



Gold medal-winning track star Edwin Moses waves an American flag as he arrives at the Los Angeles Memorial Coliseum. Athletes, spectators, news media, and Olympic staff all got around LA in 1984 using a temporary, custom-designed bus rapid transit system. | AP Photo/Doug Pizac

LA OLYMPICS

The Olympics fixed LA's traffic problem—can the 2028 games do it permanently?

Transportation solutions deployed for the 1984 Summer Olympics are even more relevant today

By [Alissa Walker](#) | [@awalkerinLA](#) | Jun 7, 2018, 10:45am PDT | 13 comments

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Lessons from the 1984 Olympics

Ask Angelenos for their most vivid memories of the 1984 Summer Olympics and they'll likely all tell you the same thing: There was no traffic.

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As locals stared down the date of the opening ceremonies with trepidation—their fears stoked by [predictions](#) of spectators abandoning their motionless cars on freeway off-ramps—everyone was so spooked about the games' potential to create instant gridlock that they skipped town.

The narrative of thousands of natives fleeing their homes was the only possible explanation for why LA's roads remained miraculously unclogged, even with the addition of more than 650,000 visiting athletes and spectators.

But that's not what actually happened, says Wayne Wilson, retired vice president of education services at the LA84 Foundation, the nonprofit created by the endowment from the 1984 games.

“Contrary to popular belief, the number of cars remained about the same, but the flow of vehicles was dispersed over a wider range of hours,” he says.

By the end of the second week, congestion was still far below a normal August work week, but perhaps even more amazingly, the freeways were carrying 11 percent *more* vehicles.

LA is well-known for its [“spartan design,”](#) which produced the first budget-friendly, profit-generating games of the modern age, but the 1984 Olympics were also groundbreaking for the way they used the city as a proving ground for new transportation technology solutions.

This story is the [second in a series](#) on the 2028 Olympics that looks at what Los Angeles can learn from hosting previous games and focuses on the issues the city will face over the next decade.

For 16 days, a city with a global reputation for traffic, freeways, and smog was transformed into a more efficient, accessible, healthy community.

The games were powered by revolutionary real-time traffic information, an ambitious new strategy to make deliveries, a built-from-scratch bus rapid transit system, and a plea

for employers to institute flex work hours.

While not every element of the 1984 Olympics was [spared criticism](#), even detractors agreed that its transportation strategy was one of its biggest successes. Three decades later, it still provides important lessons for the city's future.

With the games [coming back to LA](#) in the summer of 2028, the city has already initiated a larger conversation about moving visitors, residents, and goods around the city more intelligently, efficiently, and sustainably.

The decade of lead time for the Olympics provides a reasonable framework for making big changes to the way the city works, like Twenty-Eight by '28, a Metro initiative to [speed up 28 transit projects](#) in time for the games.



One of the major successes of the 1984 Summer Olympics was a temporary transit system with service to 17 venues across the region. | [Metro Transportation Research Library & Archive](#)

But LA needs to think bigger than a few rail lines. By the time the games return to LA in 2028, the population of Los Angeles County will likely be double what it was in 1984. About 48 million people came to LA as tourists last year, a record that has been broken seven years in a row. Beyond the games, LA needs to deploy even smarter ways to move people every day.

