

The Federal Aid Highway Act of 1962 required urban areas of 50,000 or more people to have "a continuing, comprehensive transportation planning process carried out cooperatively by states and local communities." The Federal Aid Highway Act of 1973 specified that this planning should be done by *metropolitan planning organizations* (MPOs) overseen by elected officials (such as city councilors or county commissioners) representing a majority of people in the urban area. These MPOs are often called "councils of governments" or "associations of governments."

The 1962 law required states to spend between 1.5 percent and 2.0 percent of federal highway funds on planning. Today, MPOs spend hundreds of millions of dollars each year writing and rewriting long-range transportation plans and annual transportation improvement plans. The infrastructure bill passed by the Senate and now before the House includes \$2.28 billion to fund five years' worth of metropolitan transportation planning. Since there are 408 MPOs in the United States, that works out to more than \$1.1 million per MPO per year. Of course, most MPOs add local funding so their total planning budgets may be much larger.

Failing to Learn from Past Mistakes

Although the long-range transportation plans often have grandiose names such as the "2050 plan," they are actually revised about every four years. This supposedly gives MPOs the opportunity to improve plans based on new information or if they find the previous plans weren't working. Unfortunately, this rarely happens: once plans are written, special interest groups (such as contractors) that benefit from those plans lobby hard to keep the plans in place in subsequent revisions. Thus, if a plan calls for building five light-rail lines and the first one fails to attract any new transit riders, later plans are likely to call for building four more lines anyway.

Transit carries an insignificant number of travelers in most urban areas, yet most plans are far more focused on transit than highways. In 2008, I reviewed regional trans-

portation plans for more than 75 of the nation's largest urban areas. I found that at least half of them were less interested in providing transportation systems that would meet the needs of local residents and were more interested in trying to reshape how local residents traveled.

Similarly, a 2014 study of regional plans for a dozen Texas cities found that most of them were dominated by "New Urbanist" ideas focusing on compact cities and transit. The only ones that weren't had been written "prior to the rise of New Urbanism." The study's author believed that updates for those cities would probably add New Urbanist principles to their plans.

The 2006 metropolitan transportation plan for Sacramento lamented that the plans written over "the past 25 years have not worked out." Light-rail lines and other programs "luring drivers out of their automobiles" failed to do so. Despite attempts to reduce driving, "the total amount of driving has more than doubled since 1980." Despite attempts to discourage sprawl by encouraging high-density infill, low-density development "continues to out-pace infill." The plan even admitted that previous plans deliberately aimed to increase congestion, yet the "lack of road building and the resulting congestion have not encouraged many people to take transit instead of driving."

Despite these conclusions, the 2006 plan "continues the direction" of previous plans, giving "first priority" to expanding Sacramento's transit system, including doubling the miles of light rail, and continuing efforts to reduce driving. Predictably, by 2019, driving had increased another 12 percent and transit ridership declined by 30 percent. Still, the region's latest plan calls for more light rail and even heavy rail (which probably means commuter rail) as well as more "compact development."

Twisting Adaptive Planning

In order to prevent situations like this, planners once proposed to use *adaptive planning*, which means writing plans that can change in response to unpredicted events. Unfortunately, urban planners today have turned this notion on its head, instead using the term "adaptive planning" to

mean plans that attempt to force urban areas to change in response to events that planners predict (even if the predictions turn out to be wrong). Urban planners mostly use the term adaptive planning to describe responses to climate change.

Curiously, many members of Congress don't seem to believe in metropolitan planning. The 1998 transportation bill included 1,850 earmarks and the 2005 bill included 6,371. Most of these earmarks didn't increase federal transportation funding to any state or metropolitan area. Instead, they merely specified that funds that were going to those areas be spent on particular projects.

In other words, the earmarks overrode the priorities set by the state and regional transportation plans, effectively claiming that members of Congress knew better than the transportation planners and local officials who spent years writing their plans. Although the fiscal conservatives who ran Congress in 2015 prevented any earmarks from being included in that bill, the House Transportation & Infrastructure Committee included \$5.7 billion worth of earmarks in its 2021 bill and may demand that they be included in any compromise with the Senate bill.

Despite this overt lack of confidence in planners, if taxpayers are going to spend hundreds of millions of dollars a year on transportation planning, they should get their money's worth. Among other things, that means that plans should respond to unexpected events.

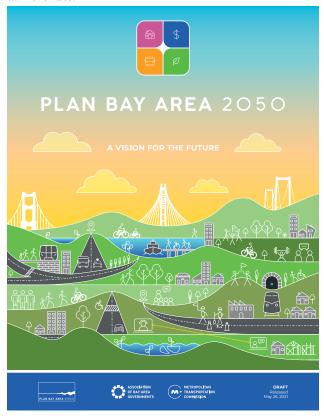
Failing to Recognize the Pandemic

The pandemic is a classic case of a Black Swan, meaning an unexpected event that has serious repercussions on the entire economy. Although Nicholas Taleb, who coined the term Black Swan, claims the pandemic wasn't a Black Swan because he predicted it, he is being disingenuous: one of the common features of Black Swans is that many people claim to have predicted it after it took place. The reality is that few others predicted it, which is why it was such a shock. I haven't read every regional transportation plan written by every MPO in the country, but I think it is safe to say that none completed before April 2020 considered the possibility that a pandemic might change future transportation habits and patterns.

