MEETING NOTICE
AND AGENDA

CITIES/COUNTY TRANSPORTATION ADVISORY
COMMITTEE (CTAC)
The CTAC may take action on any item appearing on this agenda.

Thursday, July 1, 2010

9:30 to 11:00 a.m.

SANDAG, Conference Room 7
401 B Street, Suite 800
San Diego, CA 92101-4231

Chair: Maryam Babaki, City of National City
Vice Chair: Zoubir Ouadah, City of Poway

Staff Contact: Dan Martin
(619) 699-6987
dma@sandag.org

AGENDA HIGHLIGHTS

• DEVELOPMENT OF THE INITIAL UNCONSTRAINED TRANSPORTATION NETWORK
• TIGER II DISCRETIONARY GRANT PROGRAM SUBMITTALS
• TRANSPORTATION DEVELOPMENT CREDITS

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CITIES/COUNTY TRANSPORTATION  
ADVISORY COMMITTEE (CTAC)  
Thursday, July 1, 2010

ITEM #  
RECOMMENDATION

1. INTRODUCTIONS

2. SUMMARY OF THE JUNE 3, 2010, MEETING  
APPROVE

The CTAC is asked to review and approve the meeting summary from the June 3, 2010, CTAC meeting.

3. PUBLIC COMMENTS  
COMMENTS

Members of the public will have the opportunity to address the working group during this time.

4. DEVELOPMENT OF THE INITIAL UNCONSTRAINED TRANSPORTATION NETWORK (Heather Werdick and Carolina Gregor, SANDAG)  
DISCUSSION

Defining the Unconstrained Transportation Network is an important step in developing the Regional Transportation Plan, because it establishes the broadest network from which funding scenarios will be identified. Once the Unconstrained Network is identified, staff will prioritize all of the future projects, using the updated transportation project evaluation criteria approved by the SANDAG Board of Directors. Based on input from SANDAG working groups and the public, Policy Advisory Committees, and the Board of Directors, staff has developed a preferred Unconstrained Transportation Network. CTAC members are asked to discuss and provide feedback on the Unconstrained Network. The SANDAG Board of Directors will be asked to accept the Unconstrained Transportation Network at its July 2010 meeting.

5. TIGER II DISCRETIONARY GRANT PROGRAM SUBMITTALS (Victoria Stackwick, SANDAG)  
INFORMATION

The FY 2010 Appropriations Act appropriated $600 million to be awarded by the U.S. Department of Transportation (USDOT) for National Infrastructure Investments. The USDOT is referring to the grants for National Infrastructure Investments under the FY 2010 Appropriations Act as “TIGER II Discretionary Grants.” Funds for the TIGER II Discretionary Grants program are to be awarded on a competitive basis for projects that will have a significant impact on the nation, a metropolitan area or a region. The USDOT has published guidance for the TIGER II Discretionary Grant program, with requires that pre-applications must be submitted by July 16, 2010. Final applications must be submitted by August 23, 2010. SANDAG staff will provide information on this program and be available for questions by CTAC members.
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<th>ITEM #</th>
<th>RECOMMENDATION</th>
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<tr>
<td>+6.</td>
<td>TRANSPORTATION DEVELOPMENT CREDITS (Wei Xia, Caltrans)</td>
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<td>INFORMATION</td>
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<td>Federal law allows states to use certain toll revenue expenditures as a credit toward the non-federal matching share of programs authorized by Title 23 (except for the emergency relief programs) and for transit programs authorized by Chapter 53 of Title 49. A report will be provided to CTAC members regarding the latest guidance available from Caltrans for the use of these toll credits.</td>
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<td>7.</td>
<td>CALIFORNIA DEPARTMENT OF TRANSPORTATION (Caltrans) UPDATES</td>
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<td>Caltrans will provide an update on various local programs, funding program deadlines, and announcements regarding upcoming conferences.</td>
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<td>8.</td>
<td>CTAC UTILITY UNDERGROUNDING AD HOC SUBCOMMITTEE UPDATE</td>
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<td>INFORMATION</td>
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<td>(Frank Rivera, Chula Vista)</td>
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<td>An update will be provided on the CTAC Utility Undergrounding Ad Hoc Subcommittee.</td>
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<td>9.</td>
<td>MATTERS FROM MEMBERS</td>
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<td>CTAC members are encouraged to discuss additional topics of general interest.</td>
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<td>10.</td>
<td>ADJOURNMENT AND NEXT MEETING</td>
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<td>The next CTAC meeting will be held on Thursday, August 5, 2010, from 9:30 to 11:00 a.m., in Conference Room 7 of the SANDAG offices located at 401 B Street, Suite 800, in San Diego.</td>
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+ next to an item indicates an attachment
SUMMARY OF THE JUNE 3, 2010, MEETING

Agenda Item #1. INTRODUCTIONS
Chair Maryam Babaki (National City) called the CTAC to order. Self introductions were conducted.

Agenda Item #2. MEETING SUMMARY OF MAY 6, 2010
The CTAC was asked to review and approve the meeting summary from the May 6, 2010, CTAC meeting.

Action: The meeting minutes were approved unanimously.

Agenda Item #3. PUBLIC COMMENTS
There were no public comments.

Agenda Item #4. 2050 REGIONAL TRANSPORTATION PLAN (RTP): DEVELOPMENT OF THE INITIAL UNCONSTRAINED TRANSPORTATION NETWORK (Discussion)
Carolina Gregor (SANDAG) reviewed the Urban Area Transit Strategy as part of the 2050 RTP development. Carolina provided an overview of the initial transit concepts including the Transit Propensity, Commuter Point-to-Point, and Many Centers concepts. She reviewed the proposed transit mode share goals along with the projected geographic distribution of the transit mode share. Carolina also reviewed the initial results of the analysis of the transit concepts and discussed the opportunity to incorporate the most effective features of each concept into a combined “Hybrid” strategy.

Heather Werdick (SANDAG) reviewed the concepts of the complimentary Highway Network. Heather indicated that there was the potential to modify the 2030 RTP Unconstrained highway network to support transit investments and provide adequate level of service. Heather also reviewed the time line for releasing the Draft RTP/Environmental Impact Report. The draft is scheduled to be released in early 2011.

Agenda Item #6. CTAC UTILITY UNDERGROUNDING AD HOC SUBCOMMITTEE UPDATE (Information)
Beth Chopp (Chula Vista) provided an update on the CTAC Utility Undergrounding Ad Hoc Subcommittee meeting held on May 19, 2010, with the San Diego Gas & Electric (SDG&E). Ms. Chopp also provided a copy of a letter sent out by the City of Chula Vista on May 28, 2010, that
provided recommended actions to achieve cost control, cost efficiency, and performance control with the 20A Utility Undergrounding Program. Beth reported that additional discussions with SDG&E are scheduled in June.

Agenda Item #5. CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) UPDATES (Information)
Dan Martin (SANDAG) reported from an update provided by the Caltrans, District 11, Department of Local Assistance. The following was reported:

• **FHWA - ARRA Reviews**
  FHWA is going to conduct project reviews of the selected ARRA projects. The review on SANDAG’s Grossmont Station Pedestrian Improvement project, ESPLERP 6066(067), has been scheduled for June 11, 2010, from 8:30 to 10:30 a.m.

• **FHWA - FIRE (Financial Integrity Review and Evaluation)**
  City of La Mesa, Federal Project Number RPSTPLE 5207(025), Billing No. 2B was randomly selected for the Construction Contractor Payment Review.

• **INACTIVE PROJECTS AND LAPSING FUNDS**
  FHWA is enforcing de-obligation of funds that have not been invoiced. Agencies that are not going to expend all the funds obligated to project are required to go through the entire close-out process to ensure they continue to be eligible for Federal aid.

• **PROGRAMS**
  **Call outs: Highways for Life**
  The Highways for Life (HfL) Discretionary Program is soliciting for grant applications for FY 2010.

  **Quality Assurance Program (QAP)**
  Cities of Vista, San Diego, Encinitas, and SANDAG have submitted programs and they are not yet approved. Jurisdictions who have not submitted have been notified by Local Assistance.

• **TRAINING**
  The FHWA Resource Center is conducting a series of webinars on the new Highway Safety Manual from June 14 to August 4. Each webinar will cover a specific topic area related to the HSM, such as two-lane rural roadway segments, two-lane rural intersections, rural multilane segments, urban/suburban intersections, pedestrians, horizontal curves, and will last about two hours.

Agenda Item #7. ADJOURNMENT AND NEXT MEETING (Information)
The next CTAC meeting will be held on Thursday, July 1, 2010, from 9:30 to 11:00 a.m., in Conference Room 7 of the SANDAG offices located at 401 B Street, Suite 800, in San Diego.

**Action:** Chair Maryam Babaki (National City) adjourned the meeting.
DEVELOPMENT OF THE INITIAL UNCONSTRAINED TRANSPORTATION NETWORK

Introduction

SANDAG is in the process of preparing the 2050 Regional Transportation Plan (RTP). As part of this process, a regional transit strategy that focuses high frequency transit services in the most heavily populated areas is being prepared.

Staff has developed three transit network alternatives to test various approaches in this process. Based on initial feedback received from SANDAG working groups and the public, Policy Advisory Committees, the Board of Directors, and an outside Peer Review Panel, staff has assembled preliminary recommendations for a 2050 transit network based on a combination of the three alternatives evaluated as part of the Urban Area Transit Strategy. This transit network, combined with highway improvements, and other management strategies form the basis for the initial 2050 Unconstrained Transportation Network.

Included for background information are two reports that were recently presented to the SANDAG Board of Directors that describe the planning process and provide information on the initial proposed unconstrained transit and highway networks. Staff is requesting feedback on the networks from the SANDAG working groups and from the public during June and July. Based on feedback received and additional testing of the performance of the networks, staff will recommend a draft Unconstrained network to the SANDAG Board at its July 23, 2010, meeting.

CTAC members are asked to discuss and provide feedback on the draft Unconstrained Transportation Network.

Attachments: 1. June 11, 2010, Board of Directors Agenda Item #8A  
2. June 11, 2010, Board of Directors Agenda Item #8B

Key Staff Contacts: Carolina Gregor, (619) 699-1989; cgr@sandag.org  
Heather Werdick, (619) 699-6967; hwe@sandag.org
2050 REGIONAL TRANSPORTATION PLAN:
UPDATE ON THE URBAN AREA TRANSIT STRATEGY

Introduction

Every four years, SANDAG updates its Regional Transportation Plan (RTP). The current RTP, which extends to the year 2030, was adopted in 2007. SANDAG is currently preparing a 2050 RTP, which is scheduled for adoption in 2011.

