Transportation plays a pivotal role in the quality of life in the San Diego region. Respondents to public opinion polls, conducted every few years by the San Diego Association of Governments (SANDAG), have consistently identified “traffic” as a top issue in the region. Good mobility contributes to healthy employment, quality leisure time, and general livability, as well as supporting a vibrant economy.

As part of our overall mission to sustain mobility, SANDAG monitors how well our regional transportation system functions. Measuring the system’s performance helps us identify opportunities for near-term improvements and track the success of long-term strategies. Ongoing monitoring also helps to ensure that government land use and transportation investment strategies support regional goals.

Just how well is our regional transportation system performing; and how are travel conditions changing over time? To answer these critical questions, SANDAG has assembled key facts and figures in this 2010 State of the Commute report. Everyday commuters, business owners, regional decision makers, and other regional travelers will find in its pages a simple assessment of how the San Diego region’s transportation system is performing.

Divided into three sections, the report includes information on select performance indicators and discusses how key factors influence the performance of the system.

- **Getting Around the Region** – This section provides an overview of regional travel trends. It quantifies traffic flows on our freeways and regional arterials, as well as transit ridership levels.

- **How is the System Working?** – This section provides performance statistics, including regional and corridor travel delay data and information on the most heavily used transit routes.

- **My Corridor Commute** - This section analyzes the performance of a number of specific travel corridors in the region. It measures progress relative to benchmarks set for usage, travel times, and other key statistics, highlighting completed or planned projects designed to reduce congestion and minimize delay.

The data presented in this 2010 report show that our lifestyle and the economy play key roles in the usage and performance of our regional transportation system. An examination of key performance indicators and travel trends for the region indicates that the state of our commute has improved in recent years. This trend appears to be linked to infrastructure improvements that have been made during the last several years and
factors associated with the downturn in the economy. Roadway construction efforts during the last several years have focused on infrastructure improvements that address “severe congestion levels” – specific bottlenecks that cause an overall slowing of the system. These include, as will be illustrated in the My Corridor Commute section, the completion of the I-15 Middle Segment project in 2009, cutting delays in half.

Overall travel within the region, measured in terms of how many miles we travel, has decreased by 1.3 percent since 2006. As will be illustrated in the My Corridor Commute section, data collected for our major regional transportation corridors (e.g., I-5, I-15 and I-805), also show a slight decrease in travel.

Overall travel times during peak commute periods also have declined in recent years. On average, travel times have decreased by 15 to 30 percent during the morning commute period and by 15 to 27 percent in the afternoon.

The effects of the slowing economy are more evident when analyzing the reduction of delay during commute periods, which has declined by 50 percent in the region since 2006. Overall, congestion on the region’s freeways has been relatively “moderate” (meaning speeds around 35 to 50 mph), with “severe” congestion (under 35 mph) dropping significantly since 2006.

Transit continues to play a pivotal role in the region, providing commuters an alternative mode of travel. Overall transit travel has increased by more than 8 percent since 2006. The largest increases in ridership have occurred on Metropolitan Transit System bus services and the North County Transit District’s SPRINTER light rail service, with a total of approximately 3.7 million additional passengers taking transit per year since 2008.

The current SANDAG long-term growth forecast projects that travel demand and resulting impacts on the transportation network will increase between now and 2050 as a result of an expected 40 percent population increase, 33 percent increase in total jobs, and 34 percent growth in housing units. To address this projected growth, SANDAG is currently developing the 2050 Regional Transportation Plan (RTP), a long-term vision for the future of our regional transportation system. The RTP will lay out a network that will meet our growing travel demand, while at the same time addressing environmental concerns.
Understanding how the transportation system is being used is a key step in developing strategies for near-term and long-term improvements, as well as identifying approaches to meeting our transportation goals. In addition, important factors in measuring the sustainability of transportation systems and environmental impacts include miles traveled on the network, peak period trips, and transit usage.

How much are we using the transportation system?

The number of miles traveled on the region’s surface transportation system is a measure of how connected our communities are, in terms of employment and housing, but is strongly influenced by population, employment levels, and the economy. San Diego County’s proximity along the international border, as well as its role as an employment center for residents of Mexico, Imperial County, and Southwest Riverside County, also are contributing factors to the amount of travel that occurs on the region’s roadways. The measure of “vehicle miles traveled” (VMT) also is used as an indication of the environmental impact created by passenger vehicles and commercial trucks.

Freeway travel is measured and reported by the Freeway Performance Measurement System (PeMS). Within the San Diego metropolitan area and along the urban freeway system, overall travel decreased by 1.3 percent between 2006 and 2009, while County population increased by 3.9 percent. Overall, 33 million vehicle miles were traveled per weekday along the urban freeway system in 2009, or approximately 10.4 vehicle miles traveled per person, as illustrated in the accompanying graph.
Increased transit usage reduces traffic congestion and increases the sustainability of our transportation system. Transit cuts vehicle miles traveled and the associated environmental impacts. During the last four years, overall transit use has increased by more than 8 percent. In FY 2009, transit riders logged almost 525 million passenger miles on the region’s buses, shuttles, trolleys, and commuter trains.

