C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS
OF SAN MATEO COUNTY

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AGENDA

Congestion Management & Environmental Quality (CMEQ) Committee

Date: Monday, October 31, 2011 at 3:00 p.m.
Place: San Mateo City Hall
330 West 20th Avenue, San Mateo, California
Conference Room C (across from Council Chambers)

PLEASE CALL Sandy Wong (599-1409) IF YOU ARE UNABLE TO ATTEND.

1.	Public comment on items not on the agenda	Presentations are limited to 3 mins	
2.	Minutes of September 26, 2011 meeting.	Action (Pierce)	Pages 1 - 3
3.	Receive comments on the Draft 2011 Congestion Management Program (CMP) and recommend adoption of the Final 2011 CMP for San Mateo County	Action (Hoang)	Pages 4 - 17
4.	Presentation on the San Mateo County Green Streets Program	Information (Fabry)	Oral Presentation
5.	Presentation on the San Mateo County Green Business Program.	Information (La Mariana/ Springer)	Pages 18 - 19
6.	Executive Director Report	Information (Napier)	
7.	Member comments and announcements.	Information (Pierce)	
8.	Adjournment and establishment of next meeting date: **November 28, 2011**.	Action (Pierce)	

NOTE: **All items appearing on the agenda are subject to action by the Committee. Actions recommended by staff are subject to change by the Committee.**

NOTE: ***Persons with disabilities who require auxiliary aids or services in attending and participating in this meeting should contact Nancy Blair at 650 599-1406, five working days prior to the meeting date.***

Other enclosures/Correspondence - None

CITY/COUNTY ASSOCIATION OF GOVERNMENTS COMMITTEE ON CONGESTION MANAGEMENTAND ENVIRONMENTAL QUALITY (CMEQ)

MINUTES
MEETING OF SEPTEMBER 26, 2011

The meeting was called to order by Chair Pierce in Conference Room A at City Hall of San Mateo at 3:00 pm.

Attendance sheet is attached.

1. Public comment on items not on the agenda.

None.

2. Minutes of August 29, 2011 meeting.

Motion: To approve the Minutes of the August 29, 2011 meeting, Garbarino/Bigelow. Motion carried unanimously.

3. Review and recommend approval of the Proposed 2012 State Transportation Improvement Program (STIP) for San Mateo County.

Jean Higaki presented the Proposed 2012 STIP for San Mateo County and pointed out the changes from the draft version reviewed by CMEQ last month. She also provided an updated "Summary of Proposed 2012 STIP for San Mateo County" handout. Sandy Wong added, upon submittal of this Proposed 2012 STIP to the Metropolitan Transportation Commission (MTC), the MTC and the California Transportation Commission (CTC) will likely change the years in which funds are programmed based on cash flow forecast.

Motion: To recommend approval of the Proposed 2012 State Transportation Improvement Program (STIP) for San Mateo County, Bigelow/Lloyd. Motion carried unanimously.

4. Review and comment on the draft Commute Pre-Tax Benefits Model Ordinance.

Joe Kott introduced this item. Christine Grubl of the Peninsula Traffic Congestion Relief Alliance (Alliance) along with member Bigelow provided more background information on the draft model ordinance. Member Bigelow and Ms. Grubl plan on taking the draft model ordinance to chambers of commerce to solicit feedback and support before a final draft is presented to the C/CAG Board. Stuart Baker of the Commuter Check program provided additional background information as well.

CMEQ members provided edits to the draft model ordinance. There was discussion on franchised employers, while an individual franchisee might have a small number of employees, collectively they have over 100. In that case, the ordinance should apply. CMEQ members also suggested outreaching to City/County Managers for input.

Motion: To approval of the Draft Commute Pre-Tax Benefits Model Ordinance with modifications and direct staff to solicit comments from the businesses sector. O'Connell/Richardson. Motion carried unanimously.

5. Executive Director Report.

Richard Napier, Executive Director, provided the following report:

- Staff will bring forward reports from the Resource Management & Climate Protection (RMCP) Committee.
- PG&E has made presentation to the C/CAG Board last month. We are working with California Public Utility Commission (CPUC) on coming to the C/CAG Board as well. It is to initiate better communication between them and local governments.
- Staff has been working with MTC on the OneBayArea Block Grant proposal, trying to lessen the restriction of funding. To this point, member Mullin added that it is an important message that is being communicated between Mr. Napier and Mr. Heminger (MTC Executive Director), because such advance work helps him to better represent San Mateo County in his role as a MTC Commissioner. Member Richardson also added comment regarding her and member Garbarino's input at the regional level to help shape the proposal in a manner that works for San Mateo County as well as other counties.
- A handout on "Safe Routes to School Kick-Off Event for October 19, 2011" was provided. [*Note: This event was later canceled.*]

