

SOUTHERN CALIFORNIA



**ASSOCIATION of
GOVERNMENTS**

Main Office

818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

Officers

President

Greg Pettis, Cathedral City

First Vice President

Carl Morehouse, San Buenaventura

Second Vice President

Cheryl Viegas-Walker, El Centro

Immediate Past President

Glen Becerra, Simi Valley

**Executive/Administration
Committee Chair**

Greg Pettis, Cathedral City

Policy Committee Chairs

Community, Economic and

Human Development

Margaret Finlay, Duarte

Energy & Environment

James Johnson, Long Beach

Transportation

Keith Millhouse, Ventura County

Transportation Commission

MEETING OF THE

TRANSPORTATION COMMITTEE

***Thursday, April 3, 2014
10:00 a.m. – 12:00 p.m.***

**SCAG Main Office
818 W. 7th Street, 12th Floor
Board Room
Los Angeles, CA 90017
(213) 236-1800**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Lillian Harris-Neal at (213) 236-1858 or via email harris-neal@scag.ca.gov

Agendas & Minutes for the Transportation Committee are also available at: <http://www.scag.ca.gov/committees/Pages/default.aspx>

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1858. We require at least 72 hours (three days) notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.

This Page Intentionally Left Blank

Transportation Committee

Members – April 2014

<u>Members</u>	<u>Representing</u>
Chair* 1. Hon. Keith Millhouse	<i>Moorpark</i> VCTC
Vice-Chair* 2. Hon. Alan Wapner	<i>Ontario</i> SANBAG
3. Hon. John Addleman	<i>Rolling Hills Estates</i> SBCCOG
* 4. Hon. Michael D. Antonovich	Los Angeles County
5. Hon. Rusty Bailey	<i>Riverside</i> District 68
* 6. Hon. Bruce Barrows	<i>Cerritos</i> District 23
* 7. Hon. Glen Becerra	<i>Simi Valley</i> District 46
8. Hon. Russell Betts	<i>Desert Hot Springs</i> CVAG
* 9. Hon. Art Brown	<i>Buena Park</i> District 21
10. Hon. Catalina Chacon	Pechanga band of Luiseño Indians
* 11. Hon. Gene Daniels	<i>Paramount</i> District 24
* 12. Hon. Jeff DeGrandpre	<i>Eastvale</i> District 4
* 13. Hon. Paul Eaton	<i>Montclair</i> District 9
* 14. Hon. Roy Francis	<i>La Habra Heights</i> District 31
* 15. Hon. Mario Guerra	<i>Downey</i> GCCOG
16. Hon. Bert Hack	<i>Laguna Woods</i> OCCOG
* 17. Hon. Matthew Harper	<i>Huntington Beach</i> OCTA
* 18. Hon. Carol Herrera	<i>Diamond Bar</i> District 37
19. Hon. Bill Hodge	<i>Calexico</i> ICTC
* 20. Hon. Jose Huizar	<i>Los Angeles</i> District 61
* 21. Hon. Jim Hyatt	<i>Calimesa</i> District 3
22. Hon. Trish Kelley	<i>Mission Viejo</i> OCCOG
23. Hon. Randon Lane	<i>Murrieta</i> WRCOG
24. Hon. James C. Ledford	<i>Palmdale</i> North L. A. County
* 25. Hon. Michele Martinez	<i>Santa Ana</i> District 16
* 26. Hon. Andrew Masiel, Sr.	Pechanga Band of Luiseño Indians
27. Hon. Brian McDonald	Chemehuevi Indian Tribe
* 28. Hon. Ryan McEachron	<i>Victorville</i> SANBAG
* 29. Hon. Marsha McLean	<i>Santa Clarita</i> North L. A. County
* 30. Hon. Dan Medina	<i>Gardena</i> District 28
* 31. Hon. Barbara Messina	<i>Alhambra</i> District 34
* 32. Hon. Leroy Mills	<i>Cypress</i> District 18
* 33. Hon. Brett Murdock	<i>Brea</i> District 22
* 34. Hon. Kris Murray	<i>Anaheim</i> District 19

Transportation Committee

Members – April 2014

Members

Representing

* 35. Hon. Frank Navarro	<i>Colton</i>	SANBAG
* 36. Hon. Steven Neal	<i>Long Beach</i>	District 29
* 37. Hon. Shawn Nelson		Orange County
* 38. Hon. Pam O'Connor	<i>Santa Monica</i>	District 41
39. Hon. Micheál O'Leary	<i>Culver City</i>	WSCCOG
* 40. Hon. Gary Ovitt		San Bernardino County
* 41. Hon. Bernard C. Parks	<i>Los Angeles</i>	District 55
* 42. Hon. Linda Parks		Ventura County
* 43. Hon. Gregory Pettis	<i>Cathedral City</i>	District 2
44. Hon. Teresa Real Sebastian	<i>Monterey Park</i>	SGVCOG
* 45. Hon. Ronald Roberts	<i>Temecula</i>	District 5
* 46. Hon. Adam Rush	<i>Eastvale</i>	RCTC
* 47. Hon. Mark Rutherford	<i>Westlake Village</i>	District 44
48. Hon. Damon Sandoval		Morongo Band of Mission Indians
49. Hon. Larry Smith	<i>Hemet</i>	WRCOG
50. Hon. David Spence	<i>La Cañada/Flintridge</i>	Arroyo Verdugo Cities
* 51. Hon. Karen Spiegel	<i>Corona</i>	District 63
52. Hon. Tim Spohn	<i>City of Industry</i>	SGVCOG
53. Hon. Barb Stanton	<i>Town of Apple Valley</i>	SANBAG
* 54. Hon. Jeff Stone	<i>Riverside County</i>	Riverside County
* 55. Hon. Jess Talamantes	<i>Burbank</i>	District 42
56. Hon. Brent Tercero	<i>Pico Rivera</i>	GCCOG
* 57. Hon. Donald Voss	<i>La Canada Flintridge</i>	District 36

* Regional Council Member

TRANSPORTATION COMMITTEE

AGENDA

APRIL 3, 2014

The Transportation Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as Information or Action Items.

CALL TO ORDER & PLEDGE OF ALLEGIANCE

(Hon. Keith Millhouse, Chair)

ELECTION OF CHAIR AND VICE-CHAIR

PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Committee, must fill out and present a speaker's card to the Assistant prior to speaking. Comments will be limited to three (3) minutes. The Chair may limit the total time for all comments to twenty (20) minutes.

REVIEW AND PRIORITIZE AGENDA ITEMS

ACTION ITEM

Time

Page No.

- | | | | |
|---|------------|----------|---|
| 1. <u>Approval of Regional Project Selection Process for the 2014 California Active Transportation Program</u>
<i>(Hasan Ikhata, Executive Director)</i> | Attachment | 15 mins. | 1 |
|---|------------|----------|---|

Recommended Action: Approve the 2014 Active Transportation Program: Regional Project Selection Process, which outlines the roles, responsibilities and process for selecting projects to receive funding from the region's dedicated share of the 2014 California Active Transportation Program (ATP).

INFORMATION ITEMS

- | | | | |
|---|------------|----------|----|
| 2. <u>Conversion of Orange County Tolls Roads to All Electronic Tolling</u>
<i>(Lisa Telles, Chief Communications Officer, Transportation Corridor Agencies - TCA)</i> | Attachment | 15 mins. | 16 |
| 3. <u>UPS Experience: Challenges, and Opportunities with Urban Deliveries</u>
<i>(Nancy Parmer, Director, Sustainability and Customer Relations, UPS)</i> | Attachment | 20 mins. | 24 |

TRANSPORTATION COMMITTEE

AGENDA

APRIL 3, 2014

<u>INFORMATION ITEMS - continued</u>		<u>Page No.</u>
4. <u>California Air Resources Board (ARB) Sustainable Freight Strategy Update</u> <i>(Doug Ito, Chief of the Freight Transport Branch; Jason Crow, Air Pollution Specialist, California Air Resource Board - ARB)</i>	Attachment 15 mins.	32
5. <u>Federal Highway Administration 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance Report</u> <i>(Akiko Yamagami, SCAG Staff)</i>	Attachment 10 mins.	46

CONSENT CALENDAR

Approval Items

- | | | |
|--|------------|----|
| 6. <u>Minutes of the February 6, 2014 Meeting</u> | Attachment | 93 |
| 7. <u>California High-Speed Rail Authority (CHSRA) Draft 2014 Business Plan Comment Letter</u> | Attachment | 99 |

Receive and File

- | | | |
|--|------------|-----|
| 8. <u>2014 Regional Council and Policy Committees Meeting Schedule</u> | Attachment | 105 |
| 9. <u>SCAG Sustainability Planning Grants Program - Monthly Update</u> | Attachment | 106 |

CHAIR'S REPORT

STAFF REPORT

(Akiko Yamagami, SCAG Staff)

FUTURE AGENDA ITEM(S)

ADJOURNMENT

The next Transportation Committee meeting is scheduled for Thursday, June 5, 2014, at the SCAG Los Angeles Office.

All Policy Committee Members are invited to attend the SCAG Regional Conference and General Assembly, May 1-2, 2014, to be held at the Renaissance Esmeralda Indian Wells Resort & Spa, 44400 Indian Wells Ln, Indian Wells, CA 92210.

DATE: April 3, 2014

TO: Executive Administrative Committee (EAC)
Regional Council (RC)
Transportation Committee (TC)

FROM: Hasan Ikhata, Executive Director, 213-236-1944, ikhata@scag.ca.gov

SUBJECT: Approval of Regional Project Selection Process for the 2014 California Active Transportation Program

RECOMMENDED ACTION:

Approve the 2014 Active Transportation Program: Regional Project Selection Process, which outlines the roles, responsibilities and process for selecting projects to receive funding from the region's dedicated share of the 2014 California Active Transportation Program (ATP).

EXECUTIVE SUMMARY:

SCAG is required by federal and state law to recommend to the California Transportation Commission (CTC) a regional program of projects to be funded through the ATP. The regional program must meet the requirements of the California Active Transportation Program Guidelines, which describe the policy standards, criteria, and procedures for implementing Senate Bill 99, Assembly Bill 101 and the federal MAP 21 Transportation Alternatives program (TAP). Over the last several months, SCAG staff has worked with staff from the county transportation commissions, the California Transportation Commission, and Caltrans to reach agreement on a competitive project selection process for the 2014 ATP regional program. Upon approval by Regional Council, the Regional Project Selection Process will be submitted to the California Transportation Commission for review and approval during their June 25, 2014 meeting.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan; Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

The ATP was created by Senate Bill 99 (Chapter 359, Statutes 2013) and Assembly Bill 101 (Chapter 354, Statutes 2013) to encourage increased use of active modes of transportation, such as biking and walking, as well as to ensure compliance with MAP-21. The ATP will award approximately \$124.2 million statewide per year for active transportation projects. The first three years of funding, approximately \$360 million statewide, will be awarded in the 2014 Call for Projects, which will be issued by Caltrans between March 21 and May 21, 2014. The State will recommend funding awards for 60% of the total program funds; MPOs will recommend regional programs of projects to be funded with their population-based share of the remaining 40%.

The following proposed process is in accordance with the adopted CTC ATP Guidelines at their March 20, 2014 meeting. The process is consistent with Federal Map 21 TAP funding guidelines.

The *2014 Active Transportation Program: Regional Project Selection Process* (Attachment 1) outlines a process for selecting projects to receive funding from the SCAG region's share, approximately \$76 million, of the MPOs allocation. Key elements of this Process are outlined below.

Regional Program Project Selection

- Projects selected for the regional program must be submitted as part of a Consolidated (Statewide + Regional) Call for Projects conducted by Caltrans between March 21 and May 21, 2014.
- Preliminary scoring will be completed through the Consolidated Call for Projects managed by Caltrans.
- Projects not selected for the statewide program will be considered for funding in the regional program.
- Each county will have the ability to modify preliminary scores by adding up to 10 points to projects that are consistent with local and regional plans within each county, as adopted by the respective county transportation commission.
- Geographic equity will be achieved by establishing a preliminary recommended funding list that dedicates no less than 95% of the total regional funds to Implementation Projects proportionate to the population of each county. Implementation Projects may include capital projects as well as non-infrastructure projects, such as Safe Routes to School programs and other educational and enforcement activities.
- Up to 5% will be reserved at the regional level for Planning Projects, which may include the development of active transportation plans in disadvantaged communities or non-infrastructure projects. The intent of this reserve to ensure a broad spectrum of projects is funded per the goals of SB 99, while also allowing but not exceeding the requirement that no more than 5% of the regional program be spent on planning.
- SCAG retains the authority to modify the preliminary recommended project list in order to ensure 25% of the total regional program is dedicated to projects benefitting disadvantaged communities, as required by state law.
- The final recommended project list will be reviewed by the CEOs of the county transportation commissions, Caltrans and CTC staff to make any final adjustments and achieve consensus prior to submitting the Regional Program of Projects to SCAG's Regional Council as well as each respective County's Board for approval prior to submission to the CTC.

The above recommended process reflects numerous ATP state and regional workshops and collaboration with the CTCs.

REPORT

Upon approval by the Regional Council and thereafter by the State CTC of the Regional Project Selection Process, SCAG staff will continue its collaboration with the county transportation commissions to implement the regional project selection process. SCAG staff will provide monthly updates to the Transportation Committee on the regional program, and return to the Regional Council with a recommended program of projects for the 2014 ATP regional program in September 2014.

FISCAL IMPACT:

Funding for SCAG staff's work on the matter is included in OWP FY 2013-14 050-0169A.01.

ATTACHMENTS:

- 1) 2014 Active Transportation Program: SCAG Regional Project Selection Process
- 2) PowerPoint Presentation: Regional Project Selection Process: 2014 Active Transportation Program (ATP)

This Page Intentionally Left Blank

2014 Active Transportation Program: Southern California Association of Governments Regional Project Selection Process

The intent of this document is to successfully implement the active transportation related programs and funding components of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and California Senate Bill 99 (SB 99). The following Regional Project Selection Process (Process) outlines the roles, responsibilities and processes for selecting projects to receive funding from the SCAG region's dedicated share of the 2014 California Active Transportation Program (ATP). The SCAG region's annual share is approximately \$25 million, which includes 100% of SCAG's federal Transportation Alternative Program apportionments (approximately \$14 million) plus approximately \$11 million/year from other federal and state funding programs that were consolidated by SB 99 into the ATP. This Process only relates to the 2014 California Active Transportation Program, which includes three years of funding in Fiscal Year (FY) 2013/14, FY 2014/15, and FY 2015/16. The Process may be revisited and modified for future rounds of funding.

Background

- The goals of the ATP program are to:
 - Increase the proportion of trips accomplished by biking and walking.
 - Increase the safety and mobility of non-motorized users.
 - Advance the active transportation efforts of regional agencies to achieve greenhouse gas reductions goals as established pursuant to SB 375.
 - Enhance public health, including reduction of childhood obesity through the use of programs including, but not limited to, projects eligible for Safe Routes to School Program funding.
 - Ensure that disadvantaged communities fully share in the benefits of the program.
 - Provide a broad spectrum of projects to benefit many types of active transportation users.
- The Active Transportation Program Guidelines (Guidelines) describe the policy, standards, criteria and procedures for the development, adoption and management of the Active Transportation Program.
- Per the requirements of SB 99 and Map-21, 40% of the funds for the ATP program must be distributed by Metropolitan Planning Organizations (MPO) in urban areas with populations greater than 200,000, with funds distributed to each MPO based on total MPO population.
- The funds distributed by the MPOs must be programmed and allocated to projects selected through a competitive process in accordance with the ATP Guidelines.
- Per SB 99 and the Guidelines, the following requirements apply specifically to SCAG:
 - SCAG must consult with the county transportation commission, the California Transportation Commission (CTC), and the State Department of Transportation (Caltrans) in the development of the competitive project selection criteria. The criteria should include consideration of geographic equity, consistent with program objectives;
 - SCAG must place priority on projects that are consistent with plans adopted by local and regional governments within the county where the project is located; and

- SCAG must obtain concurrence from the county transportation commissions.
- A MPO choosing to use the same project selection criteria and weighting, minimum project size, match requirement, and definition of disadvantaged communities as used by the CTC for the statewide competition may defer its project selection to the CTC.
- 25% of the regional funds must benefit disadvantaged communities.
- A large MPO may make up to 5% of its funding available for active transportation plans in disadvantaged communities.
- Non-infrastructure projects are eligible for funding; however, there is not a specific set-aside or cap for this purpose. Non-infrastructure funding is available for start-up or pilot projects that support education, encouragement, and enforcement activities—not ongoing efforts.

Regional Project Selection

In order to expedite the administrative approval process and accelerate project implementation, SCAG intends to defer project selection to Caltrans and forgo its option to issue a supplemental regional call for projects. This means that the projects will be scored and ranked by Caltrans. An evaluation committee will not be required at the county or regional level within the SCAG region to separately score projects.

- Once projects have been scored and ranked by Caltrans for the regional program, SCAG and the county transportation commissions will review and, if necessary, recommend modifications to the regional program to ensure specific statutory requirements can be met in a manner that is consistent with the intent of the law and program guidelines. Regional Funding Categories
 - Two funding categories will be established for the regional program to support the review and refinement of the regional program by SCAG and the County Transportation Commissions. These categories will include: 1) Planning Projects and 2) Implementation Projects. *Planning Projects* may include the development of active transportation plans in disadvantaged communities as well as the implementation of non-infrastructure projects (e.g., education or traffic enforcement activities). *Implementation Projects* may include the planning, design, and construction of facilities and/or non-infrastructure projects (e.g., education or traffic enforcement activities).
 - No less than 95% of the total regional funds will be dedicated to funding Implementation Projects.
 - Up to 5% of the total regional funds will be dedicated to funding Planning Projects, consistent with the intent of the ATP to fund a broad spectrum of projects *and* to ensure that disadvantaged communities have resources to develop ATP plans, which will be an eligibility requirement for future funding cycles. Non-infrastructure projects may also be funded under this category. If the total request in the Planning Projects Category is less than 5% of the total regional funds, or if applications in this category fail to meet minimum requirements, then the remaining funds will be allocated to Implementation Projects.

- County Transportation Commission’s Role in Project Selection
 - Prior to scoring by Caltrans, SCAG will provide each county with a list of **Implementation Project** applications submitted within each county.
 - The county transportation commissions will review the Implementation Project lists and determine which projects “are consistent with plans adopted by local and regional governments within the county” per the requirements of SB 99. If a project is consistent, the county will assign up to 10 points to each project. “Plan” shall be defined by each county transportation commission.
 - If a county transportation commission assigns additional points (up to 10, as noted above) to a project for which they are the lead applicant, an explanation must be provided to SCAG on how the scoring process resulted in an unbiased evaluation of projects.
 - The Board of each respective county transportation commission will approve the scoring methodology/guidelines and point assignments, and submit the scores to SCAG for inclusion in the final ranking of regional projects.
 - The Board of each respective county transportation commission will adopt the final recommended project list as further described in the Recommended Regional Program of Projects section below.

- SCAG’s Role in Project Selection
 - Implementation Projects Category
 - Following the release of the preliminary scores by Caltrans, SCAG will develop for each county a ranked Implementation Project list reflecting the base score awarded by Caltrans plus any additional point assignments (up to 10 pts as noted above) made by the respective county transportation commission.
 - The ranked list will include a preliminary funding mark, established by the county’s population-based share of no less than 95% of the total regional funds. The projects from each county above the preliminary funding mark will constitute the preliminary regional project list.
 - SCAG will analyze the preliminary regional project list and calculate the total amount of funding to be awarded to disadvantaged communities for **Implementation Projects** across all of the counties.
 - If the total is more than 25%, SCAG will consider the preliminary regional project list as final and include it in the regional program.
 - If the total is less than 25%, SCAG will modify the preliminary regional project list to ensure the 25% mark is achieved, as follows:

- Across all counties, the highest scored disadvantaged communities' project that is below the funding mark will be added to the regional project list. This project will displace the lowest scoring project that is above the funding mark and does not benefit a disadvantaged community, regardless of the county.
 - This process will be repeated until the 25% target is met.
 - This process may lead to an outcome where a county receives less than its population-based share of the funding, but is necessary to ensure the disadvantaged communities' requirements for the regional program are met.
 - As noted in Recommended Regional Program of Projects section below, the CEOs, Caltrans and CTC will have the opportunity to make any final adjustments to the preliminary regional project list to address any inequities that may result from this process.
- Planning Projects Category
 - SCAG will create a ranked list of **Planning Projects** reflecting Caltrans' selection process and scores, and delineating those projects that are above and below the funding mark.
 - SCAG will quantify the percentage of funding dedicated to disadvantaged communities within the Planning Category and determine the amount of funding that needs to be dedicated to disadvantaged communities to ensure requirements are met.
 - SCAG will defer to the ranking of Caltrans in the selection of the planning and non-infrastructure projects, except as follows:
 - SCAG may recommend projects be moved up on the list to meet disadvantaged communities requirements.
 - SCAG may recommend projects be moved up on the list to ensure there is geographic equity in projects recommended for funding in the Planning Projects Category.
- Recommended Regional Program of Projects
 - SCAG will combine the projects selected from the Planning and Implementation Projects Categories to create a preliminary Regional Program of Projects (Program).

- If there are any duplicates in the Program resulting from the selection by both SCAG and a county of a non-infrastructure project, then SCAG will select an alternative project from the Planning Projects Category.
- The final recommended Regional Program of Projects will be reviewed by the CEOs of the county commissions, Caltrans and CTC staff to make any final adjustments and achieve consensus prior to submitting the Program to SCAG's Regional Council and the Boards of the county transportation commissions for approval and submission to the CTC.

This Page Intentionally Left Blank

Regional Project Selection Process: 2014 Active Transportation Program (ATP)

Sarah Jepson
Manager, Active Transportation & Special Programs
SCAG

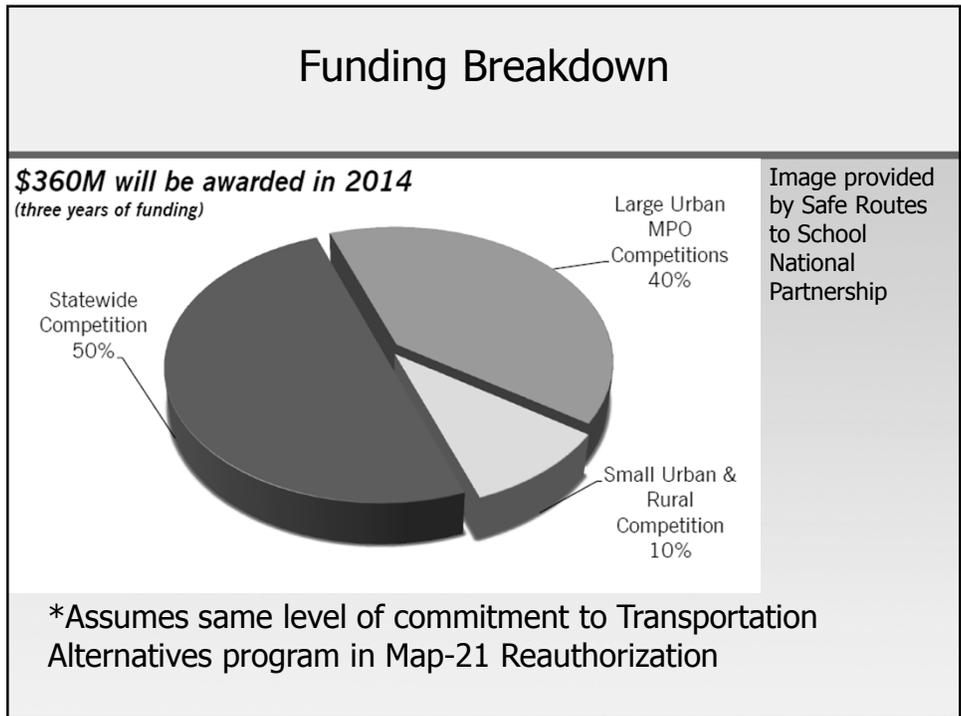
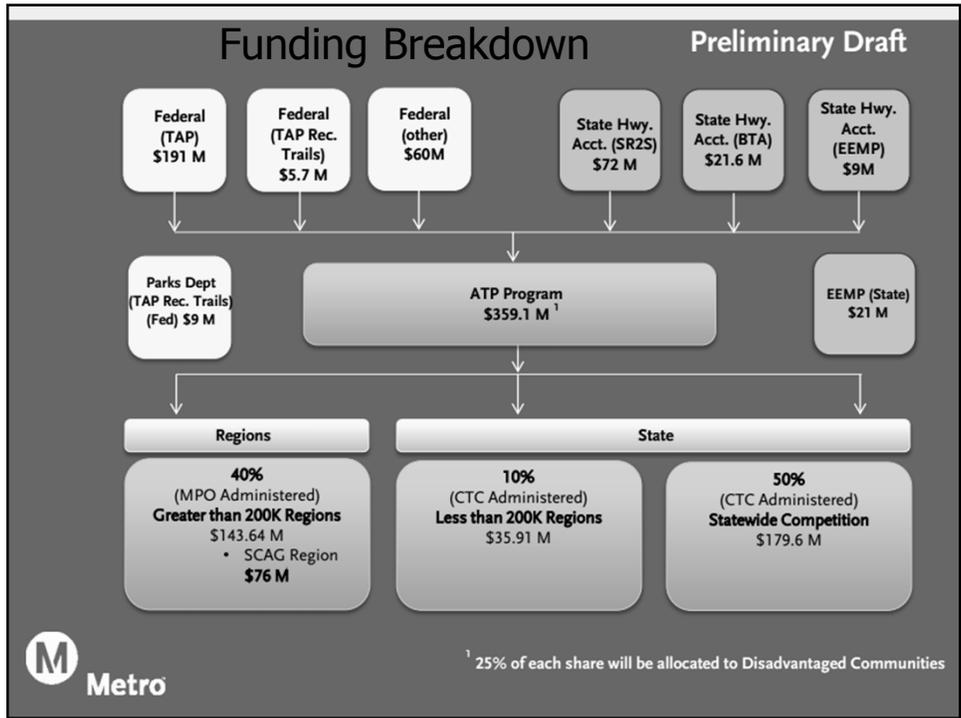


March 4th, 2014

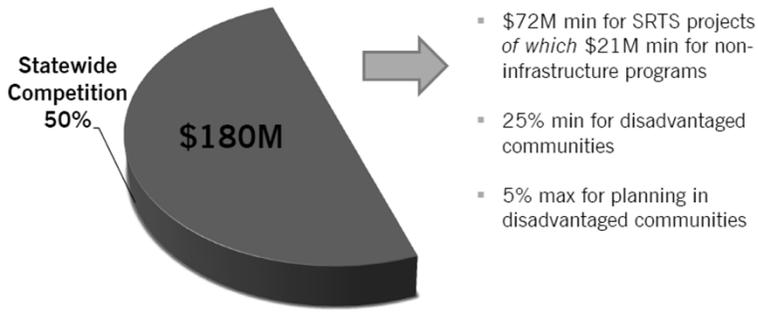


Active Transportation Program (ATP)

- New statewide program to promote walking and biking
- Created by Senate Bill 99 and Assembly Bill 101
- Consolidates funding from existing federal and state programs
- Program guidelines developed by California Transportation Commission (CTC), adopted March 20.



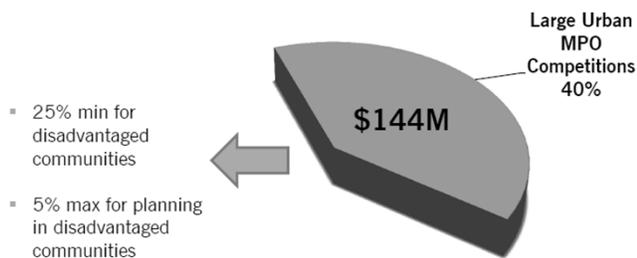
Statewide Competition



**All communities eligible to apply in Statewide Competition*

Image provided by Safe Routes to School National Partnership

Regional Competitions



**Communities in urban regions with populations greater than 200,000 eligible for Large MPO Competitions*

Image provided by Safe Routes to School National Partnership

SCAG Regional Competition = ~\$76 M

**Assumes same level of commitment to Transportation Alternatives program in Map-21 Reauthorization*

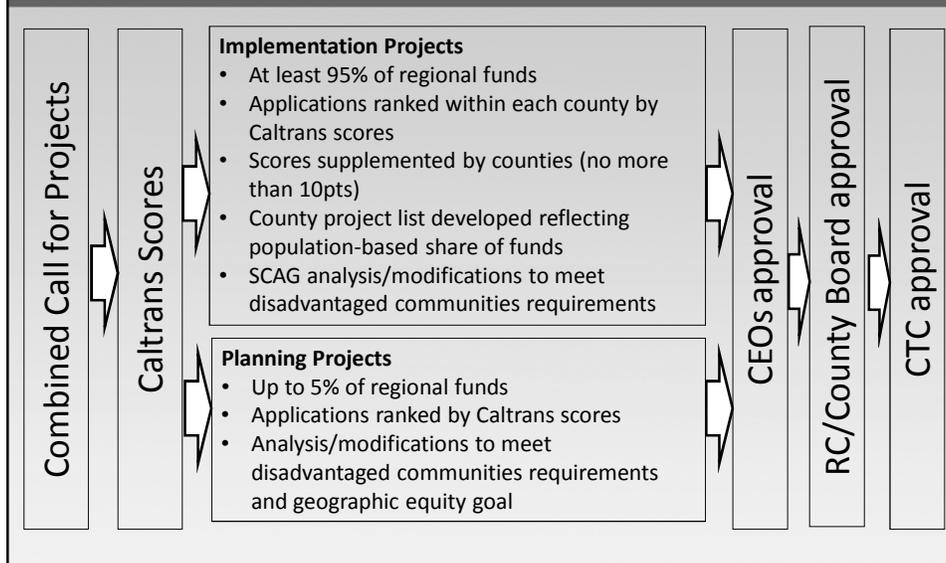
SCAG Regional Competition

- SCAG requirements:
 - Oversee a competitive project selection process, consistent with state guidelines and approved by CTC
 - Consult with county transportation commissions, CTC and Caltrans on competitive selection criteria
 - Obtain concurrence from county transportation commissions
 - Recommend regional program of projects to CTC

SCAG Regional Competition

- Program requirements
 - Consider projects not funded through statewide competition
 - Ensure at least 25% funds benefit disadvantaged communities
 - Consider geographic equity
 - Prioritize projects that consistent with local and regional plans
 - Fund a broad spectrum of projects
 - Recommend no more than 5% funds for planning

Proposed Regional Project Selection Process



Geographic Equity

- For **Implementation Projects**, funding target established for each county based on population.
 - Imperial= \$698K
 - Los Angeles=\$39,271K
 - Orange=\$12,039K
 - Riverside=\$8,757K
 - San Bernardino=\$8,140K
 - Ventura=\$3,292K
- For **Planning Projects**, SCAG aims to fund plans across region. (Planning total <\$3,800)

Prioritizing Projects in Plans

- County transportation commissions review Implementation Projects; determine which “are consistent with plans adopted by local and regional governments” per SB 99.
- If consistent, county transportation commission assigns up to 10 points to each project.
- The Board of each county transportation commission approves the scoring methodology/guidelines and point assignments; submits to SCAG.