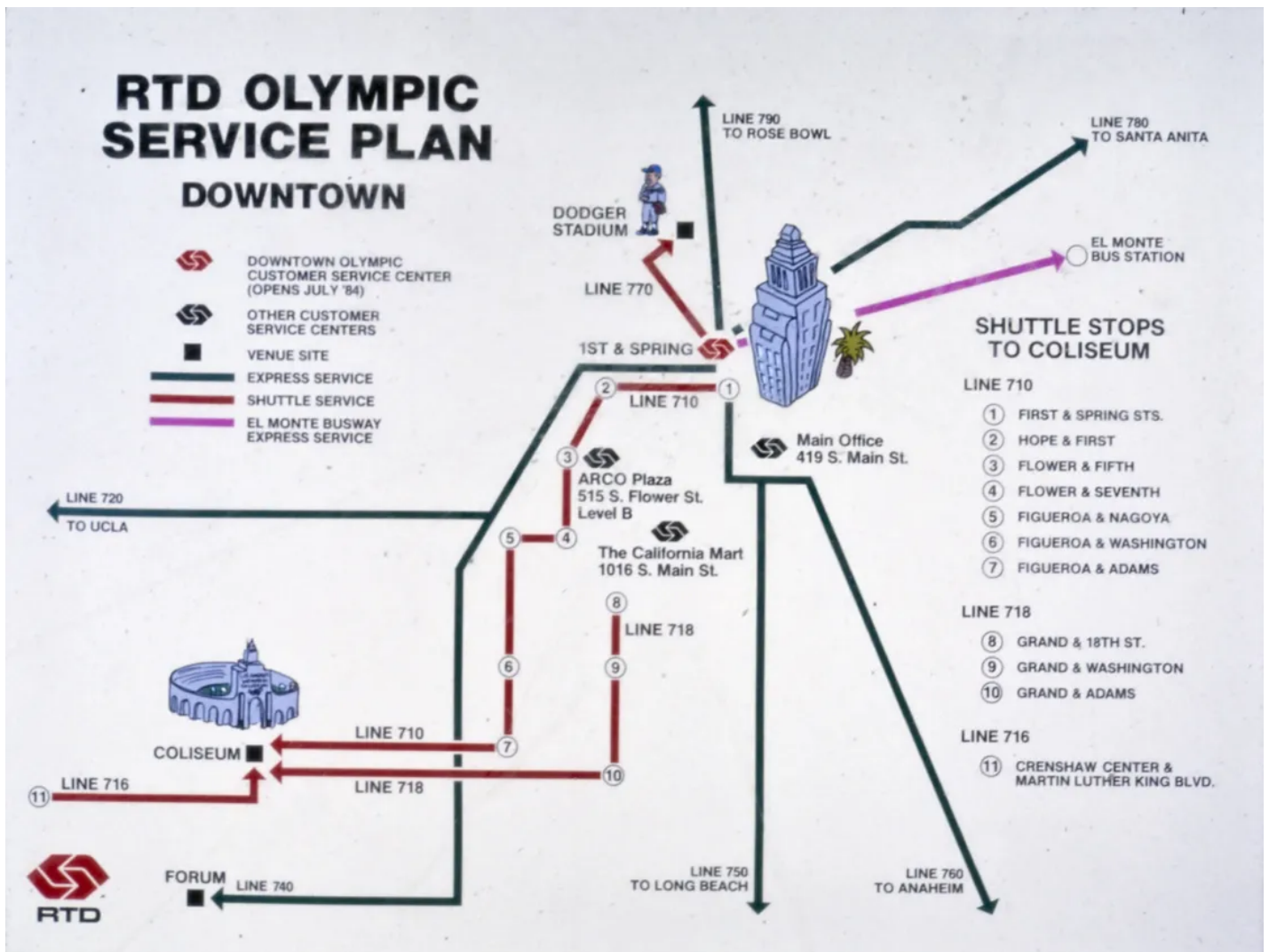
It's time to take a look at what worked so well 34 years ago and see what urban-scale solutions can be replicated a decade from now. But hey—why wait?

A bus network that works

When LA was awarded the games in 1978, it was the first city to host the modern Summer Olympics without a rail network—consider that the first time LA hosted the games, in 1932, it still had a thriving streetcar system that had been completely dismantled by the 1960s. In 1980, voters approved Proposition A, a sales-tax increase to fund a rail system, but the Blue Line would not break ground until 1985.

Concerns about traffic consumed planning conversations, says Rich Perelman, the press director for the organizing committee, but not in the way you might think.

“We were more worried about athletes getting stuck in traffic on a freeway and not getting to their venue,” says Perelman. “And if they missed it—what would be our response to the news media about it?”



Maps of Olympics bus routes around venues, like this one of Downtown, were mailed out with tickets so spectators could plan ahead. | [Metro Transportation Research Library & Archive](#)

The solution was clear: Make sure no one got stuck in traffic.

Southern California didn't have a subway, but it did have the Rapid Transit District, a very robust bus system. Engineers planned customized routes based on the attendance trips of residents (who would make up the majority of spectators).