Total transit ridership in the region has increased steadily during the last five years, with nearly 105 million passenger boardings in 2009. Transit ridership continues to be influenced by the availability of transit services, the price of gasoline, and the state of the regional economy. The events following the September 11, 2001, terrorist attacks on the United States led to considerable drops in transit ridership. Recent declines during FY 2009 can be attributed to loss in ridership on
the Blue Line Trolley from downtown to San Ysidro due to economic conditions, as well as a 25 percent drop in pedestrian border crossings from Mexico.

The notable increase that started in fiscal year 2006 was a result of the opening of the Green Line Trolley Extension in 2005 and SPRINTER light rail service introduced in 2007.
What alternative choices are travelers using?

In addition to transit, alternative travel modes such as carpooling/vanpooling, biking/walking, and teleworking reduce the number of vehicles using the transportation system. The resulting decrease in volumes and vehicle miles traveled reduces congestion and environmental impacts.

How residents in the region commute has stayed fairly consistent over the last five years. Commute mode share data is obtained from the annual American Community Survey conducted by the U.S. Census Bureau and based on a limited number of survey responses (1 out of 40 households). San Diego County survey data indicate that, while the majority of commuters continue to drive alone to work, alternative modes of transportation continue to play a role in the regional commute. Walking to work and working from home have become attractive choices for some commuters. Carpooling and vanpooling continue to provide the primary alternatives to solo commuting.

While the survey found a decline in carpooling/vanpooling during 2009, the SANDAG regional vanpool program recorded a 5 percent growth from 2008 to 2009; and that while transit, walking, and biking remained relatively constant, teleworking continued to grow. Although overall transit ridership and passenger miles have been increasing, use of public transit for the commute to and from work by San Diego County residents has remained relatively stable. Growth in overall transit ridership can be attributed to non-work trips, such as student trips to academic institutions, access to special events and attractions, and transit trips outside of the commute periods. Alternative travel modes are influenced by the economy, as well as transit fares and incentives such as those offered by the SANDAG iCommute program.
The performance of the surface transportation system is best evaluated by measures such as delay, congested segments, and travel time. Transit is best measured through ridership levels. These indicators can be used to assess improvements, identify bottlenecks, and develop strategies and investment plans. As noted earlier in the report, recent system investments and the economic downturn have resulted in improvements to the performance of the transportation system. Decreases in traffic volumes and facility improvements have reduced overall delay in the region and have eased congested areas along the region’s freeways.

**Total freeway delay during peak-hour commute**

Congestion or delay on our region’s freeways is measured in terms of the number of hours each vehicle operates below a certain speed. For example, “severe” delay occurs when vehicles are operating on the freeway at a sustained speed of less than 35 miles per hour.

After years of steady growth in freeway delay, the region has experienced a significant decrease in severe delay during the peak commute periods. Freeway delay peaked in 2006, but since then has decreased by more than 50 percent. In 2009, freeway delay dropped to approximately 2.8 million vehicle-hours during commute periods. The cause of the drop can be traced to the recent economic downturn, as well as the completion of several critical freeway improvements in the region. Some of those improvements are highlighted in the My Corridor Commute section of this report, including the I-5 North, I-15, and SR 52 corridors.
Regional bottlenecks

In recent years infrastructure improvements have played a key role in decreasing delays at specific bottlenecks. As illustrated below, identifying the causes of delay and measuring the outcomes of system improvements can be accomplished by examining specific segments/locations along individual freeways.

Our efforts to address major bottlenecks along key freeway corridors have resulted in the completion of several projects that have reduced severe congestion levels along our major freeway corridors and contributed to the reduction in delay. For example, the I-5 HOV Lane Extension and I-15 Express Lanes projects have helped to reduce delay on specific freeway segments to levels below 2005 conditions. While a stretch of SR 78 in San Marcos is now the most congested segment in the region, overall delay experienced by commuters has been relatively moderate when compared to delay experienced on the I-5 and I-15 in the past. However, future planned improvements for SR 78, as well as the completion of the I-15 Express Lanes project, will benefit commuters along these corridors. The identification of top regional bottlenecks and their impacts on travel times and delays will be an on-going performance reporting effort and documented in future State of the Commute reports.

REGIONAL BOTTLENECKS
Annual freeway delay by freeway during commute periods

Based on regional travel data for the urban freeway system, it is estimated that approximately 50 percent of daily travel is made during the morning and afternoon commute periods (weekdays from 6 to 10 a.m. and 3 to 7 p.m.). The level of delay is also the highest during these morning and afternoon time periods.

An analysis of the 2009 data showed that the majority of freeway delay in the San Diego region occurred during the commuting periods on the major freeway corridors: I-5, I-15, I-805, and SR 78. These four freeways account for more than 80 percent of the freeway delay observed during the morning and evening commute periods. More than 30 percent of delay observed during the morning commute occurs on I-15, particularly in the southbound direction. Nearly one-quarter of the morning delay occurs on SR 78, primarily in the westbound lanes. I-5 accounts for more than 30 percent of the total delay during the evening commute, with both northbound and southbound lanes congested. Both directions of I-15 experience congestion during the evening commute, with one-fifth of all delay occurring on this freeway facility.