Disadvantaged Communities

- SCAG analyzes preliminary regional project list.
- If total \$ benefitting disadvantaged communities >25%, no modifications required.
- If total <25%, SCAG modifies as follows:
 - Across all counties, highest scored disadvantaged communities’ project that is below the funding mark will be added to the regional project list.
 - This project displaces lowest scoring project that is above the funding mark and does not benefit a disadvantaged community, regardless of the county.
 - Process repeated to achieve 25% requirement.

Key Dates

- **March 21-May 21**—Combined (State+Regional) Call for Projects
- **April-June**—County Boards approve criteria for supplementing scores and make point assignments
- **June 25**—CTC approves SCAG regional project selection process
- **August 20** —CTC adopts statewide portions of the program
- **September 4**—SCAG Regional Council approves regional program
- **September**—County Boards approve regional program
- **November**—CTC adopts regional program projects

SCAG Contacts

Sarah Jepson
Jepson@scag.ca.gov

Alan Thompson
thompson@scag.ca.gov



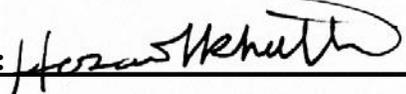
This Page Intentionally Left Blank

DATE: April 3, 2014

TO: Transportation Committee (TC)

FROM: Annie Nam, Manager of Transportation Finance & Goods Movement; nam@scag.ca.gov;
(213) 236-1827

SUBJECT: Conversion of Orange County Tolls Roads to All Electronic Tolling

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

For Information Only – No Action Required.

EXECUTIVE SUMMARY:

Lisa Telles, Chief Communications Officer, Transportation Corridor Agencies (TCA), will provide a presentation on the conversion of The Toll Roads in Orange County to all electronic tolling.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan; Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

In May 2014, the San Joaquin Hills (State Route 73), Foothill (State Route 241); and Eastern (State Routes 133/241/261) Toll Roads in Orange County – collectively referred to as “The Toll Roads” – will convert to all electronic tolling. The Transportation Corridor Agencies (TCA) is offering five (5) toll payment options with the removal of cash toll collection. In addition to the transponder-based *FasTrak*® electronic toll collection system used throughout California, TCA is offering a three (3) license plate number-based, transponder-free *ExpressAccounts*™ payment options (i.e., prepaid, charged daily, or invoiced monthly). The fifth option is geared toward infrequent toll roads users and allows payment within 48 hours of toll road use by either paying online at thetollroads.com or by downloading The Toll Roads *One-Time-Toll*™ mobile application and payment by a mobile device. The *One-Time-Toll* option does not require establishing an *ExpressAccount* for *FasTrak* account.

FISCAL IMPACT:

None

ATTACHMENT:

PowerPoint Presentation: “*The Toll Roads: Non-Stop Travel for All Customers!*”



The Toll Roads®

Non-Stop Travel for All Customers!

Cash toll collection ends May 2014.



03_05_14_Non_Stop_Travel_SCAG.pptx



- Transportation Corridor Agencies (TCA)



Legend:

- Toll Roads
- Toll Lanes
- Future Toll Lanes

03_05_14_Non_Stop_Travel_SCAG.pptx



The Toll Roads®

- TCA's toll roads
 - First in California
 - Largest
 - First to have **FASTRAK**
 - Trademarked




03_05_14 Non_Stop_Travel_SCAG.pptx



Regional Life Lines

- 250,000 transactions every week day
- 40 percent of TCA **FASTRAK** account holders live outside OC
- Value – predictable trip, time savings, less stress



03_05_14 Non_Stop_Travel_SCAG.pptx



How Our Customers Pay

- 81 percent pay with **FASTRAK**
 - FasTrak accounts = lowest tolls
 - FasTrak = statewide access



- \$0 monthly fee (if you spend more than \$25/month)

03_05_14_Non_Stop_Travel_SCAG.pptx



How Our Customers Pay

- Today 16 percent pay with cash
- Research tells us that cash customers want:
 - A non-stop, stress free experience on The Toll Roads
 - Variety of ways to pay
- Cash toll collection removed May 2014
 - New accounts designed through listening to our customers

03_05_14_Non_Stop_Travel_SCAG.pptx



Introducing **EXPRESSACCOUNT™**

- No stopping at toll plazas
- No searching or fumbling for exact change
- No transponder needed
- No need to pre-pay tolls
- No monthly account fee
- Use of License plates to record toll



03_05_14_Non_Stop_Travel_SCAG.pptx

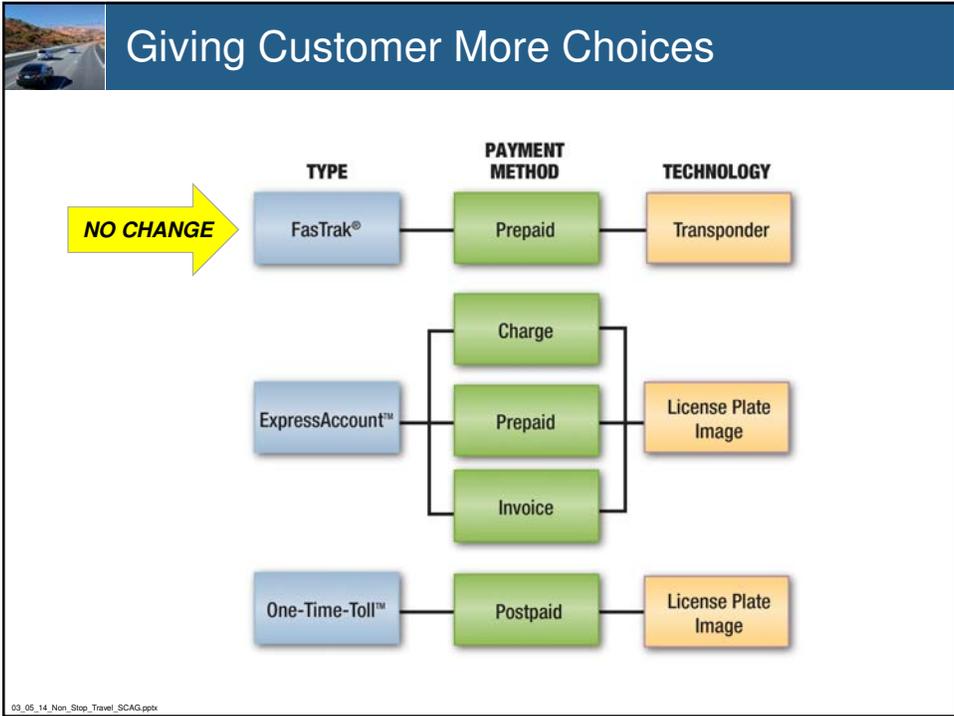


Introducing **EXPRESSACCOUNT™**

EXPRESSACCOUNT™

- Sign-up now
 - Your contact info 
 - Your license plate number 
 - Your credit card 
- Drive immediately through FasTrak lanes

03_05_14_Non_Stop_Travel_SCAG.pptx





One-Time-Toll For Tourists and Infrequent Users

- Go to www.thetollroads.com or
- Go to our mobile app
 - Must pay within 48 hours after your trip



03_05_14_Non_Stop_Travel_SCAG.pptx



FASTRAK[®] is still the first choice

- Lowest toll
- Use on all toll roads, lanes and bridges in California
- If you have a FasTrak account there is no need to change



03_05_14_Non_Stop_Travel_SCAG.pptx



03_05_14_Non_Stop_Travel_SCAG.pptx

DATE: April 3, 2014
TO: Transportation Committee (TC)
FROM: Akiko Yamagami, Senior Regional Planner, (213) 236-1987, yamagami@scag.ca.gov
SUBJECT: UPS Experience: Challenges, and Opportunities with Urban Deliveries

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:
For Information Only - No Action Required.

EXECUTIVE SUMMARY:

Over 18 million residents and thousands of business establishments in the SCAG region generate significant amount of goods movement needs, including parcel deliveries. SCAG's Goods Movement planning traditionally focused on freight movement by heavy-duty trucks and freight rail. However, recent research efforts at the national and regional level highlighted the critical role urban delivery trucks play in the economy and the need to understand opportunities and challenges experienced by the truck drivers to facilitate well-informed coordination among transportation and land use planning at the local and regional level. As part of SCAG's Goods Movement planning effort, Nancy Parmer, Director of Sustainability and Customer Relations, UPS, will present UPS' experience associated with urban deliveries.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan, Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies, a) Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans

BACKGROUND:

SCAG's regional Goods Movement planning has traditionally focused more on addressing issues associated with heavy-duty trucks that operate on state highways or freight rail that move goods over long-distances. However, smaller delivery trucks such as parcel carriers that provide goods movement services in urban areas have been gaining stronger research interest nationally and regionally as they play a critical role in supporting the economy by providing the first and last mile delivery needs.

Over 18 million residents and thousands of business establishments in the SCAG region generate significant amount of goods movement needs, including parcel deliveries. With increasing popularity of e-commerce or demand for next- and two-day shipping, demand for parcel delivery to service urban goods movement needs, whether for an office building, a business, or a residence, is rising. This highlights a need for a better understanding of opportunities and challenges experienced by urban delivery service providers to facilitate regionally coordinated and informed transportation and land use planning efforts.

Many of the SCAG region's roadways are highly congested, creating challenges to all types of motorists. Roadway congestion and accessibility to delivery points are some of the major concerns for parcel

REPORT

delivery operators as the trucks share the roads with other users to provide quality services while meeting company financial goals. While recent trends on high-density developments or new developments with sizable loading space have provided benefits to urban delivery operators, there still remain many challenges that impede urban delivery operations. To facilitate a better understanding of the opportunities, challenges, and creative solutions that highlight partnership with local jurisdictions, SCAG has invited Nancy Parmer, Director of Sustainability and Customer Relations, to present on UPS' experience in urban deliveries.

FISCAL IMPACT:

There is no direct fiscal impact. Staff work associated with the matter is included as part of the FY 13-14 OWP Budget.

ATTACHMENT:

PowerPoint Presentation: *“UPS Experience: Challenges, and Opportunities with Urban Deliveries”*



UPS Experience: Challenges and Opportunities with Urban Deliveries

presented to:
 Southern California Association of Governments
 Transportation Committee
 Nancy Parmer – Sustainability and Customer Relations



April 2014

WE LOGISTICS

UPS Global Snapshot

- **399,000 employees**
 - 323,000 U.S. / 76,000 International
- **Domestic & International Package Operations**
 - 16.3 million packages/day
 - 220+ countries and territories; every address in North America and Europe
 - More than 96,000 delivery vehicles
 - 528 total aircraft:
 - 235 UPS aircraft
 - 293 chartered aircraft
 - 8.8 million daily customers (1.1 million pick-up, 7.7 million delivery)
- **Supply Chain & Freight**
 - Approximately 796 facilities in more than 120 countries / approx. 32 million square feet
 - More than 40 dedicated Healthcare facilities / greater than 6 million square feet

UPS Presentation Fact Sheet - 2013

Additional Information



WE LOGISTICS

2013 Projected Online Retail Sales

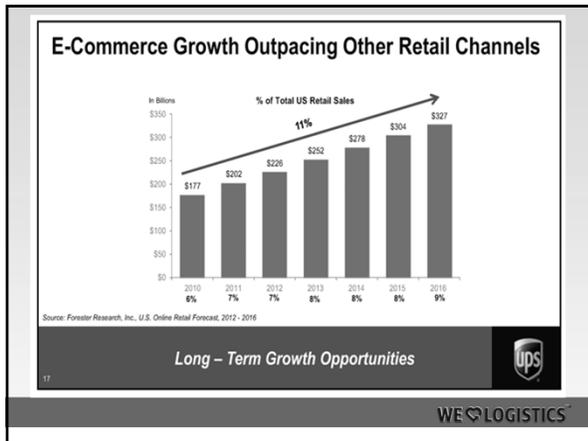
Region	Projected Sales
US	\$262B
Mexico (incl. C2C)	\$2B
Europe	€128B (\$168B)
Brazil (incl. C2C)	\$15B
Argentina (incl. C2C)	\$2B
India (incl. C2C)	\$1B
China (incl. C2C)	\$219B
Japan	\$72B

Source: Forrester Research Online Retail Forecast

Opportunities for Growth



WE LOGISTICS







UPS Alternative Fuel / Advanced Technology Fleet

Total Vehicles (US & International) = 2,864*



U.S. Total: 1,801	International Total: 1,063
<ul style="list-style-type: none"> ▪ Compressed Natural Gas Vehicles: 895 ▪ Hybrid Electric Vehicles: 380 ▪ Composite Vehicles: 251 ▪ Liquid Natural Gas Vehicles: 114 ▪ Electric Vehicles: 102 ▪ Hydraulic Hybrid Vehicles: 41 ▪ Propane Vehicles: 18 	<ul style="list-style-type: none"> ▪ Propane Vehicles: 852 ▪ Compressed Natural Gas Vehicles: 91 ▪ Ethanol: 50 ▪ Electric Vehicles: 44 ▪ Biomethane Vehicles: 20 ▪ Hybrid Electric Vehicles: 6

*As of 10/2013

Additional Information



WE ♥ LOGISTICS

Southern California Delivery Overview

- 1400 Drivers
- 175,000 Daily Deliveries
- Technology is Important
 - ORION (On-Road Integrated Optimization Navigation)
 - Tool is part of \$1 billion technology investment
- Optimization -Orion provides drivers with optimized routing information that meets all commitment times while minimizing on road time and miles driven
- Benefits – environmental, cost, customer, and operational
 - 2013 – 1.5 million gallon savings in fuel and a reduction of 14,000 metric tons CO₂ emissions

WE ♥ LOGISTICS

Southern California E Commerce Growth

- UPS Solutions
 - My Choice
 - SurePost
 - Orion System – Optimizes routes and improves efficiencies
- New Amazon Fulfillment Center in San Bernardino
 - UPS San Bernardino sends on average 3 – 42 foot trailers for delivery daily
 - Facility is less than 2 miles from Amazon

WE ♥ LOGISTICS

Southern California Package Centers

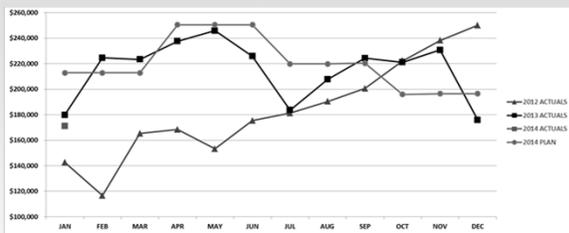
- Downtown Los Angeles
- Hollywood
- Wilshire
- Beverly Hills
- Vernon
- Commerce
- Pasadena

Southern California Delivery Operational Challenges

- Parking
- Traffic
- Narrow Streets
- Driving package cars through the 91 freeway scales
- Pedestrians Parking in loading/unloading zones
- Traffic Lights
- Theft

Historical Expense Trends: 3 Year Analysis

ANNUAL EXPENSE	
2012 ACTUALS	\$2,204,048
2013 ACTUALS	\$2,580,713
2014 ACT & FORECAST	\$2,448,299
2014 PLAN	\$2,639,292



Company Outlook 2014 and Beyond

Growth Market Growth Opportunities - \$383B

Small Package International Growth

Revenue over \$14B

More than 220 countries

75,000 employees

Long term growth opportunities

- Global Markets
- Global B2C Solutions
- Sustainable Competitive Advantage

— Continue to invest in technology to drive an optimized network

WE  LOGISTICS™

16

Thank you!

WE  LOGISTICS™

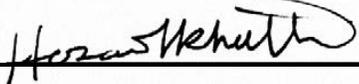
17

DATE: April 3, 2014

TO: Transportation Committee (TC)

FROM: Rich Macias, Director of Transportation Planning and Programming, 213-236-1805, macias@scag.ca.gov

SUBJECT: California Air Resources Board (ARB) Sustainable Freight Strategy Update

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

For Information Only - No Action Required.

EXECUTIVE SUMMARY:

The California Air Resources Board (ARB) is preparing a draft Sustainable Freight Strategy which will be presented in draft form in fall 2014. Until the release of the draft, ARB anticipates a stakeholder engagement process involving focus groups, community and stakeholder meetings and public workshops. Key elements of the Sustainable Freight Strategy include: information on the freight system and the importance of addressing air quality impacts; stakeholder concepts for sustainable freight; assessments of new technologies; efficiency metrics and opportunities; principles and criteria for freight transportation projects and new freight facilities; and recommendations for measures and actions.

SCAG will be working closely with ARB and regional freight transportation partners and stakeholders to ensure that the Sustainable Freight Strategy reflects the region's pressing air quality and economic goals as well as incorporating SCAG's prior freight planning initiatives.

Two (2) speakers from ARB; Doug Ito, Chief of the Freight Transport Branch; and Jason Crow, Air Pollution Specialist, will provide an update on the ARB's Sustainable Freight Strategy.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan; Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

The California Air Resources Board ARB preparing a draft Sustainable Freight Strategy which will be presented in fall 2014. Until the release of the draft, ARB anticipates a stakeholder engagement process involving focus groups, community and stakeholder meetings and public workshops. The strategy will build on the input and advice provided by stakeholders at the Transitioning to Zero-Emission Freight Transport Technologies Symposium, held in April 2013, and the Haagen-Smit Symposium, held May 2014. Key elements of the Sustainable Freight Strategy include information on the freight system and the importance of addressing air quality impacts; stakeholder concepts for sustainable freight; assessments of new technologies; efficiency metrics and opportunities; principles and criteria for freight transportation projects and new freight facilities; and recommendations for measures and actions.

In January 2014, ARB approved Resolution 14-2 that provides more detail on key components of the Sustainable Freight Strategy. Stakeholder input, technology assessments including “well-to-wheel” impacts, and technical analysis will drive strategies and recommendations as well as freight-related measures in the State Implementation Plan (SIP) and the Climate Change Scoping Plan. The Resolution also suggests development of air quality and climate-related principles that can be used along with existing transportation and mobility metrics to determine the prioritization of freight-related transportation projects. The objective is to elevate the importance of air quality impacts and have them be considered earlier in the decision-making process.

SCAG is working closely with ARB and other freight stakeholders to ensure that the strategy reflects the pressing air quality and economic goals of the region. ARB has identified six (6) goals for a sustainable freight system to be reflected in the Sustainable Freight Strategy. These include:

1. Move goods more efficiently and with zero- and near-zero emissions;
2. Transition to cleaner, renewable transportation energy sources;
3. Provide reliable velocity and expanded system capacity;
4. Foster competitiveness of California’s logistics industry and jobs;
5. Integrate with national and international freight transportation system; and
6. Support healthy, livable communities.

The goals of the ARB Sustainable Freight Strategy are compatible with the following vision statement for Southern California freight as included in the 2012-235 Regional Transportation Plan/Sustainable Communities Strategies (2012 RTP/SCS): *“A world-class, coordinated Southern California goods movement system that accommodates growth in the throughput of freight to the region and nation in ways that support the region’s economic vitality, attainment of clean air standards, and the quality of life for our communities.”*

FISCAL IMPACT:

None

ATTACHMENTS:

1. Sustainable Freight Strategy Update, California ARB Resolution 14-2
2. PowerPoint Presentation: “Sustainable Freight Strategy”

PROPOSED

State of California
AIR RESOURCES BOARD

Sustainable Freight Strategy Update

Resolution 14-2

January 23, 2014

Agenda Item No.: 14-1-5

WHEREAS, section 39003 of the Health and Safety Code charges the Air Resources Board (ARB or Board) with coordinating efforts to attain and maintain ambient air quality standards, to conduct research into the causes of and solution to air pollution, and to systematically attack the serious problem caused by motor vehicles;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Board to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, sections 39666 and 39667 of the Health and Safety Code authorize the Board to regulate emissions of toxic air contaminants from non-vehicular and vehicular sources;

WHEREAS, section 43013 of the Health and Safety Code authorizes the Board to adopt and implement regulations, which the Board has found to be necessary, cost-effective and technologically feasible, to control air pollution from motor vehicles and off-road or non-vehicle engine categories;

WHEREAS, the federal Clean Air Act requires the Board and local air districts to prepare State Implementation Plans (SIPs) demonstrating how each nonattainment region will attain the national 8-hour ozone and fine particulate matter (PM_{2.5}) standards, with plans due in 2016;

WHEREAS, the California Global Warming Solutions Act of 2006 (Assembly Bill 32; Chapter 488 Statutes of 2006; Health & Safety Code section 38500 et seq.) declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California; it granted ARB the authority to monitor and regulate greenhouse gas emissions from all sources, and provided initial direction on creating a comprehensive multi-year program to reduce California's greenhouse gas emissions to 1990 levels by 2020, maintain and continue reductions beyond 2020, and initiate the transformations required to achieve the State's long range climate goals;

WHEREAS, Executive Order S-3-05 established a California greenhouse gas emission reduction target of 80 percent below 1990 levels by 2050; this target was reaffirmed in Executive Order B-16-2012 which established a California target for the transportation sector of 80 percent below 1990 levels by 2050;

WHEREAS, Assembly Bill 32 added section 38501 to the Health and Safety Code, which expresses the Legislature's intent that ARB coordinate with State agencies and consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing AB 32 and to design emissions reduction measures in a manner that minimizes costs and maximizes benefits for California's economy, maximizes additional environmental and economic co-benefits for California, and complements the State's efforts to improve air quality;

WHEREAS, section 38560 of the Health and Safety Code directs the Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emissions reductions from sources or categories of sources;

WHEREAS, the ships, harbor craft, trucks, locomotives, cargo equipment, and aircraft that move international and domestic goods to, from, and throughout California are significant contributors of direct PM_{2.5}, black carbon, and greenhouse gas emissions, as well as the nitrogen oxides and sulfur oxides that form ozone and PM_{2.5}; these emissions are a public health concern at both regional and community levels and also contribute to global warming;

WHEREAS, ARB defined an initial suite of necessary regulations and other actions to lower the health risk from diesel PM in the 2006 Emission Reduction Plan for Ports and Goods Movement in California;

WHEREAS, as outlined in the 2006 Plan, ARB adopted regulations over the next several years to reduce emissions of diesel PM and other air pollutants from drayage and other on-road trucks, transportation refrigeration units, marine vessels, cargo equipment, locomotives, and ARB is actively implementing and enforcing those regulations and related programs;

WHEREAS, local air districts, ports, transportation and energy agencies, cargo owners, trucking firms, railroads, shipping lines, and terminal operators are initiating or continuing activities to reduce freight related emissions; these actions are integral to the success of California's air quality and climate programs;

WHEREAS, ARB actions to date, combined with national emission standards and local initiatives, have significantly improved air quality in the highest risk communities affected by freight transport by reducing diesel PM emissions by 70 percent or more at the major seaports and by 50 to 70 percent at the highest risk rail yards since 2005;

WHEREAS, the diesel emissions from operations at major freight facilities (e.g., ports and rail yards, along roadways, and near warehouses, distribution centers, border crossings, and airports) still pose unacceptable health risks and must be further reduced to protect nearby communities;

WHEREAS, attainment of the national air quality standards for ozone and meeting the State's GHG reduction targets will require aggressive emission reductions and transformation of the freight sector to zero or near zero-emission technologies;

WHEREAS, public funding such as Air Quality Improvement Program, Proposition 1B Goods Movement Emission Reduction Program, Carl Moyer Program, Cap-and-Trade auction proceeds, air district, port and federal funds, has or is anticipated to be critical in ensuring and supporting advanced development, demonstration, deployment, and commercialization of zero and near-zero technologies;

WHEREAS, the California Department of Transportation (Caltrans) is preparing a State Freight Mobility Plan that complies with the federal transportation funding requirements under Moving Ahead for Progress in the 21st Century (MAP-21, Pub. L. 112-141) and provides a comprehensive plan to govern the State's short- and long-term planning activities and capital investments relating to freight;

WHEREAS, Caltrans has established the California Freight Advisory Committee to advise the California State Transportation Agency on freight-related priorities, issues, projects, funding needs, and development of the State Freight Mobility Plan;

WHEREAS, ARB is participating in Caltrans' California Freight Advisory Committee, and Caltrans and ARB staff are working together to address the State's mobility needs, while reducing GHG emissions, criteria pollutants, and toxics;

WHEREAS, the United States Department of Transportation (USDOT), under the provisions of MAP-21, is in the process of establishing a national freight policy, a national freight network, a national freight strategic plan, and freight data planning and reporting tools;

WHEREAS, USDOT, through the metropolitan and statewide planning provisions of MAP-21, is working with California's Metropolitan Planning Organizations (MPOs) to support the continued requirement that planning processes consider projects and strategies to increase the accessibility and mobility of people and freight and enhance the integration and connectivity of the transportation system across and between modes;

WHEREAS, California's MPOs are already working to incorporate these freight planning requirements from MAP-21 into their Regional Transportation Plans and Federal Transportation Improvement Programs and integrating them with their regional air

quality goals and Sustainable Communities Strategies as they prioritize and fund transportation projects;

WHEREAS, California transportation infrastructure projects are developed, prioritized, and funded through State and regional transportation planning and programming processes;

WHEREAS, new freight infrastructure projects are being planned, permitted, and built in California to improve the logistic system, including projects for port infrastructure, rail yards, large distribution centers, and border crossings; this infrastructure expansion creates a need for a coordinated California freight effort to address transportation and environmental objectives;

WHEREAS, ARB approved the Air Quality and Land Use Handbook in 2005 to provide information to local land use decision makers on siting new housing, schools, and other facilities near existing sources of air pollution;

WHEREAS, the logistics industry is a critical contributor to California's economy and jobs, supporting small businesses, agriculture, manufacturing, and other sectors, as well as making a wealth of goods available to consumers;

WHEREAS, in April 2013, the South Coast Air Quality Management District, in cooperation with the San Joaquin Valley Air Pollution Control District, the U.S. Environmental Protection Agency, and ARB held a symposium on "Transitioning to Zero-Emission Freight Transport Technologies" to begin exploring the technologies that will be needed to support a sustainable freight system;

WHEREAS, in May 2013, ARB, in cooperation with business, transportation, port, and environmental organizations, convened the Haagen-Smit Symposium with over 80 leaders from government, industry, and communities to seek foundational input on the need and principles for developing a sustainable freight system in California; and

WHEREAS, the approach proposed by staff for the Sustainable Freight Strategy builds on the recommendations that emerged from three days of discussion at the Haagen-Smit Symposium.

WHEREAS, the Board finds that:

1. The Legislature, the Board, and regional transportation agencies have already begun to plan for sustainable communities to support personal mobility. A significant transformation in how the State moves cargo is also required to meet California's air quality, health, and climate goals.
2. There is an opportunity and a need for ARB to take a leadership role now with its agency partners to engage stakeholders in the context of California's long-term

effort to implement a sustainable freight system that can: move goods more efficiently with zero or near-zero emissions; transition to cleaner, renewable transportation energy sources; provide reliable velocity and expanded system capacity; integrate with the national and international freight transportation systems; and support healthy, livable communities.

3. This initiative should also recognize the value of: keeping California's ports and logistics industry competitive; supporting the delivery of California's products locally and to other states and countries; creating jobs in California and training local workers to support the new transport system; increasing energy security; and improving mobility.

NOW, THEREFORE, BE IT RESOLVED that the Board directs the Executive Officer to:

1. Engage cargo owners, the logistics industry, labor, ports, utilities, business leaders, environmental and community groups, academics, air, transportation and energy agencies at all levels, and other interested stakeholders to provide input on the development of a Sustainable Freight Strategy document that ARB staff will present to the Board in 2014. The document should identify and prioritize actions to move California towards a sustainable freight transport system and build a coalition to affect change outside of ARB's immediate sphere of influence.
2. Complete sector-based technology assessments for: truck, rail, ship, commercial harbor craft, cargo handling equipment, and air cargo. Consider the "well-to-wheels" pollution impacts associated with different fuel and technology options to inform development of performance-based goals and/or standards. Seek advice from the logistics industry and academics on techniques that businesses could use to improve the efficiency of their freight transportation operations, and actions that government could take to support efficiency improvements at the business, sector, and system levels.
3. Use the results of the work described above as the technical foundation for the development of freight-related strategies to aid regions in attaining air quality standards, reducing the localized health risk from freight operations, and meeting climate change goals. This work should also inform the recommendations for action to be included in the Sustainable Freight Strategy, as well as the freight-related measures in the State Implementation Plan and the Climate Change Scoping Plan.
4. Identify and implement near-term actions to reduce localized risk in communities near freight facilities. Begin development of broad principles and criteria for new and expanded freight facilities as a tool for local land use decision makers and community residents.

5. In coordination with Caltrans and the California Freight Advisory Committee, develop principles and criteria that seek to establish air quality and climate benefits as co-equal to established transportation/mobility metrics in determining the priority of freight-related transportation projects and recommend inclusion of these principles and criteria in the 2014 Freight Mobility Plan.
6. Coordinate planning with State energy agencies, including the California Energy Commission, the California Public Utilities Commission, and the California Independent System Operator to meet the energy requirements of a sustainable freight system.
7. In close coordination with the local air districts, evaluate and implement opportunities to prioritize transformative zero and near-zero emission technologies for incentive funding programs.

BE IT FURTHER RESOLVED that the Board considers the development of the Sustainable Freight Strategy document to be a high priority for the agency and directs the Executive Officer to proceed expeditiously.