6. Member comments and announcements.

- Member Patridge announced the Half Moon Bay Pumkin Festival will be on October 15 & 16.
- Member Richardson suggested CMEQ packet be posted on website with hyperlinks to documents. She also asked members to rsvp to meetings so as to ensure a quorum.
- Member Bigelow announced the Dumbarton Rail meeting on Friday at 1:00 pm in Union City City Hall.
- Chair Pierce suggested inviting Jean Fraser or Dean Peterson of San Mateo County Health Systems to make presentation on "Mobility for Sustainable Communities" at a future CMEQ meeting.

7. Adjournment and establishment of next meeting date.

The next regular meeting was scheduled for October 31, 2011.

Meeting was adjourned at 4:10 pm.

	CMEQ 2011 Attendance Record						
Name	**Jan 31**	**Feb 28**	**Mar 28**	**Apr 25**	**Jun 27**	**Aug 29**	**Sept 26**
Arthur Lloyd	Yes		Yes	Yes	Yes	Yes	Yes
Barbara Pierce	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Daniel Quigg				Yes			Yes
Gina Papan		Yes	Yes		Yes	Yes	
Irene O'Connell	Yes	Yes	Yes	Yes			Yes
Jim Bigelow	Yes		Yes	Yes	Yes	Yes	Yes
Kevin Mullin	NA	NA	NA	Yes	Yes		Yes
Lennie Roberts	Yes	Yes	Yes	Yes	Yes	Yes	
Linda Koelling	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Naomi Patridge	Yes	Yes	Yes	Yes		Yes	Yes
Onnolee Trapp	Yes	Yes	Yes		Yes		
Richard Garbarino	Yes	Yes	Yes	Yes		Yes	Yes
Sepi Richardson	Yes	Yes	Yes		Yes	Yes	Yes
Steve Dworetzky	Yes	Yes	Yes				
Zoe Kersteen- Tucker		Yes	Yes	Yes	Yes		Yes
Vacant							
Other attendees at the September 26, 2011							
R Napier, S Wong, JHigaki, JKott - C/CAG							
Christine Grubl - Alliance							
Stuart Baker - Commuter Check Program							

C/CAG AGENDA REPORT

Date: October 31, 2011

To: Congestion Management and Environmental Quality (CMEQ) Committee

From: John Hoang

Subject: Receive comments on the Draft 2011 Congestion Management Program (CMP) and recommend adoption of the Final 2011 CMP for San Mateo County

(For further information contact John Hoang 363-4105)

RECOMMENDATION

That the CMEQ receive comments on the Draft 2011 Congestion Management Program (CMP) and recommend adoption of the Final 2011 CMP for San Mateo County.

FISCAL IMPACT

Adopting the CMP in itself will not have any fiscal impact.

SOURCE OF FUNDS

Not applicable.

BACKGROUND/DISSCUSION

Every two years, C/CAG as the Congestion Management Agency for San Mateo County, is required to prepare and adopt a Congestion Management Program (CMP). The role of a CMP includes: identifying specific near term projects to implement the longer-range vision established in a countywide plan; addressing the transportation investment priorities in a countywide context; and establishing a link between local land use decision making and the transportation planning process.

State law establishing the CMPs include specific requirements for the content and development process, the relationship between the CMP and the metropolitan planning process, and for system monitoring. The Metropolitan Transportation Commission (MTC) is responsible for reviewing the CMP for consistency with the Regional Transportation Plan (RTP), evaluation of consistency and compatibility of the CMP in the region, and inclusion of CMP projects in the Regional Transportation Improvement Program (RTIP) in order to compete for state funding. MTC requested that the draft 2011 CMP be submitted by October 14, 2011.

The C/CAG Board approved the Draft 2011 CMP on September 8, 2011 and authorized its release for review and comments. The Draft 2011 CMP and the notices of its availability for review were issued on September 23, 2011 to all interested parties including local and regional transportation agencies and local jurisdictions. Comments were due on October 14, 2011. In addition to minor editorial changes, the following items were also updated.

- Updated Table 5-1: San Mateo County Employed Residents (Mode of Transportation to Work) to include 2010 data.