More disturbing is the fact that few, if any, efforts to write regional transportation plans since April 2020 are considering the effects of the pandemic on transportation patterns. I've reviewed planning documents for Denver, Phoenix, the San Francisco Bay Area, and several other urban areas and found few mentions of the potential effects of the pandemic on transportation.

The pandemic led to a significant migration of people out of San Francisco, the second-densest major city in the United States. This casts doubt on the San Francisco Bay Area's last regional plan, which counts on more compact development to reduce auto driving. Yet a draft environmental impact report for the next regional plan only mentions the pandemic for how stay-at-home orders

inhibited public involvement efforts and how it may affect tax revenues.

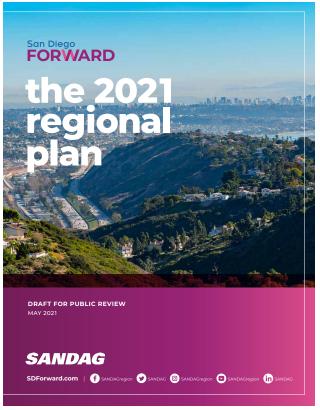


Issued more than a year after the pandemic began, Plan Bay Area 2050 fails to acknowledge that the pandemic has made plans for increased density and transit ridership impossible to achieve.

Phoenix light-rail and total transit ridership had been declining before the pandemic, yet the Maricopa Association of Government's latest regional transportation plan, approved just weeks before pandemic-related lockdowns began, proposed more light-rail lines. Last month, the agency released the first of several documents leading to the development of the next regional transportation plan. It doesn't mention the pandemic.

Dallas and Fort Worth have spent billions on light-rail and commuter-rail transit only to see ridership drop 11 percent between 2012 and 2018. Yet the region's *Mobility 2045* plan, approved in 2018, proposed to build more. Public presentations made in recent months about the next update to the plan, scheduled for 2022, never mention the pandemic and instead focus on "transportation options," a buzz phrase for spending more on transit.

The Denver Regional Council of Governments approved an updated regional transportation plan in April, 2021, a full year after the pandemic began. It mentions the pandemic just three times: first saying that it forced the agency to use virtual public involvement methods; second, that the pandemic may have reduced funding for transit; and third that pandemic-related flexible work schedules were an example of transportation demand management (not that such schedules were initiated by the agency in any way except perhaps for its own employees).



Published about the same time as Plan Bay Area 2050, San Diego's transportation plan is equally oblivious about the effects of the pandemic on its plan to spend \$80 billion on transit.

San Diego has built numerous light- and commuter-rail lines, yet transit ridership declined by 11 percent between 2014 and 2019. The San Diego Association of Governments published a regional transportation plan in May 2021 that calls for spending more than \$80 billion on new transit lines. The plan only mentions the pandemic to say that it "reaffirmed the need for a transportation system that offers choices," meaning more transit.

In short, it appears that urban transportation planners believe that the main effects of the pandemic are that it makes federally mandated public involvement efforts more difficult and may reduce the funding for them to built their rail transit empires. While there may be exceptions, none of the plans or planning documents that I have reviewed seem to be concerned that the pandemic may be the death knell to their dreams of transforming American urban areas into compact, Euro-styled cities with lots of transit and minimal driving.

Pandemic-Related Updates & Revisions

As a result, it is imperative that MPOs revise their plans. MPOs that are nearly done with their latest plans must update them to take the effects of the pandemic into account before final approval. MPOs that recently completed plans should undertake an emergency, hastened revision to minimize the misallocation of resources in the near term.

These updates and revisions need to recognize that compact development has never worked to save ener-

gy and certainly not to make housing more affordable. Spending more money on transit, especially obsolete rail transit, also fails to save energy or achieve other social or environmental goals.

Unfortunately, many urban planners are in denial about the effects of the pandemic on their plans. "Urban living in a post-pandemic world will be more local, compact, pedestrian-friendly and connected," according to planner Mike Day. "Cars will become the exception rather than the rule on our roads." In fact, people fled dense cities for suburbs and small towns and driving returned to nearly normal levels soon after the pandemic began.

This internal bias can only be overcome by data collection. MPS should be required to survey employers in the urban area, and especially those in downtowns or other job concentrations served by transit, to find out where they expect their employees will work after the pandemic. Some employers may allow employees to work at home full time, some part time, and some may move their offices completely out of the downtown areas to places not easily reached by transit.

At the same time, MPOs should survey commuters to see how they got to work before the pandemic, how during the pandemic, and how they expect to get to work after the pandemic. The best analysis I've seen to date predicts that "20 percent of full workdays will be supplied from home after the pandemic ends, compared with just 5 percent before." That's going to simultaneously relieve congestion and reduce transit ridership.