NOTE: Delay is based on observed data in the freeway general purpose lanes and available freeway detection.
Freeway delay by major corridor

Freeway delay impacts commuters differently depending on the freeway corridors used for travel to and from work. The accompanying graph shows the maximum delay a typical commuter might have experienced in 2009 while driving a given freeway corridor. This figure is calculated based on the entire length of the freeway for both the morning and afternoon commutes and using the estimated number of travelers on that facility.

For example, in 2009, a freight truck hauling cargo daily between Oceanside and San Ysidro during peak commute hours may have experienced as much as 44 hours – or just more than a week – of delay over the course of the year. A commuter on I-5 may have experienced as much as 20 to 24 hours of delay commuting from Oceanside to San Ysidro throughout the course of the same year. Commuters on SR 78 experienced a similar level of delay driving between Oceanside and Escondido. Travelers in the I-15 and I-805 corridors experienced the next highest level of annual delay, at 35 hours and 22 hours, respectively, during 2009.

2009 top transit routes by ridership

Transit ridership is a key performance measure in assessing the productivity of services. Increased transit ridership reduces demand on the transportation system, cutting environmental impacts and easing traffic congestion. The region’s transit operators provided service to nearly 105 million passengers in 2009 with more than 60 percent riding buses.

The Blue Line Trolley from San Ysidro to Old Town is the busiest transit route, serving more than 20 million passengers annually. The Green Line and Orange Line Trolleys each serve more than eight million passengers a year. The Route 7 bus service from La Mesa to downtown San Diego serves approximately 3.8 million passengers, and is the most patronized local bus route in the region. Taken together, the two local bus routes from San Ysidro
to downtown San Diego and National City serve more than five million passengers. The SPRINTER light rail service from Escondido to Oceanside serves almost 2.2 million passengers annually.

### Transit ridership of TransNet-supported services

Continued investments in new transit services, as well as rehabilitation of existing networks, is an important aspect of increasing ridership. The TransNet program has played a key role in developing major transit services in the region. During the last five years, TransNet-supported transit services have served approximately 30 million transit passengers annually.

In 2009, the SuperLoop, SPRINTER, COASTER, and Orange/Blue lines together carried more than 33 million passengers, almost one-third of all transit ridership in the region.
The San Diego region’s freeway system is considered one of the finest in the nation. To maintain a high level of service as the region grows, it will have to employ new approaches. Continuing to simply widen freeways to increase capacity is becoming infeasible due to such factors as right-of-way space limitations; increases in construction costs; and reductions in transportation funds for infrastructure improvements – as well as state and federal government mandates that regions reduce greenhouse gas emissions.

The following My Corridor Commute section provides a traveler’s perspective on daily commutes in the region and illustrates how peak travel has changed over time for the I-5 North, I-15, I-805, SR 52, and SR 78 commute corridors. This section provides freeway performance data for these featured corridors, including overall corridor travel, travel time, and corridor delay. This data is provided by the Performance Measurement System (PeMS), which is used for reporting and monitoring the performance of the freeway system. Freeway performance reported in this section is based on data observed by freeway detectors and is subject to the availability and “health” of these detectors. The regional map on the next page shows the existing PeMS detection coverage.

Each featured corridor reports travel times during the A.M. and P.M. commute. Travel times represent trip times once on the freeway rather than door-to-door commute times. PeMS takes data from the freeway detectors, estimates travel speeds for a given travel corridor and calculates travel time from one freeway on-ramp to the ultimate off-ramp. Morning and evening travel times in this section assume that one enters the freeway at 8 a.m. and 5 p.m., respectively.

The reported travel times in this section will differ from travel times reported in other reports or documents, such as the Regional Transportation Plan (RTP). While travel times in My Corridor Commute are based on actual observed roadway data, “door-to-door” travel times in the RTP are based on the San Diego Regional Transportation Model. Travel time estimates from the Regional Transportation Model are based on roadway configurations, traffic volumes, and intersection controls for all streets, arterials, and freeways along the trip route. Modeled travel times are not observed data, but derived from a series of programs designed to forecast travel demand on the transportation system.

Commute travel times are reported in three different ways: average, median, and budget. The average travel time is simply that: the average of all midweek travel times (Tuesdays, Wednesdays, and Thursdays) for a time period. The median (or 50th percentile) travel time is the typical travel time that occurs during the middle of the work week for the same time period. The budget time reported in this section is a measure of the freeway corridor’s reliability. The budget time is the time you would need to add to your typical commute to ensure an on-time arrival at your destination. Higher budget times are related to less reliable travel caused by freeway bottlenecks, higher freeway incident rates, prevalence of special events, etc.

Efforts to improve PeMS and roadway performance monitoring are ongoing. Specific enhancements currently under development will allow PeMS to incorporate real-time transit and arterial data. With the completion of missing detection on the region’s arterials and remaining freeway segments, PeMS will have the ability to report door-to-door travel times in selected corridors for both automobiles and transit vehicles.

Transit performance data comes from the transit operators, the Metropolitan Transit System (MTS), and the North County Transit District (NCTD).

