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SPECIAL REPORT: CALIFORNIA'S SURFACE TRANSPORTATION: ROADS, BRIDGES & HIGH SPEED RAIL

I. INTRODUCTION

The California Institute for Federal Policy Research periodically releases Special Reports, highlighting specific policy areas. This Special Report, in a series of infrastructure reports, provides an overview of the current state of California's surface transportation systems, and funding levels for these systems, including roads, bridges, and California's High Speed Rail.

Overall, as measured by U.S. News, California's complete infrastructure system, as determined by its surface transportation system, energy system, and internet access, ranks 33rd in the nation.[1] California's infrastructure systems ranks 40th in the nation, as measured by bridge quality (21st), commute time (46th), public transit usage (7th), and road quality (42nd).[2] U.S. News ranks California's energy system 43rd nationally, as determined by electricity price (44th), power grid reliability (39th), and renewable energy usage (16th). Further, California's internet system ranks 23rd in the nation, as measured by households with internet access (13th), and online download speed (32nd).[3]

II. CALIFORNIA'S SURFACE TRANSPORTATION SYSTEM

According to the Federal Highway Administration, roughly "each dollar spent on road, highway and bridge improvements results in an average benefit of \$5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow." [4]

A. Overview: Roads. In 2015, California had 432,083 miles of functional roads, interstates, highways, freeways, and other major and minor roads, which represents 4.9% of the total miles of roads in the United States.[5] The same year, Californians traveled a total of 335,539 miles on these roads, constituting 10.8% of the total miles driven throughout the nation. Of these roads, including both rural and urban roads, about 51,900 miles (about 12%) of roads are maintained by the California Department of Transportation (Caltrans), which includes interstate freeways and state routes known as the State Highway System. Roughly 306,500 (70.9%) miles of California public roads and streets are maintained by regional agencies and local governments, and 7,909 (1.8%) miles are owned by the federal government.[6,7,8]

Of the over 400,000 miles of public roads in California, 50% of roads state-wide are in "poor" condition, and 70% of California's major roads are in poor or mediocre condition.[9] California ranks 3rd worst in the nation for the condition of its rural roads, with 38% of rural roads in "poor" condition.[10] Regarding urban centers, California is home to 4 of the top 25 large urban areas (500,000+ population) and 7 of the top 25 mid-sized urban areas (200,000-500,000 population) "with the highest share of roads in poor condition." [11] The top 3 large urban areas with the highest levels of poor roads in the nation are in San Francisco/Oakland, Los Angeles/Long Beach/Santa Ana, and in San Jose, with 71%, 60%, and 59% of these roads, respectively, in poor condition. In these areas, respectively, drivers pay \$978, \$892, and \$863 annually to maintain their vehicles due to the poor conditions of these roads.[12] Further, three of the top four mid-size urban areas with the highest levels of poor roads in the nation are in California. Concord ranks the worst in the nation, with 75% of its roads in "poor" condition, Victorville/Hesperia/Apple Valley, ranks 3rd, with 61% of its roads in "poor" condition, and Antioch ranks 4th, with 60% of "poor" road conditions. In these mid-size urban areas, drivers pay \$1,014 in Concord, \$883 in Antioch, and \$854 in Victorville per year to maintain their vehicles due to the poor conditions of roads in these cities.[13] State-wide, California drivers spend \$844 each year to repair their cars because of driving on California's roads.[14]

Vehicle travel on California's highways increased by 19% from 2000 to 2016, while California's population grew by 16% during the same time. Regarding traffic, 85% of California's urban interstates experience congestion during peak hours. In 2017, state-wide, Californians took 29.4 minutes to travel to work, placing California as the 6th longest commute time in the country.[15]

California averages 3.19 fatalities per 100 million vehicle miles of travel on rural roads, which places California as the 2nd highest for this fatality rate in the nation.[16] The rural fatality rate is nearly five times higher than the fatality rate on all other roads in the state. On all other roads, this rate is 0.66 fatalities per 100 vehicle miles of travel, which also places California as the 2nd highest for this fatality rate in the nation.[17]