Increases in telecommuting will have especially profound effects in New York, Chicago, Washington, Boston, San Francisco, Seattle, San Jose, and other urban areas where transit commuter median incomes before the pandemic were greater than median incomes for all workers for those areas. Since telecommuters will disproportionately be drawn from higher-income occupations, transit ridership in these areas is going to decline more than people might expect from increases in telecommuting.

Planners who believe it is imperative to save energy and reduce greenhouse gas emissions need to rethink how they can accomplish that. Compact development was supposed to save energy because people living in apartments supposedly would use less energy than people living in single-family homes, including both the energy to operate their homes and the energy required to travel. But multifamily housing requires more energy per square foot than single-family housing, both to build and to operate. Transit also uses more energy than driving per passenger-mile in all but a handful of urban areas.

Post-pandemic planners also need a new approach to congestion. Department of Energy data show that people living in dense cities drive less, but because they waste more fuel in congestion they actually use more energy and emit more greenhouse gases per capita than people living in low-density suburbs. Most urban transportation models fail to account for the effects of congestion on ener-

gy consumption; doing so would discourage, rather than encourage, planners from adopting plans that deliberately increase congestion in order to reduce driving and greenhouse gas emissions.

Carrots Rather Than Sticks

Rather than try to get people out of single-family homes and into apartments, or out of cars and onto transit, planners can save more energy by making the homes people live in and the vehicles people drive more energy efficient. Increasing the energy efficiency of the average automobile by 1 percent will save more energy in all but one or two urban areas than increasing transit ridership by 10 percent. Increasing the energy efficiency of new single-family homes will cost a lot less than subsidizing the construction of multifamily housing that isn't particularly energy efficient.

States and metropolitan areas that want to save energy could offer people tax credits for buying vehicles that are more fuel-efficient than the ones they are driving. The current focus on tax credits solely for electric vehicles is wrong, especially because electricity in many states is primarily generated by burning fossil fuels. Instead, the tax credit should be proportional to the difference in the energy efficiency of the new vehicle vs. that of the trade-in.

States and metro areas could also offer tax credits or other incentives to encourage builders of new homes to use passive solar and other techniques to build zero-energy homes. The extra cost of building a zero-energy home is far less than the extra cost of housing in apartment buildings that are four or more stories tall.

With its focus on Amtrak, transit, and state highways, the Senate infrastructure bill will do very little to reduce local infrastructure maintenance backlogs. Regions worried about their infrastructure need to consider new methods of funding infrastructure. Portland has neglected its streets, whose maintenance is funded out of property taxes, to the point that more than half are in poor condition. Oregon is currently transitioning from fuel taxes to mileage-based user fees, and Portland should piggy-back on that system as soon as possible, perhaps compensating drivers who use the system with a lower property tax rate.

While not related to the pandemic, plans need to consider the near-certainty that driverless ride-hailing is going to dramatically alter transportation before the end of the 30-year forecast periods of their plans. Although some people say that they wouldn't want to ride in a vehicle driven by a computer, a Federal Transit Administration-sponsored survey of resident in Chandler, Arizona, where Waymo has offered driverless ride-hailing for more than a year, found that people said they would be much more likely to use such a service than to ride transit.

For the short run, planners looking at transit need to seriously consider the kind of transit their urban areas really need. In Austin, Indianapolis, Kansas City, San Jose, and many other urban areas, fares covered less than 10 percent of operating costs in 2019, and Dallas-Ft. Worth and Houston weren't much better at less than 12 percent. Such poor performance signals that the transit systems in those areas are almost totally failing to meet the needs of their residents. The pandemic will greatly expand the number of transit systems that fall into this category.

One way to reduce costs is to convert rail lines to buses as the rail infrastructure wears out. Another is to size buses to ridership needs. A 100-passenger electric bus isn't saving energy if it only carries an average of 10 passengers over the course of the day.

Large urban areas may benefit from rerouting transit networks so that transit can serve more employment centers than just downtown. Small urban areas might save money by completely replacing their transit buses with ride-hailing systems or giving people transportation vouchers to use such systems. In any case, plans should recognize that—except possibly in New York City—transit is never going to be as important as it was before the pandemic—and in most places it wasn't important before the pandemic.

Persuading MPOs

There are three ways people can convince MPOs to take the effects of the pandemic seriously and update or revise their plans accordingly. One way would be to ask Congress to mandate it and make federal planning funds conditional upon such revisions. The problem is that the Democrats now in charge in Congress seem more interested in earmarks and rail pork barrel than in sound transportation.

Most MPOs also get money from the states, so state legislatures could make such funding conditional on pandemic planning. Even MPOs that aren't funded by the states were originally created by the states (at federal behest), so the states could order them to do so. In many places, this will be the government level most likely to listen to taxpayer concerns.

The third approach is to ask the MPOs themselves to revise their plans. Since most MPOs are at some stage of revising their plans all the time, people can simply get involved in the planning process and insist that the MPOs consider the effects of the pandemic on changing transportation patterns before they once again endorse policies that have never succeeded in the past.

In the long run, regional planning isn't the best way to allocate transportation resources. If all transportation were funded out of user fees, such plans would be unnecessary. Until then, we should at least work to ensure that MPOs don't simply follow planning fads such as compact development and rail transit and instead take the latest information and events into account.

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