This section also provides information about plans for improving mobility along the region’s transportation corridors, as well as a brief assessment of the travel benefits resulting from the completion of freeway improvement projects in some of the featured corridors.
The I-5 North commute corridor serves as a critical north-south travel link that connects San Diego to Los Angeles County, Orange County, and Baja California, Mexico. The corridor is used by commuters, as well as recreational and commercial travelers. In addition, the corridor provides a number of commuting options for local, regional, and interregional trips, including the existing eight-to ten-lane freeway network, the COASTER commuter train, and the local street network.

Freeway congestion is prevalent for this corridor and is expected to worsen during peak commute periods as population grows over time. The average daily traffic volume along this freeway corridor ranges from 135,000 to 250,000 vehicles. Commute times between Oceanside and the Sorrento Valley/ La Jolla area range from 31 to 44 minutes southbound in the morning and from 33 to 39 minutes northbound during the afternoon peak. Congestion also affects the reliability of travel times for southbound travel; commuters need to plan for an extra four minutes on average to complete their morning commutes.

Average weekday transit ridership in the corridor has seen a decrease in recent years, dropping from 6,267 to 5,058.

During the last several years, freeway improvements have been made in the corridor, including the addition of carpool lanes from Via de la Vallee to just south of Manchester Avenue and the construction of auxiliary lanes and interchange improvements at Lomas Santa Fe Drive. These improvements have improved travel times along those freeway sections.

Data gathered before and after the completion of the I-5 improvements indicate that motorists traveling northbound and southbound on the freeway have experienced a 50 percent reduction in delay. Overall corridor travel times have improved dramatically for southbound traffic, dropping from almost 56 minutes to 42 minutes to downtown San Diego.

Additional improvements planned for this corridor include the I-5 North Coast Express Lanes project, which will extend from La Jolla Village Drive to Vandegrift Boulevard. Proposed project improvements include the construction of HOV/Express Lanes, auxiliary lanes, and possibly one general travel lane in each direction. The proposed improvements will create a flexible freeway network that will provide additional travel choices, including facilities for carpooling/vanpooling and premium transit services.

Improvements are also planned to the rail line that runs parallel to I-5 in San Diego County. Approximately $800 million in upgrades are planned to support COASTER and Amtrak rail services. These infrastructure projects include double tracking, bridge and track replacement, new stations, grade separations, and other safety and operational improvements.

Growth projections along the corridor indicate that traffic will increase. Commuting delays between the north coastal area and downtown San Diego are estimated to reach 80 to 90 minutes by 2030 if improvements are not made. In addition, without improvements forecasts indicate that congested periods will reach six hours for southbound morning and six hours for northbound afternoon commute periods by 2030 compared to five hours currently for each period.

The I-5 North Coast Express Lanes project would maintain or improve future traffic levels of service through 2030 over the existing levels of service, as well as improve or maintain free flow travel times during peak commute hours. This project has been identified as a high priority in the region and is currently part of the TransNet Early Action Program (with the focus on the completion of the environmental document). The draft environmental document was released in June 2010 for a five-month public review and comment period. Detailed project information is available at KeepSanDiegoMoving.com.
Average Weekday Travel
I-5 from SR 76 to Front/First Streets

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<thead>
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<th>Year</th>
<th>Travel (million vehicle miles)</th>
</tr>
</thead>
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<td>2008</td>
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Average Freeway Travel Time

<table>
<thead>
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</thead>
<tbody>
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<tr>
<td>2009</td>
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Average Weekday Transit Ridership

<table>
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</tr>
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<td>FY 2008</td>
<td>42</td>
</tr>
<tr>
<td>FY 2009</td>
<td>42</td>
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I-5 IMPROVEMENTS: BEFORE AND AFTER

Year 2009 A.M. Travel Time Southbound Starting at 8:00 a.m. 42 minutes
Year 2009 P.M. Travel Time Northbound Starting at 5:00 p.m. 39 minutes

COASTER Commuter Rail FY2009 Boardings: 1,501,619

Average Weekday Traffic I-5 at Del Mar Heights Road Year 2009: 247,000

Note: Ridership at Solana Beach screenline for COASTER and Route 101 bus.
The I-15/SR 163 commute corridor consists of a 35-mile eight- to ten-lane freeway segment between SR 78 and downtown San Diego, a transit network that includes Express Bus service into downtown San Diego from northern inland communities, and approximately 25 miles of parallel arterial network. The corridor currently includes the operation of a 16-mile HOV/Express Lane facility between SR 163 and Centre City Parkway. The corridor is the primary north-south link that connects northern inland communities with other San Diego County communities.

Congestion on this corridor is a critical regional issue because it is one of just two major north-south commuter routes. The corridor serves local, regional, and interregional travel. The corridor is the primary inland north-south trunk line that connects and serves travelers coming from Southwest Riverside County to downtown San Diego and other regional destinations. The corridor also serves as one element of a major interregional goods movement corridor, connecting Mexico with Riverside and San Bernardino counties, as well Nevada.

Average daily traffic in the corridor ranges from 100,000 vehicles on SR 163 near Balboa Park to 300,000 at the I-15/SR 163 junction. Travel times in the corridor are approximately 34 minutes for morning southbound commutes and 30 minutes for afternoon northbound commutes. In order to reach morning commute southbound travel destinations on time, travelers need to plan for an extra seven minutes of possible delay. Regional corridor transit use recently has increased from 2,082 to 2,235 on an average weekday.

