REPORT

Freedom to Move

Investing in Transportation Choices for a Clean, Prosperous, and Just Future

HIGHLIGHTS

More transportation options such as transit, walking, and biking, are good for the environment, the economy, and social equity. Yet the system we currently have revolves around car dependence bolstered by outdated policies and industry lobbying. New UCS analysis finds that

- ***A system with improved transportation options and reduced driving could save up to $201 billion in energy infrastructure, $128 billion in public health costs, and $5.9 trillion in vehicle ownership costs through 2050, presenting a more effective and affordable climate solution than the current car-dependent model.***
- ***The auto and oil industries have a vested interest in car dependence, currently receiving more than 75 percent of public and private transportation spending, and have lobbied for decades to prioritize cars over a more complete and affordable set of transportation options.***
- ***Science-based policies that prioritize more transportation choices align with community-based solutions where local advocates have long fought for a transportation system that prioritizes people over industry interests.***

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ACE alternatives for community & environment
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Chapter 1
Introduction

No matter where we come from or the color of our skin, most of us want to stay connected with loved ones, be healthy, and make a better future for our families. We want strong and vibrant communities that benefit and prosper from bringing together people from different places, of different races, and with different backgrounds.

For this country to be a place of freedom for all, investing in clean, abundant transportation choices and prioritizing convenience and efficiency in land use planning is crucial. In cities, suburbs, small towns, and rural areas, we can unlock this freedom with transit, walking, rolling, and biking. Transit reduces social isolation (Lamanna et al. 2020), improves access to health care (Smith et al. 2022), and allows people to reach school or work (Sanchez 1999; Urban Institute 2021). More transportation options can also reduce toxic air pollutant emissions from cars and trucks on the roads that contribute to cardiovascular and respiratory illnesses, especially in communities of color and low-income communities (Rick et al. 2024). Increased access to transportation has also been linked to increased voting and participation in our democracy (de Benedictis-Kessner and Palmer 2023). These benefits are especially important for the 30 percent of people in the United States who do not drive (FHWA 2024b; Zivarts 2024).

Transportation is the biggest contributor to heat-trapping emissions in the United States, and the United States has the highest-emitting transportation system in the world (EPA 2024; Climate Watch 2023). These emissions are already contributing to increased flooding, forest fires, extreme heat, and destructive storms across the country (Dahl et al. 2024; Dahl et al. 2023; Dahl et al. 2019; UCS 2019). Climate impacts further create lasting damage on transportation infrastructure (Dahl 2019), with staggering long-term costs for our families' futures. Reducing tailpipe pollution through vehicle electrification, petroleum phaseout, and improved transportation options are all necessary strategies to create a cleaner and more equitable future.

Yet the wealthy auto, fossil fuel, and road-building industries have profited by rigging the rules to constrain our options to only driving fossil-fueled cars. These industries have promoted car-dependent infrastructure that divides and destroys communities, creating costly new maintenance liabilities for state and local budgets and sparking disinvestment in economic engines across the country (Bellis et al. 2019; Howell et al. 2018; Litman 2015). Meanwhile, the average household in the United States spends nearly of their income on housing and transportation costs, deepening the industries' coffers (CNT 2024).

Freedom to Move outlines UCS's vision for a future where we all—White, Black, Brown—are able to get where we need to go with abundant transportation options. Through our research, we answer four key questions:

1. **How much does investing in more transportation choices make a meaningful difference in decarbonizing the transportation system?** Building on previous UCS economy-wide energy modeling (Clemmer et al. 2023), we estimate the benefits of two

scenarios with feasible reductions in transportation demand from increasing transportation options and improving land use planning. We find savings of up to $201 billion in grid infrastructure buildout, $950 billion in household savings in fuel costs, and 15 percent less demand for lithium used for electric vehicle (EV) batteries. We also estimate associated air quality health benefits at up to $128 billion from 2025 to 2050, saving thousands of lives and preventing hundreds of thousands of hospital visits and missed work and school days.

2. **How much money do we really invest in car dependence?** The United States' autocentric transportation system is not an accident—government, influenced by special interests, has actively invested in car-dependent infrastructure while choosing not to invest in alternatives for decades. Examining public and private expenditure, UCS analysis shows that as a country we spend over $2 trillion annually on on-road and public transportation, with the vast majority of that money going directly to the automotive and fossil fuel industries, which reinforces the status quo rather than investment in cleaner, equitable alternatives.

3. **What do transportation choices mean for communities on the ground?** Science-based policy rooted in getting people around works in conjunction with people who have been fighting in their communities for a better system for decades. We collaborated with three grassroots partners from across the country—Alternatives for Community and Environment, Allendale Strong, and the Campaign for Public Transit in the 435—each with a concrete vision of what increased transportation choices look like for its community: expanding transit options and affordability, fighting the harms of highway expansion in favor of a business boulevard, and providing more transportation options in rural areas.

4. **What can we do about it?** At the federal, state, and local levels, expanding transportation options, making decisions through an equity and climate lens, and implementing more accessible, democratic, and equitable decisionmaking processes are crucial ways to create a clean, prosperous, and just future.

All of us, from all walks of life, must come together to advance science-based policies that greatly expand transportation options, based on decisions made through an equity and climate lens, and centering those who have long not had a seat at the table. For decades, many of us have fought harmful freeways (Crockett 2018), pushed for increased transit service (TransitCenter 2019), and won major climate action (Kumar 2023), but we still need to ensure that we all have the freedom to move for generations to come.

Chapter 2
More Transportation Choices Are Key to the Climate Transition

We envision a transportation system free from tailpipe pollution, that responsibly phases out petroleum, and offers more mobility options for everyone. Getting there is a monumental challenge and must come with treating communities fairly and addressing long-standing inequities—from environmental injustices of transportation-related air pollution; to displacement and community disinvestment from highway construction; to stark disparities in access to opportunity (Rick et al. 2024; Grimminger et al. 2023; Austin 2017).

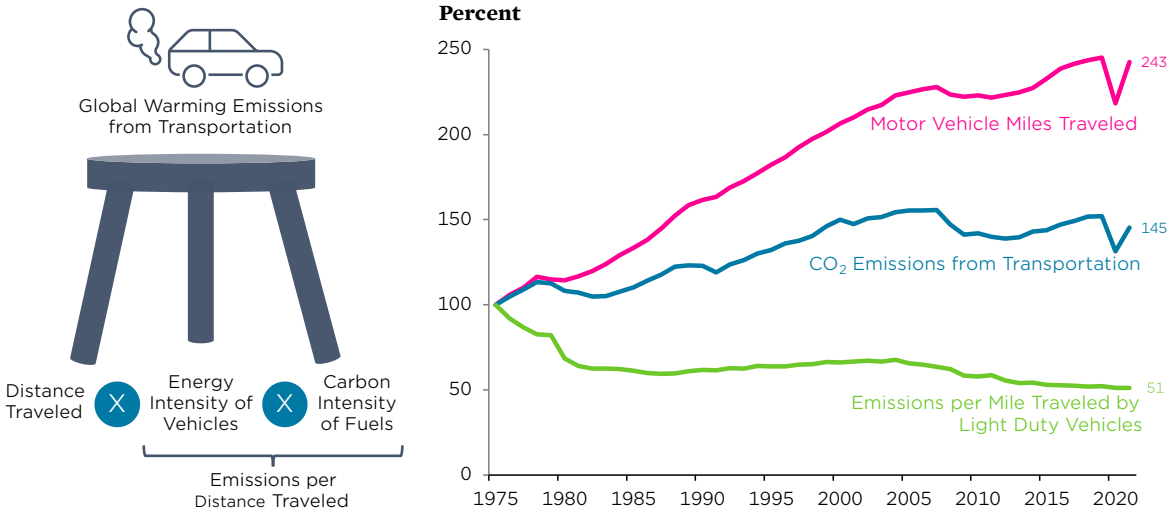
Since 2017, transportation has been the highest-emitting sector of the economy, contributing to over a quarter of total heat-trapping emissions in the United States in 2022 (EPA 2024). Around 69 percent of these emissions are from passenger transportation, or moving people, whereas 31 percent are from freight, or moving goods (USDOT 2024). In addition, transportation sector emissions have grown more than any other economic sector in the nation since 1990 (18.4 percent).

A Highway-Centered Approach Makes It Harder to Reduce Climate Emissions

Transportation's climate emissions rest on a three-legged stool: distance traveled, energy intensity of vehicles, and carbon intensity of fuels (Figure 1). While the United States has made significant improvements over the last few decades to the energy intensity of vehicle technologies and the carbon intensity of fuels, these are in constant tension with the ever-increasing amount of motor vehicle miles traveled (Box 1), and transportation emissions have continued to increase. As researchers have long warned, "A stool cannot stand on only two legs" (Ewing et al. 2008, 2).