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B. Overview: Bridges. In 2016, there were 25,431 bridges in California, including the 666 bridges owned by the federal government within the state.[18] There were 11,617 (45.7%) bridges in rural areas, which totaled 5,994,458 square meters of total bridge area. There were 13,789 (54.3%) bridges in California's urban areas, totaling 22,961,077 square meters of total bridge area. Rural bridges were crossed 69,517,198 (10.5%) times daily, and urban bridges were crossed 591,775,300 (89.5%) times daily. In total, bridges state-wide were crossed a total of 661,292,498 times per day. Additionally, Caltrans maintains over 13,000 (over 50%) of the state's bridges.[20]

Of the over 25,000 bridges in California, 16,788 (66%) were ranked "good" by the Federal Highway Administration, 7,439 (29%) were ranked "fair," 1,204 (4.7%) were ranked "poor," and 1,338 (5.5%) were ranked "structurally deficient." [21] Of bridges statewide, 4,306 bridges (17%) are classified as "functionally obsolete – meaning that "the bridge does not meet design standards that are in line with current practice." [22]

C. Overview: California's High Speed Rail Authority. In 2002, the California Legislature passed SB 1856 (Senator Costa), which submitted a \$9.95 billion bond measure to California voters to finance California's High Speed Rail Authority (HSRA). In November 2008, California voters approved (53% to 47%) the measure, Proposition 1A, making HSRA the nation's first voter-approved financing mechanism for high-speed rail. In 2009, California secured \$3.3 billion of federal funding through the American Recovery and Reinvestment Act. In 2012 Governor Brown proposed, and the Legislature approved, an additional \$8 billion in federal and state funds through the 2012-13 California state budget "for the construction of the first high-speed rail investment in the Central Valley and 15 bookend and connectivity projects throughout the state." [23] In 2014, the federal government provided \$3.06 billion for HSRA, and Governor Brown's 2018-19 budget proposal provides an additional \$1.1 billion for the HSRA. [24,25]

As of January 2018, the total estimated cost of HSRA is \$67 billion. [26] The original budget for the first 118 miles of the HSRA, the Central Valley track, could cost \$9.5 to \$10 billion. The original budget of the Central Valley track was \$6.4 billion, but has increased due to "significant delays in environmental planning, lags in processing invoices for federal grants and continuing failures to acquire needed property." [27] This first phase of the project was initially projected to be completed by 2017, but it is now estimated that the Central Valley track will be completed by 2024. [28]

According to the HSRA, "by 2029, the system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of over 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations," and will include 150 miles of bridges and viaducts, 35 miles of tunnels, 610 grade separations, and 510,000 square yards of retaining walls. [29,30] When completed, the HSRA will be "easily accessible to more than 90% of the state's residents." [31]

D. Funding for California's Surface Transportation System. Funding for California's surface transportation is derived from a variety of sources, which include state, local, and federal resources. In 2014-15, California's funding for highways and public transit totaled \$27.11 billion. The state provided \$6.778 billion (25%) of total funding, the federal government provided \$5.78 billion (21%) in funding, and local governments provided \$14.55 billion (54%) in funding. In the same year, the federal government also provided \$3.06 billion for California's High Speed Rail. The state's \$6.778 billion in funding is derived from \$958 million in weight fees, \$2.72 billion in base excise taxes, \$2.5 billion in gasoline sales/swap excise tax, and \$593 million in diesel sales tax. California's municipalities provided \$4.63 billion in sales tax measures, \$2.92 billion in transit revenues, and \$3.62 billion in street and road revenues, among other sources. [32]

Governor Brown's 2018-19 budget proposal provides a total of "\$22.5 billion from all fund sources for transportation departments and programs." [33] This is an increase of \$4.2 billion (23%) over last year's funding. In 2017, state-wide, Governor Brown identified \$78.1 billion in deferred maintenance. [34]

Caltrans. Gov. Brown's budget includes \$13.6 billion for Caltrans, an increase of \$2.3 billion (or 20%), from last year. SB 1, as discussed below, increases Caltrans funding by a total of \$2.8 billion in 2018-19. In 2017, Caltrans experienced \$57 billion in deferred maintenance. [35]

Department of Motor Vehicles (DMV). Gov. Brown's budget proposes \$1.2 billion, a \$27 million (or 2%) increase over last year. About \$18 million of the proposed budget is to help pay for new IT software and hardware. In 2017, the DMV experienced \$14 million in deferred maintenance.