An important part of the development of the 2050 RTP is the preparation of an innovative and visionary "Urban Area Transit Strategy." The Urban Area Transit Strategy will serve as the basis for development of the regional transit network to be included in the 2050 RTP along with all of the other modal networks (highway, high occupancy vehicle (HOV)/Managed Lanes, bicycle and pedestrian improvements, freight improvements, etc.). As part of the strategy, three draft transit network alternatives have been developed for analytical purposes.

The purpose of today’s report is threefold: (1) to introduce the draft transit network alternatives and summarize feedback received to-date; (2) to review proposed transit mode share goals for key corridors/communities; and (3) to present a preliminary summary of the performance of each network. These items will help inform Board discussion on Item 3B, the development of the 2050 Unconstrained Transportation Network.

Initial Transit Scenarios and Feedback Received

Through the planning process, staff has developed and begun testing three transit network alternatives with a focus on the urban areas of the San Diego region. Ultimately, one of the networks (or a combination or variation) will be incorporated into the unconstrained transportation network in the 2050 RTP. The overarching goal is to create a world-class transit system for the San Diego region in 2050 that significantly increases the use of transit, walking, and biking in the urbanized areas of the region, makes transit more time-competitive with the automobile, maximizes the use of transit during peak periods, and reduces greenhouse gas emissions and vehicle miles traveled in the region.

The transit alternatives under study are grouped into three themes and illustrated conceptually as follows:

- **Transit Propensity**
  Expands Transit in the Most Urbanized Areas
  ![Transit Propensity Diagram]

- **Commuter Point-to-Point**
  Emphasizes Quick Access to Work
  ![Commuter Point-to-Point Diagram]

- **Many Centers**
  Connects Local Smart Growth Areas and Activity Centers
  ![Many Centers Diagram]
The three transit alternatives have been intentionally designed to vary significantly from one another in order to test how different transit strategies might function in the long-term when compared across a number of performance measures.

The draft networks have been presented to the Transportation and Regional Planning Committees, various SANDAG working groups, an outside Peer Review Panel, and at the five 2050 RTP public workshops (held April 26 - May 6, 2010). Subway-style maps of each draft alternative are provided in Attachments 1 – 3, and a brief description of the initial concept behind each alternative is provided in Attachment 4. The study area for the Urban Area Transit Strategy is provided in Attachment 5 for reference purposes. More detailed maps, including transit routes and station locations, are available on the SANDAG Web site at www.sandag.org/uats.

In Item 3B of today’s report, staff is recommending initial routes for incorporation into an unconstrained regional transit network for the 2050 RTP that is a combination of network elements from the draft transit alternatives based on comments by the policymakers, stakeholders, the public, and the Peer Review Panel; the overall performance of the networks with respect to identified performance measures (discussed below); the performance of specific routes and modes; and other factors. The report goes on to assess the regional highway network in order to set the stage for developing a comprehensive transportation network.

Feedback Received

In general, staff has received positive feedback on the concept of developing and testing alternative transit strategies, and on the draft networks developed to-date. At its April 16, 2010, meeting, Transportation Committee members articulated support for the networks being tested in the three alternatives and expressed excitement at the prospect of building a robust transit network that can enhance regional mobility options and potentially influence the region’s reduction of greenhouse gas emissions.

During the remainder of April, staff presented the transit networks to the Regional Planning Technical Working Group (TWG), the Cities/County Transportation Advisory Committee (CTAC), the Regional Planning Stakeholders Working Group (SWG), and the Quality of Life Stakeholder Working Group. Earlier this month, the networks also were presented to the Regional Planning Committee. Comments by the working groups generally have been positive. While some working group members are concerned that the alternatives do not sufficiently emphasize transit in the less urbanized areas, others are concerned that the networks are too broad and there is insufficient focus on the urban core. In addition, working group members have encouraged staff to conduct analysis on the effects of land use assumptions, user charges, and transportation demand management before finalizing mode share goals. Suggestions also have been received to identify regionally-based transit mode share figures, in addition to corridor-based mode share figures. Other ideas included evaluating a broader range of ideas for last-mile solutions that could include the use of taxicabs, addressing parking pricing, and considering fare-free zones or fare-free routes as a way of increasing mode share.

A wide range of comments were made at the RTP public workshops. Attachment 6 provides a sampling of some of the comments received. SANDAG is encouraging additional comments via the Web site at www.sandag.org/uats.
Peer Review Panel Key Findings

As a unique part of the planning process, SANDAG assembled an outside Peer Review Panel to critically assess the alternative networks. The Peer Review Panel, which consisted of two public sector and two private sector panelists with extensive professional experience in land use, economics, transportation, congestion management, transit management, and transit-oriented development, convened in San Diego during the week of April 19, 2010. (Peer Review Panel biographies are included in Attachment 7.)

Generally, the Peer Review Panel felt that the Transit Propensity and Many Centers transit networks had merit and could each result, to varying degrees, in a successful long-term transit network. The Panel stated that while the 2050 RTP will define the region’s long-term mobility vision, the plan’s ultimate success will be grounded in the implementation of near-term demonstration or “catalyst” projects that showcase elements of the transit vision, particularly the integration of transit into smart growth areas. More specifically, the following observations were made about the alternative transit scenarios:

- **Transit Propensity**: The Panel observed that this scenario may be too focused on some geographically-concentrated areas to the exclusion of other areas (such as major employment areas, University City, and North County) to meet the region’s long-term mobility goals.

- **Commuter Point-to-Point**: The Panel expressed nervousness about promulgating a type of mobility that supports a dispersed land use pattern. The Panel felt that this scenario may encourage longer trips by both autos and transit, and that this scenario portrayed a more “business as usual” approach that may not have the ability to influence land use decisions toward more integrated communities and sustainability.

- **Many Centers**: The Panel commented that this scenario provides a solid vision, but may need to be refined. Panelists suggested focusing transit investments into a smaller number of smart growth centers that either already have high housing and employment densities or have smart growth plans in the early phases of the regional growth forecast, thereby placing a priority on existing and near-term smart growth. The Panel recommended that SANDAG revisit its Smart Growth Concept Map and consider making changes that might coalesce the smaller smart growth areas into larger-scale ones, thereby promoting “smarter” smart growth.

In addition, the Panel provided broader, more global observations summarized in Attachment 8, focusing on issues such as economic competitiveness; technological savviness; world-class region; sustainability and co-benefits; land use development around transit stations; land use, freeways, and parking; project prioritization; leadership and champions; and dedicated funding sources. In addition to the group findings, several Peer Review Panelists also contributed individual opinions, summarizing their observations of the region’s strengths and weaknesses. Those individual viewpoints are contained in Attachment 9.

Interestingly, many of the observations by the Peer Review Panel reinforce some of the key “Overarching Themes” and “Considerations for San Diego” summarized in the Executive Summary of the Lessons Learned from Peer Regions report produced by the SANDAG consultant team on this project when it began late last year. These overarching themes and considerations are contained in Attachment 10.
Proposed Transit Mode Share Goals

The Urban Area Transit Strategy work program includes developing peak-period transit mode share goals for regionally significant corridors/communities for 2050. There are two general issues that must be addressed in identifying mode share goals: first, how to determine the most suitable corridors/communities for which to establish mode share goals; and second, how to set appropriate mode share goals for the selected areas. Theoretically, the goals should be ambitious yet achievable, based on quantifiable trends and patterns, and have the ability to be measured over time. As a starting point for identifying where transit mode share goals would be most appropriate, staff identified geographic areas and travel corridors based on:

- High-volume travel corridors (all motorized trips), both current and future, that factor in trip purpose, trip origins and destinations, and time of day (such as peak-period vs. off-peak);
- Major job centers that attract large volumes of peak-period trips;
- Land use patterns that focus on locations with transit-supportive land uses (such as higher densities, walkable communities) and where access to transit (and often existing transit mode share) is high; and
- Existing transit markets that have been identified through the Metropolitan Transit System Comprehensive Operational Analysis (COA) and the North County Transit District Mobility Plan to ensure that RTP transit mode share goals are consistent with current short-range transit plans.

Attachment 11 illustrates the travel corridors, major employment areas, and high-activity areas for use in identifying peak-period transit mode share goals.

After conducting research, it is staff’s conclusion that very few areas have actually established transit mode share goals for corridors or communities. As a result, an approach similar to one used in Brisbane, Australia, is being proposed to develop the mode share goals. This approach involved aiming to increase the proportion of trips made on public transit by 50 percent between the plan’s initial and target year. The plan recognized that achieving a 50 percent increase in public transit’s share of all travel would be an ambitious, yet achievable, target over the 14-year planning period. There was initial discussion of doubling the mode share (increasing it to 100 percent), and it was found that that goal would be impossible without requiring significant revisions to curtail the expansion of urbanization and strict new measures to restrain single-occupancy vehicle use during peak-period commute times. Neither of those actions appeared to be possible at that time, given community lifestyle and travel patterns, but the plan left open the possibility of revisiting the target in future plans.

Proposed Approach

In the case of the San Diego region, the staff recommendation is to start with a more aggressive base year — a base year consisting of a combination of the 2030 RTP transportation network and the 2050 land uses — as the foundation upon which to set peak-period, home-to-work transit mode share goals in the urban area. This would provide a higher starting point for any proposed mode share increase. Staff then proposes applying a goal of a 25 percent increase in the peak-

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1 The base year assumes the higher mode share value of either the currently adopted 2030 Reasonably Expected RTP or the 2030 Unconstrained RTP, combined with the 2050 land uses.
period transit mode share over this base year assumption. (This approach is different than the Brisbane method, which used an existing base year of 1997 as the starting point for a 50 percent increase.) The approach would be applied to the urban area, as well as to the identified corridors/areas.²

For example, the current 2030 RTP Unconstrained Network would increase the mode share for peak-period, home-to-work trips within the Urban Area Transit Strategy study area from the 2008 level of 5 percent to the 2030 projected level of 9 percent, an increase of 80 percent between 2008 and 2030. Applying the 25 percent goal would mean increasing the 2030 RTP mode share an additional 25 percent from 9 percent to 11 percent as the starting point for the 2050 transit mode share goal for the study area. The end result would be a rise in the mode share by 120 percent between 2008 and 2050. Because the year 2050 is 40 years away, and the current tools to predict human travel behavior that far into the future are not completely accurate, staff is proposing that the goals be generalized into “goal ranges” based on patterns of geographic groupings. This would result in a 10-15 percent transit mode share goal range for the urban area. This would more than double the peak-period, home-to-work transit mode share in the urban area during this time period. When considering the proposed mode share increases from existing levels to the year 2030 in the current RTP, it seems reasonable to set 25 percent as an ambitious, yet achievable, goal.