Mode	1990		2000		2010	
Drive Alone	251,218	(.72)	256,066	(.72)	248,192	(.70)
Carpool	45,104	(.13)	45,367	(.13)	39,750	(.11)
Public Transportation	25,788	(.07)	26,029	(.07)	28,430	(.08)
Walked	8,868	(.03)	7,609	(.02)	11,023	(.03)
Motorcycle	1,333	(.00)	878	(.00)		
Bicycle	2,606	(.01)	2,896	(.01)	7,567*	(.02)
Other Means	6,059	(.02)	2,406	(.01)		
Work at Home	9,532	(.03)	12,845	(.04)	17,722	(.05)
TOTAL	**350,508**		**354,096**		**352,684**	

Source: 1990 and 2000 Census; 2010 American Community Survey 1-Year

** Motorcycle, Bicycle, and Other Means combined*

- Updated Table 8-1: Proposed 2012 State Transportation Improvement Program (STIP) to include the latest project list (Board approved at the October 2011 meeting). (Attached)

- Updated Chapter 9: Data Base and Travel Model incorporating new content to describe the new C/CAG CMP Transportation Model and Database element. (Attached)

- Updated Appendix F, which includes the Final 2011 CMP Monitoring Report, completed on September 13, 2011. The final report includes an updated Table 7: Transit Ridership Totals, as indicated below.

	Annual Total				Average Weekday			
	2011	2009	2007	2005	2011	2009	2007	2005
SamTrans	13,474,466	14,951,949	14,351,402	14,189,548	44,910	49,950	47,535	46,797
Caltrain	12,673,420	12,691,612	10,980,802	9,454,467	39,909	40,066	34,867	29,270
BART (Colma & Daly City)	7,014,816	7,026,186	6,864,974	6,211,514	23,598	23,711	23,214	20,992
BART (SFO Ext. Stations)	10,097,310	9,900,626	7,662,450	6,788,036	32,294	31,485	24,516	22,196
Combined Transit	43,260,012	44,570,373	39,859,628	36,643,565	140,711	145,212	130,132	119,255

Staff did not receive any external comments by the close of the review period on October 14, 2011, therefore proceeded to finalize the 2011 CMP. The updated version of the 2011 CMP was submitted to the MTC on October 14, 2011, for a consistency review. The "Checklist for Modeling Consistency" (Appendix K) was submitted separately on October 24, 2011. MTC has indicated that their Consistency Findings process will continue through mid-November.

This Draft Final 2011 CMP will be presented to the CMP Technical Advisory Committee (TAC) on November 17, 2011. The revised CMP approval schedule is as follows:

Date	Activity
Aug 18	Draft Report to TAC – *Recommended approval*
August 29	Draft Report to CMEQ – *Recommended approval*
Sept 8	Draft Report to Board – *approved for distribution*
Oct 14	Draft 2011 CMP due to MTC - *submitted*
Oct 31	Final 2011 CMP to CMEQ
Nov 17	Final 2011 CMP to TAC
Nov/Dec	MTC performs Consistency Findings/approval of 2012 RTIP
Dec 8	Final 2011 CMP to Board

Staff request that the CMEQ Committee recommend adoption of the Final 2011 CMP and allow staff to incorporate comments received from the TAC and MTC, as feasible, prior to presenting the Final 2011 CMP to the Board for adoption at its December 2011.

Since the majority of the Final 2011 CMP did not change from the draft version, only the following attachments are included for your review. The full document can be downloaded at http://ccag.ca.gov/studies-2011CongMgmtPrg.html

ATTACHMENT

- Table 8-1: Proposed 2012 State Transportation Improvement Program (STIP)
- Chapter 9 – Data Base and Travel Model

SUMMARY of PROPOSED 2012 STIP FOR SAN MATEO COUNTY

($1,000's)