**SCAG Transportation
Committee**

April 3, 2014

Sustainable Freight Strategy

California Environmental Protection Agency
 Air Resources Board

Freight Transport System

Modes:

Facilities:

- Seaports
- Airports
- Rail yards & lines
- Distribution centers
- Warehouses
- High traffic roads
- Border crossings

California Environmental Protection Agency
 Air Resources Board **2**

Freight Impacts at Many Levels

Localized health risk

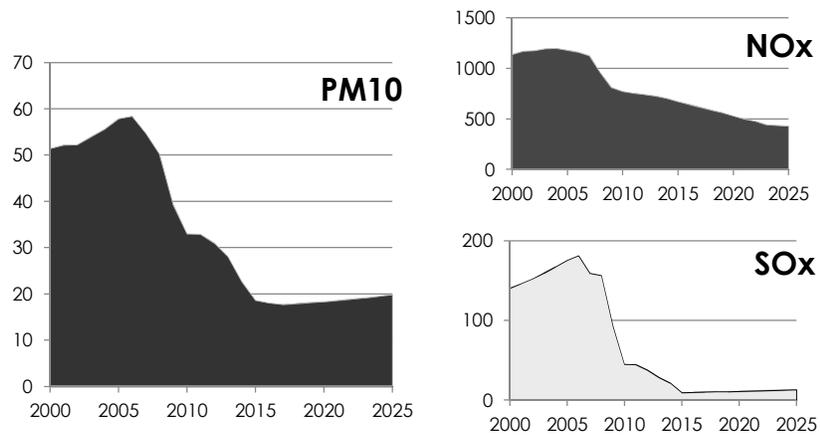
Regional air pollution

Climate change

California Environmental Protection Agency
Air Resources Board

3

Progress in Reducing Freight Emissions in California (Tons/Day)



National Ozone Status

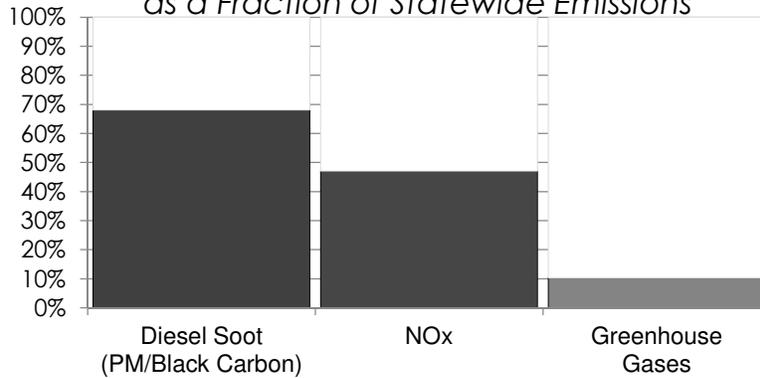
8-Hour Ozone Nonattainment Areas (2008 Standard)



5

Freight is a Significant Contributor to California's Air Pollution

Exhaust Emissions from All Freight Equipment as a Fraction of Statewide Emissions



California Environmental Protection Agency
Air Resources Board

6

Related State Planning Efforts

- Scoping Plan
- California Freight Mobility Plan
- California Transportation Plan
- State Implementation Plans

7

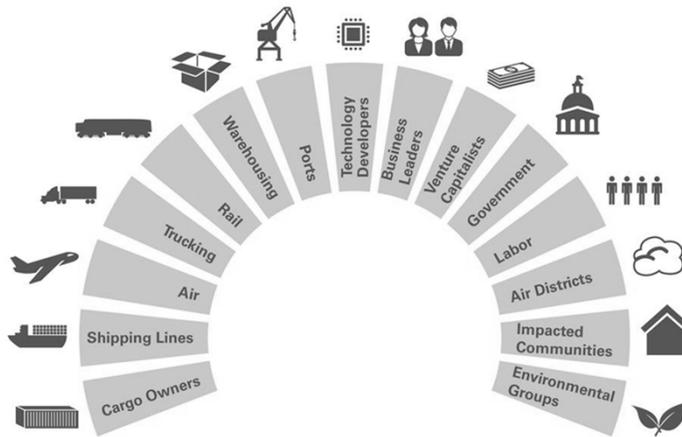
Sustainable Freight Starts Here

- Improve air quality and public health
- Increase energy security
- Support logistics growth and new jobs
- Maintain ports' competitiveness
- Improve transportation mobility

California Environmental Protection Agency
 **Air Resources Board**

8

Stakeholder Engagement is Critical



California Environmental Protection Agency
Air Resources Board 9

2014 Sustainable Freight Strategy Document

- Freight fundamentals and need for transformation
- Stakeholder concepts for sustainable freight
- Technology assessments
- Efficiency metrics and opportunities
- Principles for freight transportation projects
- Principles for new freight facilities
- Actions needed over next 5 years

California Environmental Protection Agency
Air Resources Board 10

Sustainable Freight Strategy – 2014 Timeline

When	Focus of Work Effort	Stakeholder Forums
Spring	Stakeholder concepts, technology assessments, efficiency, criteria for transportation projects	Focus groups, community, stakeholder meetings and initial public workshops
Summer	Draft assessments, initial efficiency metrics/options, draft criteria for transportation and freight facilities, outline of measures and actions	Focus groups, community and stakeholder meetings
Fall	Sustainable Freight Strategy draft document and stakeholder feedback	Public workshops, Board meeting

www.arb.ca.gov/gmp/sfti/sfti
freight@arb.ca.gov

California Environmental Protection Agency
 Air Resources Board

Doug Ito, Chief
Freight Transport Branch
916-327-5981
dito@arb.ca.gov

Jason Crow
Freight Transport Branch
916-323-7525
jcrow@arb.ca.gov

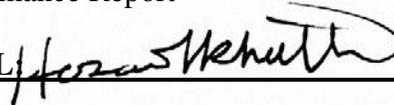
DATE: April 3, 2014

TO: Transportation Committee (TC)

FROM: Akiko Yamagami, Senior Regional Planner, (213) 236-1987, yamagami@scag.ca.gov

SUBJECT: Federal Highway Administration 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance Report

EXECUTIVE DIRECTOR'S APPROVAL:



RECOMMENDED ACTION:

For Information Only - No Action Required.

EXECUTIVE SUMMARY:

The Federal Highway Administration (FHWA) has recently released its 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance (C&P report) to Congress. The report is intended to provide decision makers an objective appraisal of the physical conditions; operational performances; and financing mechanisms of highways, bridges, and transit systems based on the current state of these systems and on their projected future state under a set of alternative future investment scenarios. This report offers a comprehensive, data-driven (through the year 2010) background context to support the development and evaluation of legislative, program, and budget options at all levels of government. Also, this report is very timely to Congress as they contemplate renewal of transit and highway spending levels beginning October 1, 2014 through 2019.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan Goal 1, Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies, a) create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

The adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (2012 RTP/SCS) was developed utilizing information similar to that provided in this C&P report, prior C&P reports, and other applicable sources of highway, bridge, and transit physical and operating conditions at the national, state, regional, and local levels. Just as this C&P report is intended to provide decision makers an objective appraisal of transportation system needs, the development of the 2016-2040 RTP/SCS will provide our decision makers an objective evaluation of regional transportation system needs, projected future conditions under different investment scenarios, and funding strategies to achieve these investment levels.

This edition of the C&P report is based primarily on data through the year 2010, reflecting the effects of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) on the system conditions and performance. None of the impact of funding authorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21) is reflected. In assessing recent trends, this report generally focuses on the 10-year period from 2000 to 2010. The prospective analyses

generally cover the 20-year period ending in 2030; the investment levels associated with these scenarios are stated in constant 2010 dollars.

The C&P report is divided into five (5) parts, each chapter includes discussions on highways and bridges; and transit systems. Following is a summary of the analysis and investment scenarios from the C&P report with respect to (1) Highway and Bridges, (2) Freight Infrastructure and (3) Transit. The Executive Summary of the C&P report is attached.

Highways and Bridges

Past Spending

The nation's road network includes over 4 million miles of public roadways and more than 600,000 bridges. In 2010, the network carried almost 3 trillion vehicle miles traveled (VMT), the vast majority of which occurred on federal-aid highways, the National Highway System (NHS), and the Interstate System. In the same year, all levels of government spent a combined \$205.3 billion for highway-related purposes, about half of which (\$100.2 billion) was for capital improvements to highways and bridges, and the remainder for operations, maintenance, and debt service. Accounting for inflation, highway spending increased by 35.9 percent between 2000 and 2010; during the same period, the federal government saw a 5.4 percent increase in highway capital spending per year, while state and local governments saw 4.7 percent annual increases.

Conditions and Performance

Between 2000 and 2010, the safety of the highway system improved nationwide, with the annual number of highway fatalities seeing a 21.6 percent reduction, the number of pedestrians killed by motor vehicle crashes experiencing a 10.1 percent decrease, and the number of pedal cyclists deaths seeing a 10.8 percent decrease. Traffic-related injuries also decreased by nearly 32 percent during this time.

The conditions of our pavement and bridges also improved during this period in many areas, but not in all categories. The percentage of VMT on the NHS with "good" ride quality rose from 48 percent to 60 percent, but lower-volume urban roadways saw a decrease in the percentage of VMT with "good" ride quality. As for our nation's bridges, the share of NHS bridges classified as structurally deficient and functionally obsolete declined from 30.7 percent to 25.9 percent. However, rural interstate bridges saw a rise in the share of bridges classified as structurally deficient, from 4.0 percent to 4.5 percent.

Future Capital Investment Scenarios

Based on the conditions and performance data, the report then provides several future capital investment scenarios, as follows:

1. **Sustain 2010 Spending Scenario:** This scenario assumes that capital spending by all levels of government is sustained in constant dollar terms at the 2010 level (\$100.2 billion systemwide) through 2030. At this level, the average sufficiency rating for the nation's bridges is projected to improve from 81.7 to 84.1 (on a scale of 0 to 100). Depending on the VMT growth per year (assumed to be between 1.36 and 1.85), pavement ride quality on federal-aid highways would improve by anywhere from 11.5 to 17.7 percent while the change in delay could range from a 1.9 percent increase (worsened conditions) to a 7.8 percent decrease (improved conditions). It should be noted that 2010 capital spending overestimates typical recent levels of annual spending

since it includes one-time supplemental funding under the American Recovery and Reinvestment Act of 2009.

2. **Maintain Conditions and Performance Scenario:** This scenario assumes that capital investment gradually changes over 20 years so that 2010 levels of conditions and performance are maintained through the year 2030. The average annual level of investment in this scenario ranges from \$65.3 billion to \$86.3 billion, depending on the rate of VMT growth.
3. **Improve Conditions and Performance Scenario:** This scenario assumes that capital investment gradually rises to the point at which all potential highway and bridge investments that are estimated to be cost-beneficial could be funded by 2030. The average annual level of investment in this scenario ranges from \$123.7 billion to \$145.9 billion, depending on the rate of VMT growth.
4. **Intermediate Improvement Scenario:** This scenario assumes that spending gradually rises to a point at which potential highway investments with a benefit-cost ratio of 1.5 or higher can be implemented. The average annual level of investment in this scenario ranges from \$93.9 billion to \$111.9 billion, depending on the rate of VMT growth.

Freight Infrastructure

The discussion on freight infrastructure is included within the highways and bridges section of the report. Some of the highlights include the following.

The multimodal and well-connected freight transportation system in the United States currently moves nearly 52 million tons of freight, worth \$46 billion, with over two-thirds (2/3) moved by trucks. Combined tonnage carried by all freight modes is projected to increase by 1.4 percent per year over the next 30 years to 27.4 billion tons in 2040 (18.3 billion tons in 2010). Trucks will be carrying 18.5 billion tons of 27.4 billion in 2040, indicating major congestion and threat to freight movement efficiency, especially near large urban areas along or near major truck corridors.

About 50 percent of trucks (trucks larger than pick-ups and vans) have an average travel distance shorter than 50 miles. These trucks account for about 30 percent of total truck VMT. By contrast, only about 10 percent of trucks operate more than 200 miles, but they account for more than 30 percent of truck VMT. With the projected growth in freight movement, capacity expansions and/or operational improvements on major freight corridors and at major freight nodes are critical to ensure efficiency.

Some of the challenges associated with freight movement include:

- freight movement often creates local problems with fewer local benefits,
- improvements specifically targeted at freight demand are needed because freight accounts for a larger share of VMT on the transportation system and improvements targeted at general traffic or passenger travel are less likely to aid the flow of freight except as an incidental by-product,
- freight rail demand is growing at the same time the demand for passenger rail is growing, where many of them operate on shared tracks,

- congestion is also caused by restrictions on freight movement, especially in urban area with limited delivery and pickup times, limited parking space for delivery trucks,
- safety associated with freight movement is an important area to be addressed. Highways and railroads account for nearly all fatalities and injuries involving freight transportation. 33,808 highway fatalities were recorded in 2009, of which 1.5 percent was occupants for large trucks, and 7.5 percent were others killed in crashes involving large trucks, and
- freight transportation raises additional issues involving the relationships between public and private sectors as most freight moving equipment are owned by private companies, but operated on publicly financed and maintained transportation facilities. As a consequence of this mixed ownership and management, most solutions to freight problems require joint action by both public and private sectors. Financial, planning, and other institutional mechanisms for developing and implementing joint efforts have been limited, inhibiting effective measures to improve the performance and minimize the public costs of the freight transportation system.

Transit

Scope of Transit

In 2010 there were 728 agencies in urbanized areas required to submit data to the Federal Transit Administration's (FTA) National Transit Database (NTD). There were also 1,582 rural transit operators. Urban reporters operated 612 motor bus systems, 587 demand response systems (such as dial-a-ride), 18 heavy rail systems, 30 commuter rail systems, and 33 light rail systems. There were also 20 ferryboat systems, 5 trolleybus systems, 3 automated guideway systems, 3 inclined plane systems, and 1 cable car system. Together, these services total 74,319 buses, 33,458 vans, 11,434 heavy rail vehicles, 7,072 commuter rail cars, and 2,118 light rail cars. Rail providers operated 12,438 miles of track and served 3,175 stations.

Condition of Transit

The FTA uses a rating scale from 1 to 5 to describe the condition of transit assets. Assets are considered to be in a state of good repair (SGR) when their condition is at or above a value of 2.5. The 2010 rating for all transit bus types is 3.0, slightly lower than it has been a decade ago. The full-size bus fleet (40' or greater) shows a decrease in the average age however and is now at 6.1 years. The rail vehicle average condition and age has been quite stable over the last five years, and is experiencing a steady growth in fleet size due to new and/or expanding rail lines (especially light rail) being implemented. Non-vehicle rail assets represent the biggest challenge to achieving a SGR. The estimated replacement value of rail facilities such as track, ties, switches, ballast, tunnels, and elevated structures is \$213.0 billion, of which \$35.8 billion is for assets rated in poor condition (17 percent) and \$22.6 billion is for assets in marginal condition. The replacement value of train systems, such as power, communication, and train control equipment is estimated at \$93.6 billion, of which \$13.7 billion is for systems in poor condition (15 percent) and \$15.3 billion is for systems in marginal condition. The relatively large proportion of rail guideway and systems assets that are in poor condition, and the magnitude of the \$49.5-billion investment required to replace them, represents a major challenge to the rail transit industry. (It should be noted that these figures disproportionately represent the systems in the Mid-West and East Coast regions, where rail facilities are much older than in our region.)

Transit Safety

Public transportation experiences considerably lower rates of incident, fatality, and injury than all other modes of transportation. From 2002 to 2010, the number of fatalities has remained relatively flat on transit with roughly 0.5 fatalities per 100 million passenger miles travelled (PMT) for bus and 1.0 for rail. These statistics have remained relatively flat for transit over the years as compared to automobile travel which has slowly declined.

Transit Finance and Funding

In 2010, \$54.3 billion was expended to finance transit capital, operations and maintenance. 73.9 percent (\$40.2 billion) came from public sources and 26.1 percent came from passenger fares (\$12.1 billion) and other system-generated revenue sources (\$2.0 billion). The Federal share of this was \$10.4 billion (25.8 percent of total public funding). State and local jurisdictions provided the bulk of transit funding: \$18.0 billion in 2010, or 44.9 percent of total public funds and 33.2 percent of all funding.

In 2010, transit agencies spent a combined \$16.5 billion on capital improvements for infrastructure and vehicle fleets. This amount included \$10.3 billion in the preservation (rehabilitation and replacement) of existing assets and \$6.2 billion to expand transit capacity in order to accommodate ridership growth and to improve service for existing riders. Although 2010 investment levels are very similar to those of 2008, the proportion of capital funds used for expansion has increased from 32 to 38 percent and preservation investments have declined. Sustaining transit capital spending at year 2010 levels for 20 years is projected to result in an overall decline in transit system conditions due to underinvestment in system preservation. The average physical condition of transit assets will decline, with an estimated 52 percent increase in the size of the SGR backlog by 2030. This will be added to the current backlog of \$85.9 billion. This will have impacts on service reliability and potentially on safety. The FTA estimates that the average annual level of investment required to eliminate the existing system preservation backlog by 2030 is roughly \$18.5 billion. In addition, FTA estimates that up to \$7.1 billion in annual expansion investments may also be required to handle future ridership growth while maintaining the current number of passengers per vehicle.

FISCAL IMPACT:

There is no direct fiscal impact. Staff costs associated to review of the matter is included in the FY 13-14 OWP Budget.

ATTACHMENT:

Executive Summary, 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance

This Page Intentionally Left Blank

EXECUTIVE SUMMARY

2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance



U.S. Department
of Transportation
Federal Highway
Administration
Federal Transit
Administration

REPORT TO CONGRESS

EXECUTIVE SUMMARY

2013 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance



U.S. Department
of Transportation

Federal Highway
Administration

Federal Transit
Administration

REPORT TO CONGRESS

Introduction

This document is a summary of the *2013 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance* report to Congress (C&P report). The C&P report is intended to provide decision makers with an objective appraisal of the physical conditions, operational performances, and financing mechanisms of highways, bridges, and transit systems based both on the current state of these systems and on their projected future state under a set of alternative future investment scenarios. This report offers a comprehensive, data-driven background context to support the development and evaluation of legislative, program, and budget options at all levels of government. It also serves as a primary source of information for national and international news media, transportation associations, and industry.

The 2013 C&P report draws primarily on 2010 data, which reflect funds from the American Recovery and Reinvestment Act of 2009 (Recovery Act) (Pub.L. 111-5). The 2010 C&P Report, transmitted on March 15, 2012, was based primarily on 2008 data.

The main body of the report is organized into four major sections. Part I, "Description of Current System," contains the core retrospective analyses of the report, including chapters on household travel and highway freight movement, system characteristics, system conditions, safety, system performance, and finance.

Part II, "Investment/Performance Analysis," contains the core prospective analyses of the report, including 20-year future capital investment scenarios. The highway investment scenarios presented in this report are developed in part from the Highway Economic Requirements System (HERS), which uses benefit-cost analysis to optimize highway investment. The HERS model quantifies user, agency, and societal costs for various types and combinations of improvements, including travel time and vehicle operating, safety, capital, maintenance, and emissions costs. Bridge investment scenario estimates are developed from the National Bridge Investment Analysis System (NBIAS) model. Unlike earlier bridge models (and similar to HERS), NBIAS incorporates benefit-cost analysis into the bridge investment/performance evaluation. The transit investment analysis is based on the Transit Economic Requirements Model (TERM). The TERM consolidates older engineering-based evaluation tools and introduces a benefit-cost analysis to ensure that investment benefits exceed investment costs. TERM identifies the investments needed to replace and rehabilitate existing assets, improve operating performance, and expand transit systems to address the growth in travel demand.

Part III, "Special Topics," explores some topics related to the primary analyses in the earlier sections of the report, including the transportation systems serving Federal and Tribal lands, the FHWA Center for Accelerating Innovation, and FTA's National Fuel Cell Bus Program. Potential future changes to the Highway Performance Monitoring System (HPMS) are discussed in Part IV, "Recommendations for the HPMS". The report also contains three technical appendices that describe the investment/performance methodologies used in the report for highways, for bridges, and for transit. A fourth appendix describes ongoing research activities and identifies potential areas for improvement in the data and analytical tools used to produce the analyses contained in this report.

Cautionary Notes on Using This Report

In order to correctly interpret the analyses presented in this report, it is important to understand the framework in which they were developed and to recognize their limitations. This document is not a

statement of Administration policy, and the future investment scenarios presented are intended to be illustrative only. **The report does not endorse any particular level of future highway, bridge, or transit investment.** It does not address what future Federal surface transportation programs should look like, or what level of future surface transportation funding can or should be provided by the Federal government, State governments, local governments, the private sector, or system users. Making recommendations on policy issues such as these would go beyond the legislative mandate for the report and would violate its objectivity. Outside analysts can and do make use of the statistics presented in the C&P report to draw their own conclusions, but any analysis attempting to use the information presented in this report to determine a target Federal program size would require a whole series of additional policy and technical assumptions that go well beyond what is reflected in the report itself.

The investment scenario estimates presented in this report are estimates of the performance that **could** be achieved with a given level of funding, not necessarily what **would** be achieved with it. The analytical tools used in the development of these estimates combine engineering and economic procedures, determining deficiencies based on engineering standards while applying benefit-cost analysis procedures to identify potential capital improvements to address deficiencies that may have positive net benefits. Although the models generally assume that projects are prioritized based on their benefit-cost ratios, that assumption deviates somewhat from actual patterns of project selection and funding distribution that occur in the real world. Consequently, the level of investment identified as the amount required to maintain a certain performance level should be viewed as **illustrative only**, and should not be considered a projection or prediction of actual condition and performance outcomes likely to result from a given level of national spending.

Recovery Act

In February 2009, the American Recovery and Reinvestment Act authorized \$48.1 billion for programs administered by the U.S. Department of Transportation (DOT). Of most relevance to the transportation modes reflected in the C&P report are the \$27.5 billion appropriated for programs administered by FHWA and \$8.4 billion appropriated for programs administered by FTA. In addition, highway, bridge, and transit projects were eligible to compete for Office of the Secretary of Transportation's Supplemental Discretionary Grant for a National Surface Transportation System program, later referred to as the TIGER I program.

Consistent with the operation of the regular Federal-aid program funds as a reimbursement program, the Recovery Act funds were obligated to specific projects up front, but the actual transfer of Federal dollars to the grant recipients occurs more gradually over the life of the projects. Through the end of 2010, approximately \$17.3 billion of Recovery Act funding had been expended for highway projects, and approximately \$3.5 billion had been expended for transit projects. Consequently the 2010 conditions and performance data presented in this report do not yet fully reflect the results of the Recovery Act investments. Recovery Act investments will continue to impact future financial data, as well as condition and performance data.

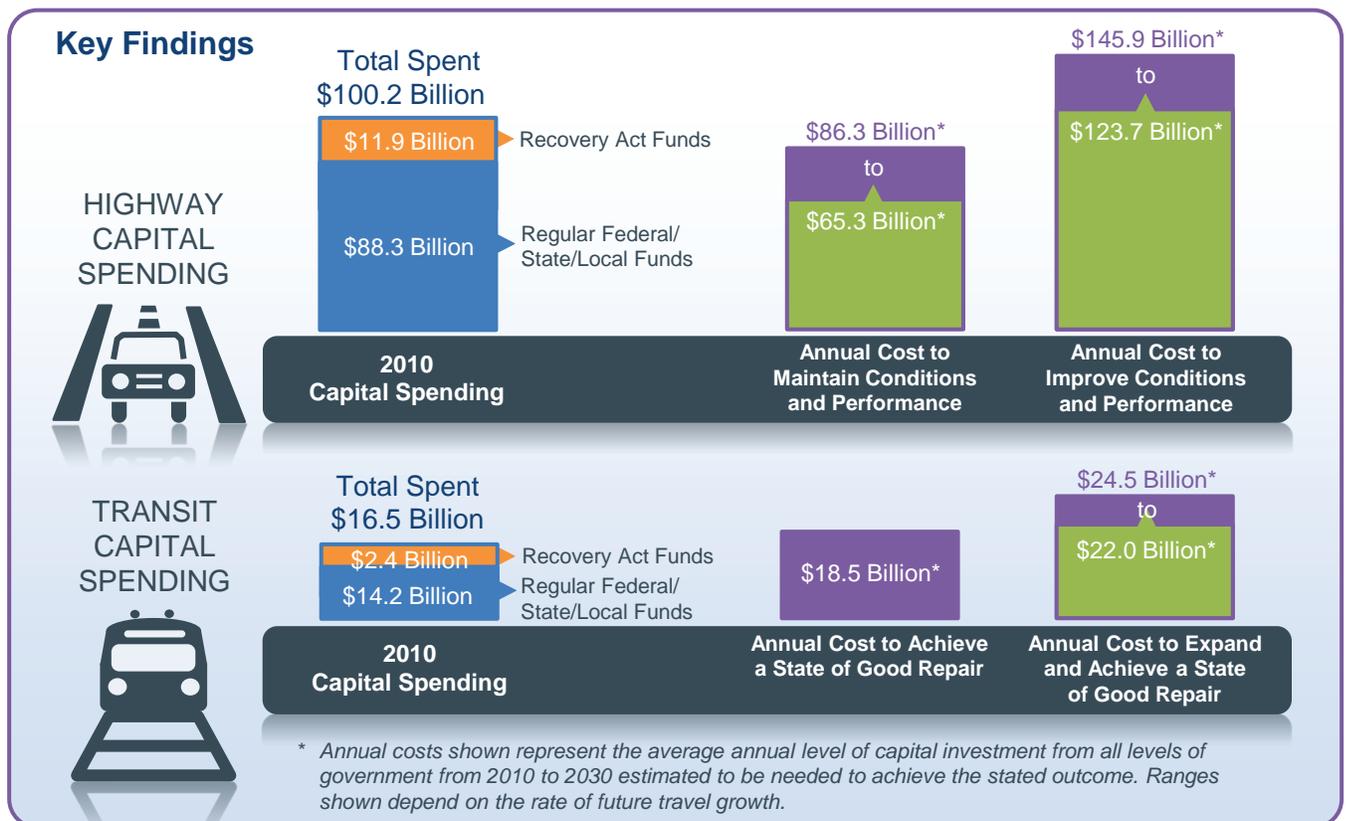
Because the financial statistics presented in the C&P report are cash-based, the Recovery Act funding is accounted for at the time that States and transit agencies are reimbursed, and appears in the revenue figures as support from Federal general funds. During 2010, \$11.9 billion of funding appropriated under the Recovery Act funds were expended for highway purposes and \$2.4 billion were expended for transit capital investments.

Executive Summary

This edition of the C&P report is based primarily on data through the year 2010; consequently, the system conditions and performance measures presented should reflect effects of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which authorized Federal highway and transit funding for Federal fiscal years 2005 through 2009 (and extended through fiscal year 2012), as well as some of the impact of the funding authorized under the American Recovery and Reinvestment Act of 2009 (Recovery Act). None of the impact of funding authorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21) is reflected. In assessing recent trends, this report generally focuses on the 10-year period from 2000 to 2010. The prospective analyses generally cover the 20-year period ending in 2030; the investment levels associated with these scenarios are stated in constant 2010 dollars.

In 2010, all levels of government spent a combined \$205.3 billion for highway-related purposes, of which \$11.9 billion was a direct impact of the Recovery Act. All levels of government spent a combined \$54.3 billion for transit-related purposes, including \$2.4 billion of expenditures supported by one-time funding under the Recovery Act.

The average annual capital investment level needed to maintain the conditions and performance of highways and bridges at 2010 levels through the year 2030 is projected to range from \$65.3 billion to \$86.3 billion per year, depending on the future rate of growth in vehicle miles traveled (VMT). Improving the conditions and performance of highways and bridges by implementing all cost-beneficial investments would cost an estimated \$123.7 billion to \$145.9 billion per year. (Note that these projections are much lower than those presented in the 2010 C&P report, driven in part by an 18 percent reduction in highway construction prices



between 2008 and 2010). In 2010, all levels of government spent a combined \$100.2 billion for capital improvements to highways and bridges.

Bringing existing transit assets up to a state of good repair would require an annualized investment level of \$18.5 billion through the year 2030. The estimated combined costs associated with accommodating future increases in transit ridership and addressing system preservation needs when it is cost-beneficial to do so, would range from \$22.0 billion to \$24.5 billion per year. In 2010, all levels of government spent a combined \$16.5 billion for transit capital improvements.

Highlights: Highways and Bridges

Extent of the System

- The Nation's road network includes more than 4,083,768 miles of public roadways and more than 604,493 bridges. In 2010, this network carried almost 2.985 trillion vehicle miles traveled (VMT).
- The 1,007,777 miles of Federal-aid highways (25 percent of total mileage) carried 2.525 trillion VMT (85 percent of total travel) in 2010.
- While the 162,698 miles on the National Highway System (NHS) make up only 4 percent of total mileage, the NHS carried 1.305 trillion VMT in 2010, just under 44 percent of total travel.
- The 47,182 miles on the Interstate System carried 0.731 trillion VMT in 2010, constituting a bit over 1 percent of mileage and just over 24 percent of total VMT.

Highway System Terminology

"Federal-aid Highways" are roads that are generally eligible for Federal funding assistance under current law. (Note that certain Federal programs do allow the use of Federal funds on other roadways.)

The "National Highway System" (NHS) includes those roads that are most important to interstate travel, economic expansion, and national defense. It includes the entire Interstate System. MAP-21 directed that the NHS system be expanded. The statistics presented for 2010 reflect the NHS as it existed then. The 20-year scenarios have been adjusted to approximate the NHS after expansion.

Spending on the System

- All levels of government spent a combined \$205.3 billion for highway-related purposes in 2010. About half of total highway spending (\$100.2 billion) was for capital improvements to highways and bridges; the remainder included expenditures for physical maintenance, highway and traffic services, administration, highway safety, and debt service.
- In nominal dollar terms, highway spending increased by 67.3 percent between 2000 and 2010; adjusting for inflation this equates to a 35.9 percent increase. Highway capital expenditures increased by 63.4 percent between 2000 and 2010, equaling a 36.6 percent increase when adjusted for inflation.
- The portion of total highway capital spending funded by the Federal government increased from 42.6 percent in 2000 to 44.3 percent in 2010. The average annual increase in Federally funded highway capital outlay grew by 5.4 percent per year over this period, compared to a 4.7 annual increase in capital spending funded by State and local governments.

