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California Transportation Plan 2050
California Department of Transportation
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Re: Comments Regarding California Transportation Plan 2050

I am writing on behalf of Rail Passenger Association of California and Nevada (RailPAC) members living, traveling and working throughout California. RailPAC is an all-volunteer statewide organization that advocates for the improvement of commuter and intercity passenger rail service. RailPAC is a strong advocate for an expanded comprehensive public transportation network serving cities and towns throughout the entire state of California. RailPAC is pleased to submit this public comment letter on the Public Review Draft of the California Transportation Plan 2050.

Improved commuter and intercity passenger rail needs to be a cornerstone of California's transportation investments between now and the year 2050. RailPAC sees improved commuter and intercity passenger rail as critical to realizing the CTP 2050 vision. Aside from the obvious environmental benefits of reducing air pollution and providing additional transportation capacity, efficient passenger rail travel is vital to California's economic well-being. The livelihood and security of all Californians cannot be dependent upon increasingly congested and deteriorating highways, rail networks and airports.

RailPAC also recognizes that the development of the 2050 plan before the true impact of Covid19 on the future is a challenge. Some of the effects of the pandemic may be temporary with a return to normal (increasing travel volumes) while it may also have accelerated trends already underway.

One cautionary factor is prioritizing the overwhelming pursuit of new developing technologies. This pursuit can often become an end in itself, resulting in a deferral of investment in proven systems. In addition, we need to have a global perspective when viewing passenger rail investments. High quality passenger rail service levels, which many Californians would consider 'futuristic' or 'unrealistic', are in fact what Europe and Asia have had available for decades. There is a wealth of global experience and proven "off the shelf" technology that California can utilize to address its transportation issues.

Passenger Rail:

Recommendation #3 of the draft CTP2050 is "improve transit, rail, and share mobility options" (p. 96), although improved commuter and intercity passenger rail will also play a part in most of the other 14 recommendations listed. The action items listed for this recommendation (pg. 101) include "identify and prioritize improvements in the 2018 State Rail Plan Vision that can be implemented in the short term". Given that this is a long term plan, RailPAC advocates for expedited planning of rail projects for the medium and long term as well.

RailPAC agrees with the support in the 2050 draft plan of High Speed Rail (p. 43). The California High Speed Rail project is crucial to the economic development in the Central Valley. Revitalizing the cities and towns of the Central Valley, stimulating their economies by tapping their enormous reservoirs of untapped labor, housing, infrastructure and other resources and connecting them to jobs in the coastal cities will be a game changer. In addition, as noted on p. 52, airport capacity will benefit from shifting short-haul air travel within the State to High-Speed Rail. Finally, the Tulare Cross Valley Corridor would connect to HSR at the Kings/Tulare High Speed Rail Station

RailPAC recommends enhanced actions to promote the passenger rail services it already has. That system performs well as noted on p. 44, rail ridership in California increased by 6% in 2018, while bus ridership declined 20%. To continue that growth California should continue to prioritize development of its statewide California Integrated Travel Program. While HSR will generate substantial benefits its expansion should not be at the expense of conventional rail projects which also generate substantial benefits and are key connecting routes for HSR. Finally, as described in the 2018 California State Rail Plan, the state should expedite the planning and construction for ‘emerging corridors’ such as Coachella Valley/San Geronio Pass, Central Coast, Tulare Cross Valley Corridor, Caltrain extension to Salinas, Monterrey, Santa Cruz.

Investments in commuter and intercity passenger rail will create resilience and redundancy in the California’s transportation system and economy by rapidly expanding ridership on an electrified rail network powered by renewable energy sources.

New Rail Routes:

The majority of California’s rail routes were built over a century ago, on alignments which made sense given the goal was to build quickly with the limited technology of the time. However, these same slow and winding routes are used by trains today limiting their ability to compete with highway travel. New, more direct routes are needed and today are made possible with 21st century engineering and construction techniques. A new tunnel under Cuesta Grade near San Luis Obispo, a tunnel to bypass the sinuous route north from San Diego, bypasses for rail lines at risk from sea level rise, all need to be planning priorities for the state. These major capital projects would pay for themselves over the decades by generating increased passenger and freight business for the railroads.

Interstate Rail:

Amtrak’s long distance service, the *Sunset Limited* (Los Angeles – New Orleans), *Southwest Chief* (Los Angeles – Chicago), *California Zephyr* (Oakland – Chicago) and *Coast Starlight* (Los Angeles – Seattle) are also a key part of California’s transportation network. They should be included in planning efforts. These trains allow Californians the option of traveling to a large matrix of cities big and small throughout the US. These trains also bring out-of-state visitors to California for vacations, to attend college and to visit family and friends. Overall direct and indirect spending (wages, visitor spending, purchases of supplies, etc.) associated with these rail passenger services generates a yearly economic impact of almost \$800 million dollars in California.