Compared to the start of construction of the Interstate Highway System in 1956, people in the United States now drive over 5 times more in total and over 2.5 times more per person (FHWA 2024a) as well as drive significantly more per person than most other countries (Huxley-Reicher 2022). The construction of the interstate system sacrificed communities near highways in the name of broader economic growth. Over the past 25 years, despite building over 700,000 lane-miles of new roadways, experts widely acknowledge that increasing driving is "decoupled" from and becoming less of a factor for economic growth (VTO 2021). In fact, more and more studies identify auto-oriented planning as reducing economic activity and tax revenues, whereas compact land uses and increased transportation options promote economic inclusivity and productivity (Litman 2024).

Figure 1. Improvements in Vehicles and Fuels Have Been Offset by Increases in Driving



USDOT's National Blueprint for Transportation Decarbonization breaks down transportation emissions into three main drivers: distance traveled, energy intensity of vehicles, and carbon intensity of fuels (left). Although improved fuel economy has reduced global warming emissions per mile by 49 percent (combining energy and carbon intensities), a 143 percent increase in vehicle miles traveled more than offsets this reduction, resulting in a 45 percent increase in transportation sector emissions in 2021 from 1975.
SOURCE: Reproduced and adapted from USDOT 2024; CBO 2022

Box 1. Vehicle Miles Traveled

Vehicle miles traveled (VMT) is the most widely used measure for how much we drive. Generally, car-dependent infrastructure results in higher VMT by making car travel the single dominant mode of transportation and promoting sprawl, whereas transportation options such as transit, walking, rolling, and biking provide alternatives that result in less VMT. More convenient land use, such as through clustered development, can help people reach the same places with fewer total VMT.

VMT represents the aggregate quantity of travel and is usually limited to on-road travel, which constitutes over 80 percent of transportation emissions. It is often divided between passenger and freight VMT or by vehicle type. Federal aggregated data are usually estimated from a network of over 4,000 traffic recorders that each state reports annually to the USDOT (USDOT 2015). Alternatively, some VMT applications use odometer readings, surveys sources such as the National Household Transportation Survey, and proprietary GPS data from Replica or StreetLight.

Transportation is a means to an end. We transport ourselves to the places we need to go in our lives: work, school, places of worship, grocery stores, health care facilities, homes of loved ones, and more. Transportation scholars call the ease of reaching these places accessibility. However, to increase accessibility, the current paradigm of transportation planning relies on antiquated science and models that prioritize more driving—often through increasing speeds and widening roadways—over models that keep destinations closer together. For example, level of service (LOS) is a transportation metric that ranks roads by the volume-to-capacity ratio, or in other words, rewards roads for being empty and free-flowing (Marshall 2024). Roads that experience traffic congestion (as does any useful road) see their LOS score decline, which leads transportation planners to add more lanes so that traffic can speed up. However, once lanes have been added, more drivers choose to use that road in a phenomenon known as *induced demand* (Transportation for America 2020; Lee, Klein, and Camus 1999), generating more congestion. Meanwhile, if LOS scores are too low, many municipal ordinances limit nearby development in a practice known as *concurrency* (Levine, Grengs, and Merlin 2019). Together, these problematic practices spread destinations farther apart and force people to drive longer distances to reach the same places.

Unlike highway expansion, investing in more transportation options such as transit, biking, walking, and rolling not only provides more choices in getting around but also has a positive impact on the climate. Decades of research have shown that the viability of these modes of transportation is linked with lower greenhouse gas emissions (Bailey, Mokhtarian, and Little 2008; Ewing et al. 2008; McGraw et al. 2021; Newman and Kenworthy 1989). The United Nations Intergovernmental Panel on Climate Change (IPCC) notes with high confidence in its Mitigation Working Group report (Shukla 2023, 1052) that provision of less car-dependent transport infrastructure such as protected walkways and bikeways, public transit, and compact land use planning is important for breaking out of infrastructure "lock-in" around high-emitting car dependence. The results of research on the emissions impacts of new mobility technologies such as shared micromobility, ride hailing, and teleworking are more mixed, though electric bikes stand out in their potential to provide a more affordable and lower-emitting alternative to cars for trips of longer distances along with a host of cobenefits (ITDP and Cycling Cities 2024; McQueen, MacArthur, and Cherry 2020; Reichmuth 2023).

Walking, rolling, and biking have negligible global warming and air pollutant emissions compared to other modes, and in 2018, traveling via transit emitted less than half as many greenhouse gas emissions compared to driving alone in a private gasoline vehicle (McGraw et al. 2021, 22). In addition, investing in other modes often leads to our communities—urban, suburban, and rural—being more convenient to navigate by encouraging clustered development (Box 2).

Other potential strategies to reduce travel demand include reforming costly parking policies; managing transportation demand, such as by implementing employer- or school-based commute programs and constraining highway capacity spending; and charging for road use, such as with congestion pricing (McCahill, Westling, and Link 2023; Litman and Pan 2024; Aguayo, Reichmuth, and Weintraub 2021).[1] Ultimately, a combination of many of these

[1] *For examples of advocates working on these policies, see the Parking Reform Network at https://parkingreform.org/, the Freeway Fighters Network at https://freeway-fighters.org/, and advocates for congestion pricing in NYC such as the Tri-State Transportation Campaign at https://tstc.org/fixmycommute/congestion-pricing/.*

Box 2. Clustered Development
Clustered development (also called compact development) makes it easier for everyone, including those who drive, to get to destinations more conveniently and efficiently because of shorter distances between locations (Mangan et al. 2020, 15). In rural areas, creating small groups of homes and businesses on one portion of a site while maintaining open space for agricultural or natural preserves saves on road, water, and sewer infrastructure costs and makes it cheaper to provide community services (Thakkar et al. 2023; EPA 2012; Wells 2002). The long history of the quintessential small town Main Street serves as efficient transportation planning and is key for strengthening economic revival and bridging social divides (Love and Powe 2020; Orvell 2017). In suburbs and urban areas, clustering mixed land uses around transit stops can improve access to jobs, services, and loved ones while contributing to placemaking and productivity gains that, when coupled with antidisplacement measures, can help vitalize a community's economy (Litman 2024).

strategies will be necessary to reduce emissions while also improving access for all, especially for communities of people who have long been stuck by car-dependent infrastructure.

What Would This Country Look Like with More Transportation Options?

UCS analysis in *Accelerating Clean Energy Ambition* (Clemmer et al. 2023) has shown that pathways exist to meet US climate targets of net zero heat-trapping emissions by 2050, but they all require us to significantly ramp up deployment of clean energy technologies and phase out fossil fuels. Achieving this would come with near-term savings and only modest long-term costs, while the nation stands to gain more than $800 billion in public health benefits[2] and $1.3 trillion in avoided climate damages by 2050, more than offsetting slightly higher energy system costs of $46 billion. While policies in the Inflation Reduction Act and Infrastructure Investment and Jobs Act (IIJA) deliver significant progress toward these targets, bolder action is needed, especially considering the worrying trends in state spending of initial IIJA transportation funding on emissions-inducing highway expansion projects (Salerno 2024).

That analysis also found that increasing energy efficiency and lowering overall energy demand is a key strategy to make this future easier to attain by requiring gradual and more achievable rates of buildout for wind and solar energy transmission and storage and other zero-carbon technologies. For transportation, this means that reducing the need to drive by investing in transportation options and smarter land use could decrease the need for minerals, land, and new infrastructure—all while lessening challenges in siting, permitting, supply chain, and public acceptance.

[2] Given the range in quantified health impacts of decreased air pollution in public health literature, this number represents a high end on an uncertainty range presented in the health impacts model utilized.

Building off this previous UCS analysis utilizing economy-wide energy modeling, we created two new scenarios to illustrate the benefits of reduced driving associated with more transportation choices in the clean energy transition. This scenario includes investments in public transit and bike and pedestrian infrastructure along with land use policies that enable people to access destinations with more convenience and efficiency, resulting in reductions in total passenger VMT relative to US Energy Information Administration (EIA) projections. Specifically, we analyzed the relative differences in economic benefits, health outcomes, and resource use between three scenarios where we meet the US goal of net-zero heat-trapping emissions by 2050, but with lower trajectories for VMT (also summarized in Table A-1):

- **Net Zero**. This scenario represents a least-cost mix of technologies and resources for meeting US climate targets and the EIA's projected demand for energy services, including for transportation VMT growth, under a limited set of technology and resource constraints.