Constant Dollar Conversions for Highway Expenditures

This report uses the Federal Highway Administration's (FHWA's) National Highway Construction Cost Index (NHCCI) and its predecessor, the Composite Bid Price Index (BPI), for inflation adjustments to highway capital expenditures and the Consumer Price Index (CPI) for adjustments to other types of highway expenditures.

- The composition of highway capital spending shifted from 2000 to 2010, particularly from 2008 to 2010, which was partially attributable to the Recovery Act. The percentage of highway capital spending directed toward system rehabilitation rose from 52.7 percent in 2000 to 59.9 percent in 2010. Over the same period, the percentage directed toward system enhancement rose from 9.9 percent to 12.8 percent, while the percentage directed toward system expansion fell from 37.4 percent to 27.4 percent.

Highway Capital Spending Terminology

This report splits highway capital spending into three broad categories. “System Rehabilitation” includes resurfacing, rehabilitation, or reconstruction of existing highway lanes and bridges. “System Expansion” includes the construction of new highways and bridges and the addition of lanes to existing highways. “System Enhancement” includes safety enhancements, traffic control facilities, and environmental enhancements.

Conditions and Performance of the System

- Work is under way to establish metrics and data collection systems to capture information on attaining sustainable transportation systems, both in terms of fostering livable communities and advancing environmental sustainability.

Highway Safety Has Improved

- The annual number of highway fatalities was reduced by 21.6 percent between 2000 and 2010, dropping from 41,945 to 32,885. The fatality rate per 100 million VMT declined from 1.53 in 2000 to 1.11 in 2010.
- Between 2000 and 2010, the number of pedestrians killed by motor vehicle crashes decreased by 10.1 percent, from 4,763 to 4,282, and the number of pedalcyclists (such as bicyclists) killed has decreased almost 10.8 percent, from 693 to 618. While these are positive trends, they also reflect that less progress has been made in reducing nonmotorist fatalities than in reducing overall highway fatalities.
- The number of traffic-related injuries decreased by almost 32 percent from 3.1 million to 2.1 million between 2000 and 2010. The injury rate per 100 million VMT declined from 112 in 2000 to 71 in 2010.

Pavement Conditions Have Improved in Many Areas

- The percentage of VMT on NHS pavements with “good” ride quality rose from 48 percent in 2000 to 60 percent in 2010. The share of VMT on NHS pavements with “acceptable” ride quality increased from 91 percent to 93 percent.
- The percentage of Federal-aid Highway VMT on pavements with “good” ride quality rose from 42.8 percent in 2000 to 50.6 percent in 2010, while the share of VMT on pavements with “acceptable” or better ride quality declined from 85.5 percent to 82.0 percent.
- The improvement in the percentage of VMT on pavements with “good” ride quality has not been uniform across the system. For lower-volume urban roadways classified as urban minor arterials, or urban collectors, the percent of VMT on pavements with “good” ride quality and “acceptable” ride quality both declined between 2000 and 2010. This result appears consistent with a change in philosophy among

Pavement Condition Terminology

This report uses the International Roughness Index (IRI) as a proxy for overall pavement condition. Pavements with an IRI value of less than 95 inches per mile are considered to have “good” ride quality. Pavements with an IRI value less than or equal to 170 inches per mile are considered to have “acceptable” ride quality. (Based on these definitions “good” is a subset of the “acceptable” category.) These metrics are typically VMT weighted, so the report refers to the percent of VMT on pavements with good ride quality. (Note that the NHS pavement statistics presented in this report are based on calendar year data, consistent with the annual Highway Statistics publication; in other DOT publications presented on a fiscal year basis, these calendar 2010 NHS statistics appear as Fiscal Year 2011 data.)

many transportation agencies leading them to move away from a simple strategy of addressing assets on a “worst first” basis toward more comprehensive strategies aimed at targeting investment where it will benefit the most users.

Bridge Conditions Have Improved

- Based directly on bridge counts, the share of NHS bridges classified as structurally deficient declined from 6.0 percent in 2000 to 5.1 percent in 2010. Over this period, the share classified as functionally obsolete declined from 17.7 percent to 16.3 percent, so the total share classified as deficient declined from 23.7 percent to 21.4 percent.
- Weighted by deck area, the share of NHS bridges classified as structurally deficient declined from 8.7 percent in 2000 to 8.3 percent in 2010. Over this period, the share classified as functionally obsolete declined from 22.0 percent to 20.3 percent, so the total share classified as deficient declined from 30.7 percent to 28.7 percent.
- Systemwide, based on bridge counts, the share of bridges classified as structurally deficient declined from 15.2 percent to 11.7 percent from 2000 to 2010, the functionally obsolete share declined from 15.5 percent to 14.2 percent, and the total percentage of deficient bridges declined from 30.7 percent to 25.9 percent.
- The reductions in bridge deficiencies have not been uniform across the system. The share of rural interstate bridges classified as structurally deficient rose from 4.0 percent in 2000 to 4.5 percent in 2010; over the same period, the share of urban collector bridges classified as functionally obsolete was not reduced below the 2000 level of 28.1 percent.

Bridge Condition Terminology

Bridges are considered “structurally deficient” if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage, or the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions due to high water. That a bridge is deficient does not imply that it is likely to collapse or that it is unsafe.

Functional obsolescence is a function of the geometrics (i.e., lane width, number of lanes on the bridge, shoulder width, presence of guardrails on the approaches, etc.) of the bridge in relation to the geometrics required by current design standards. As an example, a bridge designed in the 1930s would have shoulder widths in conformance with the design standards of the 1930s, but could be deficient relative to current design standards, which are based on different criteria and require wider bridge shoulders to meet current safety standards. The magnitude of these types of deficiencies determines whether a bridge is classified as “functionally obsolete.”

These classifications are often weighted by bridge deck area, in recognition of the fact that bridges are not all the same size and, in general, larger bridges are more costly to rehabilitate or replace to address deficiencies. They are also sometimes weighted by annual daily traffic (ADT).

Future Capital Investment Scenarios – Systemwide

The scenarios that follow pertain to spending by all levels of government combined for the 20-year period from 2010 to 2030 (reflecting the impacts of spending from 2011 through 2030); the funding levels associated with all of these analyses are stated in constant 2010 dollars. Rather than assuming an immediate jump to a higher (or lower) investment level, each of these analyses assume that spending will grow by a uniform annual rate of increase (or decrease) in constant dollar terms using combined highway capital spending by all levels of government in 2010 as the starting point. As noted in the Introduction, caution should be taken in evaluating the scenario findings, given the impact of the Recovery Act funding on 2010 spending.

Sustain 2010 Spending Scenario

- The **Sustain 2010 Spending scenario** assumes that capital spending by all levels of government is sustained in constant dollar terms at the 2010 level (\$100.2 billion systemwide) through 2030.
- At this level of spending, the average sufficiency rating for the Nation's bridges is projected to improve from 81.7 to 84.1 (on a scale of 0 to 100).
- Assuming a higher forecast-based future VMT growth (of 1.85 percent per year), average pavement ride quality on Federal-aid highways is projected to improve by 11.5 percent while average delay per VMT on Federal-aid highways worsens by 1.9 percent. Assuming lower trend-based VMT growth (of 1.36 percent per year), average pavement ride quality is projected to improve by 17.7 percent, while average delay improves by 7.8 percent.
- **Note that 2010 capital spending was supplemented by one-time funding under the Recovery Act, which would make it more challenging to sustain this level of spending in the future.**

Highway Investment/Performance Analyses

In order to provide an estimate of the costs that might be required to maintain or improve system performance, this report includes a series of investment/performance analyses that examine the potential impacts of alternative levels of future combined investment levels by all levels of government on highways and bridges for different subsets of the overall system.

Drawing upon these investment/performance analyses, a series of illustrative scenarios were selected for further exploration and presentation in more detail. The scenario criteria were applied separately to the Interstate System, the NHS, all Federal-aid highways, and the overall road system.

Recognizing that one of the major factors influencing future highway investment needs will be future travel demand, two sets of illustrative scenarios are presented for Federal-aid Highways and the overall system. One set incorporates travel forecasts provided by the States for individual highway sections (averaging to 1.85 percent growth per year), while the other assumes lower travel growth based on a continuation of national trends over the last 15 years (1.36 percent growth per year).

Maintain Conditions and Performance Scenario

- The **Maintain Conditions and Performance scenario** assumes that capital investment gradually changes in constant dollar terms over 20 years to the point at which selected measures of future conditions and performance in 2030 are maintained at 2010 levels.
- The average annual level of investment associated with this scenario is \$86.3 billion systemwide assuming higher future VMT growth and \$65.3 billion systemwide assuming lower future VMT growth.
- The annual investment levels for both versions of this systemwide scenario fall below the base year (2010) spending level. In previous editions of this report, the estimated costs of this scenario have typically been higher than base year spending, under most or all alternative versions of the scenario presented.

Improve Conditions and Performance Scenario

- The **Improve Conditions and Performance scenario** assumes that capital investment gradually rises to the point at which all potential highway and bridge investments that are estimated to be cost-beneficial (i.e., those with a benefit-cost ratio of 1.0 or higher) could be funded by 2030.
- Assuming higher future VMT growth, the average annual level of systemwide investment associated with this scenario is \$145.9 billion. This is 45.7 percent higher than actual 2010 spending; a gap that could be closed if spending rose by 3.46 percent per year faster than the rate of future inflation.
- Assuming lower future VMT growth brings the annual cost of this systemwide scenario down to \$123.7 billion, 23.4 percent higher than 2010 spending; a 1.96 percent annual increase in constant dollar spending would be sufficient to close this gap.
- The **State of Good Repair benchmark** represents the subset of this scenario that is directed toward addressing deficiencies of existing highway and bridge assets. The average annual investment level associated with this benchmark is \$78.3 billion, assuming higher future VMT growth, and \$72.9 billion, assuming lower future VMT growth.

Intermediate Improvement Scenario

- The highway component of the **Intermediate Improvement scenario** assumes that combined spending gradually rises to a point at which potential highway investments with a benefit-cost ratio of 1.5 or higher can be implemented; the bridge component represents the cost of achieving half of the gains in bridge sufficiency computed under the **Improve Conditions and Performance scenario**.
- The average annual level of systemwide investment associated with this scenario is \$111.9 billion (11.7 percent higher than 2010 spending, which was 10.8 percent higher than 2008 spending due to the Recovery Act), assuming higher future VMT growth, and \$93.9 billion (6.3 percent lower than 2010 spending), assuming lower future VMT growth.

Highlights: Transit

Extent of the System

- Of the transit agencies that submitted data to the National Transit Database (NTD) in 2010, 728 provided service to urbanized areas and 1,582 provided service to rural areas. Urban agencies operated 612 bus systems, 587 demand response systems, 18 heavy rail systems, 30 commuter rail systems, and 33 light rail systems. There were also 70 transit vanpool systems, 20 ferryboat systems, 5 trolleybus systems, 3 automated guideway systems, 3 inclined plane systems, and 1 cable car system.
- Bus and heavy rail modes continue to be the largest segments of the industry, providing 35.6 percent and 51.6 percent of all transit trips, respectively. Commuter rail supports a relatively high share of passenger miles (20.0 percent). Light rail is the fastest-growing rail mode (with passenger miles growing at 5.0 percent per year between 2000 and 2010) but it still provides only 4.1 percent of transit passenger miles. Vanpool growth during that period was 10.3 percent per year, with vanpools accounting for only 2.1 percent of all transit passenger miles.
- Urban transit operators reported 9.9 billion unlinked passenger trips on 3.9 billion vehicle revenue miles. Rural transit operators reported 123 million unlinked passenger trips on 570 million vehicle revenue miles.

Bus, Rail, and Demand Response: Transit Modes

Public transportation is provided by several different types of vehicles that are used in different operational *modes*. The most common is *fixed-route bus* service, which uses different sizes of rubber-tired buses that run on scheduled routes. *Commuter bus* service is similar but uses over-the-road buses and runs longer distances between stops. *Bus rapid transit* is high-frequency bus service that emulates light rail service. *Publicos and jitneys* are small owner-operated buses or vans that operate on less-formal schedules along regular routes.

Larger urban areas are often served by one or more varieties of *fixed-guideway* (rail) service. These include *heavy rail* (often running in subway tunnels) which is primarily characterized by third-rail electric power and exclusive dedicated guideway. Extended urban areas may have *commuter rail*, which often shares track with freight trains and usually uses overhead electric power (but may also use diesel power). *Light rail* systems are common in large- and medium-sized urban areas; they feature overhead electric power and run on track that is entirely or in part on city streets that are shared with pedestrian and automobile traffic. *Streetcars* are small light rail systems, usually with only one or two cars per train. *Cable cars, trolley buses, monorail, and automated guideway* systems are less-common rail variants.

Demand response transit service is usually provided by vans, taxicabs, or small buses that are dispatched to pick up passengers upon request. This mode is mostly used to provide *paratransit* service as required by the Americans with Disabilities Act. They do not follow a fixed schedule or route.

Spending on the System

- All levels of government spent a combined \$54.3 billion to provide public transportation and maintain transit infrastructure. Of this, 26.1 percent was system-generated revenue, of which most came from

passenger fares. 19 percent of revenues came from the Federal government while the remaining funds came from State and local sources.

- Public transit agencies spent \$16.6 billion on capital investments in 2010. Annually authorized Federal funding made up 26.6 percent of these capital expenditures. One-time funds from the Federal American Recovery and Reinvestment Act provided another 14.5 percent.
- Federal funding is primarily targeted for capital assistance; however, Federal funding for operating expenses at public transportation agencies has increased from 19 percent of all Federal funding in 2000 to 35 percent in 2010. Virtually all of the increase is due to the 2004 change making “preventative maintenance” eligible for reimbursement from 5307 grant funds. Maintenance is an operating expense. Meanwhile, farebox recovery ratios, representing the share of operating expenses that come from passenger fares, have remained close to the 2000 value of 35.5 percent throughout this period.
- Recent investments in system expansion have been adequate to keep pace with ridership growth (the average number of passengers per vehicle has not increased). Furthermore, continuing these investment levels will support projected growth in demand that falls between the low- and high-growth projections in this report. Investments in system preservation, however, still fall short of current and projected needs.

Federal Transit Funding Urban and Rural

Federal Transit Administration (FTA) Urbanized Area Formula Funds are apportioned to *urbanized areas* (UZAs), as defined by the Census Bureau. UZAs in this report were defined by the 2000 census. Data from the 2010 census will be used in the 2013 apportionment and beyond. Each UZA has a designated recipient, usually a Metropolitan Planning Organization (MPO) or large transit agency, which then sub-allocates FTA funds in its area according to local policy. In small urban and rural areas, FTA apportions funds to the State, which allocates them according to State policy. Indian tribes receive their funds directly. All funds then become available, on a reimbursement basis, through application to the FTA.

Conditions and Performance of the System

Transit Remains Safe

- There has been no significant increase in the rate of transit fatalities since 2004. Excluding suicides, that fatality rate hovers around one fatality for each 250 million passenger miles traveled (0.4 per 100 million).
- In 2010, one in four transit-related fatalities was classified as a suicide. In 2002, the rate was just one in 13. The rate of suicides on transit facilities has gone up every year since 2005.

Some Aspects of System Performance Have Improved

- Between 2000 and 2010, transit agencies have provided substantially more service. The annual rate of growth in route miles ranged from 0.4 percent for heavy rail to 6.0 percent for light rail. This has resulted in 21 percent more route miles available to the public.
- Between 2000 and 2010, the number of annual service miles per vehicle (vehicle productivity) increased steadily and the average number of miles between breakdowns (mean distance between failures) decreased by 14 percent. Thus, transit operators are getting more use out of their vehicles.

Unlinked Passenger Trips, Passenger Miles, Route Miles, and Revenue Miles

Unlinked passenger trips (UPT), also called boardings, count every time a person gets on an in-service transit vehicle. Each transfer to a new vehicle or route is considered another unlinked trip, so a person’s commute to work may count as more than one trip if that person transferred between routes.

Passenger miles traveled (PMT) simply count how many miles a person travels. UPT and PMT are both commonly used measures of *transit service consumed*.

Directional route miles (DRM) measure the number of miles of transit route available to customers. They are directional because each direction counts separately; thus, a one-mile-out and one-mile-back bus route would be two DRM. *Vehicle Revenue Miles* (VRM) count the miles of revenue service, and are typically much greater than the DRM because many trips are taken over each route (and each DRM). These are commonly used measures of *transit service provided*.

- Growth in service offered was nearly in accordance with growth in service consumed. In spite of steady growth in route miles and revenue miles, average vehicle occupancy levels did not decrease. Passenger miles traveled grew at a 1.6-percent annual pace while the number of trips grew at a 1.3-percent annual pace. This is significantly faster than the growth in the U.S. population during this period (0.93 percent), suggesting that transit has been able to attract riders who previously used other modes of travel. Increased availability of transit service has undoubtedly been a factor in this success.

Future Capital Investment Scenarios – Systemwide

As in the highway discussion, the transit investment scenarios that follow pertain to spending by all levels of government combined for the 20-year period from 2010 to 2030 (reflecting the impacts of spending from 2011 through 2030); the funding levels associated with all of these analyses are stated in constant 2010 dollars. Unlike the highway scenarios, these transit scenarios assume an immediate jump to a higher (or lower) investment level that is maintained in constant dollar terms throughout the analysis period.

Included in this section for comparison purposes is an assessment of the investment level needed to replace all assets that are currently past their useful life or that will be over the forecast period. This would be necessary to achieve and maintain a state of good repair (SGR) but would not address any increases in demand during that period. Although not a realistic scenario, this does provide a benchmark for infrastructure preservation.

Sustain 2010 Spending Scenario

- The **Sustain 2010 Spending scenario** assumes that capital spending by all levels of government is sustained in constant dollar terms at the 2010 level (\$16.5 billion systemwide), including Recovery Act funds, through 2030. Assuming that the current split between expansion and preservation investments is maintained, this will allow for enough expansion to meet medium growth expectations but will fall far short of meeting system preservation needs. By 2030, this will result in roughly \$142 billion in deferred system preservation projects.

Low-Growth Scenario

- The **Low-growth scenario** assumes that transit ridership will grow at an annual rate of 1.4 percent between 2010 to 2030, as projected by the Nation’s metropolitan planning organizations. During that period, it also attempts to pay down the current \$85.9 billion system preservation backlog (subject to a cost-benefit constraint). The annualized cost of this scenario is \$22.0 billion. In 2010, all levels of government spent a combined \$16.5 billion for transit capital improvements.

High-Growth Scenario

- The **High-growth scenario** assumes that transit ridership will grow at an annual rate of 2.2 percent between 2010 and 2030, the average annual rate of growth experienced between 1995 and 2010. It also attempts to pay down the current \$85.9-billion system preservation backlog (subject to the same cost-benefit constraint). The annualized cost of this scenario is \$24.5 billion.

State of Good Repair – Expansion vs. Preservation

State of Good Repair (SGR) is defined in this report as all transit capital assets being within their average service life. This is a general construct that allows FTA to estimate *system preservation* needs. The analysis looks at the age of all transit assets and adds the value of those that are past the age at which that type of asset is usually replaced to a total reinvestment needs estimate. Some assets may continue to provide reliable service well past the average replacement age and others will not; over the large number of assets nationally, the differences average out. Some assets will need to be replaced, some will just get refurbished. Both types of cost are included in the reinvestment total. SGR is a measure of system preservation needs, and failure to meet these needs results in increased operating costs and poor service.

Expansion needs are treated separately in this analysis. They result from the need to add vehicles and route miles to accommodate more riders. Estimates of future demand are, by their nature, speculative. Failure to meet this type of need results in crowded vehicles and represents a lost opportunity to provide the benefits of transit to a wider customer base.

PART I

Description of Current System

Part I of this report summarizes the current state of highways, bridges and transit systems, based primarily on data through the year 2010 unless otherwise noted. Chapter 1 discusses trends in personal travel, drawing upon the 2009 National Household Travel Survey, and presents data and issues relating to highway freight movement. Chapter 2 describes the characteristics of the highway, bridge, and transit systems, and Chapter 6 provides data on the revenue collected and expended for highways and transit.

U.S. Department of Transportation (DOT) Strategic Plan, FY 2012–16

The latest U.S. DOT Strategic Plan presents five strategic goals for America’s transportation system:

- **Safety** – Improve public health and safety by reducing transportation-related fatalities and injuries.
- **State of Good Repair** – Ensure that the United States proactively maintains its critical transportation infrastructure in a state of good repair.
- **Economic Competitiveness** – Promote transportation policies and investments that bring lasting and equitable economic benefits to the Nation and its citizens.
- **Livable Communities** – Foster livable communities through place-based policies and investments that increase the transportation choices and access to transportation services.
- **Environmental Sustainability** – Advance environmentally sustainable policies and investments that reduce carbon and other harmful emissions from transportation sources.

Chapter 3 addresses issues relating to the State of Good Repair goal, presenting data on the physical conditions of highways, bridges, transit systems, and transit vehicles. Chapter 4 addresses issues pertaining to the Safety goal. Chapter 5 covers topics relating to the goals for Livable Communities, Environmental Sustainability, and Economic Competitiveness.

Performance Management

Transportation Performance Management is a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. A typical performance management process would include the following elements: (1) establish a set of goals/objectives; (2) define measures that support achievement of the goal or objective; (3) establish specific future targets for the measures; (4) develop specific plans, budgets, and programs to achieve the target outcome; and (5) after the programs are implemented, assess their results against the desired target. Any discrepancy between the planned and actual outcomes can be addressed by altering strategies. Performance management is a continual improvement process.

In July 2012, the Moving Ahead for Progress into the 21st Century Act (MAP-21) introduced specific requirements for performance management for highway and transit investments, establishing national goals for safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic activity, environmental sustainability, and reduced project delivery time.

Federal Agencies are required to define the measures and standards for achieving the goals identified, unless defined in MAP-21. The States are to determine their own targets, while minimum standards may be established by Federal agencies where appropriate. States are to report progress toward the targets established. Failure to meet targets or develop plans has specific penalties for States: reduction in funding or requirements to spend more on the specific goal area. States are to report progress toward the targets within 4 years of enactment of MAP-21, and biennially thereafter.

Transit agencies that receive FTA grant funds are similarly required to maintain asset management plans, to set goals for achieving a state of good repair, and to report asset inventory condition data to FTA along with metrics demonstrating their progress toward meeting their goals.

CHAPTER 1

Household Travel

To fully understand daily travel, one must look at it through the lens of the 300 million Americans who use the transportation system to connect to jobs, stores, schools, friends, relatives, healthcare, recreational places, and more. The National Household Travel Survey (NHTS) is the only national source of travel data that connects daily travel behavior with the characteristics of the household and the individual making the trip.

The NHTS data reflect daily travel behavior of the American public, and do not include freight movement or commercial driving. Americans drove 30 billion fewer vehicle miles in 2008-2009 than in the 2001-2002 NHTS survey period despite a nearly 10 percent population increase over that time. There are many factors that could be causing this decline, including: the recession, high gas prices during the summer of 2008, changing demographics (e.g., the aging of the population and smaller household sizes) changing lifestyles of Americans (e.g., the increases in telecommuting and cyber shopping or different travel preferences), an increase in the availability of quality transit service and other alternatives

By 2050, about one in four members of the U.S. population will be over the age of 65. Maintaining the mobility of this group is a major quality of life issue. This group is increasing in average age over time, which may explain the recent decreases in their per capita trips and miles traveled.

Like the population as a whole, the household vehicle fleet is also aging, with the average age of household vehicles now reaching an all-time high of 9.4 years. Because more than half of the household vehicles are now older than 9 years, recent automotive advances in energy efficiency, air quality, and safety are not fully represented in the vehicles on the road.

Age of Household Vehicles

Model Years	Percent of Total
≤1 Year	5.7%
2-5 Years	28.6%
6-10 Years	32.2%
11-20 Years	26.9%
>20 Years	6.7%

Average Annual Person Miles per Household by Trip Purpose



to driving, or roadway congestion. The NHTS results also show that transit ridership increased by 16 percent between the two survey periods; most of the increase was in the shopping and social/recreational activities categories. For all modes of travel combined, average daily person miles of travel per household dropped from 96.6 to 90.4.

Much attention has been given to changes in the travel behavior of the Millennial generation, generally defined as those born between 1982 and 2000. The NHTS results indicate that youth travel is declining as they are driving less, traveling less, and taking shorter trips compared with previous generations. Recent research has identified several contributing factors to this trend, including:

- Technology influences travel and how youth get their information.
- Youth concerns for the environment play a role in their travel decisions.
- More youth prefer to live in high-density areas where there are more modal options and shorter trip lengths.
- High unemployment and personal income constraints limit resources for travel and cause youth to live with parents longer.
- Increases in driver's licensing restrictions have resulted in more youth waiting longer to get their license.

CHAPTER 1

Freight Movement

The freight transportation system plays a major role in promoting and sustaining the economic vitality of the United States. Various businesses, ranging from companies that mine raw materials that are used to manufacture goods to retail companies selling household goods or office products, rely on the U.S. freight transportation system to have their products picked-up and/or delivered.

Though the system includes a variety of transportation modes (highway, railroad, waterway, aviation, and pipeline), some of which are publicly owned and others of which are privately owned, most of the system has a high degree of connectivity. This allows freight carriers to operate more efficiently and shippers to use the most economically effective mode or modes for shipping their goods.

The well-developed transportation system currently handles over 50 million tons of freight each day, with over two-thirds of that amount being carried by trucks. This high volume of freight movement, which has grown steadily over the last few decades due to the ease of transport in the United States and an increase in interregional domestic and international trade, is putting increasing stress on the transportation system. Freight volumes are expected to continue to increase across all modes in the coming years, challenging the transportation system even more.

Based on projections from the FHWA Freight Analysis Framework, combined tonnage for all freight modes is projected to increase by 1.4 percent per year over the next 30 years to 27.4 billion in 2040. The weight of shipments carried by trucks is projected to increase by 1.3 percent per year during this period, rising from 12.5 billion tons to 18.5 billion tons.

Though trucking typically is considered a faster mode and handles a large volume (87 percent) of high-value, time-sensitive goods, it also hands a surprising share (71 percent) of lower-value bulk tonnage. This share includes movement of

Weight of Shipments by Transportation Mode (Millions of Tons)

Mode	2010	2040 Projected	Average Annual Growth, 2010–2040
Truck	12,490	18,503	1.3%
Rail	1,776	2,353	0.9%
Water	860	1,263	1.3%
Air, Air & Truck*	12	43	4.4%
Multiple Modes & Mail	1,380	2,991	2.6%
Pipeline	1,494	1,818	0.7%
Other & Unknown	302	514	1.8%
Total	18,313	27,484	1.4%

*Includes air cargo movements that are shipped via truck at the ends of the trips.

agricultural products from farms, local distribution of gasoline, and pickup of municipal solid waste.

The growth in freight shipments will make it more difficult for freight carriers to continue to operate efficiently, particularly if capacity expansions and/or operational improvements are not implemented on major freight corridors and at major freight nodes. In turn, decreased operational efficiency would increase transportation costs, negatively impacting carriers, shippers, and ultimately consumers.

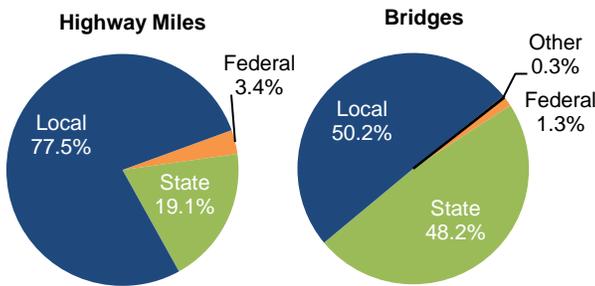
The increased focus on freight transportation needs in the Moving Ahead for Progress in the 21st Century (MAP-21) surface transportation reauthorization legislation should help address the growing freight needs in the United States. By designating a national freight network, requiring the formulation of a national freight strategic plan, and refining transportation investment and planning tools to evaluate freight projects, among other requirements, freight transportation needs should become more easily identifiable, and transportation funding decisions should become more strategic in nature. These legislative changes will likely help enhance the U.S. freight transportation system in the long term.

CHAPTER 2

System Characteristics: Highways and Bridges

Spanning more than 4.08 million miles and including 604,493 bridges, the Nation’s public road network facilitated slightly less than three trillion VMT in 2010. Local governments owned 77.5 percent of the Nation’s public road mileage and 50.2 percent of the Nation’s bridges in 2010; States owned 19.1 percent of mileage and 48.2 percent of bridges; the Federal government owned 3.4 percent of mileage and 1.3 percent of bridges.

2010 Mileage and Bridges by Owner



As of 2010, the National Highway System (NHS) included 162,876 miles of the Nation’s key corridors (4.0 percent of total mileage) which carried 43.0 percent of VMT. The revised NHS criteria in MAP-21 will add to the NHS most of the principal arterial mileage that is not currently part of the system. If all principal arterial mileage were added, this would cover 5.5 percent of the Nation’s route miles and 55.2 percent of VMT. (This estimate of the extent of the enhanced NHS is used in Chapters 7 and 8 in developing 20-year NHS investment/performance projections.)

MAP-21 requires the creation and definition of a new National Freight Network, which is intended to include the most important urban, rural, and intercity routes for commercial truck movements. This network will include a Primary Freight Network of up to 27,000 miles to be designated by the U.S. DOT, other Interstate highways not included in the Primary Freight Network, and Critical Rural Freight Corridors to be designated by the States.

Rural mileage (in areas with population less than 5,000) decreased an at an average annual rate of 0.4 percent between 2000 and 2010, in part due to the expansion of urban area boundaries following the 2000 Census. Urban mileage increased at a rate of 2.5 percent annually during this period.

Roads are functionally classified based on the purpose they serve in terms of providing mobility and access. Almost half of the Nation’s road mileage is classified as rural local, but these roads carry only 4.5 percent of VMT.