Proposed Goal Ranges

Attachment 12 contains the information described above and the peak-period, home-to-work transit mode share goal ranges based on the geographic groupings for the various corridors/areas. Attachments 13a, 13b, and 13c illustrate the 2008 peak-period transit mode shares, the mode shares for the 2030 RTP Network with the 2050 land uses, and the proposed 2050 transit mode share goal ranges from a geographic perspective.

Next Steps for Mode Share Goals

Over the next few months, staff proposes to conduct sensitivity tests by corridor/area to see how various adjustments could further affect peak-period transit mode share. These may include options such as increasing transit frequencies, increasing transit travel speeds, testing parking pricing, adjusting land use assumptions, or other scenarios to help refine the peak-period, home-to-work transit mode share goal ranges.

In addition, in an effort to consider mobility options from a multimodal perspective, staff also will examine mode share goals for walking/biking, carpooling, and vanpooling, which, when combined with transit mode share goals, can ultimately provide a more comprehensive view of overall non-single-occupancy vehicle peak-period mode share for incorporation into the 2050 RTP.

The Transportation and Regional Planning Committees are discussing the proposed methodology and the resulting transit mode share goal ranges at their joint meeting on June 4, 2010, and any comments made will be provided verbally at the June 11 Board Policy meeting. Staff will report the modeled transit mode share performance at a future meeting.

² Having transit mode share goals for the urban area and for several specific corridors/areas, rather than a single regionwide transit mode share goal, better reflects how transit investments are made, that is, focused on specific areas where the propensity for using transit is the highest.
Performance of Transit Network Alternatives

Analysis is underway to compare the three transit networks against one another, as well as against a baseline scenario, which consists of an overlay between the 2030 RTP transportation network and the land use assumptions included in the 2050 Regional Growth Forecast. The analysis is organized according to performance measures that line up with the following objectives that support the overall transit goals for the San Diego region in 2050:

- Increase peak-period mode share
- Maximize transit ridership
- Develop a cost-effective and implementable transit system
- Support an efficient and effective transportation system
- Address the need for sustainability
- Address the need for environmental justice/social equity
- Make transit more time competitive with the car

These transit-specific objectives also are consistent with the overall 2050 RTP goals and objectives. (The detailed set of performance measures was presented to the Transportation Committee at its April 16, 2010, meeting, and is available on the Web site at www.sandag.org/uats.)

Attachment 14 contains initial data comparing the performance of the three transit alternatives against the 2008 transit network and the baseline scenario described above. In order to isolate the performance of transit in each alternative, staff held constant the highway network and the land use assumptions of each transit network.3

Initial analysis shows that all three scenarios yield significantly better results than the existing (2008) transit network, and that all three scenarios result in modest to significant improvements in most performance measures when compared against the baseline scenario. The baseline scenario places the region at an aggressive starting point for comparison purposes, given the high level of transit investment included in the 2030 RTP. The overall concept was to test three varying strategies for expanding the role of transit in the region beyond that outlined in the current RTP.

In summary, the initial analysis shows that while none of the scenarios performs the best in all of the categories, the Many Centers scenario appears to have the highest overall performance, although it also requires the highest level of capital and operating cost support. That being said, the analysis shows that there are effective features in the Transit Propensity, Commuter Point-to-Point, and Many Centers alternatives that could be incorporated into a combined strategy. As a result, there appears to be an opportunity to combine the most effective features of all three scenarios into a “Hybrid” alternative that could then be further evaluated and refined as cost estimates and revenue assumptions become available. More detail on the “Hybrid” approach is contained in Item 3B of this report.

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3 All transit network alternatives hold the highway networks and land use assumptions constant. The highway network for each alternative consists of the highway network included in the 2030 RTP and the land use assumptions are those assumed in the 2050 Regional Growth Forecast.
**Next Steps**

Based on discussion today on both Items 3A and 3B of this report, staff will return to the Board of Directors in July with a report on the transit mode share performance for the geographic areas and with a refined list of transit projects for possible incorporation into the 2050 Unconstrained Transit Network.

GARY L. GALLEGOS  
Executive Director

Attachments:  
1. Transit Propensity Subway-Style Map  
2. Commuter Point-to-Point Subway-Style Map  
3. Many Centers Subway-Style Map  
4. Draft Initial Transit Concepts  
5. Study Area for Urban Area Transit Strategy  
6. Sampling of Comments on the UATS from 2050 RTP Public Workshops  
7. Peer Review Panel Biographies  
8. Peer Review Panel Global Observations  
9. Peer Review Panel Individual Perspectives  
10. Executive Summary of Lessons Learned from Peer Regions Report  
11. Major Travel Corridors and Areas for Use in Identifying Initial Transit Mode Share Goals  
12. Proposed Transit Mode Share Goal Ranges for Identified Corridors and Areas  
13. Peak-Period, Home-to-Work Transit Mode Share Maps  
   a. 2008 Transit Mode Share  
   b. 2030 RTP Transit Mode Share (with 2050 Land Uses)  
   c. 2050 Proposed Transit Mode Share Goal Ranges  
14. Initial Performance of Transit Network Alternatives

Key Staff Contacts: Carolina Gregor, (619) 699-1989, cgr@sandag.org  
Dave Schumacher, (619) 699-6906, dsc@sandag.org

Funds are budgeted in Work Element #31003
Transit Propensity
Expanding Transit in the Most Urbanized Areas

Legend
- High Speed Rail
- COASTER Rail
- Light Rail Transit
- Bus Rapid Transit
- Rapid Bus
- Streetcar/Shuttle-Circulator
- High Frequency Local Bus Services
Commuter Point-to-Point

Emphasizing Quick Access to Work

Legend
- High Speed Rail
- COASTER Rail
- Light Rail Transit
- Bus Rapid Transit
- Peak Bus Rapid Transit Commuter
- Rapid Bus
- Streetcar/Shuttle-Circulator
- High Frequency Local Bus Services
Many Centers

Connects Smart Growth Areas and Activity Centers

Legend
- High Speed Rail
- COASTER Rail
- Light Rail Transit
- Bus Rapid Transit
- Peak Bus Rapid Transit Commuter
- Rapid Bus
- Streetcar/Shuttle-Circulator
- High Frequency Local Bus Services
Draft Initial Transit Concepts

Transit Propensity:

*Expands Transit in the Most Urbanized Areas*

Builds on the San Diego region’s innovative trolley system - expands transit in the central core and in the region’s most urbanized areas, many of which are characterized by pre-World War II street grid patterns. Provides very frequent transit services, alleviating riders from schedules and allowing easy transfers. Major investments may include streetcars, grade separations, priority treatments, transit nodes, expanded light rail, enhanced bike and walk access, and improvements to the public realm.

Commuter Point-to-Point:

*Emphasizes Quick Access to Work*

Transit to work is an easy option - leverages new dedicated transit facilities and flexible use of Managed Lanes to serve work trips. A system of few transfers provides high speed, reliable commute options during peak periods with a variety of “last-mile” treatments. Major investments may include Managed Lanes with in-line stations, park and ride lots, new fixed guideways, and some rail expansion.

Many Centers:

*Connects Local Smart Growth Areas and Activity Centers*

Supports the San Diego region’s local commitments to smart growth - consists of a multi-radial transit system serving the region’s larger-scale smart growth areas and major activity centers. Transit services are oriented toward the centers, and supported with frequent connections between the centers. Major investments may include a variety of transit priority treatments between centers, expanded light rail, enhanced transit centers, shuttles and streetcars connecting to the transit centers, enhanced bike and walk access, and improvements to the urban realm.
Sampling of Comments on the Urban Area Transit Strategy from 2050 RTP Public Workshops

- Strong support for more bike projects, more bike racks on buses and trolleys, and related connections to transit stations;
- Suggestions on transit line extensions in particular areas (e.g., streetcar from Park Blvd. to I-805 along University Avenue; light rail to North County; streetcar along Monroe Avenue);
- Observation that places with great transit systems (e.g., London, Paris, Sydney, Moscow, San Francisco) have underground stations and lines;
- Support for extension of the planned high speed rail system to the international U.S./Mexico border;
- Support for building an extensive transit system ("build it and they will come" notion);
- Concern over the lack of funding for transit services and the related suggestion to be less ambitious in the transit planning process;
- Need for more real-time information at transit stations;
- Encouragement for the use of smaller buses to increase efficiency;
- Preference for the “Many Centers” alternative;
- Support for priority measures to bypass areas with traffic congestion and improve travel times;
- Concern about future mobility for seniors and the need to plan ahead to meet their needs for “aging in place;”
- Encouragement for expanding sidewalks and planting street trees to make walking and biking more pleasant, particularly at transit stations;
- Appreciation for the Spanish translation at the workshops.
Urban Area Transit Strategy
Peer Review Panel Biographies

John M. Inglish – General Manager/CEO, Utah Transit Authority (UTA)
John Inglish has worked in the transportation industry for more than 35 years. With an engineering background, Mr. Inglish began his career in 1970 as a systems planning engineer for the Utah State Highway Department. In the early 1970s he began working for the Wasatch Front Regional council on the early initiatives that formed today’s UTA. In 1977, he became the director of Transit Development for UTA, and in August 1997, the UTA Board of Trustees appointed Mr. Inglish as the general manager for the Authority. Under his leadership, UTA has garnered national and worldwide recognition for its transportation systems. He oversaw funding and construction of the $312.5 million Sandy to Salt Lake TRAX light rail line, completing the 15-mile TRAX line one year ahead of schedule and under budget, as well as the $118.5 million University TRAX light rail line connecting downtown Salt Lake City and the University of Utah in time for the 2002 Winter Olympics.

