a “Party” and collectively the “Parties”).

WHEREAS, the AUTHORITY and C/CAG have determined a need to collaboratively provide an update to performance measures and assess key “hot spots” on major highway corridors in San Mateo County performed in 2017; and

WHEREAS, the AUTHORITY and C/CAG desire to work together to fund and perform the 2019 State Highway Congestion and Safety Performance Assessment (PROJECT), with the scope of work described further in Exhibit A; and

WHEREAS, C/CAG, by Resolution 19-09, authorized the C/CAG Chair to execute this MOU for the PROJECT; and

WHEREAS, the Parties have agreed that the total cost for the PROJECT is estimated at \$92,135 and that each Party will provide a cost-share of 50%, up to a maximum of \$461,068 each, for the PROJECT; and

WHEREAS, by agreement of the Parties, C/CAG has retained a consultant to perform the scope of work described in Exhibit A.

NOW, THEREFORE, IT IS HEREBY AGREED by the Parties hereto, as follows:

1. SCOPE OF SERVICES

C/CAG will serve as the lead agency for the PROJECT and has retained CoPLAN, LLC (CONSULTANT) to provide services as described in Exhibit A, attached hereto and incorporated herein, and will provide a cost share of 50% of the total estimated PROJECT cost of \$92,135.

AUTHORITY agrees to reimburse C/CAG 50% of the total estimated PROJECT cost of \$92,135.

The AUTHORITY and C/CAG will not authorize or require the CONSULTANT to perform tasks related to this MOU that will exceed \$92,135 in PROJECT costs without express written consent of the Parties in the form of an Amendment to this MOU.

2. TIME OF PERFORMANCE/TERMINATION

This Agreement is effective as of the day first written above and will terminate on February 29, 2020 unless further extended by mutual consent of the Parties. Either Party may terminate the Agreement without cause by providing thirty (30) days' advance written notice to the other.

3. METHOD OF PAYMENT

AUTHORITY agrees to reimburse C/CAG for expenses for the PROJECT as described in Section 1, above, on a cost reimbursement basis. C/CAG will submit invoices to the AUTHORITY, accompanied by paid invoices issued by the CONSULTANT as proof that services were rendered and paid for by C/CAG. Upon receipt of each invoice and its accompanying documentation, AUTHORITY will pay the specified proportional share claimed under the invoice, up to the maximum amount described by this MOU, within thirty (30) days of acceptance of the invoice, delivered or mailed to AUTHORITY as follows:

San Mateo Transportation Authority
1250 San Carlos Avenue
San Carlos, CA 94070
Attention: Joel Slavit
Manager, Programming and Monitoring

4. AMENDMENTS

Any changes in the services to be performed under this MOU must be incorporated in written amendments, which shall specify the changes in work performed and any adjustments in compensation and schedule. Any amendments must be executed by the AUTHORITY and C/CAG.

5. NOTICES

All notices or other communications to either Party by the other shall be deemed given when made in writing and delivered or mailed to such Party at its respective address as follows:

To AUTHORITY: San Mateo Transportation Authority
1250 San Carlos Avenue
San Carlos, CA 94070
Attention: Joel Slavit
Manager, Programming and Monitoring

To C/CAG: City/County Association of Governments
555 County Center, 5th Floor
Redwood City, CA 94063
Attention: Jeff Lacap
Program Manager

6. INDEPENDENT CONTRACTOR

The Parties agree and understand that the work/services performed by C/AG or any

consultant retained by the C/AG under this MOU are performed as independent contractors and not as employees or agents of the AUTHORITY. Nothing herein shall be deemed to create any joint venture or partnership arrangement between the AUTHORITY and C/CAG. The consultant is currently under contract with C/CAG and will follow all contractual obligations as set forth in the contract. C/CAG will manage the oversight of the contract and procurement process.

7. ASSIGNMENT

No Party may assign, transfer or otherwise substitute its interest or obligations in this MOU without the prior written consent of the other Party.