Lead Agency	Rte	PPNO	Project	Total	(Info Only) Prior Year	(Info Only) 11-12	12-13	13-14	14-15	15-16	16-17
Caltrans	101	658B	Auxiliary Lanes Segment 1, University to Marsh Road (CMIA)	9,172	9,172						
Caltrans	101	658C	Auxiliary Lanes Segment 2, Embarcadero to University (CMIA)	5,049	5,049						
SMCTA	101	702A	US 101/Broadway Interchange	23,218	4,218			*19,000*			
Caltrans	82	645C	Menlo Park-Millbrae, interconnect signals, phase 2	7,331	7,331						
SMCTA	101	690A	US 101/Willow interchange reconstruction	28,951	2,509	4,500	~~*20,471*~~	*1,471*	*20,471*		
~~*Caltrans*~~	~~*92*~~	~~*669B*~~	~~*SR 92 Slow Vehicle Lane Improvements (grf)*~~	~~*13,563*~~	~~*1,023*~~				~~*12,540*~~		
Caltrans		0700C	Aux Lane Landscaping #700B- 2-yr plant establishment	33		33					
SMCTA/ Pacifica	1	632C	SR 1 Calera Parkway - Pacifica	6,900				*6,900*	*6,900*		
SMCTA/ Pacifica	1	2140H	Hwy 1 San Pedro Creek Bridge Replacement	3,000		3,000					
San Mateo	92/82	New	Phase 1 of SR 92 Improvement from I-280 to US 101 - Construction of Operational Improvement at the SR 92/El Camino Real Interchange - New	5,000							*5,000*
SM C/CAG	92	New	Phase 2 of SR 92 Improvement from I-280 to US 101 - Environmental Study for Improvement at the SR 92/US 101 Interchange Vicinity - New	2,411						*2,411*	
SM C/CAG	VAR	2140E	Countywide ITS Project	4,298			~~*1,977*~~		*4,298*		
SM C/CAG	VAR	2140F	Smart Corridor Segment (TLSP)	10,000	10,000						
SM C/CAG	VAR	2140F/Q	Smart Corridor Segment (STIP) - Segment 3 to Santa Clara county line	12,977	11,000		*1,977*				
			SUBTOTAL - HIGHWAY (2012/13 thru 2016/17):	**90,478**							
JPB		2140J	CalTrain San Bruno Ave Grade Separation (HSRCSA)	19,203	19,203						
BART		1003J	Daly City BART station improvement, elevator, lighting	700		900 ~~200~~	~~700~~				
			SUBTOTAL - PTA ELIGIBLE (2012/13 thru 2016/17):	**700**							
SM C/CAG			TE Reserve	4,827	200	1,000	~~*1,000*~~	~~*745*~~	*2,490*	*1,137*	
SM County			*TE funded - County of San Mateo Bike lane (C/CAG TOD commitment)*	200	200						
San Bruno			*TE funded - City of San Bruno ECR median (C/CAG TOD commitment)*	779	779						
Half Moon Bay			*TE funded - City of Half Moon Bay, Rte 1 landscaping*	223	223						
Brisbane			*TE funded - City of Brisbane Bayshore bike lane*	803	803						
MTC		2140	Planning, programming, and monitoring	382		60	60	62	64	*67*	*69*
SM C/CAG		2140A	Planning, programming, and monitoring	2,378		690	353	353	355	*165*	*462*
			Grand Total:	**77,148**		**9,283**	*4,561*	*26,315*	*27,678*	*3,780*	*5,531*

Table 8-1: Proposed 2012 State Transportation Improvement Program

CHAPTER 9

Data Base and Travel Model

Legislative Requirements

California Government Code section 65089 (c) requires that every Congestion Management Agency (CMA), in consultation with the regional transportation planning agency, cities, and the county, develop a uniform data base to support a countywide transportation computer model that can be used to project traffic impacts associated with proposed land developments. Each CMA must approve computer models used for county subareas, including models used by local jurisdictions for their own land use impact analysis purposes. All models must be consistent with the modeling methodology and data bases used by the regional transportation planning agency.

Discussion

This chapter describes the San Mateo City/County Association of Governments (C/CAG) Congestion Management Program (CMP) Transportation Model and Database Element. It contains the following sections:

- C/CAG Transportation Model and Database Legislative Requirements
- Overview of the C/CAG CMP Transportation Model

Transportation models are analytical tools that can be used to assess the impacts of land use and development decisions on the transportation system. Transportation models are based on a complex interaction of relationships between variables: for example, the relationship between the price of gasoline and the number of vehicle-miles traveled or transit ridership. They are tools that can be used to project future transportation conditions, and the need for and effectiveness of transportation projects and infrastructure improvements. As long as the basic relationships established in a base year model validation remain well behaved over time, a well-designed and validated transportation model should predict transportation conditions with some degree of confidence.

The CMP transportation database consists of data that in effect document existing and future transportation network conditions and socioeconomic characteristics in a quantitative manner. The databases are a basic input for the C/CAG transportation model (CMP model) and are typically updated based on updates to the regional socioeconomic data sets provided by the

Association of Bay Area Governments (ABAG) and through periodic updates of the transportation networks through development of long-range planning efforts and for specific projects and corridors.

The CMP model serves several purposes:

1. Evaluating the transportation impacts of major capital improvements and land use developments on the countywide CMP System,

2. Establishing transportation system characteristics for use by member agencies in performing transportation impact analyses, developing local transportation models, and preparing deficiency plans.