- **Net Zero/Low VMT Reduction**. This scenario also meets US climate targets but with slight decreases in VMT starting in 2023 that represent a 20 percent reduction of light-duty VMT in 2050 compared to the Net Zero scenario, which translates to a 3 percent decrease in total light-duty VMT from 2023 to 2050. This scenario is associated with a modest increase in transportation options such as transit, biking, and walking.

- **Net Zero/High VMT Reduction**. This scenario is more ambitious in that the VMT reduction is twice that of the Net Zero/Low VMT Reduction scenario, leading to a 27 percent decrease in total light-duty VMT from 2023 to 2050, which is roughly within the range of VMT goals for multiple states.[3] This scenario is associated with a drastic increase in transportation options such as transit, biking, and walking. We derived this scenario following the assumptions for lower passenger mobility demand in the Global North as discussed in Supplementary Table 15 of Grubler et al. 2018. This scenario also roughly matches VMT assumptions for studies conducted by the Institute for Transportation and Development Policy (ITDP),[4] RMI,[5] National Renewable Energy Laboratory (NREL)[6], and Climate & Community Institute (CCI).[7]

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[3] Washington has set a goal of reducing per capita VMT 50% from 2019 levels by 2050 (Millar and Houser 2024, 2). California has set a goal of reducing per capita VMT 30% from 2019 levels by 2045 (CARB 2022, 72). Maine has set a goal of reducing total VMT 20% from an unspecified baseline by 2030 (Maine Climate Council 2020, 10).

[4] ITDP's Mode Shift scenario estimates maximum feasible car/motorcycle VMT reductions in US cities in 2050 as reduced 37 percent from a business-as-usual case in 2050. This roughly translates to a 11 percent reduction in car VMT in 2050 from a base year of 2023 (ITDP 2024).

[5] RMI's Smarter MODES calculator benefits default scenario is a 20 percent per capita light-duty VMT reduction from 2024 to 2050. Also see RMI's analysis on land use reform, which captures the benefits of a subset of strategies that could help reduce VMT (Moravec et al. 2024; Korn et al. 2024).

[6] This NREL study conducts an uncertainty analysis with a range of passenger travel demand ranging from -28 percent to +21 percent by 2050 compared to 2019 levels, roughly the same range we analyze in our scenarios. Its Supplemental Information section also reviews a larger literature supporting the feasibility of the VMT reduction scenarios (Hoehne et al. 2023). A simplified version of its high and low VMT scenarios are cited in USDOT 2024.

[7] Our Net Zero/High VMT Reduction scenario aligns best with CCI's comparison between Scenarios 1 and 2 for reduced electric vehicle stock needs and sales (Riofrancos et al. 2023).

More Transportation Options Lead to Trillions of Dollars in Potential Benefits

We summarize the benefits of the Net Zero/Low VMT Reduction scenario and Net Zero/High VMT Reduction scenario in Table 1.

While it is achievable to build out the necessary electricity generation, transmission, and energy storage to meet US climate targets with baseline increases in driving through 2050, more transportation options would ease some of these requirements. This is especially important as EVs start to dominate the vehicle fleet past 2035 and demand more electricity. More transportation choices and smarter land use planning could reduce this electricity demand by 188-376 GW in 2050, helping us transition to clean energy more efficiently. Over half of these efficiency improvements come from reduced capital investment needs for solar, with the rest from reductions in wind, storage, and avoided natural gas power plants. For context, this is equivalent to the demand of 240–460 million solar panels, 15,000–33,000 wind turbines, and 70–140 natural gas power plants combined. This also includes 25 to 48 GW of avoided energy storage, mostly consisting of lithium-ion batteries targeted for storage durations of six hours or less, as well as 7,700-17,800 GW-miles of avoided transmission capacity, a 3-8 percent reduction. Overall, this adds up to $108-197 billion saved in capital investment in energy system upgrades through 2050 (Figure 2).

In addition to electricity system benefits, more transportation choices reduce our need for many other resources. Gasoline consumption would drop by 65-131 billion gallons cumulatively through 2050 and save households anywhere from $174-348 billion at the pump. Also, the demand for hydrogen to power fuel cell EVs would also decrease by 11–23 percent. Together with avoided EV charging, households could save $476-952 billion in total fuel costs. Last, with a wider variety of transportation choices available and less driving occurring, we would expect a commensurate decrease in annual sales of light-duty vehicles of 2-4 million vehicles in 2050. Cumulatively from 2025 to 2050, this would then result in a decrease in demand for lithium for EVs batteries of 7-15 percent. Reducing the need for newly mined minerals is key to a sustainable and equitable transition away from the environmental and social impacts of extraction, and refining (Dunn et al. forthcoming; Dunn 2023).

A future with more transportation options and less driving would also result in significant health benefits. Vehicle tailpipes and fossil-fueled electricity generation emit air pollutants such as nitrogen oxides, sulfur oxides, and fine particulate matter that cause cardiovascular and respiratory illnesses, leading to missed days at work and school, expensive hospital and emergency room visits, and even premature death. These health impacts are a thoroughly documented environmental injustice, where tailpipe pollution is disproportionally concentrated in communities of color and low-income communities across the country. Reducing car and truck traffic has been shown to be especially beneficial to environmental justice communities, which are often located near roadways due to the history of redlining and segregation (Rick et al. 2024). While meeting the same climate targets as in the scenarios above, we could see $32 to $128 billion cumulative air quality health benefits between 2025 and 2050.

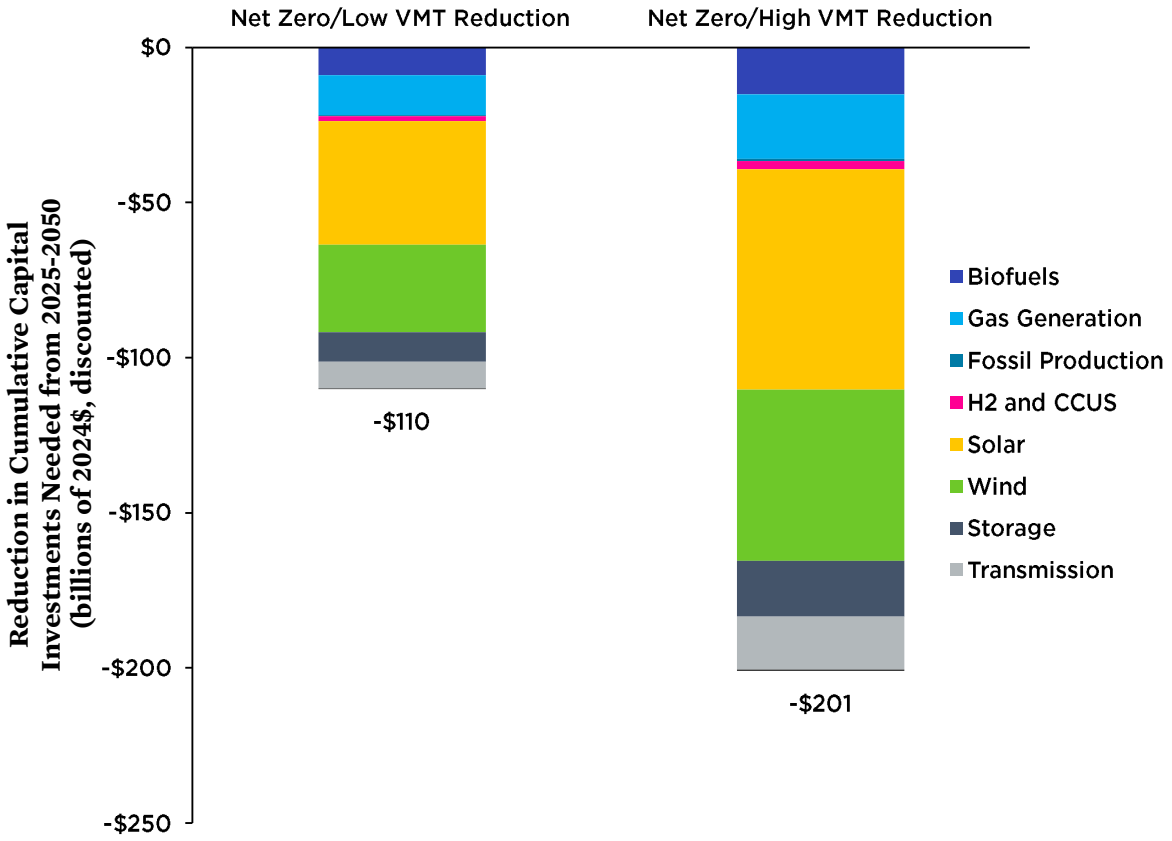
Table 1. Reduced VMT Scenarios Result in Significant Benefits Relative to Net Zero Scenario