2010 Percentage of Highway Miles, Bridges, and Vehicle Miles Traveled by Functional System

Functional System	Miles	VMT	Bridges
Rural Areas			
Interstate	0.7%	8.2%	4.2%
Other Freeway and Expressway	0.1%	0.6%	
Other Principal Arterial	2.2%	6.8%	6.0%
Minor Arterial	3.3%	5.1%	6.5%
Major Collector	10.2%	6.0%	15.4%
Minor Collector	6.4%	1.8%	7.9%
Local	49.7%	4.5%	34.0%
Subtotal Rural	72.7%	32.9%	73.9%
Urban Areas			
Interstate	0.4%	16.0%	5.0%
Other Freeway and Expressway	0.3%	6.7%	3.3%
Other Principal Arterial	1.6%	15.5%	4.5%
Minor Arterial	2.6%	13.0%	4.6%
Major Collector	2.8%	6.1%	3.4%
Minor Collector	0.0%	0.1%	
Local	19.6%	9.7%	5.3%
Subtotal Urban	27.3%	67.1%	26.1%
Total	100.0%	100.0%	100.0%

Bridges on rural other freeway and expressway included under rural other principal arterial. Bridges on urban minor collector included under urban major collector.

The term “Federal-aid Highways” refers to the subset of the road network that is generally eligible for Federal funding assistance under most programs; this excludes roads functionally classified as rural minor collector, rural local or urban local. Federal-aid highways make up 24.7 percent of the nation’s mileage, but carry 84.6 percent of VMT.

CHAPTER 2

System Characteristics: Transit

Between 2000 and 2010, transit system coverage, capacity, and use in the United States all experienced steady growth. In 2010, there were 728 agencies (709 public agencies) in urbanized areas required to submit data to the National Transit Database (NTD). All but 148 of these agencies operated more than one mode. There were also 1,582 rural transit operators that reported. Urban reporters operated 612 motor bus systems, 587 demand response systems, 18 heavy rail systems, 30 commuter rail systems, and 33 light rail systems. There were also 70 transit vanpool systems, 20 ferryboat systems, 5 trolleybus systems, 3 automated guideway systems, 3 inclined plane systems, and 1 cable car system.

U.S. transit systems operated 74,319 motor buses, 33,458 vans, 11,434 heavy rail vehicles, 7,072 commuter rail cars, and 2,118 light rail cars. Transit providers operated 12,438 miles of track and served 3,175 stations. Almost all transit providers are included in these counts, excepting those that do not receive FTA grant funds and choose not to report to NTD.

Motor bus and heavy rail modes continue to be the largest segments of the industry, providing 51.6 percent and 35.6 percent of all transit trips, respectively. Commuter rail, with 4.6 percent of trips, supports a relatively high share of passenger miles (20.0 percent) due to its greater average trip length (23.4 miles compared with 4.0 for bus, 4.6 for heavy rail, and 4.8 for light rail). Light rail

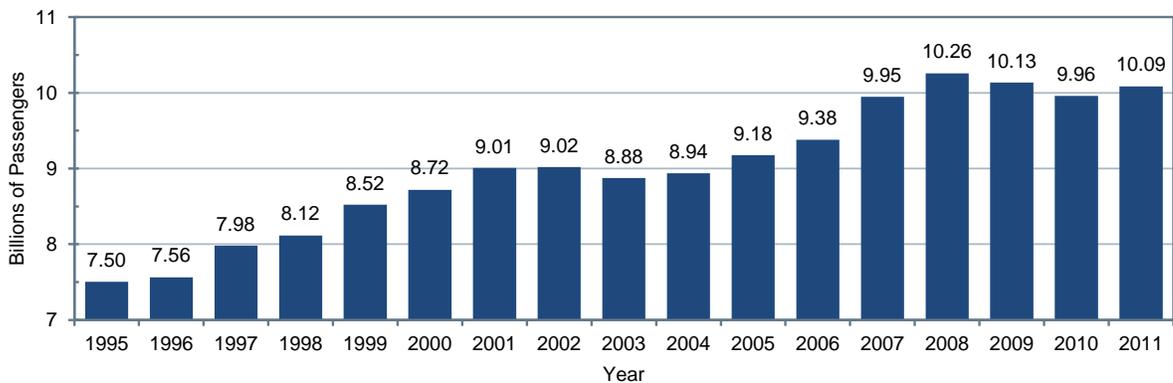
is the fastest-growing rail mode (with passenger miles traveled [PMT] growing at 5.0 percent per year between 2000 and 2010) but still provided only 4.1 percent of transit PMT in 2010. Vanpool growth during that period was 10.3 percent per year, substantially outpacing the 0.9-percent growth in motor bus passenger miles; however, while motor buses provided 39.1 percent of all PMT, vanpools accounted for only 2.1 percent.

Transit systems are concentrated in the 42 urbanized areas with populations of more than 1 million people. These areas contain about half of the U.S. population, but their higher population densities and long-term investments in transit infrastructure support 89 percent of all transit trips on 77 percent of the vehicle revenue miles.

Rural transit operators reported 123.2 million unlinked passenger trips on 570 million vehicle revenue miles. This included 61 Indian tribes that provided 1,008,701 unlinked passenger trips. Rural systems provide both traditional fixed-route and demand response services. In 2010, there were 1,180 demand response systems, including 30 systems added since 2008, and 530 motor bus systems, including 36 added since 2008. Sixteen rural systems reported vanpool operations.

Rural service is provided in every State, and 327 urbanized area agencies reported providing service to rural areas as well.

Annual U.S. Unlinked Transit Passenger Trips, 1995–2011



CHAPTER 3

System Conditions: Highways

Highway users are economically impacted by the conditions of the highways and bridges they utilize. Users are more likely to incur higher vehicle maintenance costs for travel on roads with poor pavement conditions, particularly on higher speed roads like Interstate highways. Poor pavement conditions may also increase travel time due to drivers slowing down and avoiding risks like potholes, which can also escalate the level of congestion on the Nation’s most traveled roadways.

Urban centers facilitate more than two-thirds of VMT on the Nation’s highway system. Pavement conditions in urban settings tend to deteriorate at a faster rate because of the higher usage. Replacing pavement in urban centers is also challenging because roadwork can exacerbate congestion.

The Highway Performance Monitoring System (HPMS) includes data on pavement ride quality on Federal-aid highways, which includes about one-quarter of the Nation’s mileage. Between 2000 and 2010, the percentage of rural VMT on pavements classified as having acceptable ride quality declined from 93.8 percent to 87.8 percent. However, the percent of rural VMT on pavements with good ride quality (a subset of the acceptable ride quality classification) increased from 55.2 percent to 64.6 percent. The share of urban VMT on pavements with good ride quality rose from 35.0 percent in 2000 to 44.0 percent in 2010, while the share on pavements with acceptable ride quality declined from 80.3 percent to 79.4 percent.

Percent of Federal-aid Highway VMT on Pavements With Good and Acceptable Ride Quality

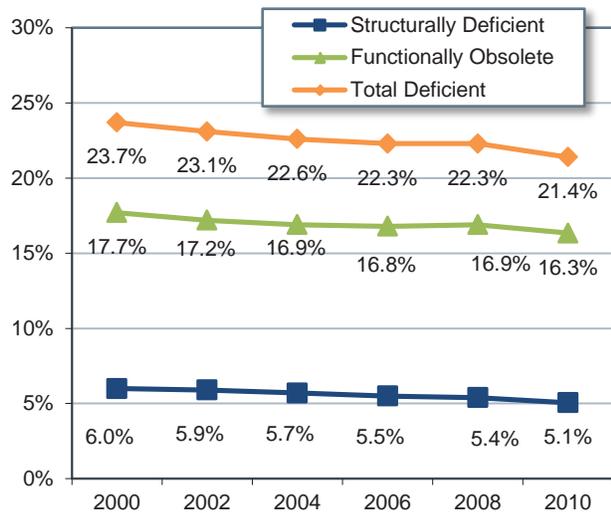
Ride Quality	Calendar Year		
	2000	2008	2010
Good (IRI < 95)			
Rural	55.2%	62.5%	64.6%
Urban	35.0%	38.9%	44.0%
Total	42.8%	46.4%	50.6%
Acceptable (IRI ≤ 170)			
Rural	93.8%	94.8%	87.8%
Urban	80.3%	81.0%	79.4%
Total	85.5%	85.4%	82.0%

The share of National Highway System (NHS) VMT on pavements with good ride quality rose from 48 percent in 2000 to 60 percent in 2010.

Bridges are another vital component for the Nation’s highway system. Two terms used to summarize bridge deficiencies are “structurally deficient” and “functionally obsolete.” Structural deficiencies are characterized by deteriorated conditions of significant bridge elements and potentially reduced load-carrying capacity, but do not necessarily imply safety concerns. Functional obsolescence is characterized by bridges not meeting current design standards, such as lane width or number of lanes, relative to the traffic volume carried by the bridge.

The percentage of NHS bridges classified as deficient decreased from 23.7 percent in 2000 to 21.4 percent in 2010. Of the 116,669 bridges on the NHS in 2010, 5.1 percent of bridges were classified as structurally deficient while 16.3 percent of bridges were classified as functionally obsolete.

Percentage of NHS Bridges Classified as Deficient, 2000–2010



Almost 68.5 percent of the Nation’s 604,493 bridges were 26 years old or older as of 2010, up from 67.2 percent in 2000. The share of total bridges classified as structurally deficient as of 2010 was 11.5 percent, and 12.8 percent of bridges were functionally obsolete.

CHAPTER 3

System Conditions: Transit

This edition of the C&P report discusses levels of investment needed to achieve a “state of good repair” benchmark. The FTA uses a numerical condition rating scale ranging from 1 to 5 (detailed in Chapter 3) to describe the relative condition of transit assets as estimated by the Transit Economic Requirements Model (TERM). Assets are considered to be in a state of good repair when the physical condition of that asset is at or above a condition rating value of 2.5 (the mid-point of the marginal range). An entire transit system is considered to be in a state of good repair when all of its assets are rated at or above the 2.5 threshold rating. This report estimates the cost of replacing all assets in the national inventory that are past their useful life (that is, below the 2.5 condition rating) to be a total of \$85.9 billion. This is 13 percent of the estimated total asset value of \$678.9 billion for the entire U.S. transit industry.

The cost-weighted average condition rating over all bus types is at the bottom of the adequate range (3.0), slightly lower than it has been for the past decade. The full-size bus fleet shows decreases in average age and percentage of vehicles that are below the state of good repair replacement threshold. The average age of the bus fleet is now 6.1 years.

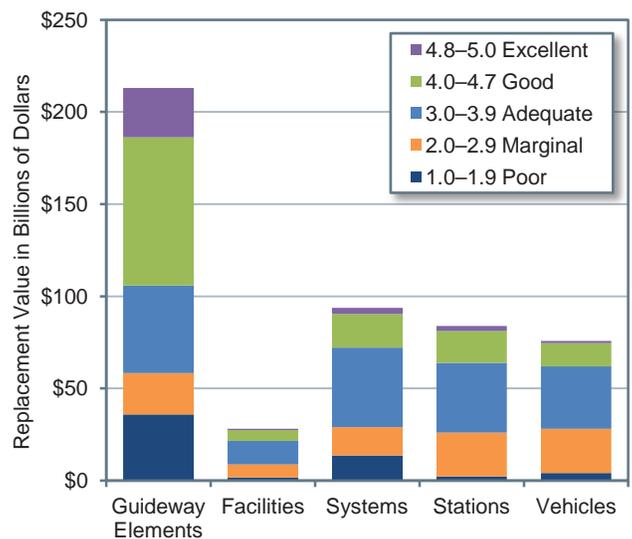
A reduction of 1.2 percent in the number of full-sized buses may indicate that older vehicles are being removed from the fleet. If so, this represents a welcome reversal of trends seen in the 2010 edition of this report. The total number of vehicles reported is up 14 percent over the last 4 years. This is driven by a 46-percent increase in the number of vans and a 42-percent increase in the number of articulated buses (extra-long buses with two connected passenger compartments) during this 4-year period.

The cost-weighted average condition rating for all rail vehicles is near the middle of the adequate range (3.5), where it has been without appreciable change for the past decade. With

average conditions and ages being quite stable over the last 5 years, the most significant aspect of the rail vehicle data presented here is the steady growth in the size of the fleet, which increased at an average annual rate of 2.1 percent between 2000 and 2010. By comparison, the U.S. population increased at an average annual rate of only 0.93 percent.

Non-vehicle transit rail assets represent the biggest challenge to achieving a state of good repair. The estimated replacement value of guideway elements (track, ties, switches, ballast, tunnels, and elevated structures) is \$213.0 billion, of which \$35.8 billion is for assets in poor condition (17 percent) and \$22.6 billion is for assets in marginal condition. The replacement value of train systems (power, communication, and train control equipment) is estimated at \$93.6 billion, of which \$13.7 billion is for systems in poor condition (15 percent) and \$15.3 billion is for systems in marginal condition. The relatively large proportion of guideway and systems assets that are in poor condition, and the magnitude of the \$49.5-billion investment required to replace them, represents a major challenge to the rail transit industry.

Distribution of Asset Physical Conditions by Asset Type for All Rail



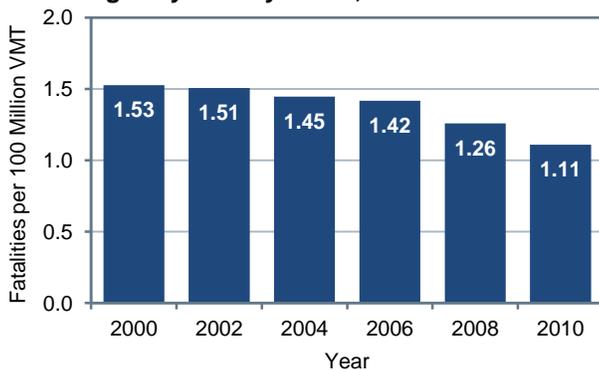
CHAPTER 4

Safety: Highways

There has been considerable improvement in highway safety since Federal legislation first addressed the issue in 1966; in that year alone, 50,894 Americans lost their lives in crashes. Traffic deaths reached their highest point in 1972 with 54,589 fatalities, then declined sharply following the implementation of a national speed limit, reaching a low of 39,250 fatalities in 1992. Between 1992 and 2006, there was more limited progress in reducing the number of fatalities, and by 2006 the annual number of fatalities had risen to 42,708. The annual number of traffic deaths has subsequently declined; there were 32,885 fatalities in 2010, a record low in the post-1966 era.

The fatality rate per VMT provides a metric that allows transportation professionals to consider fatalities in terms of the additional exposure associated with driving more miles. In 1966, the fatality rate was 5.50 fatalities per 100 million VMT. By 2010, the fatality rate had declined to 1.11 per 100 million VMT. It is also worth noting that the number of fatalities decreased by 23 percent between 2006 and 2010, coinciding with the timing of the implementation of FHWA's Highway Safety Improvement Program (HSIP).

Highway Fatality Rates, 2000 to 2010



At the same time that the overall number of fatalities dropped by more than 26 percent in 20 years (between 1990 and 2010), the overall number of traffic-related injuries also decreased by almost

35 percent (from 3.2 million to 2.1 million). Injuries increased between 1992 and 1996, but have steadily declined since then. In 1990, the injury rate was 151 per 100 million VMT; by 2010, the number had dropped by almost 53 percent to 71 per 100 million VMT.

FHWA has three focus areas related to the reduction of crashes: roadway departures, intersections, and pedestrian crashes. These three focus areas have been selected because they account for a noteworthy portion of overall fatalities and represent an opportunity to significantly impact the overall number of fatalities and serious injuries. In 2010, roadway departure, intersection, and pedestrian fatalities accounted for 52.9 percent, 20.3 percent, and 13.0 percent, respectively, of all crash fatalities.

Highway Fatalities by Crash Type, 2000 to 2010

	2000	2010	Percent Change
Roadway Departures	23,046	17,389	-24.5%
Intersection-Related	8,689	6,758	-22.2%
Pedestrian-Related	4,763	4,280	-10.1%

In 2010, there were 17,389 roadway departure fatalities. In some cases, the vehicle crossed the centerline and struck another vehicle, hitting it head-on or sideswiping it. In other cases, the vehicle left the roadway and struck one or more manmade or natural objects, such as utility poles, embankments, guardrails, trees, or parked vehicles.

Of the 32,885 fatalities that occurred in 2010, 6,673 occurred at intersections. Rural intersections accounted for 38.3 percent of intersection fatalities and urban accounted for 61.7 percent.

The number of pedestrian fatalities decreased 10.1 percent, from 4,763 in 2000 to 4,280 in 2010. Total nonmotorist fatalities (including pedestrians, bicyclists, etc.) decreased from 5,597 in 2000 to an 11-year low of 4,888 in 2009 before rising to 5,080 in 2010.

CHAPTER 4

Safety: Transit

Based on the number of fatalities and injuries reported on an annual basis, public transportation generally experiences lower rates of incident, fatality, and injury than other modes of transportation in the same year. However, serious incidents do occur, and the potential for catastrophic events remains. Several transit agencies in recent years have had major accidents that resulted in fatalities, injuries, and significant property damage. The National Transportation Safety Board (NTSB) has investigated a number of these accidents and has issued reports identifying their probable causes and the factors that contributed to them. Since 2004, the NTSB has reported on nine transit accidents that, collectively, resulted in 15 fatalities, 297 injuries, and over \$30 million in property damage.

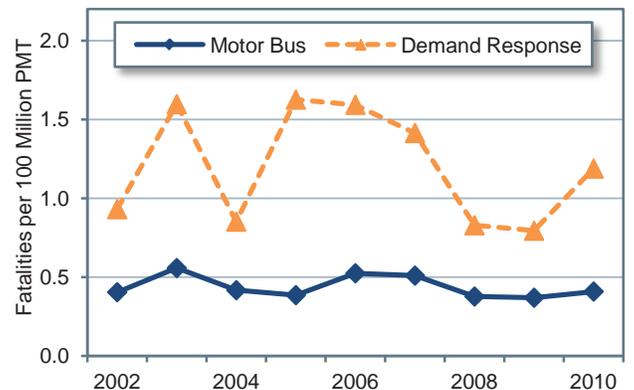
Since 2002, there has been no significant decrease in the rate of transit fatalities, excluding suicides. From 2002 to 2010, the number of fatalities has remained relatively flat while the rate per 100 million passenger miles has declined slightly due to increasing ridership. Unlike other modes, such as highway travel, public transportation has not achieved a consistent decrease in fatalities.

Transit interaction with pedestrians, cyclists, and motorists at rail grade crossings, pedestrian crosswalks, and intersections largely drives overall transit safety performance. The majority of fatalities and injuries in public transportation result from interaction with the public on busy city streets, from suicides, and from trespassing on transit right-of-way and facilities. Pedestrian fatalities accounted for 29 percent of all transit fatalities in 2010.

Although public fatalities have been decreasing in recent years, suicides have steadily increased. This change could be attributed to improvements arising

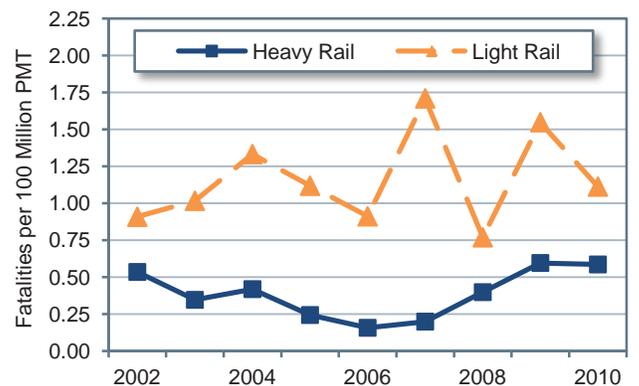
from clarifications to the procedures for reporting and distinguishing between trespasser fatalities and suicides, or it could indicate a rising trend of suicides in public transportation environments. On average, fatalities involving suicides and persons who are not transit passengers or patrons (usually pedestrians and drivers) account for about 75 percent of all public transportation fatalities.

Annual Transit Fatality Rates by Highway Mode, 2002–2010



Note: Fatality totals include both Directly Operated (DO) and Purchased Transportation (PT) service types.

Annual Transit Fatality Rates by Rail Mode, 2002–2010



Note: Fatality totals include both Directly Operated (DO) and Purchased Transportation (PT) service types.

CHAPTER 5

System Performance: Highways

This chapter relates to three of the goals in the U.S. DOT Strategic Plan FY 2012–FY2016: (1) to “Foster livable communities through place-based policies and investments that increase transportation choices and access to transportation services;” (2) to “Advance environmentally sustainable policies and investments that reduce carbon and other harmful emissions from transportation sources;” and (3) to “Promote transportation policies and investments that bring lasting and equitable economic benefits to the Nation and its citizens.”

Sustainable Transportation Systems

Transportation systems that balance the access and mobility needs of all users—motorists, truckers, emergency vehicles, bicyclists, pedestrians, and transit riders—are an important aspect of livable communities. Incorporating community input and other livability considerations into transportation, land use, and housing policies can help improve public health and safety, lower infrastructure costs, reduce combined household transportation and housing costs, reduce vehicle miles traveled, and improve air and water quality, among many other benefits.

Sustainability emphasizes the natural environment, the economic efficiency of the transportation system, and societal needs (e.g., mobility, accessibility, and safety). Transportation agencies currently address sustainability through a wide range of initiatives, such as Intelligent Transportation Systems, linking transportation and land use decision-making, linking planning and environment, and addressing requirements of the National Environmental Policy Act. From an environmental sustainability perspective, FHWA helps ensure that regions continue to make progress towards their air-quality standards through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, promoting strategies to reduce greenhouse gas emissions, and assisting transportation agencies in adapting to the impacts of climate change and extreme weather events.

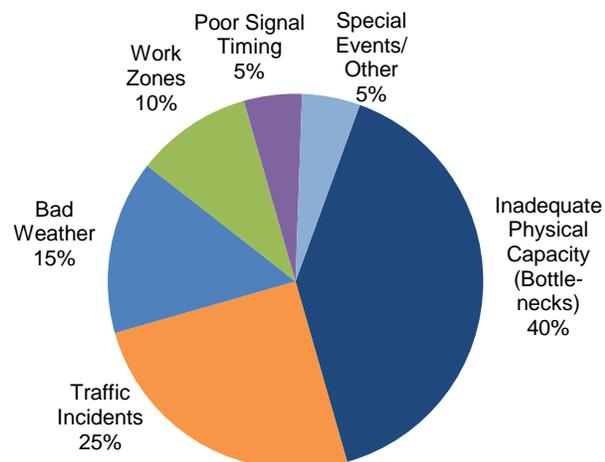
Economic Competitiveness

Maintaining economic competitiveness means increasing and maximizing the contribution of the transportation system to economic growth.

Heavy congestion has an adverse impact on the American economy. The problem is of particular concern to firms involved in logistics and distribution. As just-in-time delivery increases, firms need an integrated transportation network that allows for the reliable, predictable shipment of goods. If travel time were to increase or reliability were to decrease, businesses would need to increase average inventory levels to compensate, which increases storage costs and adds to the final costs of goods.

Congestion results when traffic demand approaches or exceeds the available capacity of the system. Recurring congestion occurs in roughly the same place and time on the same days of the week if the physical infrastructure is not adequate to accommodate demand during peak periods. Nonrecurring congestion is caused by temporary disruptions that take away part of the roadway from use. The three main causes of nonrecurring congestion are: incidents ranging from a flat tire to an overturned hazardous material truck, work zones, and weather.

Sources of Congestion



CHAPTER 5

System Performance: Transit

The transit industry has been successful at meeting the growing demand for its services in communities across the country. While many transit agencies experienced budget reductions during the last decade, analyses of transit data from the end of the last decade show steady increases in service provided. This is accompanied by improvements in a number of efficiency indicators and in ridership.

Between 2000 and 2010, transit route miles of service and vehicle revenue miles on those routes have steadily increased for all the major transit modes. This has been done without significant decreases in vehicle occupancy. In addition, the mean distance transit vehicles operated between mechanical breakdowns has decreased (by 14 percent).

Between 2000 and 2010, transit agencies provided substantially more service. The overall annual rate of growth in urban directional route miles was 1.9 percent with a range from 0.4 percent for heavy rail to 6.0 percent for light rail, and bus route miles grew at 1.9 percent per year. This has resulted in 21 percent more route miles available to the public with growth focused on the light rail and commuter rail systems that are most likely to attract riders from automobiles.

Growth in route miles was matched by 2.0-percent annual overall growth in vehicle revenue miles. This indicates that the new route miles are being served at a frequency similar to that of the previous routes. This demonstrates a true expansion of service to more neighborhoods and more people. Vehicle revenue mile growth for vanpools was particularly

large, but recent increases in reporting account for much of this increase.

Growth in service offered was almost matched by growth in ridership. In spite of steady growth in route miles and revenue miles, average vehicle occupancy levels remained stable. Passenger miles traveled grew at a 1.6-percent annual pace while the number of unlinked passenger trips grew at a 1.3 percent annual pace. This is significantly faster than the growth in the U.S. population during this period (0.93 percent), possibly suggesting that transit has been able to attract riders who previously used other modes of travel. Increased availability of transit service has undoubtedly been a factor in this success.

The two fastest-growing rail modes—light rail and commuter rail—did have some trouble maintaining occupancy levels; their per-vehicle occupancies are down 9.2 percent and 9.8 percent, respectively, since 2000. The other major modes are largely unchanged. Several urbanized areas, including Denver, Phoenix, Seattle, Charlotte, and Salt Lake City, recently opened new light rail systems and it typically takes several years for a new system to realize its full ridership potential.

Productivity per active vehicle increased between 2000 and 2010. Vehicle in-service mileage increased steadily from 2000 to 2008 before leveling off between 2008 and 2010. For the decade, all the major modes showed increases in vehicle use. Light rail and demand response have shown a particularly strong improvement in vehicle miles per active vehicle.

Rail and Nonrail Vehicle Revenue Miles, 2000–2010

Transit Mode	Miles (Millions)						Average Annual Rate of Change
	2000	2002	2004	2006	2008	2010	2010/2000
Rail	879	925	963	997	1,054	1,056	1.9%
Heavy Rail	578	603	625	634	655	647	1.1%
Commuter Rail	248	259	269	287	309	315	2.4%
Light Rail	51	60	67	73	86	92	6.0%
Other Rail	2	3	2	3	3	2	1.7%
Nonrail	2,322	2,502	2,586	2,674	2,841	2,863	2.1%
Motor Bus	1,764	1,864	1,885	1,910	1,956	1,917	0.8%
Demand Response	452	525	561	607	688	718	4.7%
Vanpool	62	71	78	110	157	181	11.3%
Ferryboat	2	3	3	3	3	3	5.0%
Trolleybus	14	13	13	12	11	12	-1.8%
Other Nonrail	28	26	46	32	25	32	1.5%
Total	3,201	3,427	3,549	3,671	3,895	3,920	2.0%

CHAPTER 6

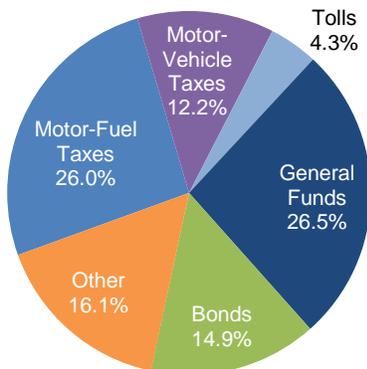
Finance: Highways

Highway revenue totaling \$221.0 billion was collected by all levels of government in 2010, while \$205.3 billion was spent on highways during the year. (The net difference of \$15.7 billion was added into reserves for use in future years.)

User charges such as motor-fuel and motor-vehicle tax receipts and tolls have traditionally provided the majority of the combined revenues raised for highway and bridge programs by all levels of government. However, at the Federal level, the total proceeds to the Highway Trust Fund (HTF) from dedicated excise taxes have fallen below annual expenditures for several years. As recently as 2007, the share of Federal highway revenue derived from user charges was 92.8 percent, but this share has subsequently dropped to 48.8 percent in 2010. This decline is the result of a legislated \$14.7 billion transfer of general funds to the HTF, as well as the expenditure in 2010 of **\$11.9 billion of funding authorized by the Recovery Act**.

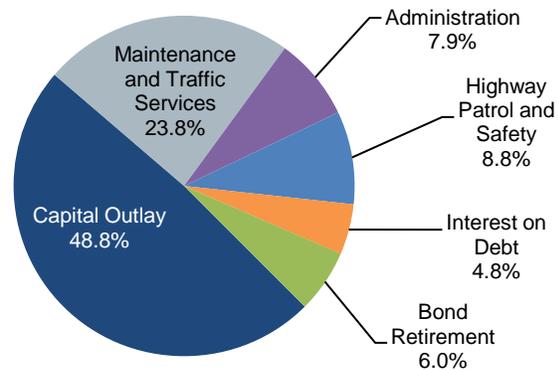
In 2010, \$93.8 billion (42.5 percent, down from 62.0 percent in 2000) of the revenue generated for spending on highways and bridges by all levels of government came from highway-user charges. General fund appropriations totaled \$58.6 billion (26.5 percent) and bond proceeds totaled \$33.0 billion (14.9 percent). All other sources such as property taxes, other taxes and fees, lottery proceeds, interest income, and miscellaneous receipts totaled \$35.5 billion (16.1 percent).

Revenue Sources for Highways, 2010



Of the \$205.3 billion spent on highways in 2010, \$100.2 billion (48.8 percent) was used for capital investment. Spending on routine maintenance and traffic services totaled \$48.8 billion (23.8 percent), administrative costs (including planning and research) were \$16.2 billion, \$18.1 billion was spent on highway patrol and safety programs, \$9.8 billion was used to pay interest, and \$12.3 billion was used for bond retirement.

Highway Expenditure by Type, 2010



The portion of total capital spending directed toward system rehabilitation (resurfacing or replacing existing pavements and rehabilitating or replacing existing bridges) rose from \$46.2 billion (51.1 percent of the total) in 2008 to \$60.0 billion (59.9 percent of the total) in 2010, an increase of almost 30 percent over the 2 years which was partly driven by additional funding provided by the Recovery Act.

Federal cash expenditures for capital purposes grew at an average annual rate of 5.4 percent from \$26.1 billion in 2000 to \$44.4 billion in 2010; combined State and local capital spending grew by 4.7 percent per year during this period. Consequently, the Federally funded share of total capital outlay rose during this period (from 42.6 percent to 44.3 percent).