3. Developing roadway vehicle volume and transit ridership to support planning studies for CCAG and member agencies for corridor and project analysis.

CMP TRANSPORTATION MODEL AND DATABASE LEGISLATIVE REQUIREMENTS

The CMP Statute requires C/CAG to develop a uniform database and model for evaluating transportation impacts. The Statute specifies the following three requirements for the CMP database and model:

1. The CMP must develop a uniform database and model for use throughout the County

2. The CMP must approve local jurisdictions' computer models that are used to determine transportation impacts of land use decisions on the CMP System

3. The CMP database and model must be consistent with the Metropolitan Transportation Commission (MTC) regional transportation database and model.

Each of these requirements is discussed below.

Uniform Database and Model

The legislative requirement for a uniform countywide model and database is critical to the success of the overall Congestion Management Program. The CMP model is used to assist in the land use impact analysis program, evaluate projects for inclusion in the Capital Improvement Program, evaluate system-level improvements to the CMP System due to deficiency plans and assist with C/CAG and member agencies in project planning and transit service planning.

Local Model Consistency

In addition to the requirement for developing a countywide model, the CMP Statute requires that models developed by member agencies for local transportation analysis be consistent with the CMP model and database. This is a logical requirement that helps assure that all member agencies are using uniform techniques to evaluate the impacts of development projects.

Returning to the concept of transportation models as tools, it is clear that local transportation models will serve a similar purpose. Local models, however, operate on a different scale. While a countywide model may be able to predict future traffic volumes on a roadway, a local model would be capable of predicting the number of vehicles at a much finer detail, for example traffic turning movements at specific intersections. In general, since local transportation models are able to include more background information they provide more detailed "city-specific" information than a countywide model.

Regional Transportation Model and Database Consistency

Consistency with the regional transportation model and database is one of the most important requirements of the CMP Statute. This section describes the regional model and database and consistency requirements.

MTC Regional Transportation Model — The Metropolitan Transportation Commission (MTC) is responsible for developing the Bay Area's regional transportation model. MTC has been developing a series of transportation models since the mid-1960s. MTC has recently converted the regional models from trip-based to tour-based models (MTC Travel Model One) and is expected to refine the full transition to activity-based models in the very near future. The C/CAG models, however, are based on the previous version of the MTC transportation planning models known as BAYCAST-90. The BAYCAST-90 travel model demand system was originally developed using 1990 Census data and data from the 1990 regional household travel survey incorporating travel diary data from more than 10,000 households.

ABAG Database — The MTC models use input socioeconomic data prepared by the Association of Bay Area Governments (ABAG). ABAG projections provide estimates of employment, land use, housing, population, and household income at regional, county and census tract levels. ABAG updates its database forecasts every two to three years. These updates are based on surveys of local land use and development policies as well as revised national, state, and regional forecasting assumptions. The most recent version of ABAG's officially adopted database for

congestion management application is Projections 2009 (P2009). The P2009 series provide forecasts at five-year intervals from year 2000 to the year 2035. ABAG is currently in the process of updating the regional socioeconomic data through the development of the Sustainable Communities Scenarios as required by California SB 375, and has developed an interim socioeconomic data scenario referred to as the Current Regional Plans scenario. The C/CAG CMP model uses the Current Regional Plans scenario as the basis for the 2035 long-range forecasts for San Mateo County as provided by MTC at the MTC 1454 zone level. The MTC zone level allocations were then sub-allocated to the smaller C/CAG zones based on local development characteristics. As such, the C/CAG socioeconomic data inputs are consistent at both the MTC zone level and the ABAG census tract level.

CMP Model and Database Consistency — The CMP model and database are developed to be consistent with the MTC BAYCAST-90 model and the ABAG Current Regional Plans database. MTC has recently updated the consistency requirements for the 2011 CMP development. The revised MTC Checklist for Modeling Consistency is used to evaluate the 2011 CMP. Summaries of the checklist outputs are provided to MTC in a separate submittal. More details regarding specific consistency issues are described in the following sections.

OVERVIEW OF THE C/CAG CMP TRANSPORTATION MODEL

The current C/CAG model is based on the corridor model developed for the Grand Boulevard Initiative (GBI) Multi-model Corridor Study by the Santa Clara VTA in 2009. The GBI study evaluated the impacts of enhanced transit service (bus rapid transit) and enhanced developed strategies in the El Camino Real corridor to transform an existing auto-oriented commercial transportation corridor into a more transit-oriented mixed-use transportation corridor. The GBI model was essentially the VTA Countywide model with added zone and network detail to improve upon what was network and zone detail based on the MTC regional models for San Mateo County. The basis for the network and zone refinements applied to the VTA Countywide models within San Mateo County were the previous C/CAG Countywide models originally developed in the mid-1990s.