	Net Zero/Low VMT Reduction (2050)	Net Zero/High VMT Reduction (2050)
Electricity-Generating Capacity	188 GW (4%) less capacity needed in 2050	376 GW (8%) less capacity needed in 2050
Grid Energy Storage	25 GW (5%) less storage needed in 2050	48 GW (9%) less storage needed in 2050
Electricity Transmission	7,700 GW-miles (3%) avoided capacity by 2050	17,800 GW-miles (8%) avoided capacity by 2050
Energy System Capital Investments	$110 billion (3%) savings from 2025 to 2050	$201 billion (5%) savings from 2025 to 2050
Electricity Demand	2850 TWh (12%) avoided electricity demand from 2025 to 2050, saving households around $299 billion	5700 TWh (25%) avoided electricity demand from 2025 to 2050, saving households around $598 billion
Gasoline	65 billion gallons (6%) avoided gasoline consumption from 2025 to 2050, saving households around $177 billion	131 billion gallons (12%) avoided gasoline consumption from 2025 to 2050, saving households around $355 billion
Hydrogen	770,000 kilograms (11%) avoided consumption from 2025-50, saving households around $4 million	1,500,000 kilograms (23%) avoided consumption from 2025-50, saving households around $8 million
Lithium Demand for EVs	250,000 metric tons (7%) less demand from 2025 to 2050	530,000 metric tons (15%) less demand from 2025 to 2050
Air Quality Health Savings from On-Road Vehicles	$32 billion to $64 billion from 2025 to 2050 2,200 to 4,500 lives saved from 2025 to 2050	$63 billion to $128 billion from 2025 to 2050 4,500 to 9,000 lives saved from 2025 to 2050

Reduced driving, coupled with an increase transportation choices, can lead to significant grid infrastructure benefits, saving billions of dollars in energy system capital costs. In addition, it can result in reductions in needed resources such as gasoline, hydrogen, and lithium, and would result in public health benefits from reduced premature mortality from fine particulate matter exposure from tailpipe emissions and hundreds of thousands of avoided emergency room visits, missed school or work days, and cases of respiratory and cardiovascular illnesses. All of these benefits scale up with more visionary changes to the transportation system.

Note: TWh = terawatt hour; GW = gigawatt; all dollar figures are in 2024 dollars, discounted at 2%.

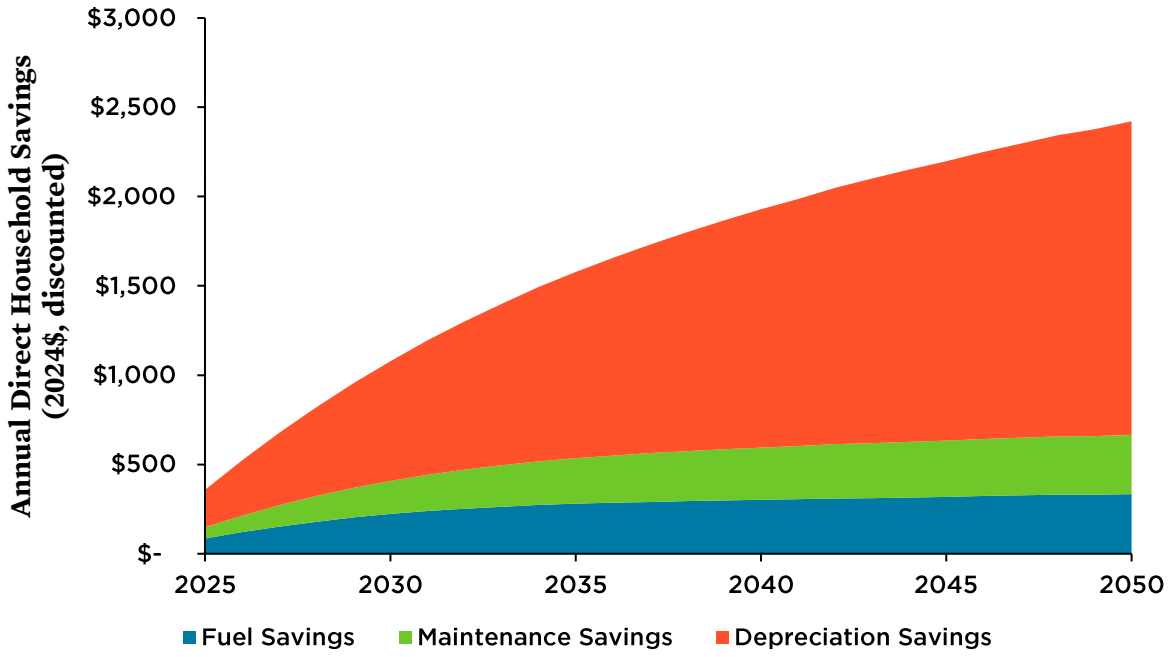
Figure 2. Reduced Energy Infrastructure Needs Translate to Billions of Dollars Saved in Capital Investments



Reduced energy infrastructure needs that result from more transportation choices and more convenient land use translate to billions of dollars in investment savings through 2050. Meeting US climate goals without changing VMT would require lower near-term energy costs and only modest long-term costs compared to the status quo (Clemmer et al. 2023) and decreasing energy demand by decreasing VMT can lessen these burdens.

These effects of reducing energy and resource demand are a portion of many other benefits of making this transition. For example, utilizing RMI's Smarter MODES Calculator, we estimate that the Net Zero/High VMT Reduction scenario would prevent 250,000 crash fatalities and 3,700,000 crash injuries (Moravec et al. 2024). For context, USDOT estimated 41,000 traffic fatalities in 2023 (National Center for Statistics and Analysis 2024). In addition, Smarter MODES estimates a reduction in average yearly household car ownership costs by $1,600 when considering fuel, maintenance, and depreciation costs (Figure 3). Similar scenarios in ITDP's Compact Cities Electrified: United States report estimates $650 billion in cumulative savings through 2050 public spending in avoiding additional urban road construction and maintenance (ITDP 2024). The EPA-funded National Public Health Assessment Model can show how similar scenarios result in reductions in chronic disease and mental health issues associated with increased physical activity and changes in the built environment (Schoner et al. 2018).

Figure 3. Less Driving Leads to Household Savings on the High Costs of Vehicle Ownership



RMI's Smarter MODES calculator analysis of our Net Zero/High VMT Reduction Scenario shows high and increasing household savings from avoided vehicle ownership costs due to fuel, maintenance, and depreciation savings. In later years, a large share of savings is attributed to avoided depreciation for vehicles given a decrease in odometer miles, which preserves the value of vehicles for longer, and can be interpreted akin to purchase cost savings. Total savings can be compared to an average estimated transportation cost burden of over $14,000 per year in 2019 (CNT 2024). Across all households, this adds up to over $5.9 trillion cumulatively through 2050.
SOURCE: Moravec et al. 2024

These same financial savings could result in hundreds of billions of dollars every year for investment in transit, walking, and biking and would result in substantially more access for everyone over the next 25 years. That would mark a drastic shift in investments from the current car-dependent trajectory. In the next section, we discuss how we got here by telling the history of transportation spending.

Chapter 3
Car-Dependence Is Not an Accident

Historically, policymakers have actively advanced policies that favor investment in car-dependent infrastructure while choosing not to invest in a more complete set of transportation options to serve communities, cities, and regions. Over decades, these policies have been upheld by outdated science and engineering practices influenced by self-interested industry advocacy and devalued community needs, prioritizing a single mode of travel while dividing us between transportation haves and have-nots. Ultimately, the result is an expensive transportation system that strains government finances and everyday household budgets. Understanding the history of roads and transportation funding in the United States helps us illuminate how our transportation system functions as it does today and helps us identify what changes are needed for a more equitable and sustainable transportation system for the future.

State and Local Governments Have Played a Role in Transportation since the Beginning

During the years before the formation of the United States, colonists took over a transportation network built over centuries by Indigenous people who had established roads and waterways to move across the continent for trade and travel.[8] Many of the current interstates we use today, including US-75 in Texas and the iconic Route 66 can trace their roots to these paths (Bureau of Outdoor Recreation 1975; Malcolm 2024; "Historic Route 66 in Illinois: Construction," n.d.; American Indian Alaska Native Tourism Association 2020). Much of the development of the United States is rooted in this centuries-old transportation network.