In an extraordinary regional cooperation effort, a total of 550 buses were borrowed from local agencies to create a temporary transit system of venue-to-venue shuttles, express buses, and park-and-ride lots.

To encourage ridership, the organizing committee created [commemorative Rapid Transit District tokens](#), and [route maps were mailed](#) with tickets. Ads around the city encouraged everyone to “take the bus to the games.”

The system's big test was “Black Friday”—August 3, 1984—when two different crowds of 90,000 would need to watch track and field events at the Los Angeles Memorial Coliseum, on top of other major events nearby, including a baseball game at [Dodger Stadium](#). To handle the crush, temporary stations were created in [Exposition Park](#) that could load and unload 50 buses at a time.



A school bus, one of the 900 employed during the Olympics to transport athletes, coaches, and reporters, arrives at the Coliseum in time for the opening ceremonies. | AP Photo/Reed Saxon

For extra insurance, athletes, news media, and “Olympic family” actually traveled using a separate and more flexible transportation network of 900 rebranded school buses—a microtransit system, if you will—for almost a month, as they needed to get to 20 separate training sites for a full two weeks prior to the games.



Bus stations at each Olympic venue were custom-designed to accommodate the expected number of attendees and where they might be coming from. | *Design Quarterly* courtesy Sussman/Prejza

LA's Olympic bus network prepared for 3.5 million boardings. In the end, ridership was actually much lower than projected at 1.1 million, which may have contributed to the [smooth, uncrowded rides](#). The [official report](#) attributes the disparity in ridership to planning for events to be at full capacity, when in actuality there were many ticket holders who were no-shows. (Flakers gonna flake.)

Still, more than one out of five spectators used the buses—about 7 percent of LA's population regularly rode transit at the time—accomplishing some pretty impressive urban geometry. All transit, including the Rapid Transit District's regular service, reduced daily vehicle-miles traveled by 20 percent during the games. Bus ridership reduced congestion as much as 25 percent on some streets.

As Metro, the Rapid Transit District's successor, embarks upon a plan to [redesign its entire bus network](#) and [the city's transportation department pilots its microtransit program](#), the coming Olympics creates a great opportunity to experiment with buses. After all, the hugely successful “freeway express service” during the 1984 games was essentially just a bus that traveled on dedicated freeway lanes, including some bus-only on- and off-ramps, much like the Silver Line does today.

Inspired by the nimbleness of 1984, LA can start testing bus-only lanes with nothing more than colorful paint and temporary signs, using cleverly branded buses—[perhaps automated ones](#)—to shuttle down the newly dedicated lanes. By the time the Olympics roll around, the buses could be a fast, efficient complement to the city's mature rail system. Collect all 28 commemorative TAP cards?

Smarter ways to make deliveries

While LA had created pop-up transportation systems for special events before the Olympics, changing the movement of goods during the games was like nothing the city had ever attempted. Venue hubs needed a way to reliably replenish supplies—namely in the form of concessions—while other streets needed to remain free from deliveries during commute times.

Plus, all this had to happen in a way that didn't interrupt freight funneling from the Port of LA—the largest port in the United States.

The plan was simple but fraught with potential roadblocks: Make deliveries at night.

“Operation Breezeway” proposed that all deliveries be made before 10 a.m. or wait until after dark. An LA city ordinance was changed to allow companies to make deliveries before 7 a.m., and a special state law permitted the delivery of alcoholic beverages at night. The plan also included negotiating with local Teamsters to shift trucking routes, stockpile some goods ahead of time, and adjust worker schedules.

The impact was immediate and immense. With no trucks on freeways during daytime hours, and no deliveries being made in business districts that might slow traffic during peak drive time, other vehicles could move more seamlessly in the same lanes. Truck crashes, which are often far more disruptive than car crashes, dropped by 67 percent, according to the games' official report.



Flowers being planted in Olympic rings along the Hollywood Freeway, just before the games in 1984. During the games, trucks were only allowed on freeways before 10 a.m. and after sunset. | AP Photo/Craig Mathew

This part of the Olympics transportation plan proved so popular that, in 1987, there was a countywide proposal to [revive the rush-hour ban](#) on deliveries.