Overall, travel times in the corridor have decreased over time. The decreases are the result of the completion of several key freeway improvements, including the I-15 Express Lanes middle segment from SR 56 to Centre City Parkway in 2009. Delays have since been reduced by 25 to 50 percent.

The completion of the on-going I-15 Express Lanes construction project will help maximize overall capacity of the I-15 corridor. Estimates based on anticipated population growth indicate that traffic volumes will increase approximately 20 to 35 percent throughout the corridor. The middle and northern sections of the Express Lanes will help accommodate that anticipated growth. When completed, the I-15 Express Lanes will provide a four-lane freeway-within-a-freeway – including a movable barrier capable of changing lane configurations – stretching 20 miles from SR 163 to SR 78. The project also will add a Bus Rapid Transit (BRT) system to the corridor. The BRT system will connect with the I-15 Express Lanes facility via direct access ramps (DAR). The DARs will route users directly onto the Express Lanes, avoiding surface streets and general purpose ramps and lanes. The movable barriers and the BRT system will improve the flow of traffic and transit and will have the ability to adjust to increases in congestion during peak hours.

This project, which has been identified as a high priority in the region and is currently part of the TransNet Early Action Program, is under construction. The Express Lanes will be complete in 2012. Detailed project information is available at KeepSanDiegoMoving.com.
Average Weekday Travel
I-15/SR 163 from SR 78 to A Street

Travel (million vehicle miles)

2005 2006 2007 2008 2009

Travel Speeds

1999 2004 2009

Travel Speed (mph)

0 10 20 30 40 50 60

AM Travel Time Reliability to Downtown San Diego

Travel Time (minutes)

Budget Time
Median Travel Time

2005 2006 2007 2008 2009

Budget Time
Median Travel Time

Travel (million vehicle miles)

2005 2006 2007 2008 2009

Delay (vehicle hours)

0 50 100 150 200 250 300 350 400 450 500

I-15 IMPROVEMENTS: BEFORE AND AFTER

Corridor Delay and Travel I-15 Middle Segment
Centre City Parkway to State Route 56

Delay
Travel

0 5 10 15 20 25 30 35 40 45 50

2005 2006 2007 2008 2009

Note: Ridership at Miramar Way screenline for Route 20 and Series 800 Express buses.
The I-805 commute corridor consists of approximately 29 miles of eight- to ten-lane freeway stretching from near I-5 at the San Ysidro Port of Entry with Mexico to the I-5 interchange in Sorrento Valley. The corridor includes a transit network that is limited to local route services, and a local roadway network that supports regional east-west travel to and from the communities adjacent to the freeway.

The I-805 corridor serves local, regional, and interregional travel. It is a heavily utilized regional commuter route that provides a north-south path from South County communities to employment centers in downtown San Diego and Sorrento Valley. It also serves as part of a larger interregional goods movement corridor, connecting international trips from Mexico to other freeway facilities and to destinations in Riverside and San Bernardino counties, as well as Nevada.

Delays and congestion are directional on the corridor. The average daily traffic volume along this corridor ranges from 110,000 to 240,000 vehicles. Commuters generally experience delays in the morning when traveling to downtown San Diego and Sorrento Valley. In the afternoon, travelers experience delay when traveling to South Bay locations. Travel times in the corridor have been estimated at 17 minutes and 28 minutes for morning northbound travel to downtown San Diego and Sorrento Valley, respectively. Northbound commuters traveling to Sorrento Valley experience the greatest variability in travel time, requiring them to plan for an extra seven minutes of delay on average to reach morning commute destinations.

Planned improvements include southbound auxiliary lanes, which are currently under construction between SR 54 and H Street in Chula Vista. Expected to be complete in early 2011, the project will reduce current and future traffic congestion during the afternoon southbound commute by easing access between the SR 54 interchange and Bonita Road.

By 2030, population and employment within the I-805 corridor are expected to increase by 39 percent and 28 percent, respectively. That growth is expected to lead to a 50 percent increase in traffic, resulting in increased delays and congestion spots in the corridor.

Recent analysis indicates that northbound travelers are affected by a number of bottleneck areas prevalent during morning commute periods near the 43rd Street, El Cajon Boulevard, and Governor Drive interchanges. Based on a corridor-wide delay analysis completed in 2007, the Governor Drive area accounts for about 44 percent of the overall corridor delay during the northbound morning commute.

To address current and anticipated demand, proposed improvements along this corridor include the completion of an HOV/Express Lanes system from Palomar Street to the I-805/I-5 interchange. The project, which will be constructed in phases, includes two Express Lanes in each direction and will offer a premium level of service to transit users, carpools/vanpools, and FasTrak customers.

A bus rapid transit (BRT) system will operate in the HOV/Express Lanes, connecting South County to major regional employment centers in downtown San Diego and Sorrento Valley. This project is an integral part of the proposed improvements along the I-5 and I-15 Express Lanes systems. It will compliment proposed system improvements that will provide transportation choices to commuters, including BRT transit services and carpooling/vanpooling, resulting in more reliable and efficient travel times.