Martin Tuttle – Deputy Director, Planning and Modal Programs for the California Department of Transportation
Martin Tuttle has more than 25 years of top transportation and innovative land use planning management experience at the local, regional and state levels of government. As Deputy Director of Planning and Modal Programs at Caltrans, Mr. Tuttle is responsible for the Caltrans Divisions of Local Assistance, Mass Transportation, Planning, Rail, Aeronautics and Transportation System Information. As the executive director of the Sacramento Area Council of Governments (SACOG), he launched its nationally-recognized “Blueprint” transportation and land use growth plan. Mr. Tuttle also has served as the executive director of the Solano Transportation Authority (STA). As a top staff member to Assembly Majority Leader Tom Hannigan in the California State Legislature for 13 years, Mr. Tuttle managed innovative land-use and transportation reform legislation, including the bill establishing the successful Capitol Corridor intercity rail service between Sacramento and San Jose. Prior to joining Caltrans, he oversaw transit oriented development and urban infill housing projects for URS Corporation and New Faze Development.

George Hazel – Chairman, MRC McLean Hazel Ltd
George Hazel has extensive experience in all aspects of transport and communications, both urban and rural. He has specific expertise in strategic planning and policy development, the integration of transportation with other related areas, the prioritization of projects with respect to economic, environmental, and social objectives, and innovative funding of transportation infrastructure around the world. He has studied all forms of transportation policy around the world, including congestion charging and demand management, mode shift, goods movement, and growth management. Mr. Hazel has worked in the public, private, and academic sectors at a senior level and has acted as advisor to the Academy of Sustainable Communities, the Commission for Integrated Transport, Transport for London, the Queensland State Government, the Greater Toronto and Hamilton Region, the City of San Diego and many government agencies around the United Kingdom. Currently an honorary professor at the Robert Gordon University and adjunct professor at the Queensland University of Technology, Mr. Hazel has published a book on Making Cities Work and presents at conferences around the world.

Aidan Hughes – Principal, Arup
Aidan Hughes is the leader of Arup’s planning practice in the US, which focuses on integrated urbanism and sustainable planning and design. Mr. Hughes brings over 20 years experience and a proven track record in the management of complex multi-disciplinary projects. He consults to municipal governments, transportation agencies, and developers, and is currently leading the sustainable redevelopment of the Concord Naval Weapons Station in Concord, CA. A major part of the redevelopment program is compliance with California AB 32 (global warming act) and evaluating and mitigating carbon emissions from transportation, energy, and other sources for each redevelopment alternative. He also is involved in the Treasure Island Sustainability Planning project in San Francisco. Mr. Hughes is a USGBC LEED Accredited Professional, has worked in Europe, Asia and the United States, and has a broad understanding of the global approaches to delivering successful planning and infrastructure projects.
Peer Review Panel’s Global Observations

The Peer Review Panel convened in San Diego from April 19 – 21, 2010, to review and assess the work completed to date on the Urban Area Transit Strategy in relation to the preparation of the broader 2050 Regional Transportation Plan (RTP). In addition to the Panel’s comments on the three alternative transit networks summarized in the staff report, the Panel also made a number of more global observations, as follows.

- **Economic Competitiveness**: Transportation is seen as the major driver of regions’ economic competitiveness, and an increased focus on developing public transit systems is seen as a key factor in cities around the world for meeting mobility needs that ensure long-term economic sustainability.

- **Technological Savviness**: All over the world, technology is increasingly being used to market transportation options and other services to individuals based on user-preferences. Integrated electronic cards, such as the Octopus Card in Hong Kong and the Oyster Card in England, are providing tremendous potential to the private sector for marketing goods and services to end users; to the public sector for tailoring, directing, and providing incentives for transit/transportation services to end users; and for users who receive incentives and discounts for many kinds of products and services based on established purchasing choices. Global technology firms are actively seeking opportunities to develop markets. The Compass Card in the San Diego region is a solid start, and the region should proactively work to expand the Compass Card services beyond transportation to provide users with more convenience and incentives, and to maximize the region’s ability to direct future transportation marketing decisions.

- **World Class Region**: The San Diego region has true potential of becoming a world class region. The focus of the Urban Area Transit Strategy should shift from developing a “world class transit system” to developing a “transportation system that supports a world class region and its local communities.”

- **Sustainability and Co-Benefits**: In addition to pursuing transit as a means to help meet the Senate Bill 375 (SB 375) (Steinberg, 2008) regulatory mandates to reduce greenhouse gas emissions, transit also can help provide alternative transportation options, reduce foreign energy dependency, improve air quality, and reduce the proportion of American budgets spent on transportation. In addition, any co-benefits from smart growth development patterns and integrated transit systems should be highlighted and promoted, including internal trip capture, increased walking and biking, and carbon reductions in energy, waste, and water resulting from green building programs.

- **Land Use Development around Transit Stations**: Land use developers around the world recognize the economic potential for redevelopment around transit stations. Increasingly, the public sector is participating more directly with the private sector in the planning, design, and implementation of these types of redevelopment projects that result in more transit-oriented uses and direct economic benefits to the public sector that can then be invested back into transit infrastructure development. The Panel cited the proposed Tecolote Road, Clairemont Drive, and Balboa Avenue station sites along the Mid-Coast light-rail transit alignment as prime examples where such public/private partnerships could be forged. Additionally, the Panel
expressed concern over the proposed Genesee Avenue alignment in the University City area, where an elevated trackway and station are currently proposed in order to minimize impacts on auto traffic. The Panel felt that the added costs of grade-separation versus an at-grade alignment may not be justified given the benefit that would accrue to the overall transportation system with the addition of the Mid-Coast project. They emphasized the importance of having transit facilities at the ground level as a means to better integrate into the surrounding community rather than forcing a separation from vehicle traffic as a traditional method of addressing congestion.

- **Land Use, Freeways, and Parking**: Land use density, design, and mix are essential components of a successful urban fabric and transit system. Locations that have limited parking and freeway expansions, and have simultaneously added an array transit services, have increased the overall performance of their transit systems and have increased transit mode share. The Panel felt that SANDAG should more directly reward communities that currently have high land use densities near transit stations, and should more directly influence land development in areas that currently have regional transit services. In addition, the Panel encouraged SANDAG to work more directly with the development community to build higher-density projects at stations, and to evaluate the allocation of affordable housing through the Regional Housing Needs Assessment process. In addition, the Panel expressed concerns that the region’s Managed Lanes could be counterproductive toward transit if not properly implemented and operated, and suggested that SANDAG should monitor transit productivity as the Managed Lanes and Bus Rapid Transit (BRT) systems are implemented.

- **Project Prioritization**: The process to prioritize the funding of transportation projects needs to be easily understood by policymakers and the public, and needs to be conducted through a transparent process. A “policy audit table” example was provided. The audit helps to bridge the gap between the goals and objectives included in policy documents and the proposed transportation projects to help identify which transportation projects align with which policies, and alternatively which policies may not be addressed by any transportation projects.

- **Leadership and Champions**: Places that have successful transit systems have had strong leaders and champions to promote transit. Increasingly, bicycle and pedestrian advocates are supporting transit when they see opportunities for enhancements between the various modes. All successful transit systems need proactive and well-informed champions.

- **Dedicated Funding Sources**: Obtaining dedicated funding sources for transit is critical. In some cases, placing initiatives on the ballot solely for transit (versus for additional transportation modes and/or for other services) has culminated in success. (Within this context, the Panel recognized the difficulty of reaching California’s two-thirds voter approval threshold for new special taxes.) The Panel also noted the potential of exploring a subregional funding approach in San Diego as an innovative concept that should be pursued.
AIDAN HUGHES – PRINCIPAL, ARUP

Strengths

1. SANDAG has a strong relationship with the two transit operators and has good relationships with the Cities. This allows you to establish bold visions and work together to deliver on the vision. A more fractured relationship can get mired in delay and compromise.

2. SANDAG and the two operators have a very capable and experienced staff complemented with strong and committed leadership at the political and executive level. This translates into an ambition for leadership – learning from global best practice and seeking innovation in delivery and operation.

3. The existing system is operating successfully with strong farebox recovery and good coverage in the core areas. Much of the backbone system is in place through the LRT, Coaster and Sprinter systems linked into regional and international transport networks. While from the “inside” there is a recognition of some of the operational difficulties (for example, operating the trolley in the downtown), the public perception appears to be very positive. This establishes a strong platform for getting acceptance of system expansion and support for raising new capital. This also brings a responsibility to continue to deliver high quality service with clear benefits for riders as new projects are delivered.

Weaknesses

1. The Smart Growth plan is valuable as a comprehensive tool and it is being used appropriately as the basis for the transit networks. However, it is a bottom-up plan (the best the Cities are prepared to do right now) and it is not directly related to the availability of transit. There is an opportunity for SANDAG to take a lead in punching up the Smart Growth plan by using the carrot of transit investment to encourage Smart(er) Growth. Where there are proposed transit investments, they should be directly linked to some “threshold” metrics for smart growth.

2. The discussion we had around elevated light rail was interesting. It points to a fundamental issue that will face all projects, namely whether a case can (or should) be made to give transit priority in terms of road space at the expense of the auto. A greater commitment should be made to support trade-offs in favor of transit – case studies around the nation and world have demonstrated that this can be achieved with little downside. The upside is an ability to increase ridership, demonstrate the benefits of transit and make more complete communities with transit at its core. In many ways, this philosophical change in emphasis will be the platform for the world class community vision.

3. As we noted “parking is a big issue” and it is interesting that you have experience of the negative consequences in relation to parking for the downtown ballpark. We didn’t have time to address parking in all its complexities as part of the peer review, but parking policies should be dealt with as essential complementary measures to support successful transit.

GEORGE HAZEL – CHAIRMAN, MRC MCLEAN HAZEL LTD

Strengths

1. Enthusiasm, understanding, and competence of the team.

2. History of what you’ve done to date to build on.

3. In general, an exciting plan to deliver in a potentially world class city – you’re not there yet!

Weaknesses

1. Attitudes to not inconveniencing cars - unless you sort this out and the leadership backs and understands that it is the city’s and the car drivers’ best interests to have a world class transit system and give it top priority and road space, then you will find it very difficult. Discussion on elevated section of Mid-Coast is a key example.