“Everyone recalls how marvelous it was when for two weeks the freeways and streets worked, and they want to go back to lessons learned then to solve our increasingly serious congestion,” Los Angeles County Transportation Commission manager Ginger Gherardi told the *Los Angeles Times*.

The plan to permanently alter the way the region transports goods was blocked by trucking associations, which argued that forcing deliveries to off-peak hours permanently would eat into their profits.

But the Port of LA—which moved more cargo last year than any port in the Western Hemisphere in history—has since implemented a program along these same lines, says David Pettit, senior attorney for the National Resources Defense Council. As part of the

port's bigger sustainability efforts, the [Pierpass program](#) incentivizes freight companies to move cargo at off-peak hours.

An even bigger goal to shoot for in 2028 is to completely electrify deliveries, and power it all—even the trucks—with renewable energy, says Pettit.

“Is it possible to achieve zero-emission freight movement by 2028? Absolutely,” he says. “A lot of manufacturers are doing demonstration projects at the port right now.”

Lightweight electric trucks also might allow more deliveries to slip into the off-peak hours, as these vehicles will cut back on noise—a concern from people who might live close to businesses. Labor remains the biggest challenge, says Pettit, as workers would still have to switch to night shifts and figure out how to secure locations.

LA's Clean Tech Incubator recently announced a [2028 Zero Emissions Roadmap](#), a partnership with Metro, the mayor's office, the California Air Resources Board, and such major utilities as Southern California Edison and the Los Angeles Department of Water and Power. The idea is to use the Olympics as a goal for having zero-emissions transportation systems regionally and zero-emissions goods movement statewide.

A solar-powered goods movement would make the [2028 games tagline](#) particularly relevant—“follow the sun.”

Preventing traffic in real time

As “Black Friday” loomed, it became clear that the city needed new tools to fully monitor its constantly changing traffic conditions and deploy swift changes as needed. The city of LA began work on implementing a then-revolutionary technology that would forever transform its relationship to its vehicles.

Before the games, 120 intersections around [Exposition Park](#) were equipped with new traffic signals that could be controlled from a remote location. Paired with a closed-circuit-television monitoring system that allowed engineers to keep visual tabs on vehicular congestion, the city could take instant action to clear crashes or dispatch emergency vehicles.

In addition, 42 miles of freeway were outfitted with sensors and cameras, which garnered plenty of “[Big Brother](#)” references (it was, after all, 1984). But surveillance was key to response time.

“The television cameras can save from two to 10 additional minutes and allow us the ability to immediately dispatch what we need to the scene of the incident—paramedics, repair trucks, fire equipment, California Highway Patrol officers,” Chuck O’Connell, chief of Caltrans’s traffic operations systems, [told the *Los Angeles Herald Examiner*](#).

This pilot project became LA’s Automated Traffic Surveillance and Control, or [ATSAC](#), the “most successful and enduring” innovation of the games, says Matthew Barrett of Metro’s Transportation Research Library and Archive.

“It became a regular full-blown city service, and today’s ATSAC system monitors and modifies 4,600 intersections,” he said.



A bus carrying athletes travels down the 10 freeway during the games. In addition to sensors, giant digital signs were installed on major roads to relay messages to motorists. | Courtesy Los Angeles Public Library

Like a full-scale *SimCity* played from a bunker beneath Downtown, ATSAC has been credited with reducing travel times as well as greenhouse gas emissions. Its functions came in particularly handy after the 1994 Northridge earthquake, as the city needed to quickly adjust traffic flow to compensate for the loss of several freeways. More recently, ATSAC added a software component that allows it to give buses and light-rail trains signal prioritization.

Now, of course, LA also has Waze, a kind of public-facing ATSAC, which has a [partnership with the city](#) to supplement its real-time traffic data collection. In addition to 4,600 signals, the vehicles of four million Waze-using Angelenos track conditions on LA streets.

Waze and Google Maps have recently started adding festivals and other street closures to their real-time data offerings, making them excellent end-to-end trip-planning tools for special events.