The I-805 Express Lanes project has been identified as a high priority in the region and is part of the TransNet Early Action Program. The project is currently in various phases of implementation. The draft environmental document for the southern section of the project between East Palomar Street and SR 15 was released in August 2010 for public review and comment. Other project sections are in the preliminary engineering stages. Detailed information is available at KeepSanDiegoMoving.com.
CHULA VISTA TO DOWNTOWN SAN DIEGO AND SORRENTO VALLEY

Average Weekday Travel I-805 from SR-905 to Mira Mesa Blvd.

Travel (million vehicle miles)

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Average Weekday Traffic I-805 at Governor Drive
Year 2009: 196,000

Travel Time to/from Sorrento Valley

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<td>2009</td>
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</table>

Year 2009 P.M. Travel Time
Southbound
Starting at 5:00 p.m.
30 minutes

Year 2009 A.M. Travel Time
Northbound
Starting at 8:00 a.m.
28 minutes

Travel Time to/from Downtown San Diego

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<tr>
<th>Year</th>
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<th>PM Outbound</th>
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<td>2009</td>
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</table>

Average Weekday Traffic I-805 at SR-54 Year 2009: 237,000

Travel Time (minutes)

Year 2009 P.M. Travel Time
Southbound
Starting at 5:00 p.m.
15 minutes

Year 2009 A.M. Travel Time
Northbound
Starting at 8:00 a.m.
17 minutes

Average Weekday Travel
I-805 from SR-905 to Mira Mesa Blvd.

Travel Time (minutes)

<table>
<thead>
<tr>
<th>Year</th>
<th>AM Travel Time Reliability to Sorrento Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>12</td>
</tr>
<tr>
<td>2006</td>
<td>13</td>
</tr>
<tr>
<td>2007</td>
<td>13</td>
</tr>
<tr>
<td>2008</td>
<td>9</td>
</tr>
<tr>
<td>2009</td>
<td>7</td>
</tr>
</tbody>
</table>

Average Weekday Traffic
I-805 at Governor Drive
Year 2009: 196,000

Travel Time (minutes)

<table>
<thead>
<tr>
<th>Year</th>
<th>AM Travel Time Reliability to Sorrento Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>39</td>
</tr>
<tr>
<td>2006</td>
<td>38</td>
</tr>
<tr>
<td>2007</td>
<td>35</td>
</tr>
<tr>
<td>2008</td>
<td>31</td>
</tr>
<tr>
<td>2009</td>
<td>28</td>
</tr>
</tbody>
</table>
The SR 52 commute corridor consists of approximately 12 miles of four- to six-lane freeway running from SR 125 in Santee to the I-805 interchange in Kearny Mesa. The corridor also includes a roadway network that serves as an alternate route to I-8 for local east-west travel. The corridor serves as a critical east-west travel link that connects east San Diego County communities with employment centers located in Kearny Mesa. In addition, the corridor serves as an important trunk route by connecting with other key freeway corridors, including the I-5, I-15, I-805, and SR 163.

Travel delays along the corridor are directional and are similar to the I-8 corridor, with both reflecting similar morning and afternoon commuting patterns. Commuters encounter delays when heading west in the morning and east in the afternoon. The daily average traffic volume along this corridor ranges from 60,000 to 79,000 vehicles.

According to historical average weekday traffic delay data, commuters experience longer travel times in the afternoon than they do during the morning commute. This may be attributed to higher use of the corridor during the afternoon period coupled with probable delay experienced during the construction of the eastbound auxiliary lane between I-15 and Mast Boulevard that occurred from early 2008 through 2009.

Other recent corridor improvements include the completion of the westbound auxiliary lane from east of Santo Road to I-15, completed in 2008. Tracking of delay before and after the completion of the project indicates that delays have been cut in half since 2005.

The recent completion of the projects, along with other planned SR 52 corridor improvements, will enhance future east-west travel for East County communities. Based on growth expected to occur between 2009 and 2030, traffic along the corridor in some segments will double during the next 20 years.

On-going improvements are planned in several phases, including a freeway interchange at SR 52 and SR 67, the establishment of a riparian habitat, and bike paths and pedestrian trails along Forester Creek. SR 52 will serve as a more efficient commuter route alternative to I-8, as well as other key arterial routes such as Mission Gorge Road and Mast Boulevard. It is anticipated that SR 52 will provide travel commute relief to I-8 by as much as 20 percent, provide more reliable and direct access to job centers for commuters traveling from East County, and reduce travel times by about 10 minutes.

Future SR 52 corridor projects include the addition of an Express Lanes system from I-15 to SR 67. This project has been identified as a high priority in the region and is currently part of the TransNet Early Action Program. Detailed project information is available at KeepSanDiegoMoving.com.
SR 78 Corridor

State Route 78 serves as a principal commute corridor in North County. The six-lane freeway from Oceanside to Escondido is approximately 17 miles and provides one of the region’s east-west roadways connecting the I-5 and I-15 corridors. Portions of SR 78 west of I-15 are currently experiencing congestion and delay during peak periods. It is predicted that SR 78 will experience an increase in traffic in the future, which will lead to increased delay if improvements are not made to the corridor. Average daily traffic in this corridor ranges from 123,000 at the western end near I-5 to 163,000 at the eastern approach toward I-15.