Through much of the seventeenth and eighteenth centuries during the dispossession of Indigenous lands and displacement of Indigenous peoples (Farrell et al. 2021), local colonial governments took on responsibilities for building and maintaining roads, labor mostly done by enslaved people (Anthony 2017). These roads generally allowed colonists to travel by foot, horse, and horse-drawn wagons without a fee or toll. In addition, some services, such as a stage-wagon service from Philadelphia to New York in 1750, constituted some of the first public transit in the United States. After the expense of the American Revolutionary War, states were unable to take on additional debt and sought private investment to develop a network of "turnpikes" connecting major trading posts through privately owned toll roads. As state economies recovered, many of these roads received state funding but still required a toll to access.

[8] *One notable example is the so-called Mohawk Trail, which began as a trade route connecting Atlantic Indigenous groups with Iroquois in New York and Canada. It was traveled by Metacom of the Wampanoag to attempt to recruit the Mohawk against the English and again by Benedict Arnold to capture Fort Ticonderoga during the Revolutionary War before becoming in 1914 the first "scenic byway" in New England, a road designed for automobile touring. See NPS, n.d.*

Privatized Turnpikes Go Bankrupt, Rural Roads Fall into Disrepair, and Government Steps In

Seeking to aid westward expansion, in 1806, Congress authorized the building of the National Road, connecting Cumberland, Maryland, to the Ohio River. This was the first federally funded road and eventually ran to the then-capital of Illinois, Vandalia. At the same time, federal grants of land and investment in railroads and steam locomotives grew exponentially. This growth led many freight, mail, and passenger wagon companies to stop using the turnpikes, bankrupting turnpike companies. As railroads began to dominate long-distance travel in the middle of the nineteenth century, many toll roads were ceded back to public control. Justification for government control was based on an understanding that railroads, turnpikes, and canals were "to be used by and for the benefit of the public" (FHWA 1977).

Through the late 1800s, cities were able to draw from fruitful property tax bases to develop infrastructure such as streets, which were used widely for transit. Meanwhile, rural roads such as the farm-to-market roads, which connected the hinterlands to rail access or local urban markets, fell into disrepair. In response, the Good Roads movement, a group of White farmers' organizations, bicyclists, motorists, automobile manufacturers, politicians, and businesspeople, successfully lobbied for states and counties to dramatically increase rural road funding. Much of this funding was dedicated to upgrading dirt, gravel, or other types of road surfaces to concrete and asphalt (Longfellow 2017) while heavily relying on Black convict labor in the South (D. Scott 2023; Ellis 2022). State highway departments, the first in Massachusetts, were also formed, setting the precedent for many state departments of transportation that still perpetuate car-dependent infrastructure today.

Federal Policymakers Made Key Commitments to Car Dependence in the 1900s

As the Good Roads movement pushed for the public funding of rural roads, Congress passed the first federal funding for roads in 1912 as part of the annual Post Office Appropriation Act (Davis 2012). At this time, the Post Office Department represented the largest share of federal outlays (even larger than the War Department), and federal roads funding was linked with a long-standing core government service. This set the stage for the first real permanent program for federal aid to states for highways, the Federal Aid Road Act of 1916, which funded "rural post roads" at the cost of $75 million over a five-year span, adding an additional $10 million over ten years for roads through national forests (equivalent to a total of $2.5 billion in 2024 dollars). This unprecedented federal funding focused on rural roads, excluding funding to cities.[9]

Additional funding quickly followed in the amounts of $200 million in the Post Office Appropriation Act of 1920 and another $90 million under the Federal Highway Act of 1921. Together with the Federal Aid Road Act of 1916, these early federal investments established many of the basic principles of highway funding today: state highway agencies were responsible for conceiving of projects for review and approval by the federal agency; federal government provided 50 percent of the cost of certain rural highways; and the newly

[9] *Cities became eligible for federal roads funding in 1933 during the surge in public works funding through the New Deal in the National Industrial Recovery Act for the construction of bypasses, feeder roads, and city streets (Weingroff 1996; Weingroff 2024). Transit received its first substantial federal funding only in 1964.*

established process of formula funding guided how federal funding was to be allocated to states.

The Interstate System and the Highway Trust Fund

Federal funding was expanded to include an even broader range of roads under the Federal-Aid Highway Act of 1944. The government appropriated $1.5 billion in federal highway funding to be distributed over the first three postwar fiscal years. The Federal-Aid Highway Act of 1952 authorized $25 million in the first funding for the Interstate Highway System, first conceived of in 1913. Consecutive bills opened the floodgates for funding its development, particularly with the passage of the Federal-Aid Highway and Highway Revenue Acts of 1956, the former providing for construction of the more than 40,000 miles of the country's Interstate Highway System and the latter establishing the Highway Trust Fund that would pay for it.

The Highway Trust Fund collects revenue from taxes on gasoline and diesel fuel, tires, new heavy-duty truck sales, and the use of heavy-duty tractor trailers. This revenue stream is deposited into a fund from which Congress can appropriate funds for the federal-aid highway program. At the time of passage, the fund was primarily for the purpose of constructing the Interstate Highway System and collecting the taxes authorized by the bill through 1972.

The federal government's role in funding highway expansion was expressly evident in a provision of the Federal-Aid Highway Act of 1956 that increased the federal share of project funding to over 90 percent, up from previous requirements.[10] This increase set a precedent to this day such that the federal cost share for highways is still generally more generous than for transit (FHWA 2023a; FTA 2021).

The Government Finally Funds Transit but at a Much Lesser Level than It Does Cars

Although tens of millions of dollars in government funding were used to facilitate automobile travel in the early 1900s, few public dollars were used to support transit. Most people in cities got around by electric streetcars operated by private companies, with Black people forced into second-class accommodation (Thomas et al. 2022). Following short-term land speculation busts, sprawling zoning policies, automobile growth, and restrictive fare and financial commitments, many of these streetcar companies went bankrupt. This occurred alongside a deliberate campaign to prioritize automobiles on roads at the expense of other transportation options at the time, such as streetcar, horse, and walking (Norton 2011). Sometimes these transitions were accelerated at the hands of automobile manufacturers and fossil fuel interests, such as the case of National City Lines, a bus company linked to General Motors, Mack Trucks, and Standard Oil that was responsible for buying up and then shutting down a

[10] It should be noted that this limiting requirement had frequently been overcome previously. Congress had already repeatedly doled out funding to states explicitly to cover their required matching portion (e.g., Emergency Relief and Construction Act of 1932) or had contributed aid in the form of unmatched grants (e.g., Emergency Relief Appropriation Act of 1935). Specific projects like those under the Federal Works Administration had already been allowed a reduced match of 75/25.

number of streetcar systems.[11] In a limited number of cases, city governments took over transit operations to ensure mobility, as did Boston and San Francisco.

By the middle of the twentieth century, government at all levels was funding a glut of highway expansion. Decades prior, government investment in rail helped spur competition that led to the bankruptcy of privately funded turnpikes. This time, the repeating cycle showed government funding roads for automobiles at the expense of (mostly) private transit.

Private transit agencies at this time relied heavily on fare revenue, so losing ridership to private cars meant losing funding to provide service, which further escalated the loss of riders.[12] Throughout the 1950s, despite the crises facing transit service providers and riders, government remained uninvolved.

Transit within cities was not the only industry suffering from government investment in competition. The rail industry continued to lose long-distance ridership to the nascent airline industry (Davis 2020), which was rapidly growing in part thanks to airline subsidies—hundreds of millions of dollars in expenditure on airports and loan guarantees for aircraft to aid fleet expansion (Fischer and Kirk 1999). At the same time, commuter rail services were facing the same competition from the automobile, reducing transit ridership. Immediately following passage of the Transportation Act of 1958, which allowed railways to more easily abandon their passenger rail services, commuter rail services in a number of big cities like Chicago, New York, Philadelphia, and Boston appeared to be in danger of termination (Smerk 1971; Smerk 1972). In central cities, not in the suburbs or at the state level, coalitions of regional civic groups, organized labor, and academics mobilized to stabilize transit along with addressing many other urban issues of the civil rights era.

In response, the first substantial federal investment in transit was the passing of the Urban Mass Transportation Act of 1964, which provided $375 million over three years to be used on capital projects for mass transit, with amendments to follow in 1966 and 1970. With federal capital assistance, many cities and regions (including Washington, DC, the Bay Area, and Atlanta) built new rail systems during this era. Still, the total federal funds made available for transit through these laws were pennies on the dollar of that for highway expansion. From February 1965 to January 1971, the federal government spent less than $800 million on capital projects for transit, compared with $20-25 billion of federal funding for highways (FHWA 1995).