2. Governance needs to be sorted - too many agencies saying different things and doing different things.

3. I worry about managed lanes as a transit policy, specifically that they could be counterproductive toward the performance of transit. I would suggest experimenting with peak time express transit service or local off-peak service and monitor the results.

In addition you should really look at the potential of Intelligent Commuting Technology (ICT) and the Transport Retail Model, building on the Compass Card you have, and also the potential regarding capturing increased land value to fund transit.
Urban Area Transit Strategy:
A Component of the 2050 Regional Transportation Plan

Lessons Learned from Peer Regions

December 2009

EXECUTIVE SUMMARY

Prepared by:
EXECUTIVE SUMMARY

With the preparation of the 2050 Regional Transportation Plan (RTP), the San Diego Association of Governments (SANDAG) is seeking a new and innovative vision for transit that will result in a more significant role for transit in addressing the region’s mobility, land use, and sustainability goals. To help guide development of a new transit strategy, a review has been conducted of other regions that have successful transit systems, relatively high levels of transit use, and unique transit services or facilities. These areas offer examples of how transit has been applied successfully, and provide a point of reference or a standard from which comparisons can be made.

Three regions that might be considered “benchmark” cities for San Diego were researched in some detail. These cities are:

- Portland, Oregon
- Sydney, Australia
- Vancouver BC, Canada

Seven additional “comparison cities” are highlighted because they have characteristics similar to San Diego or provide examples of unique transit applications that have helped raise the profile of transit in their regions. These cities are:

- Brisbane, Australia
- Bordeaux, France
- Denver, Colorado
- Los Angeles, California
- Melbourne, Australia
- Minneapolis, Minnesota
- Seattle, Washington

Appendix A contains comparative data for U.S. cities to help provide a point of reference for San Diego.

Overarching Themes and Considerations for San Diego

Several overarching themes emerged from the benchmark and comparison cities evaluation, many of which may be appropriate for consideration as SANDAG develops the 2050 Transit Strategy. The overarching themes found as part of the case study review are presented on the left side of the following table and their potential applicability to San Diego is presented on the right.
<table>
<thead>
<tr>
<th>Overarching Theme</th>
<th>Considerations for San Diego</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The “success” of transit did not happen overnight.</strong></td>
<td>San Diego embarked on an innovative new transit strategy in the early 1980s with the opening of the region’s (and nation’s) first urban rail transit line since WWII from downtown San Diego to the International Border. Over the next 25 years, the region expanded the rail network to provide a backbone transit infrastructure and service network, to one that now includes 75 miles of light rail (San Diego Trolley and Sprinter) and 40 miles of commuter rail (Coaster). Between 1975 and 2005, transit ridership increased 150 percent while regional population increased approximately 75 percent. As the original regional rail program nears completion (the 11-mile Mid-Coast corridor between Old Town and University City is the only remaining rail extension in the Regional Transportation Plan), the regional transit strategy has shifted to a multi-modal, shared right-of-way approach (transit on managed lanes and arterial streets). Looking to the experiences of the case study regions, San Diego may need to develop a new “dramatic strategy” for transit for the next 30-40 years – one that combines past, present, and future strategies to recapture the transit momentum experienced in the 1980s. The new strategy will need to include a stronger connection between transit investment and land use policies to achieve SANDAG’s vision for a larger transit mode share in the urban core, and key corridors and communities.</td>
</tr>
<tr>
<td><strong>Transit success depends on regional plans and visions that guide the integration of land use and transportation.</strong></td>
<td>SANDAG’s Regional Comprehensive Plan and Smart Growth strategy have established a hierarchy of centers that are designed to be supported by transit, as well as policies for integrating land use and transportation. Development of a new regional transit strategy should draw heavily on the policies and goals in the Regional Comprehensive Plan for both the region and specific corridors/communities. To achieve success, agencies, transit providers, and stakeholders must work together towards agreed upon transit and land-use goals.</td>
</tr>
</tbody>
</table>

Transit success depends on regional plans and visions that guide the integration of land use and transportation.

Many regional plans create a hierarchy of centers focused around transit that provide good design, sufficient density, and a land use mix that supports non-auto access to transit. Success is also dependent on a number of agencies working collaboratively to achieve the success of the regional plans and visions.
<table>
<thead>
<tr>
<th>Overarching Theme</th>
<th>Considerations for San Diego</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regions use a variety of tools to achieve transit success.</td>
<td>SANDAG and the region already have a variety of policy tools to support transit as defined in the Regional Comprehensive Plan and Smart Growth strategy. Additional policies and tools found in the peer regions/cities that promote and support existing and future transit services for consideration by SANDAG include: improvements to the pedestrian environment, urban growth boundaries, cooperative agreements between public agencies and private developers, tax incentives to foster transit oriented development, parking maximums or limitations, and legislation requiring commute trip reductions by major employers.</td>
</tr>
<tr>
<td>Regions generally experienced a shift in policy and investment toward transit over the past few decades.</td>
<td>The San Diego region is also experiencing similar pressures to contain sprawl, protect the environment, promote livable communities, and maintain and improve the quality of life. Through the Regional Comprehensive Plan, the San Diego region has made the policy connection between investments in transit and achieving these goals. Looking toward the future, new transit policies and strategies designed to increase transit mode share will need to understand the effects of regional highway investments and policies on the potential success of the transit investments and system.</td>
</tr>
<tr>
<td>Local bus networks are essential for successful transit systems to provide efficient connections and access to the backbone system.</td>
<td>San Diego's existing transit network leans toward hub-and-spoke structure with feeder buses connecting to rail based transit centers. However, many trips rely solely on bus transit. A new transit strategy will need to build off the existing rail transit investment, while also considering how best to serve key travel markets (origins/destinations, work trips, etc.) that may not be well served by existing bus/rail connections. The strategy will also need to define the role of local and feeder bus service in relation to the major transit infrastructure investments.</td>
</tr>
<tr>
<td>Overarching Theme</td>
<td>Considerations for San Diego</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Parking requirements in transit-supportive communities are reduced.</strong></td>
<td>Abundant and inexpensive parking have proven to be key deterrents to transit use. A new transit strategy for the San Diego region should evaluate how parking policies (location, availability, and cost), particularly in the city center and urban core, impact transit use.</td>
</tr>
<tr>
<td>Most transit successful regions have coordinated parking policy with land use and transit policy. Parking strategies often differ between central and outlying areas.</td>
<td></td>
</tr>
<tr>
<td><strong>Successful transit systems include a variety of transit modes.</strong></td>
<td>All regions include a combination of transit facility and service applications to create their transit networks and systems.</td>
</tr>
<tr>
<td>Cities and regions with successful transit have systems that include combinations of transit modes applied for the particular conditions, objectives and circumstances (i.e., heavy rail, commuter rail, light rail, bus rapid transit, rapid bus, local bus, streetcar, shuttles, electric bus, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Unique applications of transit have occurred in the central cities.</strong></td>
<td>Even cities with similar transit histories and land use characteristics as San Diego have invested heavily in innovative transit facilities and services in their central cities (transit malls, streetcars, underground bus terminals, fare free zones). These investments have proven highly successful in generating transit ridership, supporting the regional transit network, achieving land use objectives, increasing transit mode share, and contributing to the vitality of their downtown core. Many of these strategies may have applicability to downtown San Diego and other key activity centers.</td>
</tr>
<tr>
<td>While all of the studied regions have a wide range of transit modes that provide area- and location-appropriate transit, these cities have also incorporated special applications of transit infrastructure, services, and policies in their downtowns in ways that raise the profile of transit, promote transit use, and support higher density environments.</td>
<td></td>
</tr>
</tbody>
</table>
Major Travel Corridors and Areas for Use in Identifying Initial Mode Share Goals

- Major Travel Corridor
- Major Employment Area
- High Activity Area
**Urban Area Transit Strategy**

**Proposed Transit Mode Share Goal Ranges for Identified Corridors and Areas and Supporting Data**

**Peak-Period, Home-to-Work Trips**

<table>
<thead>
<tr>
<th>Identified Corridors/Areas</th>
<th>Baseline Data</th>
<th>Supporting Data</th>
<th>Proposed Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008 Existing Transit</td>
<td>2030 RTP With 2050 Land Uses²</td>
<td>25% Increase Over 2030 RTP</td>
</tr>
<tr>
<td><strong>Major Employment Areas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtown San Diego</td>
<td>24%</td>
<td>25%</td>
<td>31%</td>
</tr>
<tr>
<td>University City</td>
<td>3%</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>Sorrento Mesa</td>
<td>2%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>Kearny Mesa</td>
<td>3%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>Otay Mesa/Otay Ranch</td>
<td>3%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Palomar Airport</td>
<td>2%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>High Activity Areas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Core</td>
<td>12%</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>Oceanside/Escondido Corridor</td>
<td>3%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Other Urbanized Areas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North I-15 Corridor</td>
<td>1%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>North Central Coastal Area</td>
<td>2%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Central Coastal Area</td>
<td>5%</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Coastal South Bay</td>
<td>8%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>East County/El Cajon</td>
<td>4%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>East County/Santee</td>
<td>3%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Urban Area Transit Strategy Study Area</strong></td>
<td>5%</td>
<td>9%</td>
<td>11%</td>
</tr>
</tbody>
</table>

1 Values represent peak period home-to-work trip transit mode-share for destination districts.

2 Values reflect projected mode share of either the currently adopted 2030 Reasonably Expected RTP or the 2030 Unconstrained RTP, whichever is higher, combined with 2050 land uses.
Values represent peak period home-to-work transit mode share for destination districts.
Values represent peak period home-to-work transit mode share for destination districts.
2050 Proposed Transit Mode Share Goal Ranges

Values represent peak period home-to-work transit mode share for destination districts.
### Urban Area Transit Strategy - Initial Performance of Transit Network Alternatives

**Key:**  
- Most Effective  
- Middle  
- Least Effective  
- No Significant Change

#### A. Mode Share

<table>
<thead>
<tr>
<th>Mode Share Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1. Peak-Period Transit Mode Share as Applied to the Identified Corridors/Areas</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A2. All-Day Transit Mode Share as Applied to the Identified Corridors/Areas</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3. Change in Peak Period Urban Area Transit Mode Share</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### B. Transit Ridership