The addition of zone and network detail in San Mateo County required the recalibration of the trip distribution and mode choice models and a validation of the highway and transit assignments to observed road volumes and transit boardings. Using the VTA Countywide model estimated trips tables for the year 2005 (which were calibrated to year 2000 census journey-to-work for home-

based work trips), new trip distribution and mode choice models were estimated for the GBI model.

For the recently updated C/CAG models, the GBI model was applied to produce an updated base year 2005 calibration and validation with selected model enhancements. These enhancements included calibration of the auto ownership models to American Community Survey (ACS) 2005 county-level data, addition of bicycle network infrastructure (bike lanes and paths) in the networks, travel time skims, mode choice and bicycle assignments and development of a toll modeling procedure to estimate express lane vehicle volumes. The model was validated to year 2005 screenline volumes for the AM and PM peak periods and to year 2005 observed transit boardings.

Consistency with MTC Model

As noted previously, the C/CAG model was designed to be consistent with the previous MTC Travel Demand Model forecasting system BAYCAST-90 model. This section provides a general overview of the C/CAG models and also describes several basic modeling characteristics that are shared between the models.

Transportation Analysis Zones (TAZ's) — The current CMP model has a more refined zone system in San Mateo County and Santa Clara County than the MTC regional models. Additional zones were added to more accurately reflect and support the added roadway network and to provide more detail in transit rich corridors and dense central business districts. In all, an additional 156 zones were added in San Mateo County and an additional 1,122 zones were added in Santa Clara County. The new model maintains the use of MTC's zone system in the remaining seven Bay Area counties, but enlarges the full model region and zones to include Santa Cruz, San Benito, Monterey, and San Joaquin Counties.

Highway Network and Transit Network — The roadway network used by the C/CAG model includes additional detail in both San Mateo and Santa Clara Counties. The current CMP model also includes detailed stop, station and route detail in the transit network for San Mateo and Santa Clara Counties, and maintains the MTC roadway and transit networks in the remaining Bay Area counties. The Association of Monterey Bay Area Governments (AMBAG) provided the basis for roadway networks in Monterey, San Benito, and Santa Cruz counties and the San Joaquin County COG provided roadways for San Joaquin County, however, the detailed networks was simplified to match the coarser zone structure in each of those four added counties. Express lane facilities, representing the MTC 'Backbone' express lanes system for 2035, were also coded in the network with a toll facility indicator based on the highway corridor segment and the direction of travel. Differential toll facility codes were required in order to apply specific toll rates to optimize utilization

of the express lanes to preserve level-of-service for free carpool users. The C/CAG model also includes a representation of the bicycle network infrastructure in the base year and 2035 forecast year for San Mateo, Santa Clara, San Francisco and southern Alameda Counties, explicitly representing existing and future bike lanes and bike paths in travel time development, mode choice and bicycle assignments.

Capacities and Speed — The current C/CAG model incorporates the area type and assignment group classification system published by MTC in BAYCAST-90. Input free-flow speeds for expressways are slightly lower in the C/CAG models to more accurately match the travel time for the expressway segments during model validation and improve the assignment match of estimated to observed expressway volumes.

Trip Purposes — The current C/CAG model uses the same trip purposes used in the BAYCAST-90 model and also uses additional trip purposes not modeled by MTC. C/CAG model trip purposes include the following:

- Home-based work trips
- Home-based shop and other trips
- Home-based social/recreation trips
- Non-home-based trips
- Home-based school: grade school, high school, and college trips
- Light, medium and heavy duty internal to internal zone truck trips

The C/CAG model uses MTC BAYCAST-90 trip generation equations for trip production and trip attraction functions for all trip purposes listed above. In order to address special markets not included in the MTC trip purposes, the C/CAG model includes several additional trip purposes beyond those modeled by MTC, including:

- Air-passenger trips to San Francisco International Airport (SFO) and San Jose/Mineta International Airport (SJC) and
- Light, medium and heavy-duty external truck trips

Market Segments — The C/CAG model adopts the BAYCAST-90 disaggregate travel demand model four income group market segments for the home-based work trip purpose in trip generation, distribution and mode choice. In addition, the C/CAG model also maintains the three workers per household (0, 1 and 2+ workers) and three auto ownership markets (0, 1 and 2+

autos owned) used in the MTC worker/auto ownership models. Trips by peak and off-peak time period are also stratified in the trip distribution, mode choice and highway and transit assignment models.