In early 2008, SANDAG and the North County Transit District introduced the SPRINTER light rail system, designed to reduce vehicle trips along the SR 78 corridor and adjacent roads by thousands per day. Because the SPRINTER runs parallel to SR 78, connecting Oceanside, Vista, San Marcos, and Escondido, it is an excellent transit alternative to driving this corridor. Local corridor bus service on Route 320 served 880 daily passengers through 2007. The SPRINTER rail service now supports more than 3,000 daily passengers.

Additionally, SANDAG is working with Caltrans, and the cities of San Marcos and Escondido on proposed improvements to westbound SR 78 at I-15 and to the Nordahl Road bridge. The improvements will address severe traffic congestion during the morning and afternoon commute hours. They include: widening the connector on-ramp from I-15 to westbound SR 78; adding a fifth westbound lane on SR 78 between the end of the I-15 connector ramp and Nordahl Road; adding a lane on the westbound SR 78 off-ramp to Nordahl Road; replacing the Nordahl Road bridge to improve height clearance; and adding space for turn lanes to the SR 78 eastbound and westbound on-ramps. These improvements are planned for construction from mid-2011 through 2013 as part of the TransNet program.

In addition to these short-term improvements, on-going planning efforts continue to evaluate potential long-range improvements for the SR 78 corridor. Currently, SANDAG is working with stakeholders to conceptually examine the feasibility of adding express toll lanes and other non-toll congestion management transportation alternatives through the SR 78 Corridor Study. The study is expected to be complete in spring of 2012.
Year 2009 A.M. Travel Time
Westbound
Starting at 7:30 a.m.
16 minutes

Year 2009 P.M. Travel Time
Eastbound
Starting at 4:00 p.m.
22 minutes

Average Weekday Traffic
SR 78 at Barham Road
Year 2009: 156,000

Average Weekday Travel
SR 78 from I-5 to I-15

Average Freeway Travel Time

PM Travel Time Reliability to Escondido

Average Weekday Transit Ridership

Note: Ridership at Vista Transit screenline for SPRINTER and Route 302, 318, and 320 buses.
SR 905 Corridor

SR 905 is a partially constructed 12-mile corridor extending from I-5 to the Otay Mesa Port of Entry (POE). Completion of this six-lane extension project will connect the POE to I-5, I-805, and the South Bay Expressway.

SR 905 is a vital route for interregional and commercial traffic. The Otay Mesa POE is the only commercial vehicle crossing between San Diego and Tijuana. Presently, the only way to access this border crossing is via Otay Mesa Road, a busy surface street. SANDAG expects border crossings at this POE to quadruple by 2030, making the completion of SR 905 crucial to reducing delay and supporting economic growth.

SR 76 Corridor

The section of SR 76 from Oceanside to I-15 serves as a major commuter route. East of I-15, SR 76 serves mainly rural communities and tribal reservations. Portions of SR 76 are currently experiencing delay during peak periods mainly due to increasing development and the resulting traffic. The problem is compounded by insufficient highway capacity, as well as a lack of parallel routes and cross street traffic access and control.

In order to alleviate the congestion on this corridor, SANDAG is widening and realigning SR 76 between Melrose Drive and I-15. Work began on the portion from Melrose Drive to Mission Road in January 2010, with an estimated completion date in fall 2012. The draft environmental document for the SR 76 widening from Mission Road to I-15 was released for a 60-day public comment period in September 2010, and the final document is expected to be complete in late 2011. Construction is scheduled to start in 2012. The corridor is currently under several phases of implementation and is part of the TransNet Early Action Program. Detailed project information is available at KeepSanDiegoMoving.com.

Mid-Coast Corridor

The Mid-Coast Corridor Transit Project proposes to extend the San Diego Trolley from the Old Town Transit Center north to University City. Travel demand is expected to increase in the Mid-Coast corridor, and there is a need to provide a reliable, high-capacity transit service to serve this demand and improve travel times.

In July 2010, the SANDAG Board of Directors unanimously approved the Locally Preferred Alternative for the Mid-Coast Corridor Transit Project. The alternative will run parallel to I-5 for most of the route, and will provide trolley service to UCSD and key employment centers.

SANDAG is conducting an environmental review and preparing a draft supplemental environmental impact statement and report. The draft SEIS/SEIR is expected to be released in summer 2011 for public review and comment. The project is part of the TransNet Early Action Program. Detailed project information is available at KeepSanDiegoMoving.com.
Data Sources and Methodology

Getting Around the Region

1. Freeway Miles Traveled per Person - Weekdays
   Sources: Caltrans, Freeway Performance Measurement System (PeMS Version 10.3); California Department of Finance, County Population Estimates (Table E-4)
   Data: Freeway vehicle miles of travel (VMT), County Population
   Period: Fiscal Years 2000 through 2009 (July – June)
   Days: Weekdays (Monday through Friday)
   Hours: All

2. What Roadways Do We Use?
   Source: SANDAG, San Diego Regional Model, Series 12 Forecast, 2010 RTP Model Network
   Day: Vehicle miles of travel (VMT), Lane-Miles
   Period: Calendar Year 2010
   Days: Weekdays (Monday through Friday)
   Hours: All