With the oil embargo of 1973, gas rationing and shortages prompted President Nixon to invest more heavily in public transit in an effort to use less oil. Although the amount of federal funding for transit significantly increased in the 1970s and could be spent on operating expenses as well as capital outlays, still no consistent source of federal investment was dedicated for transit. Then-Secretary of the Department of Transportation John Volpe had repeatedly urged Congress to establish a consistent fund for mass transit, but even at the

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[11] Although the companies were found guilty of attempting to monopolize the sale of buses and related products to local transit companies, they were found not guilty of conspiring to monopolize control of the transit companies themselves in United States v. National City Lines, 186 F.2d 562 (7th Cir. 1951).

[12] This is much like the "vicious cycle" associated with agencies who rely heavily on farebox revenue (Freemark and Rennert 2023). Most transit agencies in the present-day United States rely on funding sources beyond fare revenue, which helps with financial stability. Yet there is an increased need for more funding.

height of the oil crisis and in the wake of the so-called freeway revolts, the "highway lobby" managed to thwart the establishment of any transit analog to the Highway Trust Fund.[13]

Through the 1980s during the Reagan administration, policies to cut back on federal investments, especially those in urban areas serving local needs, gutted transit spending and derailed the budding trajectory of federal government and states investing in a more balanced transportation system (Mallett 2024). Meanwhile, in 1983, in the wake of a recession that had cost Reagan's party a significant number of seats in the House, a gas tax increase that the president had initially envisioned as a vehicle for deficit reduction ended up signed into law as a way to not only fund highway spending (with a public eye toward infrastructure as a vehicle for job creation) but, in a compromise to build a broader coalition of support, to establish the first-ever permanent source of federal funding for public transit (Davis 2015). The five-cent-per-gallon increase in fuel taxes was split, with one cent devoted to the newly created Mass Transit Account of the Highway Trust Fund and the remaining four cents going to the Highway Trust Fund for highway programs. This negotiation is the origin of the 80/20 split, which was replicated in later gas tax increases. But because excise taxes and other fees exclusively go to highways, federal spending for transit falls well short of this ratio. Though the creation of the Mass Transit Account established a permanent source of funding for transit, highways still received much more. In addition, the Reagan administration imposed stricter limits on transit operating expenses (Mallett 2024), which coupled with a reduction in transit spending from the general fund led to an erosion in overall federal support for transit.

Promising Practices Emerge in the Modern Era of Transportation, but We Continue to Invest in Car Dependence

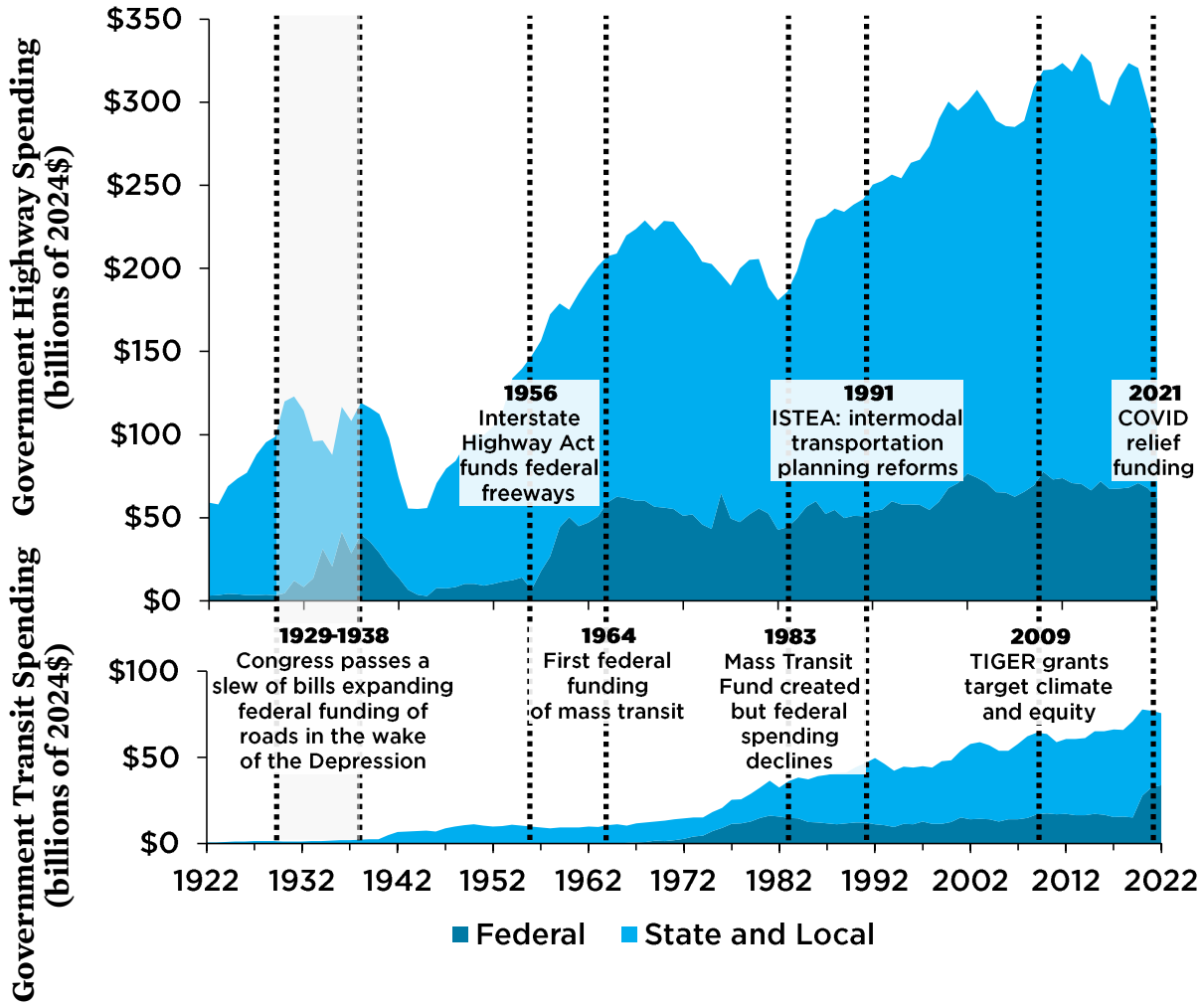
In 1991, the passing of the Intermodal Surface Transportation Efficiency Act (ISTEA) launched the country into the current era of transportation planning. The act was a milestone for considering the multimodal nature of transportation, prioritizing maintenance, requiring meaningful public involvement, and increasing responsibilities to metropolitan planning organizations (MPOs). In addition, ISTEA created and supported many programs and eligibilities that brought significant improvements to transportation options, such as the Congestion Mitigation and Air Quality Improvement Program (CMAQ), the Transportation Alternatives Program for bike and pedestrian projects, eligibility to flex federal highway funding to transit projects, and growth in many programs such as the Transit Capital Improvement Grants, also known as New Starts (League of American Bicyclists, n.d.; FTA and FHWA 1996; Emerson 2002; Davis 2017). Many of these were major victories for the Surface Transportation Policy Project (STPP), coalition of over 200 environmental groups and transit advocates including UCS.

This modern era of transportation has marked substantial progress in providing more transportation options, funding billions of dollars in infrastructure to support transportation choices and contributing to iconic projects such as the Silver Line Extension to Dulles International Airport in Washington, DC, and the D Line Subway Extension Project in Los Angeles (FHWA n.d.-a; FHWA n.d.-b). In 2009, the Transportation Investment Generating Economic Recovery (TIGER) programs, later known as Better Utilizing Investments to

[13] *Freeway revolt refers to public backlash against the development of highways in urban areas. Many of these highways were run through communities of color, as discussed in the following chapter (Mohl 2008; Avila 2014).*

Leverage Development (BUILD) and Rebuilding American Infrastructure with Sustainability and Equity (RAISE), followed this trend, supporting over 1,000 different projects to improve racial equity, reduce climate change impacts, and create good-paying jobs in communities across the country (FHWA 2024c).

Figure 4. Federal, State, and Local Government Road Investments Have Overshadowed Transit Investments over the Decades



Over the past century, government spending on transportation has dramatically increased, though investment in highways has greatly exceeded that of transit. While the Federal Aid Road Act of 1916 laid the groundwork for federal funding of roads that was accelerated in the wake of the Depression and again with the development of the Interstate Highway System, it was not until 1964 that Congress authorized spending on mass transit. It took nearly two more decades for Congress to authorize a dedicated funding mechanism for transit, and even as it did so, overall federal support for transit declined. Since then, reforms to surface transportation funding and recognition of the need by discretionary grants for rethinking our transportation system have helped reduce the disparity, but government spending continues to reflect a car-centered transportation system.