In inflation-adjusted, constant-dollar terms, highway capital spending increased at an average annual rate of 3.2 percent from 2000 to 2010, while total highway expenditures grew 3.1 percent per year.

CHAPTER 6

Finance: Transit

In 2010, \$54.3 billion was generated from all sources to finance transit investment and operations. Transit funding comes from *public funds* allocated by Federal, State, and local governments and *system-generated revenues* earned by transit agencies from the provision of transit services. Of the funds generated in 2010, 73.9 percent (\$40.2 billion) came from public sources and 26.1 percent came from passenger fares (\$12.1 billion) and other system-generated revenue sources (\$2.0 billion). The Federal share of this was \$10.4 billion (25.8 percent of total public funding and 19.1 percent of all funding). Local jurisdictions provided the bulk of transit funds: \$18.0 billion in 2010, or 44.9 percent of total public funds and 33.2 percent of all funding.

In 2010, total public transit agency expenditures for capital investment were \$16.6 billion.

Annually authorized Federal funds, \$4.4 billion, made up 26.6 percent of these capital expenditures. Federal funds from the American Recovery and Reinvestment Act provided another 14.5 percent. State funds provided an additional 14.2 percent and local funds provided the remaining 44.6 percent.

Of total 2010 transit capital expenditures, 72.0 percent (\$11.9 billion) was invested in rail modes of transportation, compared with 28.0 percent (\$4.6 billion) invested in nonrail modes. This investment distribution has been consistent over the last decade.

In 2010, \$37.8 billion was expended on transit operating expenses (wages, salaries, fuel, spare parts, preventive maintenance, support services, and leases). The Federal share of this has increased from the 2008 level of 7.1 percent to 9.4 percent. The share generated from system revenues remained relatively stable. The State share decreased slightly from 25.8 percent in 2008 to 25.0 percent. The local share of operating expenditures (28.2 percent) has been stable for several years.

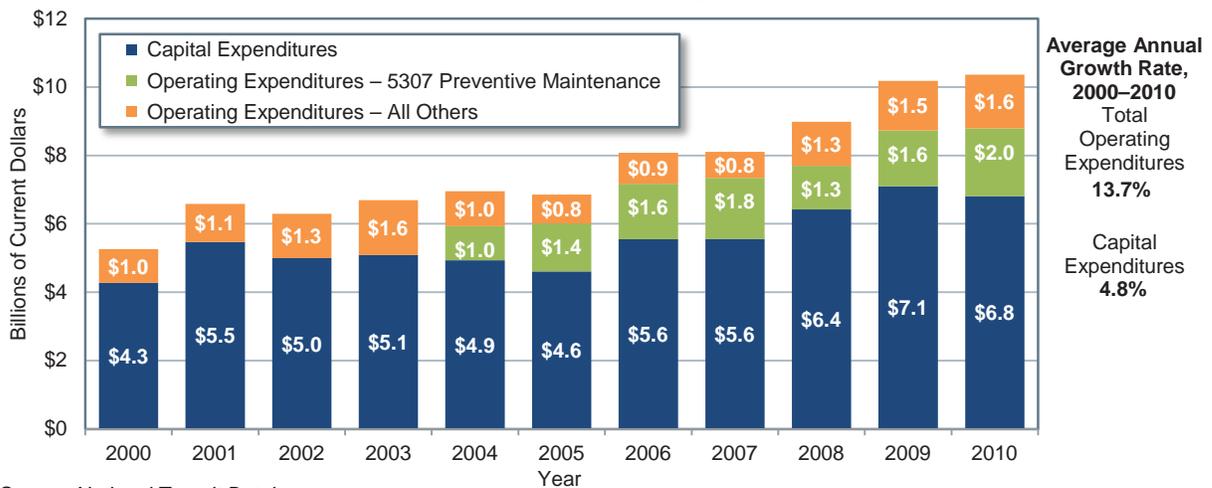
The average annual increase in operating expenditures per vehicle revenue mile for all modes combined between 2000 and 2010 was 1.3 percent.

Because vehicle capacity varies across transit modes, it is customary to analyze operating costs per capacity equivalent mile. By this standard, the cost per mile to run a bus is \$9.60 while the cost to run the same number of seats on a heavy rail vehicle is \$3.98. Demand response (mostly provided by vans) is the most expensive to operate; a mile of bus-equivalent demand-response seats would cost \$25.48.

Bus operating cost increases (2.0 percent per year) and demand response increases (3.1 percent per year) have been higher than those experienced by the rail modes (1.0 percent for heavy rail, -0.1 percent for commuter rail, and 0.4 percent for light rail).

Since 2004, some preventative maintenance costs—normally considered operating expenses—have been eligible for FTA reimbursement as capital expenses; they are shown separately in the figure below.

Applications of Federal Funds for Transit Operating and Capital Expenditures, 2000–2010



Source: National Transit Database.

PART II

Investment/Performance Analysis

The methods and assumptions used to analyze future highway, bridge, and transit investment scenarios for this report are continuously evolving to incorporate new analytical methods, new data and evidence, and changes in transportation planning objectives.

Traditional engineering-based analytical tools focus mainly on estimating transportation agency costs to maintain or improve the conditions and performance of infrastructure. This type of analytical approach can provide valuable information about the cost effectiveness of transportation system investments from the public agency perspective, including the optimal pattern of investment to minimize life-cycle costs. However, this approach does not fully consider the potential benefits to users of transportation services from maintaining or improving the conditions and performance of transportation infrastructure.

The investment/performance analyses presented in Chapters 7 through 10 were developed using the Highway Economic Requirements System (HERS), the National Bridge Investment Analysis System (NBIAS), and the Transit Economic Requirements Model (TERM). Each of these tools has a broader focus than traditional engineering-based models and takes into account the value of the services that transportation infrastructure provides to its users as well as some of the impacts that transportation activity has on non-users. Although HERS, TERM, and NBIAS all use benefit-cost analysis, their methods for implementing this analysis differ significantly. The highway, transit, and bridge models each rely on separate databases, making use of the specific data available for each mode of the transportation system and addressing issues unique to that mode. The methodologies used to analyze investment for highways, bridges, and transit are detailed in Appendices A, B, and C.

The economic approach to transportation investment relies fundamentally upon an analysis and comparison of the benefits and costs of potential investments. Projects that yield benefits whose value exceeds their costs have the potential

to increase societal welfare and are thus considered “economically efficient.” In practice, however, data limitations and other factors prevent any benefit-cost analysis from being fully comprehensive, and attaining national breadth of perspective for this report’s analyses required that the scope be limited in other ways. The analyses do not consider, for example, environmental impacts of increased water runoff from highway pavements, barrier effects of highways for human and animal populations, the health benefits from the additional walking activity when travelers go by transit rather than by car, and some other impacts related to livability. The analyses also do not consider transportation investments packaged across modes or with demand management measures or land use policies. Future editions of the C&P report may address these issues through evidence obtained from more regionally focused modeling frameworks.

Benefits and costs are measured in this report’s analysis in constant 2010 dollars to eliminate the effect of any general inflation that may be expected to occur in subsequent years. For some prices, however, the analysis projects increases at a rate different from the general rate of inflation. These include the price of motor fuels, the cost to society of carbon emissions, and, in the Chapter 10 sensitivity analysis, the value of travel time savings.

The models used in this report’s analysis produce single-valued best estimates of future outcomes rather than probability distributions of outcomes. The sensitivity analysis conducted in Chapter 10 addresses the uncertainty in parameter values (discount rates, value of time saved, statistical value of lives saved, etc.). For any year, the projected outcomes are more subject to forecasting error than the differences between projected outcomes at alternative levels of investment.

Chapter 7 analyzes the projected impacts of alternative levels of future investment on measures of physical condition, operational performance, and benefits to system users. Each alternative pertains to investment from 2011 through 2030, and is

PART II

Investment/Performance Analysis

presented as an annual average level of investment and in terms of the annual rate of increase or decrease in investment that would produce that annual average. Both the level and rate of growth in investment are measured using constant 2010 dollars.

In addition to a primary set of analyses assuming State-provided VMT forecasts for highways and Metropolitan Planning Organization (MPO)-provided passenger miles traveled (PMT) forecasts for transit, Chapter 7 also includes a secondary set of analyses assuming a continuation of 15-year growth trends. For highways, this alternative travel growth rate is lower than the State forecasts; for transit, the alternative growth rate is higher than the MPO forecasts.

Chapter 8 examines several scenarios distilled from the investment alternatives considered in Chapter 7. Some of the scenarios are oriented toward maintaining different aspects of system condition and performance or achieving a specified minimum level of performance, while others link to broader measures of system user benefits.

The capital investment scenario projections reflect complex technical analyses that attempt to predict the impact that capital investment may have on the future conditions and performance of the transportation system. **These scenarios are intended to be illustrative, and the Department does not endorse any of them as a target level of investment.**

This report does not attempt to address issues of cost responsibility. The investment scenarios predict the impact that particular levels of combined Federal, State, local, and private investment might have on the overall conditions and performance of highways, bridges, and transit.

In considering the system condition and performance projections in this report's capital investment scenarios, it is important to note that they represent what **could** be achievable assuming a particular level of investment, rather than what

would be achieved. The models used to develop the projections generally assume that, when funding is constrained, the benefit-cost ratio (BCR) establishes the order of precedence among potential capital projects, with projects with higher BCRs being selected first. In actual practice, the BCR generally omits some types of benefits and costs because of difficulties in valuing them monetarily, and these other benefits and costs can and do affect project selection.

Also, some potential capital investments selected by the models, regardless of their economic merits or impact on conditions and performance, may be infeasible for political or other reasons. As a result, the supply of feasible cost-beneficial projects could be lower than the levels estimated by the modeling assumptions of some scenarios.

Chapter 9 provides supplemental scenario analyses, including comparisons of the investment requirements identified for selected scenarios in this report with those presented in previous editions. This includes a comparison of the 20-year projections from the 1991 C&P Report with what actually occurred in terms of VMT, conditions, and performance. Issues relating to the interpretation of scenarios, including the timing of future investment and the conversion of scenarios from constant dollars to nominal dollars, are also explored. Chapter 9 also discusses transit asset condition forecasts, transit PMT growth rates, the impact of new technologies on transit investment needs, and transit expansion investment.

The investment scenario projections in this report are based on assumptions about future travel growth and a variety of engineering and economic variables. The accuracy of these projections depends, in large part, on the realism of these assumptions. To address the uncertainty concerning which assumptions would be most realistic, Chapter 10 presents a series of sensitivity analyses that vary the discount rate, the value of travel time savings, and other economic assumptions, as well as some alternative system management strategies.

CHAPTER 7

Potential Capital Investment Impacts: Highways

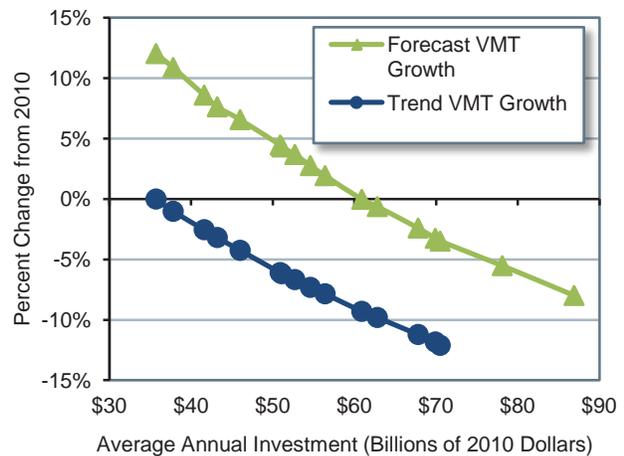
The rate of future travel growth can have a significant impact on the projected future conditions and performance of the highway system. For each of the more than 100,000 HPMS sample highway sections, States provide the actual base-year traffic volume and a forecast of future traffic volume. The HERS model assumes that these forecasts correspond to the VMT that would occur if the average user cost per mile of travel (including the costs of travel time, vehicle operation, and crash risk) remained unchanged. HERS then modifies the forecasts in response to projected future changes in user costs, increasing VMT if user costs rise or decreasing VMT if user costs fall. The composite weighted average growth rate computed from the 2008 HPMS sample data is 1.85 percent per year, which is reflected in the **forecast-based** analyses. An alternative set of **trend-based** HERS analyses was developed for this report in which the HPMS forecasts were modified to match the average annual VMT growth rate of 1.36 percent for the 15-year period from 1985 to 2010.

Of the \$100.2 billion of total capital outlay by all levels of government combined in 2010, \$56.4 billion was used on Federal-aid highways for types of capital improvements modeled in HERS, including pavement improvements and system expansion. Sustaining HERS-modeled investment at this level in constant dollar terms over 20 years is projected to result in a 1.9 percent increase in average delay per VMT and an 11.5 percent decrease in average pavement roughness by 2030 relative to 2010, assuming forecast-based VMT growth. Projected performance for 2030 relative to 2010 would be better assuming trend-based VMT growth, with average delay per VMT decreasing by 7.8 and average pavement roughness decreasing by 17.7 percent. The relatively greater improvement in pavement roughness assuming trend-based VMT growth is due partly to reduced pavement wear and tear associated with lower future VMT, but is due primarily to differences in the mix of investments recommended by HERS; the lower projected future VMT causes HERS to shift resources from capacity

expansion to pavement improvements, resulting in better pavements.

Assuming forecast-based VMT growth, HERS projects that constant-dollar spending growth of 3.95 percent per year would suffice to finance all potentially cost-beneficial capital improvements on Federal-aid highways by 2030. This would translate into an average annual investment level of \$86.9 billion and result in a 26.7-percent decrease in average pavement roughness and an 8.0-percent reduction in average delay per VMT. Assuming trend-based VMT growth, the pool of potential cost-beneficial investments would be smaller, and could be addressed if spending grew by 2.08 percent annually in constant-dollar terms, resulting in an average annual level of \$70.5 billion.

Projected Change in 2030 Average Delay per VMT Compared With 2010 Levels, for Various Spending Levels Under Forecast and Trend VMT Growth



In 2010, \$17.1 billion was spent on improvement types modeled in NBIAS, including bridge repair, rehabilitation, and replacement. Sustaining this level of investment in constant dollar terms over 20 years is projected to result in an increase in the average bridge sufficiency rating from 81.7 in 2010 to 84.1 in 2030 (on a 100-point scale). Increasing NBIAS-modeled constant dollar spending by 1.57 percent per year would translate to an average annual spending level of \$20.2 billion, and would further improve the average sufficient rating to 84.6 by 2030.

CHAPTER 7

Potential Capital Investment Impacts: Transit

In 2010, U.S. transit agencies spent a combined \$16.5 billion on capital improvements to the Nation’s transit infrastructure and vehicle fleets. This amount included \$10.3 billion in the preservation (rehabilitation and replacement) of existing assets already in service and \$6.2 billion to expand transit capacity—both to accommodate ridership growth and to improve performance for existing riders. Although 2010 investment levels are very similar to those of 2008, the proportion of capital funds used for expansion has increased from 32 to 38 percent and preservation investments have declined.

Sustaining transit capital spending at year 2010 levels for 20 years is projected to result in an overall decline in transit system conditions due to underinvestment in system preservation. The average physical condition of the Nation’s stock of transit assets will decline, with an estimated 52 percent increase in the size of the “State of Good Repair” (SGR) backlog by 2030. The backlog is currently \$85.9 billion. This will have impacts on service reliability and potentially on safety.

The TERM estimates that the average annual level of investment required to eliminate the existing system preservation backlog by 2030 is roughly \$18.5 billion. Up to \$7.1 billion in

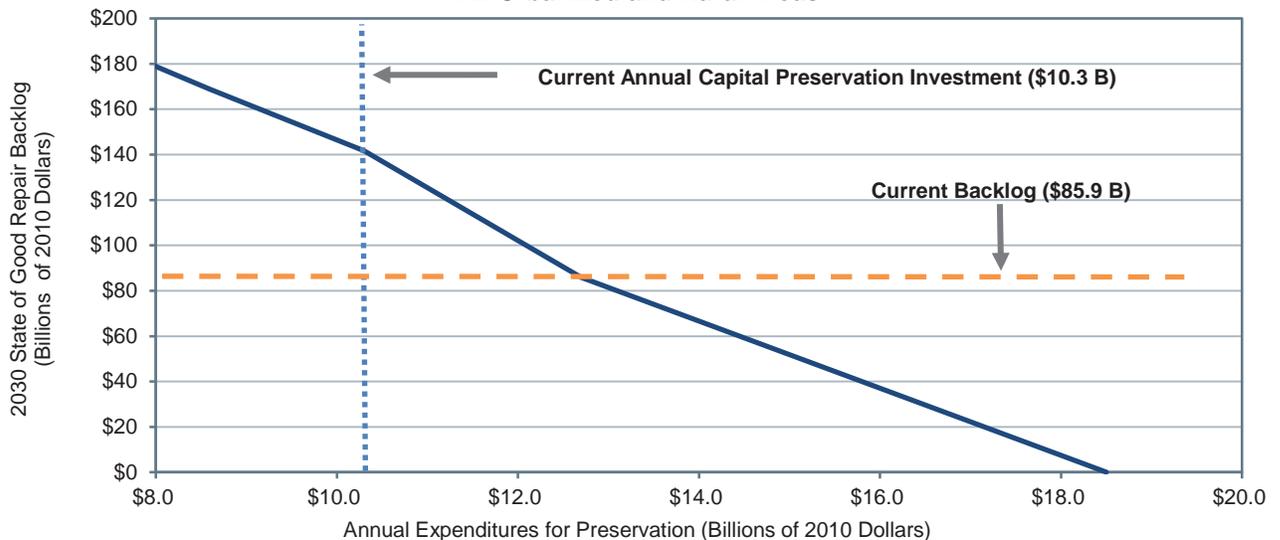
annual expansion investments may also be required to maintain transit performance (as measured by vehicle crowding) at 2010 levels, depending on the actual rate of growth in ridership.

However, current expansion rates seem sufficient to provide for expected levels of ridership growth. Continuing the current level of investment in expansion will result in somewhere between a 35-percent reduction and a 17-percent increase in vehicle occupancy by 2030 (depending on the magnitude of ridership growth).

Comparison of Current and Needed Annual Investment to Support Asset Preservation and Capacity Expansion in All Urbanized and Rural Areas

Current versus Needed Expenditures	Urbanized Areas with Populations > 1 Million	Urbanized Areas with Populations < 1 Million
Asset Preservation (Billions)		
2010 Expenditures	\$9.0	\$1.3
Annual Expenditures to Achieve SGR	\$16.0	\$2.5
Capacity Expansion (Billions)		
2010 Expenditures	\$5.4	\$0.9
Annual Expenditures Low Growth	\$3.3	\$0.2
Annual Expenditures High Growth	\$5.4	\$0.6

Impact of Preservation Investment on 2030 Transit State of Good Repair Backlog in All Urbanized and Rural Areas



CHAPTER 8

Selected Capital Investment Scenarios: Highways

This report presents a set of illustrative 20-year capital investment scenarios based on simulations developed using the HERS and the NBIAS models, with scaling factors applied to account for types of capital spending that are not currently modeled. The scenario criteria were applied separately to the Interstate System, the NHS, Federal-aid highways, and the highway system as a whole, based on section-level VMT forecasts from the HPMS averaging 1.85 percent per year. Separate versions of the scenarios for Federal-aid highways and all roads, assume lower, trend-based VMT growth of 1.36 percent per year. The **Sustain 2010 Spending** scenario assumes that capital spending is sustained in constant dollar terms at year 2010 levels from 2011 through 2030. (In other words, spending would rise by exactly the rate of inflation during that period.) Note that 2010 spending was supplemented by one-time funding under the Recovery Act. The **Maintain Conditions and Performance** scenario assumes that capital investment gradually changes in constant dollar terms over 20 years to the point at which selected measures of highway and bridge performance in 2030 are maintained at their year 2010 levels. For all roads, the average annual investment levels associated with this scenario are \$86.3 billion assuming forecast-based VMT growth and \$65.3 billion assuming trend-based VMT growth. Both estimates are below the \$100.2 billion spent on all roads in 2010, indicating that sustained spending at 2010 levels could result in improved overall conditions and performance.

Unless one is completely satisfied with base year conditions and performance, investing at a level projected to maintain that level of performance would not yield an ideal result. The **Improve Conditions and Performance** scenario assumes that capital investment gradually rises in constant dollar terms to the point at which all potentially cost-beneficial investments could be implemented by 2030. This scenario can be thought of as an “investment ceiling” above which it would not be cost-beneficial to invest. The average annual

**Average Annual Cost by Investment Scenario
(Billions of 2010 Dollars)**

System Subset	Sustain		
	2010 Spending	Maintain C&P	Improve C&P
Assuming Higher VMT Growth From HPMS Forecasts			
Interstate	\$20.2	\$17.4	\$33.1
NHS	\$53.9	\$37.8	\$74.9
FAH	\$75.8	\$67.3	\$113.7
All Roads	\$100.2	\$86.3	\$145.9
Assuming Lower Trend-Based VMT Growth			
FAH	\$75.8	\$50.3	\$95.7
All Roads	\$100.2	\$65.3	\$123.7

FAH=Federal-aid Highways; C&P=Conditions and Performance

investment level for all roads under this scenario is \$145.9 billion for all roads assuming forecast-based VMT growth and \$123.7 billion assuming trend-based VMT growth. Of the \$145.9 billion **Improve Conditions and Performance** scenario investment level for all roads assuming forecast-based VMT growth, \$78.3 billion (54 percent) would be directed toward improving the physical condition of existing infrastructure assets; this amount is identified as the **State of Good Repair** benchmark. The comparable values (assuming forecast-based VMT growth) for Federal-aid highways, the NHS, and the Interstate System are \$60.4 billion, \$34.5 billion, and \$13.2 billion, respectively.

Investing at the **Improve Conditions and Performance** scenario level for Federal-aid highways (assuming forecast-based VMT growth) is projected to result in a 26.7-percent reduction in average pavement roughness and an 8.0-percent reduction in average delay per VMT. The average bridge sufficiency rating is projected to rise from 82.0 to 84.7 under this scenario.

Of the \$100.2 billion of highway capital spending on all roads in 2010, 27.4 percent was directed toward system expansion. Assuming forecast-based VMT growth, the **Sustain 2010 Spending** scenario for all roads would direct 29.9 percent of its investment toward capacity expansion; the comparable share for the **Improve Conditions and Performance** scenario is 33.6 percent.

CHAPTER 8

Selected Capital Investment Scenarios: Transit

This report presents a set of illustrative 20-year transit capital investment scenarios. These scenarios build upon analyses developed using the TERM and were applied separately to the Nation’s transit assets as a whole, to urbanized areas (UZAs) with populations of more than one million, and to everyone else.

The Sustain 2010 Spending scenario assumes that capital spending is sustained at 2010 levels, in constant dollar terms, for 20 years. Transit operators spent \$16.5 billion on capital projects in 2010. Of this amount, \$10.3 billion was devoted to the preservation of existing assets and the remaining \$6.2 billion was dedicated to investment in asset expansion to support ongoing ridership growth and to improve service performance. This scenario considers the expected impact on the Nation’s transit infrastructure if these expenditure levels are sustained in constant dollar terms. TERM analysis suggests that sustaining spending at 2010 levels would likely yield an estimated 65-percent increase in the SGR backlog by 2030. The 2010 backlog is estimated at \$85.9 billion. Current levels of expansion investment are within the projected range

necessary to limit increases in crowding on transit passenger vehicles.

The **Low Growth** and **High Growth** scenarios consider the level of investment to address both asset SGR and service expansion needs subject to two differing potential levels of growth. The **Low Growth** scenario assumes that transit ridership will grow as projected by the Nation’s metropolitan planning organizations, and the **High Growth** scenario assumes the average rate of growth (by UZA) as experienced in the industry since 1995. The **Low Growth** scenario assumes that ridership will grow at an annual rate of 1.4 percent during the 20-year period from 2010 to 2030; conversely, the **High Growth** scenario assumes that ridership will increase at a rate of 2.2 percent per year during that time frame. TERM estimates this average annual level of investment for the Nation to be between \$22.0 billion and \$24.5 billion, including between \$17.3 billion and \$17.4 billion to replace and rebuild assets as they exceed their life expectancy and between \$4.6 billion and \$7.1 billion for expansion to keep up with growth in demand. The high and low estimates here depend on the expected rate of ridership growth, which is expected to be between these high- and low-growth estimates.

Annual Average Cost by Investment Scenario (2010–2030)

Mode, Purpose, and Asset Type	Investment Projection (Billions of 2010 Dollars)			
	Sustain 2010 Spending	SGR	Low Growth	High Growth
Urbanized Areas Over 1 Million in Population¹				
Nonrail ² : Preservation	\$2.9	\$4.6	\$4.2	\$4.2
Nonrail ² : Expansion	\$1.2	\$0.0	\$1.2	\$2.1
Subtotal Nonrail³	\$4.1	\$4.6	\$5.4	\$6.3
Rail: Preservation	\$6.3	\$11.4	\$11.0	\$11.1
Rail: Expansion	\$4.2	\$0.0	\$2.9	\$4.0
Subtotal Rail³	\$10.5	\$11.4	\$13.9	\$15.1
Total, Over 1 Million in Population³	\$14.6	\$16.0	\$19.3	\$21.4
Urbanized Areas Under 1 Million in Population and Rural				
Nonrail ² : Preservation	\$1.1	\$2.2	\$1.9	\$1.9
Nonrail ² : Expansion	\$0.6	\$0.0	\$0.5	\$1.0
Subtotal Nonrail³	\$1.7	\$2.2	\$2.4	\$2.9
Rail: Preservation	\$0.0	\$0.3	\$0.2	\$0.2
Rail: Expansion	\$0.2	\$0.0	\$0.0	\$0.0
Subtotal Rail³	\$0.2	\$0.3	\$0.2	\$0.2
Total, Under 1 Million and Rural³	\$1.9	\$2.5	\$2.7	\$3.1
Total³	\$16.5	\$18.5	\$22.0	\$24.5

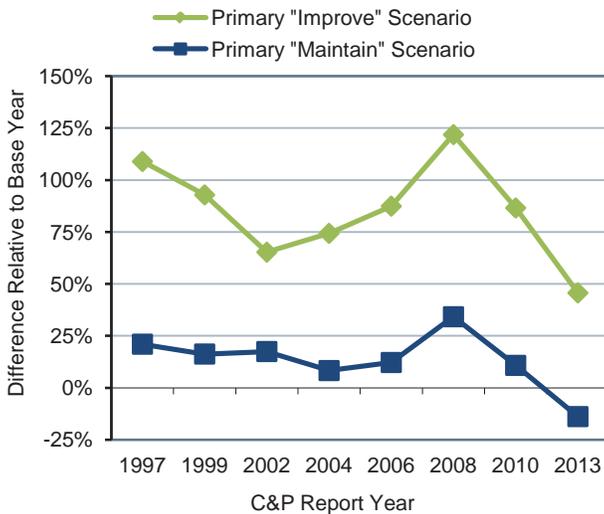
¹Includes 37 different urbanized areas. ²Buses, vans, and other (including ferryboats). ³Note that totals may not sum due to rounding.

CHAPTER 9

Supplemental Scenario Analysis: Highways

While the names and definitions of the highway scenarios presented in the C&P report have varied over time, each edition has generally included one primary scenario oriented toward maintaining the overall state of the system and one oriented toward improving the overall state of the system. Looking at previous editions starting with the 1997 C&P Report, the “gap” between base year spending and the average annual investment level for the primary “Maintain” and “Improve” scenarios has varied, rising as high as 34.2 percent and 121.9 percent, respectively, in the 2008 C&P Report (comparing needs in 2006 dollars with actual spending in 2006). These larger gaps coincided with a 43.3 percent increase in construction costs between 2004 and 2006.

Gap Between Average Annual Investment Scenarios and Base Year Spending, as Identified in the 1997 to 2013 C&P Reports



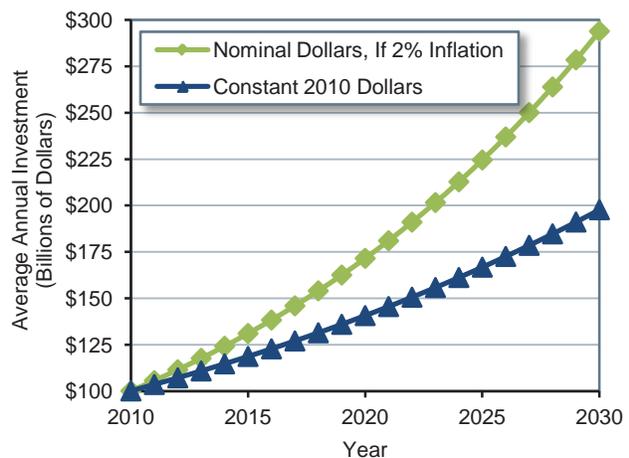
For the forecast-based analyses in the current 2013 C&P Report, the gap associated with the **Improve Conditions and Performance** scenario has fallen to 45.7 percent, while the gap with the **Maintain Conditions and Performance** scenario is -13.9 percent because the average annual investment level under the **Maintain Conditions and Performance** scenario is lower than actual spending in 2010. This negative gap is partially due to increased funding from the Recovery Act

but is largely attributable to a recent decline in construction costs; the National Highway Construction Cost Index declined by 18.0 percent from 2008 to 2010.

For the 20-year period ending in 2028, the 2010 C&P Report estimated the average annual investment levels for the **Maintain Conditions and Performance** scenario and the **Improve Conditions and Performance** scenario to be \$101.0 billion and \$170.1 billion, respectively, both stated in constant 2008 dollars; restating this in 2010 dollars would reduce them to \$82.8 billion and \$139.4 billion. The comparable forecast-based values presented in the 2013 C&P Report for these scenarios (\$86.3 billion and \$145.9 billion) are **4.0 percent higher and 4.7 percent higher**, respectively, than these adjusted values.

The investment scenarios presented in this report are “ramped”, applying an annual constant dollar growth rate starting with the \$100.2 billion of highway capital spending by all levels of government in 2010. For the forecast-based **Improve Conditions and Performance** scenario, the amount spent in individual years ranges from \$103.6 billion in 2011 (3.46 percent more than 2010 spending) up to \$197.8 billion in 2030. These values do not reflect the effects of inflation; assuming a 2 percent annual inflation rate would increase the nominal dollar value for 2030 to \$293.8 billion.