Building upon ATSAAC's legacy, the city could make all this data transparent by leading the development of a single app where Angelenos could not only monitor congested routes, but also plan, reserve, and pay for smarter options—think of it like getting a discount to ride bike share during busy traffic times—with a few taps on a smartphone. (Or a smartwatch? Smartring? Whatever the kids will be using in 10 years.)

Like the city's [no-longer-supported GoLA app](#), or other [Mobility as a Service apps](#) in development, the LA28 app could integrate real-time trip data with a schedule of Olympic events that could book a seat at the fencing finals, plan an itinerary, and even ping you when it's time to leave.

Incentivizing a better commute

With roads cleared for Olympic activities, the organizing committee confronted a final challenge—helping the rest of LA get to their workplaces. A campaign was launched for Angelenos to make their own transportation plans during the games: strategizing with their employers about how to reduce their commuting impact.

This meant carpooling, staggering start times, avoiding scheduling meetings that would require traveling at peak hours, finding a place to work remotely, or, for some, staying at home. Government employees, for example, were asked to work compressed work weeks, with four nine-hour days. And a state holiday, Admission's Day, was moved to the second Monday of the games, giving employers another easy out to give workers the day off.

The reach for this campaign was especially impressive when considering that all of this was done before social media. The organizing committee worked directly with big local corporations, many of whom were sponsoring the games in some capacity, to get them onboard.

Commuter Computer, a ridesharing program that helped workers carpool during the games, distributed 10,000 information packets with venue maps, street closures and strategies for working remotely to local employers. There was even a road show—a

mobile home outfitted with all this information made 41 stops across the county to get Angelenos to plan ahead.

Celebrities including Lou Rawls, Bob Hope, and Phyllis Diller [taped PSAs](#) asking Angelenos to do their part to cut back on peak-hour car trips, in the spirit of the games. Transportation officials seemed to pass down this bit of institutional knowledge when they [tapped celebrities to create social media posts](#) about [Carmageddon](#), the potentially paralyzing 405 freeway construction project on a summer weekend in 2011 (which also ended up being no big deal).

The plan got a splashy, if not entirely prescient, preview in [Mass Transit magazine](#).

“The games are giving the Los Angeles business community a chance to look at what traffic may be like 15 or 20 years from now,” Commuter Computer president Tad Widby told *Mass Transit*.

What’s most impressive is that these recommendations were just that—recommendations. Many workers could not flex hours and had to commute to their jobs during peak times just the same. Yet the voluntary, temporary behavioral shifts that some workers made created outsize impacts.

Surely if Angelenos could pull off such a Olympic-level stunt, they could also manage to make some sacrifices during the typical Thursday night rush hour?



Traffic was so light, commuters might not even have had time to fully appreciate the [freeway murals](#) added for the games, like John Wehrle's "Galileo, Jupiter, Apollo" on the 101. | AP Photo

A [1987 study by the University of California Irvine's Institute of Transportation Studies](#) poised this very question and concluded that the answer was no—or at least, not without incentives. The benefits seen during those 16 days were “unique and short term,” wrote study author Genevieve Giuliano. “Under ordinary circumstances, incentives do not exist to induce changes of the magnitude observed during the Olympics.”

Workplace incentives might include employers buying transit passes, subsidizing carpool costs, [charging more for parking cars at work](#), or simply paying employees to work at home. But major behavioral shifts likely won't happen voluntarily, and we probably won't see them again until 2028, says Martin Wachs, a professor at UCLA's urban planning department.

“By appealing to people's civic pride, you can do anything for two weeks,” he says.

And while some employers today might allow more flexible schedules—many of LA's government offices now require workers to take every other Friday off—telecommuting hasn't really caught on in the last few decades, even as many job requirements can be accomplished anywhere due to the internet.

It's something that Wachs doesn't think will have changed much 10 years from now.

“The national trend toward working at home has continued, but it's still a very small proportion of the workforce,” he says.

Turning road closures into open streets

As part of the 1984 games, LA witnessed an ever-changing array of street closures as part of programming—the city's roads hosted marathons, cycling races, and ceremonial events like the torch relay. Additionally, many streets around major hubs at Expo Park and Westwood were closed, and others were temporarily turned one-way to improve traffic flow, a few of which in Downtown remain one-way to this day.