3. Regional Travel on Transit
   Sources: San Diego Metropolitan Transit System, North County Transit District, SANDAG Passenger Counting Program Reporting
   Datum: Transit ridership for fixed-route buses
   Period: Fiscal Years 2004 through 2009
   Days: All
   Hours: All

4. Total Transit Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, 2010-2014 SANDAG Coordinated Plan
   Datum: Passenger Boardings for fixed-route buses and Trolley, COASTER, and SPRINTER
   Period: Fiscal Years 2000 through 2009 (July – June)
   Days: All
   Hours: All

5. Total Rail Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, 2010-2014 SANDAG Coordinated Plan
   Datum: Passenger boardings for Trolley, COASTER, and SPRINTER
   Period: Fiscal Years 2000 through 2009 (July – June)
   Days: All
   Hours: All

6. Total Bus Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, 2010-2014 SANDAG Coordinated Plan
   Datum: Passenger Boardings for fixed-route buses
   Period: Fiscal Years 2000 through 2009 (July – June)
   Days: All
   Hours: All

7. What Alternative Choices are Travellers Using?
   Source: American Community Survey, One-Year Estimates, U.S. Census Bureau
   Datum: Means of Transportation to Work (Table B8301)
   Geographical: San Diego County, California
   Period: Calendar Years 2005 through 2009

How is the System Working?

8. Annual Peak Period Delay - Weekdays
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Vehicle hours of delay (35 mph threshold) per traveller
   Period: Calendar Year 2009
   Days: Weekdays (Monday through Friday)
   Hours: 6:00 to 10:00 a.m., 3:00 to 7:00 p.m.

9. Regional Bottlenecks
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Vehicle hours of delay (35 mph threshold) by selected freeway segment
   Period: Calendar Years 2005 through 2009
   Days: Weekdays (Monday through Friday)
   Hours: All

   Delay normalized by lane mile for each freeway segment.
   EB SR 78 from Mar Vista Rd to I-15: 8.5 miles, 3 lanes, 25.5 lane miles
   10. Delay by Freeway During Commute Periods
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Vehicle hours of delay (35 mph threshold) Period: Calendar Year 2009
   Days: Weekdays (Monday through Friday)
   Hours: 6:00 to 10:00 a.m., 3:00 to 7:00 p.m.

   Delay aggregated for each freeway corridor in both directions for the portions of freeway route with available detection.

   11. Freeway Delay by Major Corridor
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Vehicle hours of delay (35 mph threshold) per traveller
   Period: Calendar Year 2009
   Days: Weekdays (Monday through Friday)
   Hours: 6:00 to 10:00 a.m., 3:00 to 7:00 p.m.

12. 2009 Top 10 Transit Routes by Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, SANDAG Coordinated Plan
   Datum: Transit boardings for selected routes
   Period: Calendar Year 2009
   Days: All
   Hours: All

13. Transit Ridership of TransNet-Supported Services
   Source: SANDAG, San Diego Metropolitan Transit System, North County Transit District, 2010-2014 SANDAG Coordinated Plan
   Datum: Transit boardings for selected routes
   Period: Fiscal Years 2004 through 2009 (July – June)
   Days: All

14. Average Weekday Travel Time
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Average (Mean) Departure Travel Time
   Period: Calendar Year 2009
   Days: Weekdays (Monday through Friday)
   Hours: 6:00 a.m., p.m. Departure Time: 5:00 p.m.

15. Average Freeway Travel Time
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Average (Mean) Departure Travel Time
   Period: Calendar Year 2009
   Days: Weekdays (Monday through Friday)
   Hours: 6:00 a.m., p.m. Departure Time: 5:00 p.m.

16. Freeway Travel Time Reliability
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: 50-Percentile (Median) Departure Travel Time
   Period: Calendar Year 2009
   Days: All
   Hours: All

17. Average Weekday Transit Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, SANDAG Passenger Counting Program Reporting
   Datum: Transit ridership at selected route screenline
   Period: Fiscal Years 2005 through 2009 (July – June)
   Days: Weekdays (Monday through Friday)
   Hours: All

18. Freeway Travel Speeds
   Source: Freeway Performance Measurement System (PeMS Version 10.3), Caltrans
   Datum: Travel Times and Speeds (I-15 only)
   Period: Calendar Years 1999, 2004, and 2009
   Days: Weekdays (Monday through Friday)

   Overall corridor travel speed is based on the corridor travel time (in hours) and the corridor length (in miles). For 1999 and 2004, Express Lanes travel speeds are based on travel on the reversible Express Lanes facility from SR 163 to SR 56, and the general purpose lanes on I-15 from SR 56 to SR 78. Express Lanes travel speed for 2009 is based on travel in the reversible Express Lanes facility from SR 163 to SR 56, and the Express Lanes facility from SR 56 to Via Rancho Parkway and I-15 general purpose lanes from Via Rancho Parkway to SR 78.

19. Freeway Annual Average Daily Traffic (AADT)
   Source: Annual Average Daily Traffic Volumes, Caltrans Data Traffic Branch

20. Corridor Transit Ridership
   Source: San Diego Metropolitan Transit System, North County Transit District, SANDAG Passenger Counting Program Reporting
   Datum: Transit ridership for selected corridor services
   Period: Fiscal Year 2009 (July – June)
   Days: Weekdays (Monday through Friday)
   Hours: All

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