8. MUTUAL HOLD HARMLESS

- a. It is agreed that C/CAG will save harmless and indemnify the AUTHORITY and its officers, agents and employees from any and all claims, demands and suits (including any and all costs and expenses in connection therewith) related to the performance of this PROJECT including, but not limited to, injuries or damage to persons and/or property which arise out of the terms and conditions of this MOU and which result from the negligent acts or omissions of C/CAG or its officers, agents and/or employees. C/CAG agrees, at its own cost and expense, to defend any and all claims, demands, suits and legal proceedings brought against the AUTHORITY and its officers, agents and employees or any of them, arising from the negligent acts or omissions of C/CAG or its officers, agents or employees, and to pay and satisfy any resulting judgments.
- b. It is agreed that AUTHORITY will save harmless and indemnify C/CAG and its officers, agents and employees from any and all claims, demands and suits (including any and all costs and expenses in connection therewith) related to the performance of this PROJECT including, but not limited to, injuries or damage to persons and/or property which arise out of the terms and conditions of this MOU and which result from the negligent acts or omissions of the AUTHORITY or its officers, agents and/or employees. The AUTHORITY agrees, at its own cost and expense, to defend any and all claims, demands, suits and legal proceedings brought against C/CAG, and its officers, agents and employees or any of them, arising from the negligent acts or omissions of the AUTHORITY or its officers, agents or employees, and to pay and satisfy any resulting judgments.
- c. This indemnification will survive termination or expiration of the MOU.

9. NON-DISCRIMINATION

C/CAG and AUTHORITY will require CONSULTANT and any subconsultants performing the services on behalf of the CONSULTANT may not discriminate or permit discrimination against any person or group of persons on the basis or 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.

10. COMPLIANCE WITH ALL LAWS

C/CAG and AUTHORITY will require CONSULTANT must at all times comply with all applicable laws and regulations.

11. SOLE PROPERTY OF THE AUTHORITY AND C/CAG

Work products produced and delivered under this MOU or which are developed, produced and paid for under this MOU, will be and become the joint property of the AUTHORITY and C/CAG. C/CAG will not be liable for the AUTHORITY's use, modification or re-use of products without CONSULTANT's participation or for purpose other than those specifically intended pursuant to this MOU.

12. ACCESS TO RECORDS

C/CAG, or any of its duly authorized representatives, will have access to any books, documents, papers, and records of the CONSULTANT which are directly pertinent to this MOU for the purpose of making audit, examination, excerpts, and transcriptions.

The AUTHORITY must maintain all required records for three years after C/CAG makes final payments and all other pending matters are closed.

13. GOVERNANCE

This MOU will be governed by the laws of the State of California and any suit or action initiated by any Party must be brought in the County of San Mateo, California.

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

**CITY/COUNTY ASSOCIATION OF
GOVERNMENTS (C/CAG)**

By: _____
Name: Maryann Moise Derwin
Its: Chair

Approved as to Form:

Legal Counsel for C/CAG

**SAN MATEO COUNTY
TRANSPORTATION AUTHORITY**

By: _____
Name: Jim Hartnett
Its: Executive Director

Attest:

Authority Secretary

Approved as to Form:

Legal Counsel for the Authority

EXHIBIT A

SCOPE OF SERVICES

In support of the San Mateo County Transportation Authority's (TA) need to evaluate projects for possible funding, the CONSULTANT has been asked to calculate the Buffer Time Index (as a measure of travel time reliability) and the Congested Delay for use in scoring. These performance measures are currently being used by Caltrans and the MTC in the region for planning purposes and it's the desire of the TA to do a more detailed review of the same measures using detailed data. INRIX data is currently being used by C/CAG in the county for congestion management and will be leveraged through the below scope to expand its' application. The INRIX data includes over 20 million records in the county and is represented on over 1,800 segments referred to as TMCs between March – May 2019. The following scope addresses the TA's desire to expand on the summary performance measure efforts by the MTC using INRIX data C/CAG recently applied to the county CMP.