However, the disproportionate investment in car dependence has largely remained unchanged (Figure 5). While transit relies heavily on oversubscribed, competitive federal grant programs that point to an incredible demand for more transportation choices, highways are given a more assured pathway to funding with formula programs akin to a blank check. At the state level, 30 statutory and constitutional restrictions continue to limit the spending of gas tax revenue on more transportation options, even when those investments are more sustainable, equitable, and accessible to more people (Kenny 2023).

Throughout the COVID-19 pandemic, transit and environmental advocates[14] across the country came together to successfully push for $69 billion in relief funding and allowed this funding to be used for operating expenses to support continued transit service, given its essential role in our communities. This set a new standard for federal support for more transportation choices (Figure 4), which we must continue to support for communities across the country.

A Broader Look at Transportation Funding

Thus far, we have limited the discussion of transportation funding to government funding of infrastructure and transit, but the costs of our transportation system go well beyond that. For FY2021, we traced who pays into our transportation system, where that money goes, and who the entities are that maintain our car-dependent transportation system. If the general public is already mostly responsible for the cost of our transportation system, then it is critical to assess what exactly it is we are getting for that expenditure.

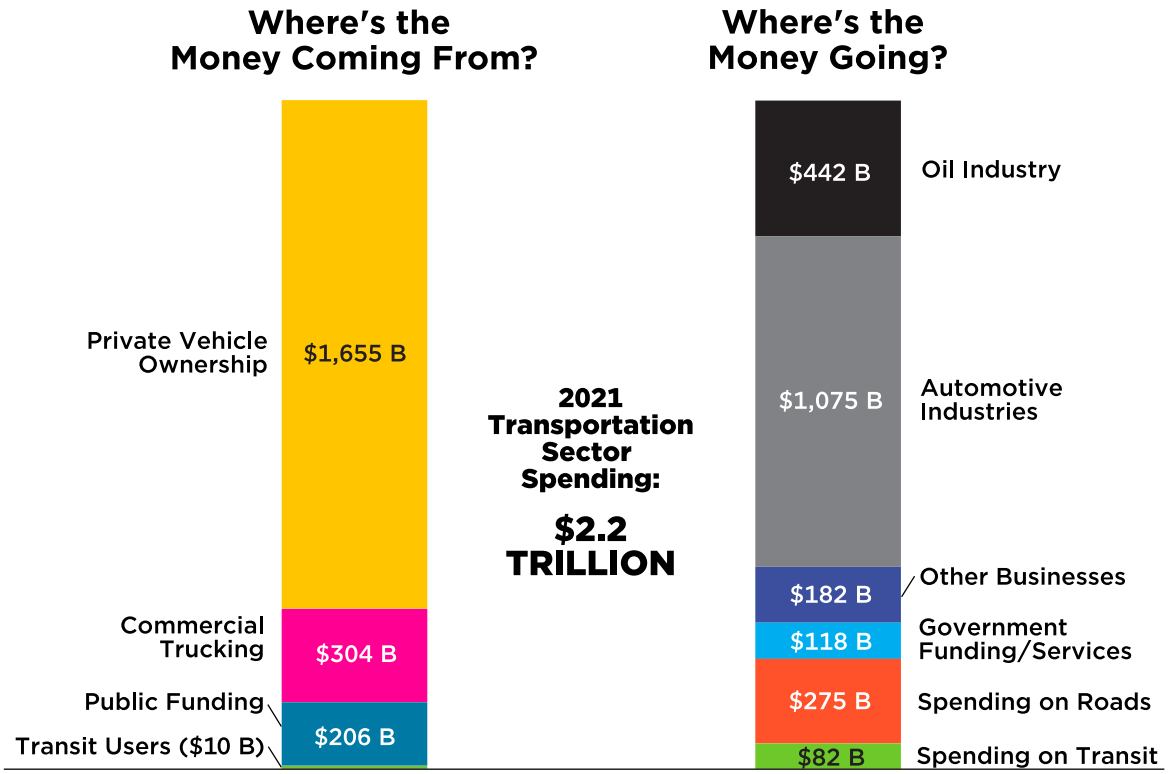
The Public Pays Dearly for the Status Quo

In FY2021, all levels of government together spent $206 billion from general public funds, taxes, and fees toward the transportation system (Figure 5). To put that figure in perspective, the budget for the Department of Defense in FY2021 was $688 billion (McGarry 2021), and the federal government alone spent $511 billion for Medicaid in 2021 (Hartman et al. 2023). In other words, federal, state, and local governments spend a sizable amount of taxpayer dollars for a car-dependent status quo.

Government policies and funding decisions set the stage for car dependence, but individuals bear the costs. Aggregating public and private expenditures, the United States spent over $2.2 trillion on surface transportation in FY2021, or an average of $17,000 per household. This is a conservative estimate of the total costs of our car-dependence, which increase further with the inclusion of health impacts associated with this highly polluting transportation system as well as the high costs and use of public space associated with parking and sprawl (Shoup 2017; Ewing and Hamidi 2017; Litman 2015). When put together, though we often frame federal transportation spending as an 80/20 split, this more complete picture shows a 96/4 split between funding for car dependence versus more transportation choices.

[14] *See the National Campaign for Transit Justice at https://transitjustice.org/ as well as environmental groups at https://www.momscleanairforce.org/resources/2021stimulus/.*

Figure 5. Vehicles and Fossil Fuels are Larger Transportation Costs than Roads or Transit



Private vehicle ownership represents the largest source of funding for our surface transportation system, followed by commercial trucking. These sources dwarf public funding. Half of this money then goes to the automotive industry through vehicle purchase and maintenance. The oil industry represents the next largest beneficiary, with more money spent on the oil industry than on roads and transit combined.

Private car ownership is the largest single expenditure in our car-dependent transportation system at over three-fourths of all spending, with households spending $1.66 trillion a year to operate privately owned vehicles. Those costs include vehicle purchases, registration fees, maintenance, insurance, financing, fuel, and tolls. This amount alone is enough to cover all our country's transit spending 20 times over.

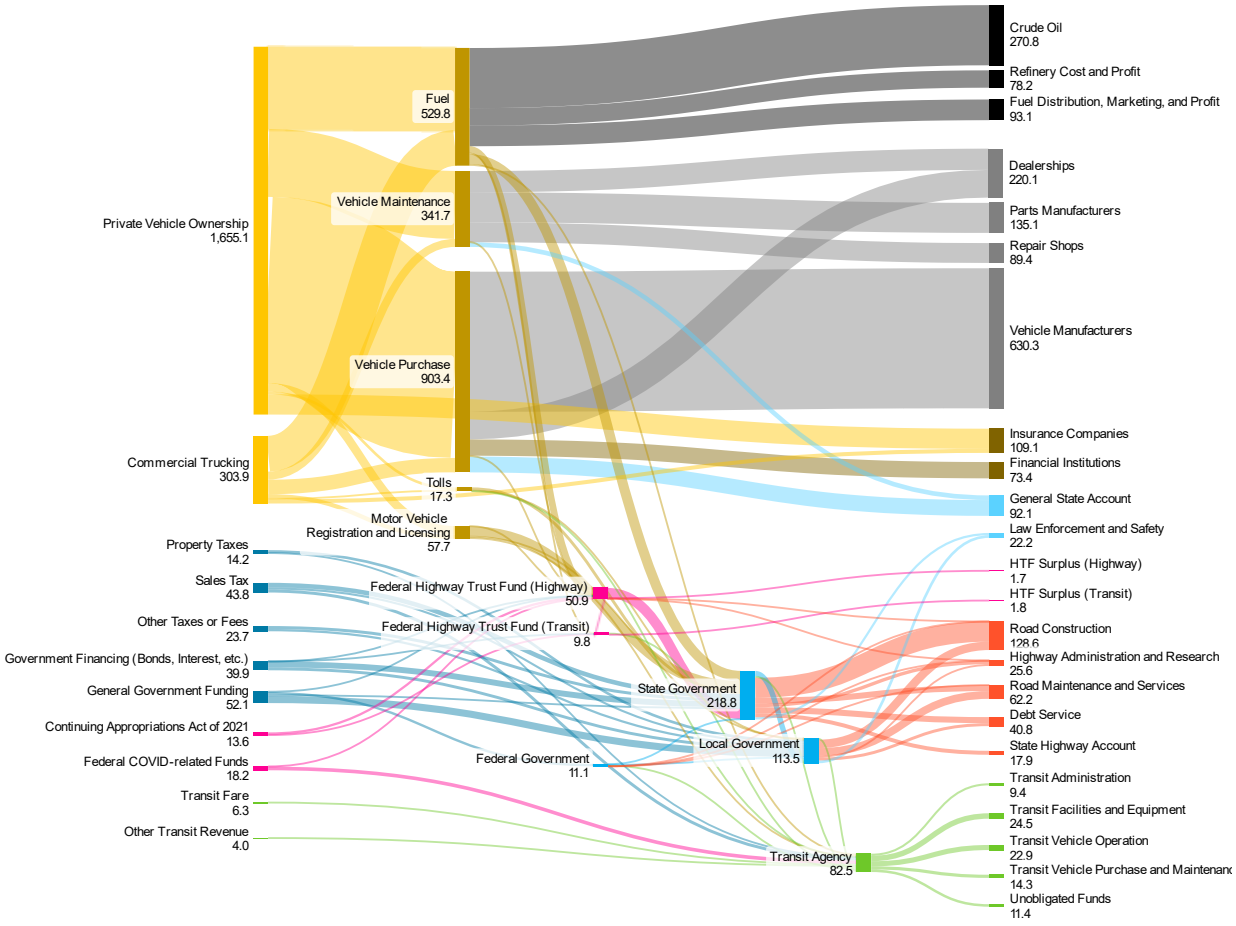
Government commitments to car dependence force us into a situation where the high costs of car ownership are often a prerequisite to economic inclusion, dividing us into those with readily accessible transportation and those without. Lower-income households and households of color spend a disproportionately higher share of their income on cars and car usage yet disproportionately lack car access (Greene and Welch 2018, sec. 4).