Security was also a concern. During the 1984 games, a [21-year-old man drove onto a sidewalk in Westwood](#), killing one person and injuring 54 others, although police said it had nothing to do with the Olympics themselves. While it's likely that in 2028 we'll see many more streets heavily barricaded due to worries about vehicular terrorism, there's another very good reason to close more of LA's streets to vehicles.

Earlier this year, a [study predicted](#) that Tokyo's subway system, known as the world's best, will be overwhelmed by demand at the 2020 summer games. Here in LA, Metro's mounting a big expansion, and has plenty of experience [managing large events](#) like concerts and marches. But to make the flow of Olympic traffic even more seamless, the city can provide even more high-capacity options for getting around.



Streets were pedestrianized around major Olympic hubs in 1984 for security reasons and to keep vehicles moving around congested areas.

| *Design Quarterly* courtesy of Sussman/Prejza

The bus-only lanes at the 1984 Olympics moved 17,500 people per hour in just two lanes. By comparison, in normal use, two lanes of mixed traffic can carry around 3,000 to 5,000 people per hour. A combination of [biking and walking lanes](#) could carry anywhere from 7,500 to 9,000 people per lane, something that's easily demonstrated at CicLAvia.

Figueroa, as it passes through Downtown, is an excellent candidate to be made car-free, as it will have already undergone its [complete streets makeover](#), and creates a route that connects several major venues.

Closing Figueroa completely to cars would allow many more people to move easily among the greatest concentration of venues without relying on the potential bottlenecks of cars, buses, and trains. Another east-west street could serve the same purpose. Olympic Boulevard, perhaps.

For the LA Philharmonic's 100th anniversary this fall, [CicLAvia](#) is working on a twist of its traditional open-streets event—it will be more like an arts and music festival, with performances all along the route. It sounds a lot like 1984's [Olympic Arts Festival](#), which,

the *New York Times* notes, delivered “400 performances by 145 theater, dance and music companies, representing every continent and 18 countries.”

Imagine a different CicLAvia route every day of the games, each scheduling performers to routes that cross through their corresponding ethnic enclaves or landmarks. This would be an incredible way to activate these neighborhoods and bring a bit of Olympic action to where people already live.

True to the athletic spirit of the games, open streets will also provide a way to get around like an Olympian. Bike-share hubs could be situated along the routes, offering plenty of active options for point-to-point transportation. (Or [dockless scooters](#)—or hoverboards?) Skateboarding will be an official Olympic sport starting in 2020, and streets could host pop-up skateparks.



Mission Viejo residents walk and bike on the 1984 Summer Olympics cycling road race course in a kind of pre-CicLAvia open-streets event.

| Courtesy of Mission Viejo Library

“Given so many challenges in urban communities—including safe passage, lack of park space, and so much more—temporarily closing streets is brilliant,” says Renata Simril, president and CEO of the LA84 Foundation.

The foundation has some experience in this department. Last summer, the foundation shut down the street adjacent to its West Adams headquarters to [launch a street soccer program](#).

In 1984, even with the unpredictable conditions for drivers and increased pedestrian activity, there was a 16 percent decline in all vehicular crashes during the Olympics. Most significantly, air quality improved, with a 14 percent decline in ozone level concentrations throughout the LA basin.

Since so many of the city's streets will be used in different ways already, and [car ownership will almost certainly be on the decline](#), this is the perfect opportunity to try putting the entire city on a [road diet](#)—and make the city safer and healthier overall in the process.

While still basking in the Olympics afterglow, the Southern California Association of Governments produced a report titled “[The Olympics Legacy—Let's Keep it Moving](#)” in 1985, meant to build upon the lessons learned from the games. “Los Angeles is going to stall and strangle on its own exhaust fumes unless people work together to change the way they live and drive,” reads the introduction.

The [report](#) contains a film, 13 policy points, and an action plan—none of which the city followed, and all of which are still urgently relevant. There's no reason to wait 10 years to try again.

Casey Wasserman, who is chair of LA 2028's organizing committee, is also a board member at Vox Media, Curbed's parent company. Vox Media board members have no involvement in Curbed's editorial planning or execution.

Lessons from the 1984 Olympics

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