<table>
<thead>
<tr>
<th>Ridership Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1. Change in Transit Person Trips (Regional)</td>
<td>202,000</td>
<td>401,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2. Change in Transit Passenger Miles (Regional)</td>
<td>1,593,000</td>
<td>5,197,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B3. Change in Transit Peak-Period Person Trips (Regional)</td>
<td>79,000</td>
<td>178,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4. Change in Mode of Access to Transit (Non-Motorized and Auto)</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walk/Bike to Transit</td>
<td>85.4%</td>
<td>89.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto (drove and driven) to Transit</td>
<td>14.6%</td>
<td>10.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### C. Cost-Effectiveness

<table>
<thead>
<tr>
<th>Cost-Effectiveness Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1. Rough Order of Magnitude (ROM) Capital Cost Estimate</td>
<td></td>
<td>Baseline</td>
<td>Middle</td>
<td>Lowest</td>
<td>Highest</td>
</tr>
<tr>
<td>C2. Cost-Effectiveness of Network (Region)</td>
<td></td>
<td>Baseline</td>
<td>Middle</td>
<td>Lowest</td>
<td>Highest</td>
</tr>
<tr>
<td>C3. Operating Subsidy Required (Region)</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4. Total Transit System Capital Cost vs. SANDAG Revenue-Constrained Funding Scenario</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C5. Ability to Phase Major System Components/Elements</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### D. Efficient Transportation Network

<table>
<thead>
<tr>
<th>Efficiency Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit System Performance</td>
<td></td>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1. Passenger Miles to Transit Seat Mile Ratio</td>
<td>36%</td>
<td>47%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Transportation System Performance</td>
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<td>Baseline</td>
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<tr>
<td>D2. Change in Auto Vehicle Miles Traveled (VMT) per capita</td>
<td>26.9</td>
<td>26.9</td>
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<tr>
<td>D3. Change in Auto Vehicle Hours Traveled (VHT) per capita</td>
<td>0.7</td>
<td>0.8</td>
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<tr>
<td>D4. Change in Auto Vehicle Trips per capita</td>
<td>3.6</td>
<td>3.5</td>
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---

1 Baseline scenario consists of an overlay between the highway and transit networks included in the 2030 RTP and the land use assumptions included in the 2050 Regional Growth Forecast.
### E. Sustainability

<table>
<thead>
<tr>
<th>Sustainability Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
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<tr>
<td>Greenhouse Gas Reduction</td>
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<td>E1. Estimated Change in GHG (tentative)</td>
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<tr>
<td>Non-Motorized Travel</td>
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<td></td>
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<tr>
<td>E2. Peak-Period Non-Motorized Mode Share in Urban Area</td>
<td>3.7%</td>
<td>3.3%</td>
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<tr>
<td>E3. All-Day Non-Motorized Mode Share in Urban Area</td>
<td>3.4%</td>
<td>3.0%</td>
<td></td>
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<tr>
<td>E4. Compatibility with Regional Bike Plan (mi. of bike fac. within 1/2 mile of major station)</td>
<td>73</td>
<td>146</td>
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<td>Land-Use/Transportation Connection</td>
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<tr>
<td>E5a. % of Jobs within 1/2 Mile of Major Transit Stations</td>
<td>21.1%</td>
<td>38.9%</td>
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<tr>
<td>E5b. % of Jobs within 1/4 Mile of Major Transit Stations</td>
<td>10.7%</td>
<td>21.3%</td>
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<tr>
<td>E6a. % of Housing Units within 1/2 Mile of Major Transit Stations</td>
<td>9.4%</td>
<td>31.2%</td>
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<tr>
<td>E6b. % of Housing Units w/in 1/2 Mile of Major Transit Stations with 10 Minute or Better Service</td>
<td>0.0%</td>
<td>23.4%</td>
<td></td>
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</tr>
<tr>
<td>E6c. % of Housing Units w/in 1/2 Mile of Major Transit Stations with 15 Minute or Better Service</td>
<td>7.3%</td>
<td>30.6%</td>
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<tr>
<td>E7. Compatibility with current Regional Activity Centers (Hospitals, Universities/Colleges, Shopping Malls, and Tourist Attractions within 1/2 Mile of Major Transit Stations)</td>
<td>17</td>
<td>40</td>
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### F. Social Equity/Environmental Justice

<table>
<thead>
<tr>
<th>Social Equity/Environmental Justice Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
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<tr>
<td><strong>Title VI Requirements</strong></td>
<td></td>
<td></td>
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<tr>
<td>F1a. % Minority Populations within 1/2 Mile of Major Transit Stations (% Improvement)</td>
<td>11.2%</td>
<td>34.4%</td>
<td>2</td>
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<tr>
<td>F1b. % Non-Minority Populations within 1/2 Mile of Major Transit Stations (% Improvement)</td>
<td>7.0%</td>
<td>20.2%</td>
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<tr>
<td>F1c. % Low-Income Households within 1/2 Mile of Major Transit Stations (% Improvement)</td>
<td>13.2%</td>
<td>41.4%</td>
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<tr>
<td>F1d. % Non-Low-Income Households within 1/2 Mile of Major Transit Stations (% Improvement)</td>
<td>9.2%</td>
<td>18.0%</td>
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<td>Other Meaningful Social Equity/Environmental Justice Measures</td>
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<tr>
<td>F2a. % of 75+ Population within 1/4 Mile of Major Transit Stations</td>
<td>3.0%</td>
<td>12.7%</td>
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<tr>
<td>F2b. % of 75+ Population within 1/4 Mile of All Stations</td>
<td>54.8%</td>
<td>58.7%</td>
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<tr>
<td>F3. % Zero-Car Households within 1/2 Mile of Major Transit Stations (2000 census data)</td>
<td>16.7%</td>
<td>43.9%</td>
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2 Title VI requires analysis of the burdens of regional transportation system investments on low-income and minority populations. Measures in this category evaluate the comparative percent improvement between low-income and non-low-income populations and minority and non-minority populations.

Key: A "1" indicates disparate impact and a "2" indicates no disparate impact.
Urban Area Transit Strategy - Initial Performance of Transit Network Alternatives

### G. Time-Competitiveness

<table>
<thead>
<tr>
<th>Time Competitiveness Measures</th>
<th>2008 Existing</th>
<th>Baseline</th>
<th>Transit Propensity</th>
<th>Commuter Point-to-Point</th>
<th>Many Centers</th>
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<tbody>
<tr>
<td><strong>G1. Oceanside - Downtown San Diego Travel Times (in Minutes)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SOV</td>
<td>55</td>
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<td><strong>G3. El Cajon - Downtown San Diego Travel Times (in Minutes)</strong></td>
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<tr>
<td>SOV</td>
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<td><strong>G4. Mid City San Diego - Sorrento Valley Travel Times (in Minutes)</strong></td>
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<td>SOV</td>
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<td><strong>G5. Chula Vista - Sorrento Valley Travel Times (in Minutes)</strong></td>
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<td><strong>G6. San Ysidro - Downtown San Diego Travel Times (in Minutes)</strong></td>
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<td>Transit - Drive Access</td>
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<tr>
<td><strong>G7. El Cajon - Sorrento Valley Travel Times (in Minutes)</strong></td>
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<tr>
<td>SOV</td>
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<td>Transit - Walk Access</td>
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<td>111</td>
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2050 REGIONAL TRANSPORTATION PLAN: DEVELOPMENT OF THE INITIAL UNCONSTRAINED TRANSPORTATION NETWORK

Introduction

During April and May, staff presented the Urban Area Transit Strategy alternative transit networks to the Transportation and Regional Planning Committees, various SANDAG working groups, and at the 2050 Regional Transportation Plan (RTP) public workshops for public input. The networks also were reviewed by an outside Peer Review Panel. Based on feedback received so far, staff has assembled initial recommendations for a preferred 2050 transit network based on the initial three alternatives evaluated as part of the Urban Area Transit Strategy. This transit network, highway improvements, and other management strategies form the basis for the initial 2050 Unconstrained Transportation Network.

Board members are asked to discuss and provide feedback on the initial Unconstrained Transportation Network. Recommendations for a preferred Unconstrained Transportation Network will be presented at the July 2010 Board meeting for further discussion and use in the development of the Draft 2050 RTP.

2050 RTP Transportation Network Scenarios

In developing the 2050 RTP, the Unconstrained Transportation Network represents the region’s vision for reasonable transit, highway, and arterial improvements and operations to meet travel demand in 2050. Defining the Unconstrained Network is an important step in developing an updated RTP, because it establishes the broadest multimodal network from which revenue constrained network scenarios will be developed.

Once the Unconstrained Network is defined, staff will prioritize all of the future projects in this network, using the updated transportation project evaluation criteria (see Agenda Item No. 4). Based on revenue projections, various Revenue Constrained transportation network scenarios will be developed using this prioritized project list and other factors. The Revenue Constrained network scenarios will attempt to build and operate as much of the Unconstrained Network as possible, given revenue availability and flexibility, and project priorities. These scenarios will be evaluated using performance measures leading to the eventual selection of a preferred Revenue Constrained Network by the Board of Directors.

As previously discussed with the Board, Senate Bill 375 (Steinberg, 2008) (SB 375) requires that the 2050 RTP include a Sustainable Communities Strategy (SCS) as a new element, in addition to the traditional policy, action, and financial elements. The 2010 Regional Transportation Plan Guidelines adopted by the California Transportation Commission on April 7, 2010, establish that the RTP must...
be an “internally consistent” document (i.e., all four elements of the RTP must be consistent with one another). As a result, transportation investments and the forecasted development pattern in the SCS should be complementary and not contradictory.

Federal regulations require that the RTP be financially constrained and include a financial plan that demonstrates how the adopted transportation plan can be implemented [Title 23 CFR Part 450.322(f) (10)]. The financial plan must demonstrate that projects included in the RTP can be implemented using committed, available, or reasonably available revenue sources (Title 23 CFR Part 450.104). Therefore, to achieve consistency among all RTP elements, the SCS must be developed to match the financially (or revenue) constrained plan. The 2050 RTP Environmental Impact Report (EIR) will analyze the Revenue Constrained plan as the Proposed Project. Project alternatives also will be analyzed in the EIR.

Discussion

Initial Recommendations for a 2050 Unconstrained Transit Network

The Urban Area Transit Strategy will serve as the basis for development of the regional transit network to be included in the 2050 RTP. Through the planning process, staff has developed and begun testing three transit network alternatives with a focus on the urban areas of the San Diego region with the ultimate goal of incorporating one of the networks (or a combination or variation of the networks) into the 2050 RTP Unconstrained Network. The Urban Area is illustrated in Attachment 1.