1. Database

CONSULTANT will setup a Microsoft SQL Server database server and structure to manage the 20 million INRIX records used in the C/CAG 2019 CMP.

The CONSULTANT will work closely with the TA and C/CAG to develop the summary segments, the combination of contiguous TMC segments, within the first two weeks after notice to proceed. See Task 8 for more detail.

2. Load INRIX Dataset

CONSULTANT will load the INRIX 5-minute interval dataset used in the C/CAG 2019 CMP into the database. The period of time is from March – May 2019.

3. Assign Linear Reference System (LRS) Route and Measure

CONSULTANT will conflate the INRIX dataset for the surface street state routes and freeways to the San Mateo County linear reference system (LRS) network developed for the C/CAG CMP. The corresponding route and measure will be assigned for each TMC segment. The roadways included within San Mateo County include:

- US 101
- I-280
- I-380
- SR 1
- SR 35
- SR 82
- SR 84
- SR 92
- SR 109
- SR 114

4. Calculate Buffer Time Index

As stated by MTC, “Experienced drivers know that, when planning a trip on Bay Area freeways, it’s a good idea to build in some extra time as a cushion against the effects of heavier-than-normal traffic or other unforeseen events. Transportation planners have a term for this cushion: buffer time index, or BTI. BTI represents a multiplier for the additional time required; for example, a driver with a 20-minute typical commute that features a BTI of 0.5 would need to leave 10 extra minutes to be confident of an on-time arrival.”

CONSULTANT shall calculate the Buffer Time Index (BTI) for the March – May 2019 time period. The BTI methodology will be consistent that used by the MTC but adapted given the time period. The methodology is based on the determination of the 95th percentile average speed for each hour of the AM and PM peak periods.

5. Calculate Congested Delay

CONSULTANT shall calculate the Congested Delay for the March – May 2019 time period. The Congested Delay methodology will be consistent with that used by the MTC but adapted given the time period. Congested Delay for the freeways will be calculated both using a 35-mph threshold as done by MTC and the posted speed limit as used with the C/CAG CMP.

The congestion threshold for the arterials will be determined within the first two weeks of notice to proceed. In performing these calculations, the average speed for each hour will be determined and tabulated.

6. Volumes

CONSULTANT shall conflate the peak period model volumes, provided by C/CAG, for each corresponding TMC. For those TMC segments that are not coincident with the model links, consecutive TMC segments will be assigned the same volume between intersections and gore points.

7. Crash Analysis

CONSULTANT shall collect data from the California Highway Patrol database, perform a crash analysis of, and prepare a summary of the findings using figures and narrative. The analysis will include iterative progress discussions with the TA to discuss performance measures, draft findings, and illustrations.

8. Reporting

CONSULTANT shall prepare and deliver the TMC level results in Excel (tabular and raw digital summaries) or database form along with an ESRI GIS map file (including summary peak period TMC segment figures) and geodatabase that can be used to visualize and query the results. The TA, CONSULTANT, and C/CAG will identify summary segments, the combination of contiguous TMC segments, within the first 2 weeks after notice to proceed to avoid duplication of effort later in the conflation and processing stage. The performance measure methodology limits the simple summation of results (i.e. travel time is $TT X + TT Y + TT Z$ vs. buffer time index is not the results of $BTI X + BTI Y + BTI Z$). Therefore, the calculations must be performed over a known segment and not just sum TMC results together.

The CONSULTANT will develop and custom tool for the use by the TA that will allow the user to calculate and compare all performance measures between locations identified by the user in GIS. The tool will be developed in close coordination with the TA with frequent discussions related to the conceptual logic and function.

The final deliverable will be coordinated with C/CAG and the TA in order to match the deliverable with the staff and planned users. C/CAG and TA staff will be trained on the use of the deliverable.

The scope includes travel and expenses for one in-person meeting / presentation.