External Trips — The C/CAG model uses a different approach for incorporating inter-regional commuting estimates than MTC. For external zones coincident with the MTC model, MTC interregional vehicle volumes were applied for base year 2000 and adjusted to the future by assuming a 1 percent growth rate per year. For external gateways from San Joaquin County and Santa Cruz, Monterey and San Benito Counties, the incorporation of those counties as internal modeled areas obviated the development of external vehicle volumes for those areas of the C/CAG models.

Pricing — The C/CAG model uses MTC pricing assumptions for transit fares, bridge tolls, parking charges, and auto operating costs as assumed in the current MTC Regional Transportation Plan (RTP) and Sustainable Community Strategies (SCS) update. All prices are expressed in year 1990 dollar values in the models. The C/CAG model also uses regional express lane toll charges for the AM and PM peak periods that are based on optimizing the level-of-service in the carpool lanes. Depending on the level of utilization, these toll charges would vary by direction, time of day and by specific corridor.

Auto Ownership — The current C/CAG model applies BAYCAST-90 for auto ownership models to estimate the number of households with 0, 1, and 2+ autos by four income groups in each traffic analysis zone. Walk to transit accessibility measures were incorporated in the auto ownership models consistent with MTC BAYCAST-90 to more logically associate low auto ownership households with transit services. The auto ownership models were recently calibrated to the 2005-2009 American Community Survey to match workers per household and auto ownership by county.

Mode Choice — The mode choice models for BAYCAST-90 include the use of nested structures for most trip purposes, however, explicit estimation of nested structures to consider transit submodes were not included in the model specification. The C/CAG model adds a nesting structure for transit submodes of local bus, express bus, Bus Rapid Transit (BRT), light rail, heavy rail and commuter rail underneath the MTC BAYCAST-90 nested structures. Consistent with the BAYCAST-90, mode choice coefficients are preserved by constraining the model to the BAYCAST-90 parameters, except those in transit submode structure. The C/CAG model includes a transit submode nest for Bus Rapid Transit (BRT), which is an emerging transit technology in the region. Submode constants for BRT were developed from a market analysis and state

preference survey that compared the relative tradeoffs between bus, light rail and hypothetical BRT service. The resulting BRT constants were between the calibrated submode constants applied to local bus service and light rail service, implying that BRT service is perceived as more attractive than local bus service, but not as attractive as light rail service.

Peak Hour and Peak Periods for Highway Assignments — The C/CAG model uses a three-hour peak period (6 AM to 9 AM) as the basis for determining drive alone, shared-ride, and transit travel times for input to the trip distribution and mode choice models. This was assumed since peak hour travel volumes tend to produce extremely congested conditions for forecast years producing unrealistic volume to capacity ratios and travel times, thus significantly overestimating forecast transit probabilities. The highway assignments produce AM and PM peak hour volumes, AM and PM peak period volumes (5 AM to 9 AM and 3 PM to 7 PM, respectively – each coincident with the time periods of operation for carpools), midday volumes (9 AM to 3 PM) and evening volumes (7 PM to 5 AM). The four time period volumes are then added together to develop daily vehicle volumes.

Vehicle and Transit Assignments — The current C/CAG model incorporates a methodology analogous to the MTC "layered," equilibrium assignment process, which distinguishes standard mixed-flow lanes from high-occupancy-vehicle (HOV) lanes. The equilibrium assignment process used in the current CMP model is functionally equivalent to the MTC methodology. The C/CAG model includes additional vehicle classes in the highway assignments for park-and-ride vehicles and drive-alone and carpool toll vehicles.

Drive-alone and carpool toll vehicles for AM and PM peak periods are estimated using a toll model post-processor that estimates toll volumes based on a comparison of the non-toll and toll travel times and costs. This procedure assumes that toll choice occurs after the decision to choose auto versus transit has already been considered, and therefore does not influence transit mode choice. A toll choice constant for drive-alone and carpool modes was developed based on a calibration of toll volumes estimated by application of the toll model to the I-680 Express Lane facility and comparison of estimated to observed express lane volumes. It should be noted that by 2035, in order to maintain the operational feasibility of implementing regional express toll lanes, it was assumed that only 3+ occupant carpools would be allowed to travel in the carpool lanes for free. This was assumed for all carpool facilities in the model region.

In the current CMP model, transit passengers are assigned with a methodology analogous to that used by MTC, with separate assignments for each transit submode and access mode.

