TECHNICAL WORKING GROUP (TWG)

Thursday, June 19, 2014: 10:00 a.m.

SCAG Offices
818 West 7th Street, 12th Floor
Board Room
Los Angeles, CA 90017
(213) 236-1800

NEW Teleconferencing Information:
Number: 1-888-273-3658 – Participant Code: 182121

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AGENDA

Introductions

Discussion Items
1. SCAG Active Transportation Results from the 2011 Household Travel Survey (Alan Thompson) (Attachment) 30 min.
2. 2016 RTP/SCS Modeling Variables Matrix (Guoxiong Huang) (Attachment) 20 min.

Technical Update Items
4. California Active Transportation Program Grant Update (Alan Thompson) 5 min.
Meeting Summary

Following is a summary of discussions of the Technical Working Group meeting of May 15, 2014.

Discussion Items

1. OCTA Draft Long Range Transportation Plan

   Greg Nord, OCTA, reported on OCTA’s Draft Long Range Transportation Plan. Mr. Nord stated in response to an increase in population, employment and congestion delay by 2035 several strategies underlie the LRTP. These include optimizing transportation systems with increased signal synchronization, rapid bus service and managed lanes. Additional actions include maintenance of the streets and highways, education for the public on different travel choices and innovative services such as real-time information. Specific improvements include new bus and streetcar service on high-demand corridors, 20 new weekday Metrolink trains, 650 miles of bikeways, 820 lane miles on the Master Plan of Arterial Highways, 206 freeway/carpool lane miles, 236 tollway lane miles and 450 vanpools and station vans. Mr. Nord reviewed the specific service improvements for bus, rail, ongoing grade separation projects as well as the continued build out of the Regional Bikeway Network. Future roadway projects by 2035 were reviewed as well as enhancements to the HOV and toll lanes. It was noted these improvements will increase daily transit trips, reduce hours of delay and improve average speeds on both freeways and arterial streets. The public comment period ends June 30, 2014.

   The working group discussed OCTA’s Long Range Transportation Plan.

2. System Preservation Update

   Margot Yapp, PE, Nichols Consulting Engineers, provided an Overview of Regional Needs Analysis. Ms. Yapp noted that a statewide survey is being conducted and surveys were requested from 539 cities and counties to submit data on their local street network. Further, 74% of those surveyed responded which covers 89% of local street miles. Once data is received the Pavement Condition Index will be determined. Ms. Yapp noted the average PCI for the SCAG region is yet to be determined as additional data is being collected. The index rate street conditions as Good/Excellent, at Risk, Poor, and Very Poor/Failed. The goal is to provide a transportation needs number for local street networks for 198 cities and counties in the SCAG region. Those will then be aggregated by county or region.

   The working group discussed the system preservation analysis.
3. **Staff Draft Paper on TOD Benefits, Challenges and Best Practices**

Ping Chang, SCAG staff, reported on a draft paper on Transit Oriented Development, Challenges and Best Practices. Mr. Chang stated the object of the paper is to provide a summary of key knowledge supportive of TOD. It was noted TOD can generate a range of transportation, economic and environmental benefits; however, there are challenges such as higher risks for developers and difficulty obtaining financing. Further, TOD is more successful with favorable market conditions and supportive local policies. The benefits of TOD include increased transit use, reduction of vehicle miles travelled, higher premium for rents and property sales as well as more efficient land use. In addition to the risk of obtaining financing, there can be uncertainties in land acquisition, the environmental process and the need for financial assistance with pre-development capital. TOD development benefits from supportive local policies that create a TOD-friendly environment. These can include offering financial incentives, tailoring land use regulations, use of density bonus, managing parking and streamlining environmental review. Finally, it was noted there are opportunities for TOD along Metro’s Crenshaw Line, the North Hollywood stations as well as rapid bus intersections in South Los Angeles.

The working group discussed TOD best practices.