As discussed in Agenda Item No. 3A, the transit alternatives under study were grouped into three themes: Transit Propensity” (expanding transit in the most urbanized areas); “Commuter Point-to-Point” (emphasizing quick access to work); and “Many Centers” (connecting local smart growth areas and activity centers).

Based on feedback from the 2050 RTP public workshops, the Peer Review Panel, the performance analysis, and the public, staff recommends combining the best overall transit system strategies contained in all three alternatives as the focus for developing and testing a preferred RTP unconstrained transit network. This strategy focuses on developing a strong link between transit and transit-supportive land use patterns, a link that will ensure that future investments made in transit are maximized in terms of cost-effectiveness. Based on this approach, staff recommends developing a Hybrid strategy based on the following key points:

- Improve the current transit network in communities that already have strong transit/land use integration (e.g., Mid-City, coastal South Bay communities, etc.). Improvements would focus on establishing 10-minute, all-day frequencies on most local routes, developing Rapid Bus services along major arterial corridors, and adding new light rail service to better serve high-demand corridors. Streetcar and/or other shuttle/circulator services also would help improve intra-community circulation within smart growth centers (e.g., downtown San Diego, downtown Escondido, downtown El Cajon, etc.). This strategy would incorporate much of Transit Propensity alternative.

- Expand high-frequency local and Rapid Bus services into the largest-scale smart-growth areas that are emerging or planned in the near-term as suggested by the Many Centers alternative. These concentrations of future transit-friendly land uses help justify significant investments in transit infrastructure and services.
• Interconnect the existing, most highly-urbanized areas and future smart growth centers to major employment areas with a system of high-speed, high-frequency rail and Bus Rapid Transit lines that will facilitate easy and convenient access across the region. Using findings from the evaluation of the Commuter Point-to-Point alternative, the addition of selected peak commuter bus services that offer one-seat rides/competitive travel would facilitate access to key regional employment centers.

• Emphasize improvements to the pedestrian environment in and around rail and bus station areas to maximize convenient and safe walking access to transit, and also create interconnections between transit and the Regional Bike Plan as a means to facilitate access to transit stations from areas outside a walking distance and create new last-mile solutions.

These actions, taken together, could serve as a good starting point for the overall strategy for developing the long-range vision for the transit plan that will ultimately be incorporated into the 2050 RTP. The Transportation and Regional Planning Committees are discussing the proposed “Hybrid” approach at their joint meeting on June 4, 2010, and any comments made will be provided verbally at the June 11 Board Policy meeting. A draft list of transit projects for the 2050 Hybrid Unconstrained Transit Network is included as Attachment 2a. (Attachment 2b provides definitions of transit services and facilities for the Urban Area Transit Strategy for reference purposes.)

**Initial Recommendations for a 2050 Unconstrained Highway Network**

Similarly to the process being proposed for the transit network, SANDAG and Caltrans staffs are analyzing potential modifications to the 2030 RTP Unconstrained highway network. These modifications are based on supporting proposed transit investments in key corridors and communities while providing an adequate level of service for the overall transportation system. It is important to note that the 2030 RTP Unconstrained highway network includes an extensive Managed Lanes system that provides tremendous flexibility in serving transit and high occupancy vehicles (HOVs) by maximizing the available rights-of-way in several of the region’s major highway corridors. The goal in reviewing the highway network is to build upon this existing plan by integrating the revised transit network into it, thereby creating the most efficient and balanced transportation system.

Potential modifications include additional operational improvements to relieve bottlenecks, refinements of the HOV and Managed Lane network to support transit services, and adjustments to general purpose lane widening beyond what is included in the 2030 Reasonably Expected RTP for corridors that are projected to operate at acceptable levels of service. A map of the initial 2050 Unconstrained Highway Network is included as Attachment 3.
Next Steps

Based on discussion today, the initial Unconstrained Transportation Network will be presented to the working groups for discussion and feedback. Recommendations for a preferred Unconstrained Transportation Network will be presented at the July 2010 Board meeting for further discussion and use in the development of the Draft 2050 RTP.

GARY L. GALLEGOS
Executive Director

Attachments: 1. Study Area for Urban Area Transit Strategy
2a. Initial List of Transit Projects for the 2050 Hybrid Unconstrained Transit Network
2b. Definitions of Transit Services and Facilities for Urban Area Transit Strategy
3. Map of Initial 2050 Unconstrained Highway Network

Key Staff Contacts: Carolina Gregor, (619) 699-1989, cgr@sandag.org
Dave Schumacher, (619) 699-6906, dsc@sandag.org
Heather Werdick, (619) 699-6967, hwe@sandag.org

Funds are budgeted in Work Elements #31003 and 31005
Initial List of Transit Projects for the
2050 Hybrid Unconstrained Transit Network

An initial list of transit projects to be included in the 2050 Hybrid Unconstrained Transit Network is proposed below. (Definitions of transit services are included in Attachment 2b as a reference.) This initial list builds upon transit services currently in operation today and on planned transit services currently included in the 2030 Reasonably Expected Regional Transportation Plan (RTP).

Based on results of upcoming model runs to test the performance of these transit projects, staff will propose modifications to the mix of projects and adjustments to the levels of service in order to maximize the cost-effectiveness for the unconstrained transit network that will eventually be incorporated into the 2050 Regional Transportation Plan.

Ultimately, the selected transit network will be accompanied by a series of policy recommendations that may enhance the performance of the networks. The policy recommendations may address issues such as urban design, parking, street connectivity, bike and pedestrian access, transit awareness and education, last mile solutions, etc. During the planning process, staff will conduct a series of sensitivity tests that may provide supplemental information on the effectiveness of any potential policies that could be considered in the planning process.

Local Bus Services

Within the Urban Area Transit Strategy study area, service frequencies on most existing local bus services would be increased to 10 minutes or better throughout the day to serve short-distance trip-making and provide connections to regional Rapid Bus, Bus Rapid Transit, and Rail services. Additional local bus services within the study area would include:

- Solana Beach-Carmel Valley-University City
- Carmel Valley-Pacific Highlands Ranch-Sabre Springs
- Mira Mesa-Scripps Ranch North-South Poway Industrial Park

Outside the study area, a basic level of local bus service (30-60 minute service throughout most of the day) would be provided to connect key communities to the urban areas, including:

- Fallbrook
- Valley Center
- Ramona
- Alpine
- Tribal nations

Rapid Bus Services

A network of limited-stop Rapid Bus services would operate in key travel corridors as overlay services to local bus services to serve medium-distance tripmaking, including:

- Oceanside-University City via Coast Highway corridor
- Oceanside-Vista via Mission Avenue corridor
- Camp Pendleton-Mira Costa College-Plaza Camino Real
• Escondido-South Escondido
• Carlsbad-San Marcos via Palomar Airport Road corridor
• Old Town-Pacific Beach-La Jolla-University City
• Mission Valley-University City via Genesee Avenue corridor
• Ocean Beach-Old Town-Mid-City-La Mesa
• Point Loma-Old Town-Linda Vista-Kearny Mesa
• SDSU-Downtown via Adams Ave/First Avenue corridors
• North Park-South Park-Golden Hill-Downtown
• Downtown-Coronado
• Downtown-Southeastern communities-Spring Valley
• SDSU-Mid-City-Lemon Grove-Spring Valley
• SDSU-Mid-City-Southeastern communities-National City
• Chula Vista-Southwestern College-Otay Ranch
• Imperial Beach-Otay-Otay Mesa

**Bus Rapid Transit Services**

All day bus rapid transit services would operate in key freeway/transit guideway corridors to serve long-distance regional tripmaking, including:

• Escondido-North I-15 communities, Kearny Mesa, Mission Valley, Downtown
• Otay Mesa-Otay Ranch-Chula Vista-National City-Downtown
• San Ysidro-Chula Vista-National City-Downtown-Old Town-University City

Peak-period commuter bus services would operate in key freeway/transitway corridors to provide point-to-point connections/one-seat ride service between key residential areas and regional employment centers, including:

• Escondido and north I-15 communities to Downtown
• Oceanside-Carlsbad-Encinitas to Sorrento Mesa
• Otay Ranch-Chula Vista to University City/Sorrento Mesa
• Southeastern San Diego communities-Mid-City to University City/Sorrento Mesa
• El Cajon-Santee to Kearny Mesa/University City/Sorrento Mesa
• Santee-El Cajon-Spring Valley to Eastern Urban Center/Otay Mesa
• Inland South Bay-Southeastern San Diego communities/Mid-City to Escondido/Palomar Airport Road corridor

**Commuter and Light Rail Services**

Double tracking of the COASTER would allow 15 minute peak/60 minute off-peak bi-directional service, while double tracking the Sprinter corridor would allow 10 minute all day service, along with express/limited stop service between Oceanside and Escondido.

A commuter rail overlay service on the proposed California High Speed Rail system would facilitate commuter travel needs between the Temecula-Escondido I-15 corridor and south county job centers.
Additional light rail services would operate in the following corridors:

- University City-Mira Mesa via Mira Mesa Boulevard
- University City-Kearny Mesa-Mission Valley-Mid-City-Southeastern San Diego communities-National City-Chula Vista via I-805 and I-15
- Downtown-SDSU via Park Blvd/El Cajon Boulevard
- Pacific Beach-Kearny Mesa-Mission Valley-SDSU-El Cajon via Balboa Avenue/Green Line

**Streetcar/Shuttle-Circulator Services**

Several streetcar and/or bus shuttle/circulator services would operate in key community center areas to facilitate both intra-area tripmaking and first-last mile connections to regional transit services.

- Downtown areas in San Diego, Oceanside, Escondido, El Cajon, National City, Chula Vista
- Community centers in University City/Sorrento Mesa, Kearny Mesa, Mission Valley, Hillcrest/North Park, Eastern Urban Center (Chula Vista)
Definitions of Transit Services and Facilities
For Urban Area Transit Strategy

High-Speed Rail:

- Designed for very high-speed long-distance intercity trips with long station spacing and dedicated grade-separated lines. Examples include the Shinkansen in Japan, the TGV in France, and the AVE in Spain. California High-Speed Rail (HSR) is currently being planned from Sacramento to San Diego.