Illustration of Potential Impact of Inflation on the Improve Conditions and Performance Scenario



CHAPTER 9

Supplemental Scenario Analysis: Transit

This section is intended to provide the reader with a deeper understanding of the assumptions behind the investment scenarios presented in Chapters 7 and 8. It includes discussion of the following topics:

- Asset condition projection under the four Chapter 8 scenarios.
- A comparison of 2010 to 2012 TERM results.
- A comparison of historic rates of growth in PMT with the growth projections provided by the Nation’s MPOs.
- An assessment of the impact of an evident gradual transition to alternative fuel and hybrid vehicles on the reinvestment backlog.
- How many transit vehicles, route miles, and stations would be acquired under the **High Growth** and **Low Growth** scenarios.

Asset condition projections for each of the Chapter 8 scenarios are presented both as average condition ratings and as distributions of assets by how much of their useful life will have been consumed. The former includes a discussion of a more realistic (gradual) pay-down of the reinvestment backlog.

We then provide an analysis of the reasons that the SGR backlog estimate has changed relative to the projections presented in the 2010 edition of this report.

Causes of the Increase in the SGR Backlog between the 2010 C&P Report and the 2013 C&P Report

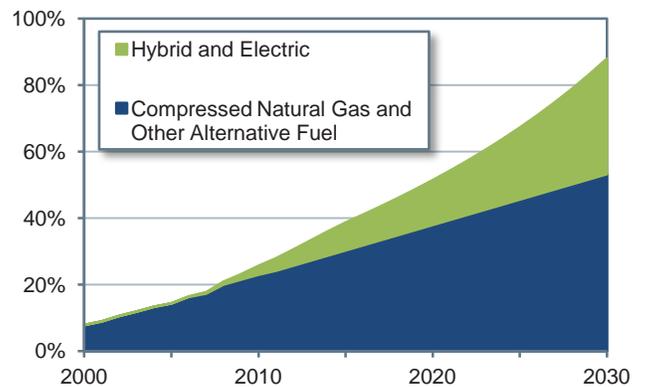
	Billion \$
SGR backlog as reported in the 2010 C&P Report	\$77.7
Impact of 2 additional years of needs	+9.0
Impact of inflation	+3.6
Impact from the change in the asset inventory	-4.4
SGR backlog as reported in the 2013 C&P Report	\$85.9

This is followed by an analysis of average historical rates of transit PMT growth. These rates exceed the MPO-projected rates of growth typically used for long-range transportation planning purposes.

Given the difference between the two growth rates (and the relatively high rate of historic PMT growth as compared with other measures, such as UZA population growth), the 2.1-percent historical growth rate of PMT was identified as a reasonable input value for the **High Growth** scenario. Similarly, the 1.3-percent MPO-projected growth rate was used as an input value for the **Low Growth** scenario.

Based on recent trends in vehicle procurement, the share of vehicles powered by alternative fuels is estimated to increase from 23 percent in 2010 to 53 percent in 2030. During the same period, the share of hybrid buses is estimated to increase from 3 percent to 35 percent. The average cost of an alternative-fuel bus is 15.5 percent higher than that of a standard diesel bus of the same size, and hybrid buses cost roughly 65.9 percent more than standard diesel buses of the same size. An analysis of the impact these more expensive vehicles will have on long-term capital needs is presented in this section based on the assumption that these price differentials will remain static.

Hybrid and Alternative Fuel Vehicles: Share of Total Bus Fleet, 2000–2030



Finally, this section attempts to answer the question: what will our transit system look like in 2030 under these scenarios? In this discussion, fleet size, fixed guideway route miles, and the total number of stations under each scenario over the period of 2010 to 2030 is projected.

CHAPTER 10

Sensitivity Analysis: Highways

Critical to any modeling effort is evaluation of the underlying assumptions—their validity and the sensitivity of the modeling results to altering them. Chapter 10 demonstrates how the baseline forecast-based scenarios presented in Chapter 8 would be affected by changing some HERS and NBIAS parameters.

The valuation of travel time savings assumed in the baseline scenarios are linked to average hourly income; personal travel is valued at 50 percent of income, while business travel is valued at 100 percent. Alternative tests were run reducing these shares to 35 percent and 80 percent, respectively, and raising them to 60 percent and 120 percent. Applying a lower value of time reduces the benefits associated with travel time savings, and would reduce the average annual investment level under the **Improve Conditions and Performance** scenario from \$145.9 billion to \$134.9 billion, as some potential projects would no longer qualify as cost-beneficial. Assuming a higher value of time would increase the annual cost of this scenario to \$153.3 billion.

The baseline scenarios assume a \$6.2-million value of a statistical life for purposes of computing safety-related benefits. Reducing this value to \$3.4 million would reduce the annual cost of the **Improve Conditions and Performance** scenario to \$142.4 billion; increasing the value to \$9.0 million would increase the annual cost to \$148.9 billion.

Benefit-cost analyses use a discount rate that scales down benefits and costs arising further in the future relative to those arising sooner. The baseline scenarios assume a 7-percent rate; changing this to 3 percent would increase the average annual investment level under the **Improve Conditions and Performance** scenario to \$177.3 billion.

The price of fuel assumed in HERS for the baseline scenarios is linked to the “reference forecast” from the Department of Energy’s Annual Energy Outlook (AEO) publication. Substituting in values from the AEO “high oil price case” would increase the cost of

driving, causing HERS to reduce its estimate of future VMT growth. This would reduce the annual cost of the **Improve Conditions and Performance** scenario to \$124.5 billion.

The NBIAS Maintenance, Repair, and Replacement (MR&R) strategy assumed in the baseline scenarios aims to sustain bridges in a steady state. An alternative strategy of minimizing bridge MR&R costs was found to sharply increase bridge replacement needs in the long run, increasing average annual investment under the **Improve Conditions and Performance** scenario to \$161.4 billion; even at this level of spending, it would not be possible to maintain the average bridge sufficiency rating at its 2010 level through 2030.

The baseline scenarios assume a continuation of current trends in deployments of Intelligent Transportation System (ITS)/Operations strategies. Accelerating these deployments would raise the cost of the **Improve Conditions and Performance** scenario, but would yield better results in terms of reducing average delay per VMT.

Impact of Alternative Assumptions on Highway Scenario Average Annual Investment Levels (Billions of 2010 Dollars)

Parameter Change	Maintain C&P	Improve C&P
Baseline	\$86.3	\$145.9
Lower Value of Time	\$89.2	\$134.9
Higher Value of Time	\$84.9	\$153.3
Lower Value of Statistical Life	\$84.5	\$142.4
Higher Value of Statistical Life	\$87.7	\$148.9
3 Percent Discount Rate	\$88.1	\$177.3
Higher Future Fuel Prices	\$72.8	\$124.5
Minimize Bridge MR&R Costs	N/A	\$161.4
Aggressive ITS/Operations Deployments	\$90.6	\$151.5

*MR&R=Maintenance, Repair, and Rehabilitation;
C&P=Conditions and Performance*

The impacts of alternative assumptions on the **Maintain Conditions and Performance** scenario are generally smaller, and linked either to the models’ distribution of spending among different capital improvement types or to reduced VMT.

CHAPTER 10

Sensitivity Analysis: Transit

The TERM relies on a number of key input values, variations of which can significantly impact the value of TERM’s capital needs projections. Each of the three unconstrained investment scenarios examined in Chapter 8—including the **SGR** benchmark and the **Low Growth** and **High Growth** scenarios—assumes that assets are replaced at a condition rating of 2.50 as determined by TERM’s asset condition decay curves. Analysis suggests that each of these scenarios is sensitive to changes in this replacement condition threshold, with the sensitivity increasing disproportionately with higher replacement condition thresholds. For example, reducing the condition threshold to 2.25 tends to reduce the SGR backlog by just over \$1 billion (close to 6 percent). In contrast, increasing the threshold to 2.75 increases preservation needs by more than \$3 billion (just under 20 percent), and a further threshold increase to 3.00 increases preservation needs by nearly \$7 billion (around 40 percent). This increasing sensitivity reflects the fact that ongoing incremental changes to the replacement condition threshold yield greater proportionate reductions in the length of the asset life cycles as higher replacement condition values are reached.

Needs estimates for scenarios employing TERM’s benefit-cost analysis are also particularly sensitive to changes in capital costs (assuming no comparable increase in benefits) because these increases tend to reduce the value of the benefit-cost ratio, causing some previously acceptable projects to fail this test. For example, a 25-percent increase in capital costs

increases investment costs by more than \$4 billion (about 20 percent) for the **Low Growth** scenario and by around \$5 billion (almost 19 percent) for the **High Growth** scenario. In contrast, needs under the **SGR** benchmark (which does not utilize TERM’s benefit-cost test) increase by less than \$5 billion (25 percent) in response to a 25-percent increase in capital costs.

The most significant source of transit investment benefits as assessed by TERM’s benefit-cost analysis is the net cost savings to users of transit services, a key component of which is the value of travel time savings. Consequently, the per-hour value of travel time for transit riders is a key driver of total investment benefits for scenarios that employ TERM’s benefit-cost test. For example, a doubling of the value of time (from \$12.50 per hour to \$25 per hour) increases total needs for the **Low Growth** and **High Growth** scenarios by approximately \$1 billion to \$3 billion (7 to 10 percent) due to the increase in total benefits relative to costs. Similarly, a halving of the value of time decreases total investment needs for these scenarios by approximately \$1 billion to \$2 billion each (5 to 6 percent).

Finally, TERM’s benefit-cost test is responsive to the discount rate used to calculate the present value of the streams of investment costs and benefits. For example, reducing the discount rate from the base rate of 7 percent to 3 percent yields an approximately \$1-billion (3 to 6 percent) increase in total annual investment needs under the **Low Growth** and **High Growth** scenarios, respectively.

Impact of Alternative Replacement Condition Thresholds on Transit Preservation Investment Needs by Scenario (Excludes Expansion Impacts)

Replacement Condition Thresholds	SGR Benchmark		Low Growth Scenario		High Growth Scenario	
	Billions of 2010 Dollars	Percent Change From Baseline	Billions of 2010 Dollars	Percent Change From Baseline	Billions of 2010 Dollars	Percent Change From Baseline
Replace assets later (2.25)	\$17.33	-6.1%	\$16.00	-5.9%	\$16.13	-5.8%
Baseline (2.50)	\$18.46		\$17.01		\$17.12	
Replace assets earlier (2.75)	\$22.07	19.6%	\$20.16	18.5%	\$20.41	19.2%
Very early asset replacement (3.00)	\$26.03	41.0%	\$23.28	36.9%	\$23.49	37.2%

CHAPTER 11

Transportation Serving Federal and Tribal Lands

The Federal government holds title to approximately 650 million acres, or about 30 percent of the total land area of the United States. Additionally, the Federal government holds in trust approximately 55 million acres of land on behalf of Tribal governments. Federal lands are managed by various Federal land management agencies (FLMAs), primarily within the Departments of the Interior, Agriculture, and Defense. Federal lands have many uses, including the facilitation of national defense, recreation, grazing, timber and mineral extraction, energy generation, watershed management, fish and wildlife management, and wilderness maintenance.

More than 8 billion vehicle miles are traveled annually on the Tribal Transportation Program road system, with more than 60 percent of the system unpaved.

Recreation, national defense, travel, tourism, and resource extraction are all dependent on a quality transportation infrastructure. More than 450,000 miles of Federal roads provide access to Federal lands, which also provides opportunities for recreational travel and tourism, protection and enhancement of resources, and sustained economic development in both rural and urban areas.

More than 75 percent of Americans participate in active outdoor recreation each year, contributing \$730 billion annually to the U.S. economy. These activities include hunting, fishing, wildlife viewing,

Federal Agency	Recreation Related Jobs	Recreation Economic Benefits (\$ Billion)
Department of Agriculture		
Forest Service	205,000	13
Department of the Interior		
National Park Service	258,000	39
Fish and Wildlife Service	27,000	2
Bureau of Land Management	59,000	7
Department of Defense		
U.S. Army Corps of Engineers - Civil Works Facilities	270,000	16

* Economic benefits include lodging, food, entertainment, recreation, and incidentals expended during travel.

biking, hiking, and water sports. In total, there are nearly 1 billion visits annually to Federal lands.

Many FLMAs are no longer able to meet the transportation demands placed upon them due to growing traffic volumes and demands for visitor parking at peak times. As population increases, the demand for access to Federal lands will continue to grow. For FLMAs to continue to fulfill their missions of providing visitor enjoyment and conserving precious resources, innovation and creative solutions will be required.

Roads Serving Federal Lands

Agency	Public Paved Road Miles	Paved Road			Public Unpaved Road Miles	Public Bridges		Backlog of Deferred Maintenance
		Good	Fair	Poor		Total	Structurally Deficient	
Forest Service	10,700	25%	50%	25%	259,300	3,840	6%	\$5.1 billion
National Park Service	5,450	60%	28%	12%	4,100	1,270	3%	\$5 billion
Bureau of Land Management	700	60%	20%	20%	2,000	439	3%	\$350 million
Fish & Wildlife Service	400	59%	23%	18%	5,200	281	7%	\$1 billion
Bureau of Reclamation	762	N/A	N/A	N/A	1,253	311	11%	N/A
Bureau of Indian Affairs	8,800	N/A	N/A	N/A	20,400	929	15%	N/A
Tribal Governments	3,300	N/A	N/A	N/A	10,200	N/A	N/A	N/A
Military Installations	26,000	N/A	N/A	N/A	N/A	1,422	11%	N/A
U.S. Army Corps of Engineers	5,135	55%	25%	20%	N/A	294	11%	\$100 million

CHAPTER 12

Center for Accelerating Innovation

America's transportation system faces unprecedented challenges. Aging roads and bridges are carrying greater traffic volumes and heavier loads than ever before and need extensive rehabilitation. Limited resources at transportation agencies across the country create the need to work more efficiently and focus on technologies and processes that produce the best results.

Addressing these challenges requires the transportation industry to pursue ways of doing business better, faster, and smarter. It requires harnessing the power of innovation to dramatically change the way highways are built. The Federal Highway Administration (FHWA) Center for Accelerating Innovation, established in 2011, provides national leadership on deploying innovation to meet today's transportation challenges. The center houses Every Day Counts—FHWA's initiative to shorten project delivery, enhance roadway safety, and protect the environment—and Highways for LIFE—the agency's initiative to build roads and bridges better, more safely, and with less impact on the traveling public.

Every Day Counts

The Every Day Counts initiative, launched in 2009, has two key components. The first is accelerating technology and innovation deployment. This involves identifying market-ready technologies that can benefit the highway system and accelerating their widespread use. Within the first 2 years of this initiative, 34 States had adopted Safety EdgeSM as a standard for paving projects, 45 States were in various stages of implementing warm-mix asphalt, 44 States were implementing adaptive signal technology, 675 replacement bridges had been designed or constructed using prefabricated bridge elements and systems, and 85 geosynthetic reinforced soil integrated bridge systems had been designed or constructed.

The second key component of Every Day Counts is shortening project delivery. Within the first

2 years of this initiative, 56 programmatic agreements (which establish streamlined processes for handling routine environmental requirements on common project types) were initiated. Thirteen States had active mitigation banking agreements (for restoring or enhancing wetlands, streams, or other resources to offset unavoidable adverse impacts related to a highway project in another area.) During these 2 years, more than 220 projects were designed and constructed using the design-build or construction manager–general contractor project delivery methods.

Selected Every Day Counts Initiatives

Accelerating Technology and Innovation Deployment

- Adaptive Signal Control Technology
- Geosynthetic Reinforced Soil Integrated Bridge Systems
- Prefabricated Bridge Elements and Systems
- Safety EdgeSM
- Warm-Mix Asphalt

Shortening Project Delivery Toolkit

- Eliminate Time-Consuming Duplication Efforts
- Encourage Use of Existing Regulatory Flexibilities

Accelerated Project Delivery Methods

- Design-Build
- Construction Manager–General Contractor

Highways for LIFE

FHWA began to address the critical need for rapid innovation through Highways for LIFE, a pilot program established in 2005 with three goals: to improve safety during and after construction, to reduce congestion caused by construction, and to improve the quality of highway infrastructure.

From fiscal years 2006 to 2012, the program provided incentives totaling about \$65 million for 70 projects, including innovations such as accelerated bridge construction techniques, precast concrete pavement systems, and new contracting methods.

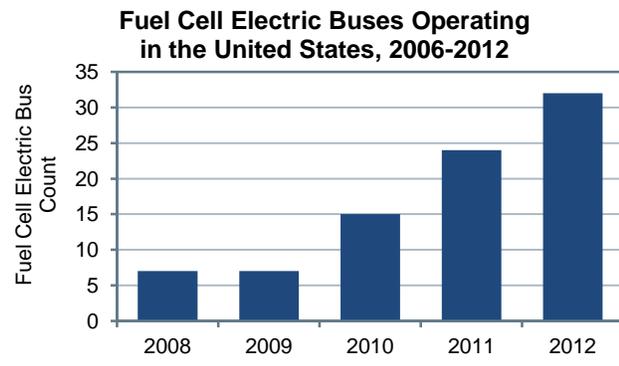
CHAPTER 13

National Fuel Cell Bus Program

This chapter summarizes the accomplishments of fuel cell transit bus research and demonstration projects supported by the FTA through 2011. It describes fuel cell electric bus (FCEB) research projects in the United States and describes their impact on commercialization of fuel cell power systems and electric propulsion for transit buses in general.

FTA sponsors the National Fuel Cell Bus Program (NFCBP), a cooperative research, development, and demonstration program to advance commercialization of FCEBs. The NFCBP is a part of a larger FTA research program to improve transit efficiency and contribute to environmentally sustainable transportation. NFCBP projects target research to improve performance and lower costs of next-generation fuel cell systems for transportation.

FTA's research to develop FCEBs has been underway since 2006. NFCBP projects require a dollar-for-dollar cost share for Federal funds, bringing the size of the program to more than \$150 million through FY 2011.



NFCBP accomplishments include:

- Supporting an El Dorado–BAE Systems–Ballard partnership that developed and demonstrated a new FCEB at SunLine and CTA. The new bus meets Buy America requirements and is assembled in Riverside, CA.
- Canadian-based fuel cell manufacturer Ballard Power Systems has established manufacturing capabilities for fuel cell power systems in Lowell, MA.
- The NFCBP funded a project with Connecticut-based fuel cell manufacturer UTC Power to engineer, package, and test a fuel cell power system that can be installed easily into U.S. bus manufacturer models.

Fuel Cell Electric Bus Demonstration Sites



Contacts for Additional Information

General Information

Mr. E. Ross Crichton, Team Leader
Investment & Economic Analysis Team
Office of Transportation Policy Studies, FHWA
Phone: (202) 366-5027
E-Mail: ross.crichton@dot.gov

Dr. David Luskin, Economist
Investment & Economic Analysis Team
Office of Transportation Policy Studies, FHWA
Phone: (202) 366-6597
E-Mail: david.luskin@dot.gov

Ms. Rabinder Bains, Economist
Investment & Economic Analysis Team
Office of Transportation Policy Studies, FHWA
Phone: (202) 366-2073
E-Mail: rabinder.bains@dot.gov

Mr. Keith Gates
Office of Budget and Policy, FTA
Phone: (202) 366-1794
E-Mail: keith.gates@dot.gov

Mr. Stephen Sissel, Highway Engineer
Investment & Economic Analysis Team
Office of Transportation Policy Studies, FHWA
Phone: (202) 366-5764
E-Mail: stephen.sissel@dot.gov

Ms. Lauren Donnelly, Economist
Safety Regulatory Analysis Division
Office of Railroad Safety, FRA
Phone: (202) 493-6289
E-Mail: Lauren.Donnelly@dot.gov

Specific Topics

- Chapter 1 Adella Santos, FHWA, (202) 366-5021, adella.santos@dot.gov and Chip Millard, FHWA, (202) 366-4415, chip.millard@dot.gov
- Chapter 2 Stephen Sissel, FHWA*, and Keith Gates, FTA*
- Chapter 3 Stephen Sissel, FHWA*, and Keith Gates, FTA*
- Chapter 4 Heather Rothenberg, FHWA, (202) 366-2193, Heather.Rothenberg2@dot.gov, and Keith Gates, FTA*
- Chapter 5 Stephen Sissel, FHWA*, Mark Kane, FHWA, (202) 366-9775, Mark.Kane@dot.gov, Shana Baker, FHWA, (202) 366-4649, Shana.Baker@dot.gov, Heather Holsinger, FHWA, (202) 366-6263, Heather.Holsinger@dot.gov, and Keith Gates, FTA*
- Chapter 6 Rabinder Bains, FHWA*, and Keith Gates, FTA*
- Chapter 7 David Luskin, FHWA*, and Keith Gates, FTA*
- Chapter 8 David Luskin, FHWA*, and Keith Gates, FTA*
- Chapter 9 Rabinder Bains, FHWA*, and Keith Gates, FTA*
- Chapter 10 Rabinder Bains, FHWA*, and Keith Gates, FTA*
- Chapter 11 Aron Reif, FHWA, (202) 366-9489, Aron.Reif@dot.gov
- Chapter 12 Kathleen Bergeron, FHWA (202) 366-5508, Kathleen.Bergeron@dot.gov
- Chapter 13 Keith Gates, FTA*
- Appendix A David Luskin, FHWA*
- Appendix B Stephen Sissel, FHWA*
- Appendix C Keith Gates, FTA*
- Appendix D David Luskin, FHWA*, and Keith Gates, FTA*

* See **General Information** above for contact information.



Transportation Committee
of the
Southern California Association of Governments
February 6, 2014
Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE TRANSPORTATION COMMITTEE. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG’S OFFICE.

The Transportation Committee (TC) met at SCAG’s office in downtown Los Angeles. The meeting was called to order by Chair Hon. Keith Millhouse, Moorpark. A quorum was present.

Members Present:

- Hon. John Addleman, Rolling Hills Estates SBCCOG
- Hon. Rusty Bailey, Riverside District 68
- Hon. Bruce Barrows, Cerritos District 23
- Hon. Glen Becerra, Simi Valley District 46
- Hon. Russell Betts, Desert Hot Springs CVAG
- Hon. Art Brown, Buena Park District 21
- Hon. Gene Daniels, Paramount District 24
- Hon. Jeff DeGrandpre, Eastvale District 4
- Hon. Paul Eaton, Montclair District 9
- Hon. Roy Francis, La Habra Heights District 31
- Hon. Bert Hack, Laguna Woods OCCOG
- Hon. Matthew Harper, Huntington Beach District 64
- Hon. Bill Hodge, Calexico ICTC
- Hon. Jim Hyatt, Calimesa District 3
- Hon. Trish Kelley, Mission Viejo OCCOG
- Hon. Michele Martinez, Santa Ana District 16
- Hon. Andrew Masiel, Sr. Pechanga Band of Luiseño Indians
- Hon. Ryan McEachron, Victorville District 65
- Hon. Dan Medina, Gardena District 28
- Hon. Barbara Messina, Alhambra District 34
- Hon. Keith Millhouse, Moorpark (*Chair*) VCTC
- Hon. Brett Murdock, Brea District 22
- Hon. Kris Murray, Anaheim District 19
- Hon. Frank Navarro, Colton SANBAG
- Hon. Shawn Nelson Orange County
- Hon. Micheál O’Leary, Culver City WCCOG
- Hon. Gary Ovitt San Bernardino County
- Hon. Linda Parks Ventura County
- Hon. Greg Pettis, Cathedral City District 2
- Hon. Teresa Real Sebastian, Monterey Park SGVCOG
- Hon. Ron Roberts, Temecula District 5
- Hon. Adam Rush, Eastvale RCTC
- Hon. David Spence, La Canada-Flintridge Arroyo Verdugo Cities
- Hon. Karen Spiegel, Corona District 63
- Hon. Tim Spohn, City of Industry SGVCOG

Hon. Jeff Stone	Riverside County
Hon. Jess Talamantes, Burbank	District 42
Hon. Don Voss, La Cañada-Flintridge	District 36
Hon. Alan Wapner, (<i>Vice-Chair</i>)	SANBAG

Members Not Present:

Hon. Mike Antonovich	Los Angeles County
Hon. Catalina Chacon	Pechanga Band of Luiseño Indians
Hon. Mario Guerra, Downey	District 25
Hon. Carol Herrera, Diamond Bar	District 37
Hon. Jose Huizar, Los Angeles	District 61
Hon. Randon Lane, Murrieta	Murrieta
Hon. James C. Ledford	Palmdale
Hon. Brian McDonald	Chemehuevi Indian Tribe
Hon. Marsha McLean, Santa Clarita	District 67
Hon. Leroy Mills, Cypress	District 18
Hon. Steven Neal, Long Beach	District 29
Hon. Pam O'Connor, Santa Monica	District 41
Hon. Bernard C. Parks, Los Angeles	District 55
Hon. Mark Rutherford, Westlake Village	District 44
Hon. Damon Sandoval	Morongo Band of Mission Indians
Hon. Larry Smith, Hemet	WRCOG
Hon. Barb Stanton, Apple Valley	SANBAG
Hon. Brent Tercero, Pico Rivera	GCCOG
Mr. Aziz Elattar	Caltrans District 7

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Hon. Keith Millhouse, Moorpark, called the meeting to order at 10:03 a.m. Hon. Art Brown led the Pledge of Allegiance.

Hon. Keith Millhouse announced new committee members Hon. Rusty Bailey, Riverside, Hon. Larry Smith, Hemet and Hon. Frank Navarro, Colton.

PUBLIC COMMENT PERIOD

Rye Baerg, Safe Routes to School National Partnership, thanked SCAG for its effort in partnering with member counties and developing active transportation initiatives in the region.

REVIEW AND PRIORITIZE AGENDA ITEMS

There was no review or prioritization of agenda items.

ACTION ITEM

1. Sustainability Joint Work Program Resolution with Imperial County

Jacob Lieb, SCAG staff, reported to further advance and implement key policies and strategies of the 2012 Regional Transportation Plan/Sustainable Communities Strategy (2012-2035 RTP/SCS). SCAG and Imperial County Transportation Commission have developed a Sustainability Joint Work Program to better coordinate the two agencies' activities and support implementation of the 2012 RTP/SCS.

A MOTION was made (Brown) to approve the Joint Work Program with Imperial County. The MOTION was seconded (Voss). The motion passed by the following votes:

AYES: Addleman, Barrows, Becerra, Betts, Brown, Daniels, DeGrandepre, Eaton, Francis, Hack, Hodge, Hyatt, Kelley, Martinez, McEachron, Messina, Millhouse, Murdock, Murray, Navarro, O'Leary, Ovitt, L. Parks, Pettis, Real Sebastian, Roberts, Rush, Spence, Spiegel, Spohn, Voss, Wapner

NOES: None

ABSTAIN: None

INFORMATION/DISCUSSION ITEMS

2. Imperial County Transit Planning Efforts Update

Mark Baza, Executive Director, Imperial County Transportation Commission, provided an update on the implementation of Imperial County's Long Range Transportation Plan and joint planning studies with SCAG. Mr. Baza stated that recently completed projects include transit centers in Brawley and El Centro as well as two (2) transit terminals at Imperial Valley College. Sunday service is now offered on select routes and headways have been reduced on others. Other items being studied include a proposed intermodal transportation center at the Calexico border as well as inter-college transit shuttle service linking three (3) local college campuses.

Hon. Alan Wapner, Ontario, asked if there are connectors to RTA and San Diego County. Mr. Baza responded that a connection does not currently exist but all options are being considered as service needs grow.

3. SCAG-Metro First/Last Mile Strategic Plan Study

Shahrzad Amiri, Deputy Executive Officer, Los Angeles MTA, stated the First/Last Mile Strategic Plan grew out of the Metro/SCAG joint work program and seeks to increase the use of transit through infrastructure improvements and maximize multi-modal benefits. Dylan Jones, IBI Group, reviewed the study and noted data indicates 91% of transit riders utilize multi-modal trips to access transit stations and this effort seeks to establish ways to increase speed of active travel, reduce point to point distances and support multimodal transfers. Final adoption will be sought from the Metro Board in spring 2014.

Hon. Russell Betts, Desert Hot Springs, asked if a demonstration project is planned. Ms. Amiri responded that two (2) pilot stations are planned for both the Exposition Line Phase 2 and the Gold Line Phase 2A.

4. California Active Transportation Program Process Update

Sarah Jepson, SCAG staff, provided an update on the California Active Transportation Program (ATP). Ms. Jepson stated the ATP is a new program that will allocate approximately \$124 million annually statewide. It is anticipated the first call for projects will be at the end of March 2014. Ms. Jepson noted SCAG's regional competition will occur concurrent to the statewide effort and the regional call for projects will commence in March 2014.

5. Federal Transit Administration – Notice of Funding Availability for the Low or No Emission (LoNo) Vehicle Deployment Program

Basil Panas, SCAG staff, reported on federal funding for the Low or No Emission (LoNo) Vehicle Deployment Program. Mr. Panas stated SCAG has been informed by the FTA that \$24.9 million is available under the Low or No Emission Vehicle Deployment Program. The purpose is to get into deployment buses that have low or no emission. Funding is available for the acquisition or lease of buses and related facilities such as recharging or refueling facilities.

CONSENT CALENDAR

Approval Item

6. Minutes of the January 2, 2014 Meeting

Receive and File

7. 2014 Regional Council and Policy Committees Meeting Schedule

8. SCAG Sustainability Planning Grants Program- Monthly Update

In response to Council Member Addleman's question, SCAG staff Jacob Lieb stated that all cities within the SCAG region were invited to apply for the Sustainability Planning Grants Program.