**Technical Update Items**

4. **Active Transportation Program Update**

Sarah Jepson, SCAG staff, provided an update on the ATP. The program is $360 million with $180 million for a statewide competition and $76 million for the regional competition. The call for projects for the first phase is underway and applications are due May 21, 2014. Ms. Jepson noted there has been considerable interest in the program from local jurisdictions. Also, SCAG will be submitting an application for the statewide funding in the non-infrastructure area to support an active transportation safety and encouragement campaign.

5. **Local Input Survey Update**

Ping Chang, SCAG staff, provided an update on the status of the local input surveys. Mr. Chang reported the local input process continues with 60% of the jurisdictions reporting region wide although some counties such as Ventura and Orange have an 80 – 90% response rate. It is anticipated efforts to summarize the data will begin in 4 – 6 weeks and initial findings returned to the TWG for feedback.

6. **MAP-21 Safety NPRM Comments**

Naresh Amatya, SCAG staff, reported on the National Performance Management Measures for state departments of transportations (DOTs) to use to carry out the Highway Safety Improvement Program (HSIP) and to assess the number of serious injuries and fatalities, and serious injuries and fatalities per vehicle mile traveled. It was noted the MPOs are limited to supporting the state DOT in the achievement of the state targets. A schedule of milestones for the program was provided and it was stated the rules will not be implemented quickly enough to directly affect the 2016 RTP/SCS planning process although the work of setting state targets would occur while the 2016 RTP/SCS is being developed.
7. **CalEnviro Screen Tool Update**

Ping Chang, SCAG staff, provided an update on the May 12, 2014 CalEnviroScreen Tool Update Workshop. It was noted the California Communities Environmental Health Screening (CalEnviroScreen) is a screen tool to identify communities that are disproportionately burdened by multiple sources of pollution and, pursuant to SB 535, is expected to be used in allocating the state’s Cap-and-Trade auction proceeds in order to assist the most impacted communities.

**Announcements**

Naresh Amatya, SCAG staff, announced that Margaret Lin will be leaving SCAG for a new position at the City of South Pasadena.

The next meeting of the TWG will be Thursday, June 19, 2014.
Item 1 Attachment:

SCAG Active Transportation Results from the 2011 Household Travel Survey
Analysis of the 2011 Travel Survey for Active Transportation Modes

SCAG Technical Working Group

June 19th 2014

Alan Thompson
SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
Structure

- 2011 Household Travel Survey
- Analysis on Walk Trips
- Analysis on Bike Trips
- Analysis from Add-on Survey
2011 California Household Travel Survey (CHTS)

- **CHTS** - A state-wide travel survey
  ... Organized by Caltrans
- **Survey was conducted by NUSTAT**
- **Data available to download online**
- **15,716 household samples**
  ... SCAG Region
- **Files include:**
  - Household, Person, Activity, Place, Vehicle, Long Distance
• Includes both CHTS plus additional surveys conducted by SCAG (Abt-SRBI)
  – SCAG’s survey questions are the same as CHTS
  – 20,088 total household samples
  – Consultant created household expansion factors and files for model estimation

• Used for model estimation of SCAG’s travel demand models and analysis
Share of Active Transportation Modes

- **Active Transportation (AT) modes include walking and biking**
- **CHTS AT Mode Share for SCAG Region:**

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- Weighted
- Unlinked trips
AT Share by Linked/Unlinked Trips

- Trips in travel survey are “unlinked”. Mode choice models consider "linked" trips, where a transit trip including transfers by walking/biking counts as only one trip.

AT Share for SCAG Region:

- CHTS (Unlinked): Walk (16.8%); Bike (1.1%)
- SCAG Survey Unlinked Trips: Walk (14.7%); Bike (1.3%)
  - Consistent with CHTS
- SCAG Linked Trips: Walk (9.8%); Bike (1.5%)
  - Total % AT = 11.3%
  - % AT of Year 2008 Model Validation = 9.66%
## Mode Share of Active Transportation Modes

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<th>Walk SCAG Linked*</th>
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* Weighted by household expansion factor
Analysis on Walk Trips

Statistics based on SCAG’s Combined Survey Database
Walk Trip Travel Time Distribution

- About 40% of walk trips are less than 5 minutes
- Mean = 13 mins; Median = 10 mins
Walk Trip Type and Mean Travel Time