Assignments are also performed separately for peak and off-peak conditions. A total of eighteen separate transit assignments are run to cover the full combination of transit submode and access modes as well as to estimate transit ridership for air-passengers and external home-based work transit trips from the San Joaquin (ACE, BART and San Joaquin SMART bus) and AMBAG (Caltrain and Monterey Express) model regions.

Model Validation with 2005 Traffic and Transit Volumes — The current C/CAG model is validated to year 2005 traffic volumes for county-level screenlines and specific major transportation facilities. Two time periods are validated for county screenlines: AM peak period (5 AM to 9 AM) and PM peak period (3 PM to 7 PM). Peak hour validation was performed for US 101 and SR 82 (El Camino Real) using traffic counts provided by Caltrans. Daily transit boardings were validated for the year 2005 at the system level for major regional transit operators (Caltrain, BART, MUNI, VTA and AC Transit) and at the route level for SamTrans express and local routes.

Compliance and Conformance

To be in conformance with the Congestion Management Program, member agencies must ensure that their models are consistent with the CMP model. C/CAG encourages the use of the C/CAG model by the local member agencies in order to ensure consistency, however, member agencies are free to develop their own local models but will be required to produce documentation to demonstrate consistency with the C/CAG models.

C/CAG must also ensure that the C/CAG CMP models are consistent with the MTC regional models. To demonstrate compliance and conformance, MTC has developed a checklist of outputs that are to be produced from the C/CAG models and compared to a comparable MTC regional forecast year model run. C/CAG has prepared the checklist outputs from the most recent 2035 model runs and will provide the results in a separate submittal to MTC.

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C/CAG AGENDA REPORT

Date: October 31, 2011

To: Congestion Management and Environmental Quality Committee

From: Joe La Mariana, Kim Springer, County of San Mateo Staff

Subject: Presentation on the San Mateo County Green Business Program Funding

(For further information contact Kim Springer at 599-1412)

RECOMMENDATION

Receive a presentation on the San Mateo County Green Business Program funding.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

The County of San Mateo along with Burlingame, Daly City, Redwood City, San Carlos, Millbrae and San Mateo officially launched a pilot phase of the Bay Area Green Business Certification Program in April 2007. The pilot was based on the existing ABAG Bay Area Green Business Program. San Mateo County was the last county in the region to join the program. The San Mateo County pilot included certification in the following commercial sectors: Restaurant/Cafe, Auto Service Shop, Hotel/Motel, and Office/Retail. After a successful six-month pilot, the program was offered to cities countywide on an opt-in basis.

The Green Business Program addresses some mandatory and some voluntary initiatives in four evaluation areas: energy, water, solid waste and pollution prevention. A sample "checklist" will be provided at the CMEQ meeting to help explain the program requirements.

The program is a collaboration of various public agencies: the cities, the county and special districts. Currently, the program includes the following cities: Belmont, Burlingame, Daly City, Half Moon Bay, Millbrae, Pacifica, Redwood City, San Carlos, South San Francisco, the County of San Mateo and SFIA. Also supporting the program is: the SBWMA, County Environmental Health, and various BAWSCA agencies.

To date, the SMC Green Business Program has certified 142 businesses, and there are about 90 additional businesses that are in the application queue. The program is currently "on hold" due to funding issues related to use of funds. As of December 31, 2010, RecycleWorks had a significant change in funding sources and this new funding source may only be used for AB 939 (solid waste) related programs. Because only 25% of the SMC Green Business Program is AB 939 fee eligible (the solid waste/recycling portion), a long term funding source must be secured to address the remaining 75% of the program (pollution prevention, water conservation and energy efficiency) for the program to continue. RecycleWorks, (the County) is seeking additional

funding partners for the program and it has been suggested that the program be presented to the C/CAG Board for consideration.

Staff believes that the program should be run by a full-time staff person in order to provide the necessary support for all the cities in San Mateo County, and estimates the necessary funding to be approximately $160,000, annually. The County, based on the 25% that is can fund, will contribute $40,000 of funding to the program. C/CAG staff has indicated that congestion relief funds and storm water funds ($20,000 each) could potentially be used to support the program, leaving approximately $80,000 unfunded. Staff will continue to approach other funding partners to reduce the net funding request to C/CAG cities prior to the presentation to the C/CAG Board on November 10, 2011.

A draft proposed budget for the program will be presented at the CMEQ meeting.

The presentation will be made by County of San Mateo, Department of Public Works staff, Joe La Mariana, Waste Management and Environmental Service Section Manager and Kim Springer, Resource Conservation Program Manager.

ATTACHMENT

Attachments to be provided at the meeting.