These long-distance rail routes not only serve California's underserved rural areas, they also represent key frequencies in existing and emerging corridors. For example, The *Coast Starlight* is a key frequency along the Coast Line serving Los Angeles–Santa Barbara–San Luis Obispo (LOSSAN Corridor), the San Luis Obispo–Salinas–San Jose–Oakland – Sacramento corridor and the San Jose-Oakland–Sacramento Capitol Corridor.

Finally, Amtrak's long-distance services aid in meeting the goals of the CTP 2050 Plan. Offering a more energy efficient alternative to driving or flying these routes fulfill the goal of reduced GHG emissions (**Climate**). Serving rural cities (both in and outside California) with limited or no air or motor coach service and providing an option for those who cannot fly or drive for medical or physical reasons these routes expand **Accessibility** for Californians. Utilizing existing transportation assets (freight rail infrastructure) these routes reduced **Environmental** impacts. By facilitating options for Californians who choose to live dependent on non-auto modes these routes advance the goal of **Quality of Life**. More rail service options add to system resiliency and the **Safety** goal of the 2050 Plan. Finally, as was noted above Amtrak's long-distance routes generate strong economic activity. These routes also aid rural cities in maintaining and enhancing their often historic downtown businesses.

Freight Railroads:

Vital for safe and efficient passenger rail operations is coordination with "host railroads" such as California's two Class I freight railroads: BNSF Railway and the Union Pacific Railroad. Most commuter and intercity passenger rail service in the state is on tracks shared with freight trains. However, on-time performance is an on-going issue. RailPAC supports strategic freight rail investments by the state. Additional freight capacity facilitates more passenger rail frequencies, less delays and faster service.

As the 2050 Planning effort moves forward, freight rail presents a key challenge to the goals of the plan. Unlike the public sector, which measures success with volume metrics, privately funded freight rail measures its success with revenue/yield metrics and maximizing revenue with the minimum of capital investment. The result is that profitable but low-yielding traffic is often discouraged to create capacity for higher yielding traffic. Last mile local service is moved through pricing to mainline trans-load centers. The result is more truck traffic on the highways, low rail volume growth and a decline in rail market share. This rate-of-return metric this has been successful in yielding strong cash flows even during the pandemic recession.

The latest iteration of this strategy has public impacts beyond additional truck traffic. Several of the Class I railroads, including Union Pacific (UP) who owns and operates almost 3,300 miles of track in California, have been adopting what they call Precision Scheduled Railroading (PSR) to cut costs. UP is operating longer and heavier trains, some two miles or more in length, which are slower to accelerate. This results in longer wait times for vehicles and pedestrians at crossings and more meet delays to state funded passenger trains. This inconveniences the public (hundreds of people at a time), creates more pollution from idling vehicles, delays passenger trains making them less competitive, negatively impacts fire, police and ambulance response times and harms the flow of local commerce. The freight railroads have made these efficiency changes

without the corresponding investments in rail yards, highway overpasses and longer sidings to mitigate the negative impacts of this operational change on the public.

This focus on revenue maximization creates a conflict with the Plan 2050 goals of maximizing energy efficiency by shifting traffic to non-highway modes. While California has programs to address improving the revenue yield of traffic with targeted state investments, a broader analysis of the impact of the different goals of the freight railroads (maximize yield) vs. modal shift and CHG reduction may be warranted.

The draft CTP2050 does endorse a general mode shift to rail (p. 92)”, the economy benefits from reduced roadway delay, shifting local travel toward transit, walking, and biking, and shifting interregional travel away from cars, trucks, and airlines and toward passenger and freight rail”. However, RailPAC is disappointed that the action items listed for Recommendation #7 “Improve Goods Movement Systems and Infrastructure” (pg. 106), make no direct mention of rail.

Rail vs. Freeway Expansions:

Recommendation #13, “Strategically invest in state of good repair investments”, needs to call out rail as a key segment in maintaining a state of good repair of the state’s transportation infrastructure. Many strategic rail assets are nearing the ends of their useful lives. Some are functionally obsolete and many rail lines are threatened by sea level rise. So for the transportation planning from now until the year 2050, consideration of long-term maintenance costs of these life-expired assets is critical. Investments to modernize these life-expired rail assets will yield maintenance cost savings for the state over the next several decades while improving service. The shift of traffic from highways to rail also helps the lower the maintenance cost of roads as a result of reduced wear and tear.