HSRA. As discussed above, Gov. Brown proposed \$1.1 billion for HSRA, which is \$849 million, or about three times more than current funding levels. The increase primarily reflects the carryover from funds from the Greenhouse Gas Reduction Fund, or cap-and-trade revenues that were previously appropriated but were not spent.

Local Streets and Roads, and State Transit Assistance. Gov. Brown proposes \$2.7 billion in shared revenues for local streets and roads, which is a 54% increase from previous funding levels. The budget proposes a \$855 million (or 21%) increase in State Transit Assistance. Both of these increases are derived from SB 1.[36]

California Infrastructure Planning Act. The California Infrastructure Planning Act requires the Governor to submit a five-year infrastructure plan to the Legislature for consideration with the annual budget bill. The 2017 Five-Year Infrastructure Plan reflects the Governor's proposal for investing \$43 billion in state infrastructure over the next five years, 92% of which is dedicated to the state's transportation system. This includes \$14.6 billion (34%) from high-speed rail funds, \$13.6 billion (31.6%) from federal funds, \$8.1 (18.8%) billion from various special funds, \$4.1 billion (9.5%) from reimbursements and non-governmental costs funds, \$1.7 billion (3.95%) from lease revenue bond funds, \$524 million (1.2%) from California's General Fund, and \$338 million (0.78%) from general obligation bond funds.[37]

California's Infrastructure Debt Financing. California's budget challenges have resulted in greater reliance on debt financing, rather than "pay-as-you-go" spending.[38] Of all previously approved infrastructure bonds, \$84.1 billion in debt obligations remain outstanding – \$74.5 billion of general obligation bonds and \$9.6 billion of lease revenue bonds. This increased reliance on borrowing to pay for infrastructure results in "roughly \$1 of every \$2 dollars spent on infrastructure investments go[ing] to pay interests costs, rather than construction costs...Annual expenditures on debt services have grown from \$2.9 billion in 2000-01 to \$7.7 billion in 2016-17." [39]

E. Overview: SB 1. In April 2017, the California Legislature passed Senate Bill 1 (Jim Beall-15) to increase state funding for California's transportation system through increases to fuel taxes and vehicle fees specifically designed to fund transportation programs. In 2016-17, revenues from these taxes and vehicle fees were at \$1.8 billion. With increased fees and taxes, revenues will increase by \$2.8 billion, totaling \$4.6 billion in 2017-18, and will total \$6.8 billion annually for the following 10 years, due to SB 1.[40]

Governor Brown's budget demonstrates that "about two-thirds of SB 1 funding supports highways and local streets and roads, while another quarter supports either transit programs or multimodal programs (that can support a combination of roadway and transit projects.) The remaining funding provided through SB 1 mainly funds projects that attempt to increase foot traffic, such as pedestrian crosswalks and bicycle lanes. Another \$706 million provides loan repayments from California's General Fund to transportation programs over three years.[41]

Prior to SB 1, the base excise tax for gasoline was 18 cents per gallon, and the bill increases this tax to 30 cents per gallon, and limits the "variable excise tax" to 17.3 cents per gallon. Prior to SB 1, the base excise tax for diesel was "variable," and the sales taxes were 1.75%. The bill sets the excise tax at 36 cents, and sets the sales tax at 5.75%.[42] These rates may be modified within the following decade because SB 1 adjusts the tax and fee rates annually to account for inflation.

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