- Nearly 80% of walk trips are Transfer Trips or Home-Based Other Trips (~40% each)
Walk Time by Purpose

- For walk transfer trips; 54% are within 5 minutes; about 80% are within 10 minutes
Walk by Person

- About 11% of total persons make at least one walk trip during a day.
- Those younger than 16 tend to walk more than the older.
- People living in higher density neighborhoods tend to walk more.
For those who made at least one walk trip during a day:

- Average daily walk time is 37.5 minutes per person.
- Age 65-74 walk near 50 minutes per day.
- Persons in higher density neighborhoods tend to walk for longer time.
- Walk time is shorter for highest density, probably due to better accessibility.
Summary of Walk Trip Analysis

• 11% of people walk during a weekday.
• Residents of higher-density neighborhoods tend to walk more than those of low-density.
• 40% of walk trips are for mode transfer.
• May need to estimate walk access/egress time in transportation model as input for health impact analysis.
• For mode choice analysis, is walk access/egress time considered as positive effect on utility?
  – People may prefer to walk to transit due to positive effect on health.
Analysis on Bike Trips

Statistics based on SCAG’s Combined Survey Database
- Nearly 30% of bike trips are longer than 20 minutes (14% for walk trips)
- Mean = 22 mins; Median = 15 mins
Trip Type and Mean Travel Time

- 56% of bike trips are home-based other trips, 16% for commuting purpose & 8% for mode transfer
- Average bike time for work is about 29 minutes
Bike Time by Purpose

- For trips to work location, 48% are longer than 20 minutes.
Bike by Person

- About 1.1% of total persons make at least one bike trip during a day.
- Those younger than 16 tend to bike more than the older, but the difference is not very large.
- People living in higher density neighborhoods tend to bike more.
For those who made at least one bike trip during a day:

- Average daily bike time is 56 minutes per person.
- Age 55-64 bike nearly 75 minutes per day.
- People living in higher density neighborhoods tend to bike for longer time.
Summary of Bike Trip Data

• 1.1% of people bike during a weekday. Not much difference among age groups

• 55% of bike trips are for home-based other (social, recreation, visiting, eat out, ...)

• Average bike time = 22 minutes. Bike for work travel time was the highest ... 28.4 mins

• Bikers tend to spend more time on biking if living in high-density or better bike access areas
Analysis from Add-on Survey
Primary Mode to School

- Based on add-on survey, of 1,370 student samples:
  - 13% are walking to school
  - 3.3% are biking to school
Primary Mode to Work

- Based on add-on survey, of 2,645 workers:
  - 2.16% are walking to work
  - 2.08% are biking to work
Bike or Walk Incentives at Primary Job

• For employers offering incentive on bike or walk, 11% of workers take AT modes, which is higher than no incentive (3%).

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<th>Bike</th>
<th>AT</th>
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• For total bike commuters
  - 77.27% use bike/walk incentive program
  - 81.82% use bicycle storage facility

* 22 samples
Neighborhood Density & Sidewalks Availability

• For a question on sidewalk availability, sidewalk is available in “most of places” or “everywhere” for high-density neighborhood.

• 20% of lowest-density neighborhoods (< 2 HH per acre) have no sidewalk.
Members of my household regularly bike and walk in our neighborhood

- Residents in higher-density areas tend to regularly bike and walk in neighborhoods.

![Bar chart showing the percentage of 2,486 households]

2,486 households
Conclusions

• **Walk Trips:**
  – Shorter distance; many are for mode transfers
  – Complements transit service

• **Bike Trips:**
  – Highest demand is for non-work modes

• **Travel Demand Model – Follow-up:**
  – Skim for bike mode
  – Link AT mode demand to Land Use & Built Environment (LUBE) variables
  – Connect to health impact model
Thank you

Alan Thompson
Active Transportation Coordinator

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Item 2 Attachment:

2016 RTP/SCS Modeling Variables Matrix
Modeling and Forecasting

Guoxiong Huang
June, 2014
SCAG Integrated Modeling & Forecasting Framework

Local Review → Local Land Use Plans

Land Use/Growth Forecasting Models → RTP/SCS Scenario Land Use Plan → Scenario Planning Model → Air Quality Model