California is spending, or intends to spend, billions of dollars on freeway expansions. The induced demand resulting from road capacity expansion means continued traffic congestion, increased pollution, a reinforcement of dispersed land use (sprawl) and additional Californians displaced by freeway construction. California would get a better return on investment and increased reduction in GHG emissions if a portion of this funding was spent on rail capital improvement projects instead. This funding redirection would be a critical part of “...leveling the playing field for active transportation, rail, transit, and shared modes” (pg. 72). The CTP2050 needs to clearly discourage freeway expansions.

Highway funding needs to focus on repaving and maintaining existing highways and streets, and not expansion of the highway network. California has a tremendous backlog of street and road maintenance and repair projects, and will continue to for the foreseeable future. Given the critical visual data requirements for autonomous vehicles, a higher standard of maintenance for roads and highways will likely be required in order to assure the safe operation of these vehicles.

As described by the 2018 California State Rail Plan (p. 108):

Investment in an expanded and more efficient passenger and freight rail network in California is intended to enhance the State's ability to maintain and rehabilitate the entire transportation system by shifting car and truck trips, particularly long-distance interregional trips, from the State highway system to rail. This shift is expected to reduce vehicular wear and tear on the state's interregional roadways, and the substantial costs associated with bringing roadway infrastructure into a state of good repair. In addition, by improving the economics of the rail system, additional resources will become available to ensure that railroads remain in a state of good repair throughout their life cycle, and that services achieve a high degree of reliability.

Environmental Balance:

One factor the Plan 2050 should explore is the tension between California's macro level climate goals and the local focus of the California Environmental Quality Act (CEQA). With its specific project focus CEQA has no mechanism to weigh macro level tradeoffs between initiatives that generate large savings in GHG but have noticeable local impacts. Within the CEQA analysis GHG savings are a calculated abstract value as compared to real impacts on neighborhoods impacted by the project. But those GHG savings are not abstract values they represent other Californians whose houses and businesses will be destroyed by climate change enhanced wildfires, floods and sea level rise unless GHG is reduced.

Quality of life is another area that is weighted within CEQA toward project impacted neighborhoods. There is no countervailing quality of life impact weighting for those Californians held captive by gridlock often missing key family and community events. To meet the challenge of climate change this tension between local and macro priorities needs to be addressed.

New Technology and Innovation:

"How Travel May Be Changing" (p. 62-64)

Telework--not everyone can work from home. California in 2050 will still need effective mass transit and intercity rail options. One of the manifestations of the recent sudden shift to a high-level of teleworking is the revelation that there are significant downsides to the non-office environment. In person relationships are in fact a critical part of the work product. Also the assumption by planning agencies that this telework will happen in the California suburbs of its cities may be optimistic. Reality may be that the telework job transferred out of the office may be a job and its direct and indirect economic impact transferred to another state.

In the Technology and Innovation section (p. 15), why is there no mention of advanced rail technologies such as Positive Train Control (safety), Communications Based Train Control (additional capacity on existing rail line), electrification or hydrogen power?

Recommendation #9 seeks to "expand research to better understand impacts of [Connected and Autonomous Vehicles] CAVs on personal mobility, freight mobility, transportation system performance, land use, and emergency response". There appears to be some overly hypothetical and optimistic assumptions regarding expanded capacity with CAVs. If a road is over capacity and at gridlock then there is little ability to gain capacity from "platooning" (automated tailgating) without altering demand to match road capacity with demand management strategies (road pricing and/or reservations).

It is commendable that the draft CTP2020 recognizes that the deadheading (zero-occupant trips) of CAVs will make traffic congestion worse (p. 63): “zero-occupant vehicle trips may increase as people are dropped off and send their vehicles home or elsewhere.” The plan also recognizes how CAVs will likely *increase* GHG emissions. If CAVs are still rubber-tired vehicles similar in size today’s automobiles, then they will not fundamentally alter the physical geometry of cars on roads. As a result they will never have the energy efficiency and environmental benefits of passenger rail.

Rail Electrification

Recommendation #8, “Advance Zero-Emissions Vehicle (ZEV) Technology and Supportive Infrastructure” makes no mention of rail electrification, which would replace dirty diesel locomotives with clean electric locomotives. This would require a very substantial investment in rail electrification infrastructure. The electrification of the Caltrain corridor between San Francisco and San Jose (and subsequent CHSR plans) provides a model for statewide rail electrification, by providing experience in electrification costs and implementation challenges. The 2018 State Rail Plan heavily endorses electrification on California’s key passenger rail lines. This should be discussed in more detail in the CTP2050.

The state needs to develop and implement policies that will electrify the California rail network, but not at the expense of projects that facilitate and encourage the movement of highway traffic to rail.

CARB’s Innovative Clean Transit regulation (p. 43) sets a statewide goal for California’s public transit agencies to transition to an all-electric bus fleet by 2040. RailPAC recommends a similar goal for statewide passenger rail electrification.

Sincerely,

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