  - Vehicles are steel wheel on steel track electrically-powered bidirectional train sets.
  - Top Speed: 220 miles per hour (mph), but 150 mph maximum expected from San Diego to Escondido and 200 mph maximum from Escondido to Riverside.
  - Level boarding.
  - Passenger Capacity: Not yet determined in CA. Examples from around the world range from approximately 300 to 1,300 per train but most single level trains have about 400-500.
  - Operates on dedicated high speed track with no at-grade crossings.
  - California HSR system will be over 600 miles.

Commuter Rail:

- Designed for higher-speed, longer-distance regional trips with stations spacing every four to five miles on average. Examples include the San Diego COASTER, Dallas/Fort Worth Trinity Railway Express, and Southern California Metrolink.

  - Commuter rail lines use diesel or electric locomotives (diesel are more common and are used in Southern California).
  - Typical speed: 80 mph.
  - Typically low floor.
  - Supported by Park and Ride lots.
  - Typical passenger capacity: 130 seats per car operating with 3-8 car trains (typically no standees).
  - Operates on a dedicated right-of-way separate from other vehicles.
  - Typical length of line: 25-100 miles.
Light Rail Transit (LRT):

- Designed for medium-distance trips with station spacing about every mile on average. Examples include the San Diego Trolley, the San Diego SPRINTER, Portland MAX, Minneapolis Hiawatha Line, and Houston MetroRail.
  - Electric or diesel-powered rail vehicles.
  - Typical speed: corridor speed limit, generally not exceeding 55 mph.
  - Designed for high-capacity corridors.
  - Integrates well with street traffic, signals, and pedestrians.
  - Operates on a dedicated guideway within separate right-of-way or on-street.
  - Typical passenger capacity: 60-140 seated plus standees (per car), with 1-4 cars.
  - Typical length of line: 6-25 miles.
  - Typically low floor.

San Diego Trolley

San Diego Sprinter

Streetcar/Shuttle-Circulator:

- Designed for short-distance trips with station spacing every few blocks or every quarter-mile on average. Streetcar examples include Portland Modern Streetcar, Seattle Streetcar, and San Francisco Historic Streetcar. Shuttle-circulators include MTS Shuttle, University City SuperLoop.
  - Typical speed: speeds up to the speed limit of the street they operate on, generally averaging 12 mph (with stops).
  - Designed for dense urban areas, such as downtown areas.
  - Integrates well with street traffic, signals, and pedestrians.
  - Streetcars operate either in mixed-traffic with automobiles or on a dedicated right-of-way.
  - Typical passenger capacity for streetcars: up to 100 seated and standees per car (vehicles generally provide few seats due to short distance nature of trips). Operate as single vehicles.
  - Typical passenger capacity for shuttles-circulators: up to 20-25 seated, depending upon vehicle size.
  - Typical length of line: 2-6 miles.

Portland Modern Streetcar

San Francisco Historic Streetcar

MTS Shuttle
Bus Rapid Transit (BRT):

Designed for longer-distance, higher-speed, regional trip-making on a dedicated bus guideway or freeway Managed Lanes/High-Occupancy Vehicle (HOV) facilities. All-day, all-stop trunk BRT services can be complemented with peak-period commuter express services designed to provide very limited stop connections to major employment centers. Examples include San Diego Interstate 15 BRT, Los Angeles Orange Line, Eugene, Oregon EmX, and the Brisbane South-East Busway.

- Diesel or CNG/alternative fuels standard.
- Typical speed: corridor speed limit, typically 40-60 mph on average.
- Supported by Park and Ride lots.
- Designed for high-capacity corridors.
- Low floor design.
- Operates on dedicated guideway and sometimes in mixed-traffic with automobiles.
- Typical passenger capacity: 50-60 seated plus standees on arterial routes, 50-80 seated on freeway routes (per bus).
- Typical length of line: 8-15 miles on arterial segments, 10-30 miles on freeway segments.
- Typical station spacing: 0.5-1 mile on arterial segments, 4-5 miles on freeway segments.

Continued on next page...
Rapid Bus:

Provides higher-speed alternatives to local bus services in high volume arterial corridors and utilizes a range of lower-capital cost signal priority treatments, short segments of transit-only lanes, and limited station stops to achieve faster travel times. Rapid Bus services can be upgraded to BRT over time through implementation of dedicated transit lanes to bypass congested arterial segments. Examples include Los Angeles Metro Rapid and Boston Washington Street Silver Line.

- Diesel or CNG/alternative fuels standard.
- Typical speed: speeds up to the speed limit of the street they operate on, averaging about 25 mph (with stops).
- Low floor design.
- Designed for high-capacity corridors.
- Integrates well with street traffic, signals, and pedestrians.
- Typical passenger capacity: 40 seated plus standees (per bus).
- Typical length of line: 8-15 miles.
- Typical station spacing: 0.5-1 mile.

High-Frequency Local Bus:

Facilitates mid-to-short-distance trip-making within local communities, with closer station spacing. Local bus services serve as the backbone of the transit system and provide the primary access into local communities where fixed-route services are warranted.

- Typically standard and single articulated buses.
- Typical speed: speeds up to the speed limit of the street they operate on, averaging 12 mph (with stops).
- Low-floor design.
- Integrates well with street traffic, signals, and pedestrians.
- Operates in mixed-traffic with automobiles, but can benefit from transit-signal priority and queue jump lanes.
- Typical passenger capacity: 37-57 seated plus standees (per bus).
- Typical length of line: ranges from under 5 miles up to 25 miles.
- Typical station spacing: 1-4 blocks.
TRANSPORTATION DEVELOPMENT CREDITS

Introduction

Federal law allows states to use certain toll revenue expenditures as a credit toward the non-federal matching share of programs authorized by Title 23 (except for the emergency relief programs) and for transit programs authorized by Chapter 53 of Title 49. This report provides the latest guidance available from Caltrans for the use of these toll credits.

Discussion

Caltrans is in the process of finalizing guidance to the use of these federal toll credits, also known as Transportation Development Credits (TDC). Attachment 1 shows a copy of the latest draft available. Although the guidance, programming and obligation have not yet been formally finalized, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) will be accepting the use of these toll credits as the non-federal match towards federal funds. It should be noted these TDC's do not represent additional funds; however, they do allow project sponsors, within allowable limits and accounting for eligibility of expenditures, to have 100 percent federal participation. Also, the use of these TDC’s is not retroactive to funds previously authorized.

The use of TDC’s needs to be appropriately documented in the Regional Transportation Improvement Program (RTIP) prior to their inclusion in an obligation request. Project sponsors requiring additional guidance or clarification should contact SANDAG programming staff for the latest guidance from Caltrans and federal agencies.

Attachment: 1. Draft Caltrans Toll Credit Use Policy

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CALIFORNIA DEPARTMENT OF TRANSPORTATION  
TOLL CREDIT USE POLICY

Version: Wednesday May 13, 2010

**Background:**
Section 1111(c) of the Transportation Equity Act for the 21st Century (TEA21), and 23 U.S.C., Section 1044 of ISTEA under Section 120(j) allows states to use certain toll revenue expenditures as a credit toward the non-federal matching share of programs authorized by Title 23 (except for the emergency relief programs) and for transit programs authorized by Chapter 53 of Title 49.

During Fiscal Year (FY) 1992 through FY 2006, California has collected approximately $18.2 billion in toll receipts, of which over $7.1 billion was invested to build and/or improve public highway facilities. Based on federal statutes, the State applied for approximately $5.7 billion in toll credits from investments during this time period. Once approved, these toll credits do not lapse until used by the state.

The Federal Highway Administration (FHWA) has granted conditional approval of $467 million in toll credits to the State from FY 2006 investments and has indicated that approval of the balance of the $5.7 billion is imminent. These guidelines would apply to the $467 million already approved and any part of the remaining $5.2 billion which may be approved by the FHWA for the State of California\(^1\) until the end of FY 2011-2012. This two year period represents the demonstration period, permanent program policy to be in place for the FY 2012 and beyond.

**Guiding Principles for use of Toll Credits:**
- Compliance with state and federal statutes,
- Maximize the use of federal funds,
- Toll credits should not result in the redirection of non-federal funds away from transportation.

**Constraints/requirements:**
- Use of toll credits does not generate additional federal funding and is limited to the non-federal match required for Apportionments and Obligational Authority (OA) available in any given year.
- All projects proposed to use toll-credits should be fully funded at the maximum allowable federal reimbursement rate.
- Use of toll credits will require amendments to current programming documents.
- FTIPs still need to be financially constrained.
- Toll credits may not be applied to projects funded with FHWA Emergency Relief funds or Appalachian Development Highway System (ADHS).
- The State must establish a special account to track toll credits.
- Processes for the tracking of toll credit usage must be established.

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\(^1\) On June 1, 2005, the Department received approval from FHWA for $104.026 million in toll credits from private entity expenditures on State Route 91. Until the policy for toll credit use in 2012-13 is developed, this $104.026 million will be kept separate for use within Orange County.
**Distribution Process:**

1. Toll credits will be made available statewide to the RTPAs for federal match, to the Highway Bridge Program Projects for off federal-aid system projects and to the Department to match federal funds used for STIP and SHOPP. Toll credits will not be used for any project in the local safety programs.
   
   a. RTPAs will provide the Department with an estimate of the total need for toll credits for the FTIP period by programming year.
   
   b. In order for the State to implement the usage of toll credits statewide, the RTPA must submit to the Department on or before October 1 of each federal fiscal year, a list of programmed FTIP projects that are planned to use the credits for the upcoming federal fiscal year (starting October 1).

2. Prior to the end of the two year demonstration period the policy will be re-evaluated and if necessary changes will be made to the methodology and process for the disbursement of toll credits to take effect in FY 2012-2013.

**Monitoring and Reporting of Toll Credit Usage and Balance**

In accordance to the FHWA February 8, 2007, Memorandum on Tolling and Pricing Program, Caltrans will establish and maintain a special account to track the use and balance of toll credits for FHWA funded projects.

Prior to using toll credits for projects funded through the FTA, RTPAs and local agencies shall develop and maintain a special account to track the use and balance of toll credits, acceptable to FTA and FHWA. The obligations of funds through FTA constitute final use of toll credits as FTA funds are not de-obligated but are amended through the FTA.