- Regional/Small Area Socioeconomic Data; List of Synthetic Population and Household Attributes
- Transportation Performance Measures
- Transportation Activities: Trips, VMT and Speed
- Criteria Pollutants and Greenhouse Gas Emissions
Air Quality Model System

**Inputs**
1. Base Input
   - Area
   - Calendar Year
   - Season
2. Vehicle Miles of Travel (VMT) Profile (for each Base Input category)
   - Vehicle Category and Technical
   - Daily VMT by vehicle category
3. Speed profile (for each Base Input and vehicle category)
   - Speed bin
   - Speed distribution
4. Emission rates
5. Vehicle Fleet Compositions

**Models**
- EMFAC2011 LDA
- EMFAC2011 HD
- EMFAC2011 SG

**Outputs**

**Criteria Pollutants Emissions**
(tons/average weekday)
1. Total organic gases (TOG) emissions
2. Reactive organic gases (ROG) emissions
3. Carbon monoxide (CO) Emissions
4. Nitrogen oxides (NOx) emissions
5. Particulate matter 10 microns or less in diameter (PM10) emissions
6. Particulate matter 2.5 microns or less in diameter (PM2.5) emissions
7. Sulfur oxides (SOx) emissions

**Greenhouse Gas Emissions**
(tons/average weekday)
1. Carbon dioxide (CO2) emissions
2. Carbon dioxide (CO2) emissions (including Pavley 1 and LCFS adjustments)

**Fuel Consumptions**
(1,000 gallons/average weekday)
1. Gasoline Consumptions
2. Diesel consumptions
Questions?

For more information, please contact
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huang@scag.ca.gov
Item 3 Attachment:

Statewide and Non-Metropolitan Transportation Planning; Metropolitan Transportation Planning Notice of Proposed Rule Making (NPRM)
Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Notice of Proposed Rule Making (NPRM)

What just happened?

On June 2, 2014, FHWA and FTA jointly released the “Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning” Notice of Proposed Rule Making (NPRM) and began soliciting formal comments, which are due to FHWA/FTA on or before September 2, 2014.

What’s in this NPRM?

This NPRM proposes revisions to a variety of regulations governing the development of metropolitan transportation plans and programs for urbanized areas, state transportation plans and programs, and the congestion management process. As such, the NPRM includes a variety of revisions, including those that directly impact MPOs and some that do not.

Revisions that directly impact MPOs

- **Reporting requirements for performance-based planning:** The NPRM proposes that MPOs, in their metropolitan transportation plans: 1) describe the performance targets required by MAP-21, 2) evaluate the condition and performance of the transportation system, and 3) report on progress toward the achievement of the targets in the metropolitan transportation plan.

- **Reporting requirements for performance-based programming:** The NPRM also proposes that both states and MPOs, in the transportation improvement program (TIP), describe, “to the maximum extent practicable,” the anticipated effect of the TIP’s investment priorities (or program of projects) toward achieving the performance targets.

- **Delineation of interagency relationships for performance-based planning:** The NPRM requires that MPOs include a description in their metropolitan planning agreements that identifies how these parties would cooperatively implement the performance-based planning provisions.

- **Expedition of environmental review process:** The NPRM allows states and MPOs to develop programmatic mitigation plans to address potential environmental impacts of future transportation projects as part of the statewide or metropolitan transportation planning process.

- **Revision to representation of MPO governing boards:** The NPRM proposes to add providers of public transportation to the list of required parties to be represented on MPO governing boards.

- **Use of scenario planning:** Finally, the NPRM proposes to allow MPOs to utilize scenario planning during the development of the metropolitan transportation plan.

Revisions with no direct impact to MPOs

- **Relationship between states and nonmetropolitan areas:** The NPRM also requires states to work more closely with nonmetropolitan areas, and gives states the option of designating regional transportation planning organizations (RTPOs) to help address nonmetropolitan areas.
Item 4: No Attachments