A MOTION was made (McEachron) and SECONDED (Rush) to approve Consent Calendar items 6 through 8. The Motion was passed by the following vote:

AYES: Addleman, Bailey, Barrows, Becerra, Betts, Brown, Daniels, DeGrandepre, Eaton, Francis, Hack, Harper, Hyatt, Kelley, Martinez, Masiel, McEachron, Medina, Messina, Millhouse, Murdock, Murray, Navarro, Nelson, O'Leary, Ovitt, Parks L., Pettis, Real Sebastian, Roberts, Rush, Spence, Spiegel, Spohn, Stone, Talamantes, Voss, Wapner

NOES: None

ABSTAIN: None

STAFF REPORT

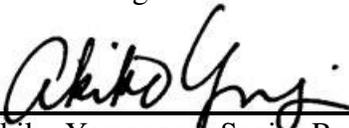
Joann Africa, Chief Counsel, stated SCAG's Draft Public Participation Plan has been released for public review and comments. The comment period ends March 5, 2014. Akiko Yamagami, SCAG staff, announced that the 8th Annual Sustainability Awards will be presented at SCAG's General Assembly May 1- 2, 2014, and the deadline for submission is March 11, 2014.

CHAIR'S REPORT

Hon. Keith Millhouse, Moorpark, encouraged more effective signage for transit users which better directs riders on priority seating etiquette and provides clearer instructions to those making transfers between transit providers. Hon. Wapner noted the proposed Aviation Task Force, which was approved by the Transportation Committee in 2013, will be brought to the Regional Council at their March 2014 meeting.

ADJOURNMENT

The meeting adjourned at 11:03 a.m. The next meeting of the Transportation Committee will be held Thursday, April 3, 2014 at the SCAG Los Angeles office.



Akiko Yamagami, Senior Regional Planner
Transportation Planning

Transportation Committee Attendance Report

2014

	Member (including Ex-Officio) Last Name, First Name	Representing	X = County Represented					X = Attended				= No Meeting		NM = New Member					
			IC	LA	OC	RC	SB	VC	Jan	Feb	Mar	April	GA May	June	No Mtg. July	Aug	Sept	Oct	Nov
1	Addleman, John	Rolling Hills Estates		X					X	X									
2	Antonovich, Michael*	Los Angeles County		X					X										
3	Bailey, Rusty	Riverside, WRCOG				X				NM									
4	Barrows, Bruce*	Cerritos		X					X	X									
5	Becerra, Glen*	Simi Valley		X					X	X									
6	Betts, Russell	CVAG				X			X	X									
7	Brown, Art	Buena Park			X				X	X									
8	Chacon, Catalina	Pechanga Luiseño Indians							X										
9	Daniels, Gene*	Paramount		X					X	X									
10	DeGrandpre, Jeff	Eastvale				X			X	X									
11	Eaton, Paul*	Montclair		X						X									
12	Elattar, Aziz	Caltrans - District 7							X										
13	Francis, Roy	La Habra Heights		X					X	X									
14	Guerra, Mario	Downey		X					X										
15	Hack, Bert	Laguna Woods			X				X	X									
16	Harper, Matthew*	Huntington Beach			X				X	X									
17	Herrera, Carol*	Diamond Bar		X					X										
18	Hodge, Bill	Clexico, ICTC	X							X									
19	Huizar, Jose*	Los Angeles		X															
20	Hyatt, Jim	Calimesa				X			X	X									
21	Kelley, Trish	Mission Viejo			X				X	X									
22	Lane, Randon	Murrieta				x			X										
23	Ledford, James C.	Palmdale/No. LA County		X															
24	Martinez, Michele*	Santa Ana			X				X	X									
25	Masiel, Andrew	Pechanga Luiseño Indians							X	X									
26	McDonald, Brian	Chemehuevi Indian Tribe					X												
27	McEachron, Ryan	Victorville					X		X	X									
28	McLean, Marsha*	Santa Clarita		X					X										
29	Medina, Dan*	Gardena		X					X	X									
30	Messina, Barbara*	Alhambra		X					X	X									
31	Millhouse, Keith* (Chair)	Moorpark						X		X									
32	Mills, Leroy*	Cypress			X				X										
33	Murdock, Brett	Brea			X				X	X									
34	Murray, Kris	Anaheim			X				X	X									
35	Navarro, Frank	Colton							NM	X									
36	Neal, Steven*	Long Beach		X					X										
37	Nelson, Shawn*	Orange County			X				X	X									
38	O'Connor, Pam*	Santa Monica		X					X										
39	O'Leary, Micheál	Culver City/WCCOG		X					X	X									
40	Ovitt, Gary*	San Bernardino County					X			X									
41	Parks, Bernard*	Los Angeles		X															
42	Parks, Linda	Ventura County						X	X	X									
43	Pettis, Gregory*	Cathedral City				X			X	X									
44	Real Sebastian, Teresa	Monterey Park/SGVCOG		X					X	X									
45	Roberts, Ron*	Temecula				X				X									
46	Rush, Adam	Eastvale							X	X									
47	Rutherford, Mark	Westlake Village		X															
48	Sandoval, Damon	Morongo Band of Mission Indians				X													
49	Smith, Larry	Hemet, WRCOG				X													
50	Spence, David	Flintridge/Arroyo Verdugo Cities		X					X	X									
51	Spiegel, Karen	Corona/WRCOG				X			X	X									
52	Spohn, Tim	Industry/SGVCOG		X					X	X									
53	Stanton, Barb	Apple Valley					X		X										
54	Stone, Jeff*	Riverside				X				X									
55	Talamantes, Jess	Burbank/SFVCOG		X					X	X									
56	Tercero, Brent	Pico Rivera		X															
57	Voss, Don*	La Cañada Flintridge		X					X	X									
58	Wapner, Alan* (Vice-Chair)	Ontario					X		X	X									
		Totals	1	25	9	11	5	2											

* Regional Council Member

DATE: April 3, 2014

TO: Transportation Committee (TC)
Regional Council (RC)

FROM: Steve Fox, Senior Regional Planner, 213-236-1855, fox@scag.ca.gov

SUBJECT: California High-Speed Rail Authority (CHSRA) Draft 2014 Business Plan Comment Letter

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION FOR TC:

Recommend that the Regional Council authorize the Executive Director to finalize and submit the joint comment letter to CHSRA regarding the Draft 2014 Business Plan.

RECOMMENDED ACTION FOR RC:

Authorize the Executive Director to finalize and submit the joint comment letter to CHSRA regarding the Draft 2014 Business Plan.

EXECUTIVE SUMMARY:

The California High-Speed Rail Authority (CHSRA) released its Draft 2014 Business Plan (Draft Plan) on February 7, 2014 for a 60-day public review and comment period. The Authority Board intends to adopt the Final 2014 Business Plan on April 10, 2014, and submit it to the California Legislature by May 1, 2014, as required by law. SCAG staff has reviewed the Draft Plan and worked with the county transportation commissions and San Diego Association of Governments to develop a joint comment letter (Attachment).

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan, Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective: a) Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

In developing the joint comment letter (Attachment), SCAG staff consulted with the county transportation commissions (CTCs) and the San Diego Association of Governments (SANDAG). The Executive Directors and Chief Executive Officers of these agencies discussed the draft joint comment letter at the monthly CTC CEOs/SCAG meeting on March 21, 2014. The comment letter supports the state's efforts to identify Cap and Trade funding for high speed rail (HSR). It acknowledges the progress made by the CHSRA to develop a comprehensive risk management program and incorporate a rigorous quantitative risk analysis into the draft Business Plan. The comment letter also reinforces the importance of the Southern California Memorandum of Understanding (MOU) and the region's commitment to invest in bookend and connectivity projects that will strengthen and improve existing rail networks in the near term, yielding early and demonstrable mobility benefits in Southern California, while enhancing the HSR system's utility by providing seamless connections with local and regional rail systems.

REPORT

Staff recommends approval of the attached letter to CHSRA regarding the Draft 2014 Business Plan. With direction from the TC and RC, the Executive Director will finalize and submit the joint comment letter to CHSRA.

Overview of Draft 2014 Business Plan

Under state law, the CHSRA is required to prepare a Business Plan every two (2) years and submit it to the state legislature. The adopted 2012 Business Plan provided a foundation for implementing the state high speed rail system using a phased and blended approach that reflected input from SCAG and its partner regional transportation agencies. The Draft Plan builds on the 2012 Business Plan and does not present any fundamental changes. It begins by reporting on the progress the CHSRA has made with its federal, state, regional and local stakeholders, and with staffing and project delivery over the last two years. It highlights some of the milestones that lie ahead and also presents updated cost and revenue estimates, along with updated ridership forecasts.

Schedule and Project Cost. The costs are virtually unchanged from the 2012 Plan; however, there is a very small reduction in total Phase 1 cost from \$68 billion to \$67.6 billion (year-of-expenditure dollars, YOES). For environmental work on the segments in the SCAG region, the Draft Plan forecasts Records of Decision (RODs) for Palmdale to L.A. Union Station in the summer of 2015 and L.A. to Anaheim in the spring of 2016. The schedule for the L.A. to San Diego ROD is undetermined. The table below summarizes the schedule and updated project cost for the three phases of implementation.

Section	Completion Year of Section	Incremental Capital Cost (Billions YOES)	Cumulative Capital Cost (Billions YOES)
Initial Operating Section (IOS) – Merced to San Fernando Valley	2022	\$31.2	\$31.2
Bay to Basin – San Jose to Merced to San Fernando Valley	2026	\$19.5	\$50.7
Phase 1 – San Francisco to Los Angeles/Anaheim	2028	\$16.9	\$67.6

Funding. The Draft Plan no longer assumes future federal funding as the 2012 Plan had. Instead, it advocates for the benefit of a national trust fund for intercity and high-speed rail. The Draft Plan assumes Cap and Trade funding, beginning with the Governor’s request for \$250 million for next fiscal year and continuing this with dedicated yearly Cap and Trade funding. The CHSRA sees committed, long-term Cap and Trade funding as necessary to allow it to leverage both public and private financing and therefore potentially finance the completion of the IOS. This committed revenue stream will allow the CHSRA to engage the private sector in the delivery of the system, bringing both investment and significant cost savings. The Draft Plan continues to project that the IOS will generate a profit, thereby attracting private sector involvement to help fund the construction of the remaining segments. For the IOS, the Authority forecasts a net operating revenue of \$24 million in the first year of operation in the medium scenario and then greatly increasing to \$481 million in 2026. This is expected to incentivize the private sector into investing in the Bay to Basin phase of the system.

REPORT

Operating Costs, Ridership and Farebox Forecasts. The Draft Plan's revenue and operating cost projections have been significantly remodeled and reanalyzed based on input from and review by industry and outside experts, and have undergone a risk analysis to provide greater confidence in their reliability. The Draft Plan forecasts an increase in the total number of trips people will take on HSR, but also a reduction in the average length of their trips, compared to the 2012 Business Plan forecasts. As a result, the ridership forecasts have increased (by 25 percent in the medium-range scenario), but due to the increase in the number of shorter trips with lower fares, farebox revenues are somewhat lower (ranging from five (5) percent lower in 2025 to ten (10) percent lower in 2040).

FISCAL IMPACT:

Staff work related to this project is included in the current OWP under Work Element No. 14-140.SCG00121-02 Regional High Speed Rail Transport Program.

ATTACHMENT:

Draft Southern California Regional Transportation Agencies Joint Comment Letter

April 3, 2014

Mr. Jeff Morales, CEO
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: Draft 2014 Business Plan – Comments

Dear Mr. Morales:

On behalf of the undersigned Southern California Regional Transportation Agencies, we thank you for the opportunity to comment on the Draft 2014 Business Plan (Draft Plan). Together, our agencies have been working cooperatively with the California High-Speed Rail Authority (CHSRA) to facilitate the development and successful implementation of HSR in Southern California, as embodied in two Memoranda of Understanding.

Signatories to the **Southern California Memorandum of Understanding (MOU)** are advancing the funding and implementation of early improvements to local passenger rail service and operations, while preparing designated high-speed rail (HSR) corridors for eventual HSR operation, to achieve region-wide systems integration of rail service in Southern California. This program of early investments in regional and local rail systems facilitates the “blended approach” to implementing HSR service through coordination of increased interregional connectivity of the existing transportation systems.

Signatories to the **Southern California Inland Corridor Group (SoCal ICG) Partnership MOU** are supporting the preparation of technical studies for the Phase 2 Los Angeles to San Diego via Inland Empire (LA-SD via IE) HSR corridor. SB 1029 included \$56 million for this section, however the CHSRA only recently awarded a \$2 million contract for corridor work during the next two years. We request that the CHSRA complete the preliminary engineering and environmental tasks and advance this section should additional funding become available and new opportunities arise.

Individual undersigned agencies support the Governor’s proposed FY15 Cap and Trade funding allocation for HSR and have transmitted a support letter to the Assembly Budget Subcommittee No. 3 on Resources and Transportation. We will transmit a similar support letter for the upcoming Senate hearing on April 3, 2014. As we continue to work with the CHSRA to ensure that the HSR system will address local, regional and state needs and priorities, we collectively offer the following comments on the Draft Plan.

- We support the Draft 2014 Business Plan and appreciate the consistency with, and validation of, the previous 2012 Business Plan. We welcome the documented progress that CHSRA has made in advancing the Central Valley segment to construction and moving forward on the planning and environmental studies for the remaining segments. We also commend the

CHSRA for taking the necessary steps recommended by the Legislative Peer Review Group, the United States Government Accountability Office, and others, to develop a comprehensive risk management program and incorporate a rigorous quantitative risk analysis into the Draft Plan, in order to better quantify and understand the risks associated with the cost estimates and ridership and revenue forecasts. We urge the CHSRA to continue to maintain transparency and open lines of communication with its partner transportation agencies, local elected leadership, and the general public, as it addresses these risks and challenges.

- We continue to support the state’s efforts to plan, design, and construct HSR service throughout the state and in Southern California. We will continue to work cooperatively with the CHSRA and partner transportation agencies to facilitate the advancement of project level Environmental Impact Reports/Environmental Impact Statements (EIR/EIS) and implementation of the HSR corridors, as well as implementation of early investments in connecting services.
- The Draft Plan acknowledges the importance of the bookend and connectivity projects that will strengthen and improve existing rail networks in the near term and yield early and demonstrable mobility benefits in Southern California, while enhancing the HSR system’s utility by providing seamless connections with local and regional rail systems. Making these early investments in Southern California provides the opportunity for the CHSRA to meet many of its goals, objectives, and mandates in advance of full implementation of the statewide HSR system. To that end, the Draft Plan discussion should be expanded to acknowledge the Southern California MOU and identify the participating agencies, highlight progress to date on advancement of the MOU projects, and discuss the CHSRA’s commitment to securing the necessary funds to implement the MOU projects.
- We appreciate the complex challenges that come along with building large infrastructure projects such as HSR, and we support the CHSRA’s financial plan and ongoing efforts to secure funding to implement HSR. The Draft Plan identifies potential uncommitted funding sources, including Cap and Trade revenue and a dedicated federal trust fund for intercity and high-speed rail. We expect the state budgetary process and successful passage of the federal transportation reauthorization bill to help bring some clarity to the matter.

As the CHSRA works to finalize the 2014 Business Plan and submit it to the state legislature in a timely manner, we recognize that upcoming efforts at the state and federal levels will have the potential to substantially affect the HSR project and Business Plan moving forward, including the state’s Network Integration Strategic Service Plan and federal transportation reauthorization. Therefore, we offer the following suggestions and clarifications for consideration when the CHSRA begins the 2016 Business Plan update.

- To the extent possible, revisions to the Draft Plan regarding Phase 2 should be addressed. For example, the LA to San Diego corridor could be added to Exhibit 1.1 in a similar way that it is listed in Exhibit 1.2 and included on page 14. Additionally, the SB 1029 call-out box on page 21 could be expanded to show the breakdown of the \$252 million for Phase 1 and 2; SB 1029 identifies \$56 million for LA to San Diego.

DRAFT – FOR DISCUSSION

- For the 2016 update, we respectfully request further discussion of Phase 2, including the SoCal ICG Partnership MOU and the agencies involved. We would appreciate clarification in terms of cost and schedule for planning, environmental, and construction activities, and Phase 2 next milestones. We also request that Phase 2 be included in future ridership and revenue models. In the Draft Plan, the CHSRA's revised ridership and revenue model indicates a significant increase in the number of shorter distance trips. The Los Angeles to San Diego section has a great potential for short range trips for the currently underserved markets of IE to LA and IE to SD sections that are not being captured in the current model.
- We encourage the CHRSA to continue working with our agencies to discuss and evaluate access to and from future HSR stations by mode, such as auto, transit, and connecting Metrolink feeder service. These factors, as well as parking supply and pricing, are important variables in determining HSR ridership and revenue.
- Land values and uses around future HSR stations are expected to change due to the improvements in accessibility and changing employment and housing patterns. Transit-oriented development around HSR stations provides a great opportunity to reduce vehicle miles traveled, air pollution and greenhouse gases (GHGs), and help support state-mandated reductions in GHGs. The possibility of value capture by various mechanisms also can help to fund infrastructure. We request the CHRSA to consider and analyze land use impacts and land value impacts in the 2016 Business Plan update.

Thank you for your consideration of our comments on the Draft 2014 Business Plan. We appreciate the work that the CHSRA has completed to date, and we look forward to a continued and productive partnership in implementing the MOU early investment projects in Southern California as a means of bringing the HSR experience to our region in advance of the completion of the overall statewide HSR system.

Sincerely,

[CEOs listed here]

SOUTHERN CALIFORNIA



ASSOCIATION of GOVERNMENTS

Main Office

818 West Seventh Street
 12th Floor
 Los Angeles, California
 90017-3435

 t (213) 236-1800
 f (213) 236-1825

 www.scag.ca.gov

Officers

President
 Greg Pettis, Cathedral City

 First Vice President
 Carl Morehouse, San Buenaventura

 Second Vice President
 Cheryl Viegas-Walker, El Centro

 Immediate Past President
 Glen Becerra, Simi Valley

Executive/Administration Committee Chair

Greg Pettis, Cathedral City

Policy Committee Chairs

Community, Economic and Human Development
 Margaret Finlay, Duarte

 Energy & Environment
 James Johnson, Long Beach

 Transportation
 Keith Millhouse, Ventura County Transportation Commission

2014 MEETING SCHEDULE

REGIONAL COUNCIL AND POLICY COMMITTEES

All Regular Meetings are scheduled on the <u>1st Thursday of each month, except for September*</u>	
Executive/Administration Committee (EAC)	9:00 AM – 10:00 AM
Community, Economic and Human Development Committee (CEHD)	10:00 AM – 12:00 PM
Energy and Environment Committee (EEC)	10:00 AM – 12:00 PM
Transportation Committee (TC)	10:00 AM – 12:00 PM
Regional Council (RC)	12:15 PM – 2:00 PM

January 2, 2014

February 6, 2014

March 6, 2014

April 3, 2014

**May 1 – 2, 2014
 (SCAG 2014 Regional Conference & General Assembly)**

June 5, 2014

DARK IN JULY

August 7, 2014

September 11, 2014*
 (Note: League of California Cities Annual Conference in Los Angeles, Sept. 3 – 5)

October 2, 2014

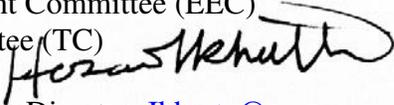
November 6, 2014

December 4, 2014

This Page Intentionally Left Blank

DATE: April 3, 2014

TO: Regional Council (RC)
Executive/Administration Committee (EAC)
Community, Economic, and Human Development (CEHD) Committee
Energy and Environment Committee (EEC)
Transportation Committee (TC)



FROM: Hasan Ikhata, Executive Director, ikhata@scag.ca.gov, 213-236-1944

SUBJECT: SCAG Sustainability Planning Grants Program – Monthly Update

RECOMMENDED ACTION:

Receive and File.

EXECUTIVE SUMMARY:

SCAG is providing a monthly update (attached) regarding successful implementation of the 73 Sustainability Grants to member agencies. Forty-four (44) of the seventy-three (73) approved SCAG Sustainability Planning Grants were funded in the fall of 2013. At the time this report was distributed, thirty (30) grant projects have had Scopes of Work developed and finalized, twenty-five (25) grant projects have had Request for Proposals (RFPs) released, thirteen (13) grant projects have selected consultants, and nine (9) grant projects have had contracts executed.

STRATEGIC PLAN:

This item supports SCAG’s Strategic Plan Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; and Goal 4: Develop, Maintain and Promote the Utilization of State of the Art Models, Information Systems and Communication Technologies.

BACKGROUND:

On September 12, 2013, the Regional Council approved seventy-three (73) Sustainability Planning Grant projects and directed staff to proceed with funding projects with available funds for Phases I and Phase II projects (total of 44 projects). The remaining projects will be part of Phase III and will proceed as additional funds become available in FY 2014-2015.

SCAG staff is providing monthly updates to the Board regarding implementation of the seventy-three (73) grants. At the time this report was distributed, thirty (30) grant projects have had scopes of work developed in partnership with the cities, twenty-five (25) grant projects have had RFPs released, thirteen (13) grant projects have consultants selected and nine (9) grant projects have completed negotiations and have contracts executed.

FISCAL IMPACT:

Funding is included in SCAG’s FY 2013-14 Overall Work Program (OWP) Budget. Staff’s work budget for the current fiscal year are included in FY 2013-14 OWP 065.SCG02663.02.

ATTACHMENT:

Summary Progress Chart

SCAG Sustainability Planning Grants

March 19, 2014 Regional Council Progress Update

Rank	Applicant	Project	Working / Last Contact	Scope	RFP	Selection	Contract
Phase 1 (Available funds FY 13-14)							
1	San Bernardino County	Bloomington Area Valley Blvd. Specific Plan Health and Wellness Element - Public health; Active transportation; Livability; Open space	x	x	x	x	x
2	Los Angeles - Department of City Planning	Van Nuys & Boyle Heights Modified Parking Requirements - Economic development; TOD; Livability	x	x	x	x	x
3	Los Angeles - Department of City Planning	Bicycle Plan Performance Evaluation - Active transportation; performance measures	x	x	x		
4	Western Riverside Council of Governments	Public Health: Implementing the Sustainability Framework - Public health; Multi-jurisdiction coordination; Sustainability	x	x	x		
5	Santa Ana	Complete Streets Plan - Complete streets; Active transportation; Livability	x	x	x	x	
6	San Bernardino Associated Governments	Climate Action Plan Implementation Tools - GHG reduction; Multi-jurisdiction coordination; Implementation	x	x	x	x	x
7	Riverside	Restorative Growthprint Riverside - GHG reduction; Infrastructure investment; Economic development	x	x	x	x	
8	Orange County Parks	Orange County Bicycle Loop - Active transportation; Multi-jurisdictional; Public health	x	x	x	x	x
9	Ventura County	Connecting Newbury Park - Multi-Use Pathway Plan - Active transportation; Public health; Adaptive re-use	x	x	x	x	x
10	Imperial County Transportation Commission	Safe Routes to School Plan - Multi-modal; Active transportation	x	x			

Rank	Applicant	Project	Working /				
			Last Contact	Scope	RFP	Selection	Contract
11	Yucaipa	College Village/Greater Dunlap Neighborhood Sustainable Community - Complete Streets; TOD	x	x	x	x	
12	Las Virgenes-Malibu Council of Governments	Multi-Jurisdictional Regional Bicycle Master Plan - Active transportation; Public health; Adaptive re-use	x	x	x	x	x
13	Eastvale	Bicycle & Pedestrian Master Plan - Active Transportation	x	x	x	x	
14	West Covina	Downtown Central Business District - Multi-modal; Active transportation	x				
15	Placentia	General Plan/Sustainability Element & Development Code Assistance - General Plan Update; Sustainability Plan	x	x	x	x	x
16	Paramount/Bellflower	Regional Bicycle Connectivity - West Santa Ana Branch Corridor - Active transportation; multi-jurisdiction	x	x	x		
17	Costa Mesa	Implementation Plan for Multi-Purpose Trails - Active Transportation	x	x	x	x	x
Phase 2 (Available funds)							
18	Fullerton	East Wilshire Avenue Bicycle Boulevard - Active transportation; Livability; Demonstration project	x				
19	Beaumont	Climate Action Plan - GHG reduction	x	x	x		
20	Palm Springs	Sustainability Master Plan Update - Leverages larger effort; commitment to implement	x				
21	Big Bear Lake	Rathbun Corridor Sustainability Plan - Multi-modal; Economic development; Open space	x	x			
22	Western Riverside Council of Governments	Land Use, Transportation, and Water Quality Planning Framework - Integrated planning, Sustainability	x				
23	Anaheim	Bicycle Master Plan Update - Active transportation	x	x	x	x	

Rank	Applicant	Project	Working /				
			Last Contact	Scope	RFP	Selection	Contract
24	Ontario	Ontario Airport Metro Center - Multi-modal; Visualization; Integrated planning	x				
25	Coachella Valley Association of Governments	CV Link Health Impact Assessment - Active transportation; Public health; Multi-jurisdiction	x	x	x		
26	San Bernardino Associated Governments	San Bernardino Countywide Complete Streets Strategy - Multi-modal; Livability; Multi-jurisdiction	x				
27	Chino Hills	Climate Action Plan and Implementation Strategy - GHG reduction; Implementation; Sustainability	x	x	x		
28	Coachella	La Plaza East Urban Development Plan - Mixed-use, TOD, Infill	x	x			
29	South Bay Bicycle Coalition/Hermosa, Manhattan, Redondo	Bicycle Mini-Corral Plan - Active transportation; implementable; good value	x				
30	Hawthorne	Crenshaw Station Area Active Transportation Plan and Overlay Zone - Multi-modal; Active transportation; GHG reduction	x				
31	Chino	Bicycle & Pedestrian Master Plan - Multi-modal; Active transportation	x	x	x		
32	Stanton	Green Planning Academy - Innovative; Sustainability; Education & outreach	Oct-13				
33	Hermosa Beach	Carbon Neutral Plan - GHG reduction; Sustainability	Oct-13				
34	Palm Springs	Urban Forestry Initiative - Sustainability; Unique; Resource protection	x				
35	Orange County	"From Orange to Green" - County of Orange Zoning Code Update - Sustainability; implementation	x				
36	Calimesa	Wildwood and Calimesa Creek Trail Master Plan Study - Active transportation; Resource protection	x				

Rank	Applicant	Project	Working /				
			Last Contact	Scope	RFP	Selection	Contract
37	Western Riverside Council of Governments	Climate Action Plan Implementation - GHG Reduction; Multi-jurisdiction; implementation	x	x	x		
38	Lynwood	Safe and Healthy Community Element - Public health & safety, General Plan update	x	x	x		
39	Palmdale	Avenue Q Feasibility Study - Mixed-use; Integrated planning	x	x			
40	Long Beach	Willow Springs Wetland Habitat Creation Plan - Open Space; Resource protection	x				
41	Indio	General Plan Sustainability and Mobility Elements - Sustainability; Multi-modal, General Plan update	x	x			
42	Glendale	Space 134 - Open space/Freeway cap; Multi-modal	x				
43	Rancho Palos Verdes/City of Los Angeles	Western Avenue Corridor Design Implementation Guidelines - Urban Infill; Mixed-use; Multi-modal	x	x	x		
44	Moreno Valley	Nason Street Corridor Plan - Multi-modal; Economic development	x	x	x		
Phase 3 (Pending additional funds)							
45	Park 101/City of Los Angeles	Park 101 District - Open space/Freeway cap; Multi-modal	Oct-13				
46	Los Angeles/San Fernando	Northeast San Fernando Valley Sustainability & Prosperity Strategy - Multi-jurisdiction; Economic development; Sustainability	x				
47	San Dimas	Downtown Specific Plan - Mixed use; Infill	Oct-13				
48	Los Angeles - Department of City Planning	CEQA Streamlining: Implementing the SCS Through New Incentives - CEQA streamlining	Oct-13				
49	Pico Rivera	Kruse Road Open Space Study - Open space; Active transportation	Oct-13				

Rank	Applicant	Project	Working /				
			Last Contact	Scope	RFP	Selection	Contract
50	South Bay Cities Council of Governments	Neighborhood-Oriented Development Graphics - public outreach	Oct-13				
51	San Bernardino Associated Governments	Safe Routes to School Inventory - Active transportation; Public health	Oct-13				
52	Burbank	Mixed-Use Development Standards - Mixed use; Urban infill	x				
53	San Bernardino Associated Governments	Countywide Habitat Preservation/Conservation Framework - Open Space; Active Transportation	Oct-13				
54	Rancho Cucamonga	Healthy RC Sustainability Action Plan - Public health; implementation	x				
55	Pasadena	Form-Based Street Design Guidelines - Complete Streets; Multi-modal; Livability	x				
56	South Gate	Gateway District/Eco Rapid Transit Station Specific Plan - Land Use Design; Mixed Use; Active Transportation	Oct-13				
57	Lancaster	Complete Streets Master Plan - Complete Streets Plan	x				
58	Rancho Cucamonga	Feasibility Study for Relocation of Metrolink Station - Transit Access	Oct-13				
59	Santa Clarita	Soledad Canyon Road Corridor Plan - Land Use Design; Mixed Use Plan	Oct-13				
60	Seal Beach	Climate Action Plan - Climate Action Plan	x				
61	La Mirada	Industrial Area Specific Plan - Land Use Design	Oct-13				
62	Hemet	Downtown Hemet Specific Plan - Land Use Design; Mixed Use Plan	x				
63	Hollywood Central Park/City of Los Angeles	Hollywood Central Park EIR - Open Space/Freeway Cap; Multi-modal	Oct-13				
64	Desert Hot Springs	Bicycle/Pedestrian Beltway Planning Project - Active Transportation	x				

		Working /					
Rank	Applicant	Project	Last Contact	Scope	RFP	Selection	Contract
65	Cathedral City	General Plan Update - Sustainability - General Plan Update; Sustainability Plan	Oct-13				
66	Westminster	General Plan Update - Circulation Element - General Plan Update; Complete Streets	x				
67	La Canada Flintridge	Climate Action Plan - Climate Action Plan	Oct-13				
68	Huntington Beach	Neighborhood Electric Vehicle Plan - Electric Vehicle	Oct-13				
69	Pasadena	Green House Gas (GHG) Emission Reduction Evaluation Protocol - Climate Action Plan	Oct-13				
70	San Bernardino Associated Governments	Countywide Bicycle Route Mobile Application - Active Transportation	Oct-13				
71	Dana Point	General Plan Update - General Plan Update	Oct-13				
72	Garden Grove	RE:IMAGINE Downtown - Pedals & Feet - Active Transportation; Infill	x				
73	Barstow	Housing Element and Specific Plan Update - Housing; Land Use Design	Oct-13				