Last, it should be noted that while commercial trucking represents a significant source of funding for transportation, these costs are still primarily borne by the public, largely passed on by the commercial freight sector with every purchase of goods and products.

The Auto, Oil, and Road-Building Industries Benefit Most from the High Cost of Transportation

If everyday households support the bulk of financing for our transportation system, to where does that money flow? By analyzing consumer expenditure data for various sectors along with federal data on surface transportation funding, it is possible to estimate the connections between the financial inputs into surface transportation and ultimately whose pockets receive those funds (Figure 6).

Figure 6. Transportation Funding Flows from Public and Private Interests to Auto and Oil Industries



While most of the focus is on government sources of funding for transportation or spending on roads and transit, the vast majority of money spent on transportation comes from households through the use and ownership of private vehicles and goes to the oil and automotive industries, industries rooted explicitly in the exploitation of fossil fuels.

When thinking through the narrow lens of government spending, the most obvious beneficiaries of our current transportation system are the entities building the roads, who receive hundreds of billions of dollars every year to maintain and expand our highway system. The companies involved span a wide range of industries, including civil engineering firms dedicated to the planning of projects, construction firms hired to supply the labor and equipment to complete a given project, and materials firms including those providing concrete, one of the largest sources of global warming emissions (Fischetti, Bockelman, and Srubar 2023), and asphalt, a petroleum product.

Looking more broadly at the transportation system, the greatest expenditure is vehicle ownership, and the greatest component of vehicle ownership is vehicle purchase. Therefore, the largest beneficiary (as measured by dollars) of our current system is the automotive industry, which receives roughly half of all transportation dollars. Approximately 60 percent of this amount (i.e., 30 percent of all transportation funding) flows directly to vehicle manufacturers, followed by vehicle dealerships, parts manufacturers, and independent repair shops.

The oil industry takes the next largest portion, or 20 percent of all transportation-related spending. The largest share of that amount (just over 60 percent) covers the crude oil itself (i.e., 12 percent of all transportation funding), followed by fuel distribution and marketing, and then refineries. While additional money likely flows to the oil industry through asphalt production for highways, we have not further broken down the costs of highway maintenance and construction outlays.

With over 80 percent of trillions of US transportation dollars funneled to the oil, auto, and road-building industries, these vested interests collectively wield a tremendous amount of power.

Industries That Benefit Most Lobby for the Status Quo

With more money going to the oil industry than is spent annually on highway and transit funding combined (Figure 6), it makes sense that the transportation system is the leading source of climate emissions in the United States. Entrenched interests profit from the status quo.

The auto, oil, and road-building industries have historically been a powerful force in shaping our transportation system. Even before there was a federal highway system, there was a highway lobby. The auto industry's trade group of the early twentieth century, the National Automobile Chamber of Commerce, linked with the fledgling trucking industry to oppose the more piecemeal development of a federal highway network favored by state highway administrators (Weingroff 2017). The 50,000-mile national network the groups *did* approve in 1918 out of the Joint Highway Congress in Chicago became the foundation of the Interstate Highway System.

In 1932, President of General Motors Alfred P. Sloan Jr., founded the National Highway Users Conference, an industry trade organization jointly lobbying for the auto, oil, and road-building industries. One of its first goals was to ensure that money raised from fuel and vehicle taxes was used exclusively for highway funding, resulting in the passage of the Hayden-Cartwright Act, which penalized states that diverted any highway user tax revenue for nonhighway

projects. The organization fought repeatedly for highways to have exclusive use of fuel and vehicle tax revenue, and in 1972, it again mobilized to forestall the establishment of the Mass Transit Account for over a decade (Mohl 2008), distributing half a million pamphlets called "Let's Talk Sense about Transit," exaggerating its true the costs (American Highway Users Alliance 2010).

With construction of the Interstate Highway System underway, the industries promoted "What Freeways Mean to Your City" in an effort to bolster support as highways reshaped the country, claiming freeways prevented "the spread of blight and slums" (Mohl 2002). But as communities began to see what freeways actually meant to their city, an opposition movement arose that fought back against highway construction in cities around the country.

In the immediate aftermath of the oil and gas victory preventing a transit trust fund, pressure from community groups helped get provisions in the Federal-Aid Highway Act of 1973 that allowed the use of federal money for transit operating and capital expenses and, importantly, allowed local officials to transfer highway-allocated money to transit (Harnik 1973). This vulnerability in the Highway Trust Fund helped shift the next decade's discussion, which eventually led to the Mass Transit Account.

Today, the influence of these industries looms large. While their coalitions have adapted, changed in focus, and even name, the auto, oil, and road-building industries have remained steadfast in leading the political support to maintain car dependence. For example, they were key in obstructing the transparency and accountability of the common-sense greenhouse gas performance measure of the Federal Highway Administration (FHWA) in early 2024. The organizations that signed onto one harmful letter in early 2024 collectively spent over $104 million in documented lobbying time in 2023 and over $14 million in political contributions (Associated General Contractors of America 2024; OpenSecrets.org). These industries also exert their influence at the state and local levels. A more recent example of their efforts occurred around 2018 when fossil fuel–financed Americans for Prosperity fought initiatives to increase local transit funding in cities and counties across the country (Tabuchi 2018).

But even in the face of heavy industry lobbying, we can move toward a more just and sustainable transportation system by coming together and acting as a community.

Chapter 4
When Some of Us Can't Get Around, We All Suffer

An equitable, sustainable, and democratic society is built on a transportation system that serves us all. In the previous section, we follow the money to trace our journey to our current unsustainable and inequitable car-dependent landscape. Regardless of race, income, age, ability, gender, sexuality, Indigeneity, immigration status, and car access, more abundant and sustainable transportation options, such as transit, walking, and biking, coupled with convenient and efficient land use planning, can help our communities thrive.

Transportation Should Connect, Not Divide

One of the most blatant ways our transportation system divides us is by the color of our skin. From the very beginning, some of the earliest transportation systems aided the expansion of slavery in the West (Thomas et al. 2022; Yusoff 2018). Even when overtly racist policies were deemed unconstitutional, discriminatory housing policies, a long legacy of segregation, and the construction of the Interstate Highway System devastated Black communities by razing their homes as well as depressing economic development, thus contributing to a cycle of disinvestment (Hackworth 2019). When investments are made in Black neighborhoods, rising property values and rents create unaffordable conditions and displacement for longtime community members. Racist stigma against transit riders has been a major barrier to transit expansions throughout the country, and even within transit network design, many services have favored rail and bus systems designed to run past Black communities or exclude Black communities from traditionally White suburban enclaves (Henderson 2006; Spieler 2020).

> *"Urban transit systems in most American cities . . . have become a genuine civil rights issue—and a valid one—because the layout of rapid-transit systems determines the accessibility of jobs to the African-American community. If transportation systems in American cities could be laid out so as to provide an opportunity for poor people to get meaningful employment, then they could begin to move into the mainstream of American life."*
>
> *– Dr. Martin Luther King Jr. in essay "A Testament to Hope," 1968 (later published in King 1991)*

People of color are also exposed to 32 percent higher levels of fine particulate air pollution from vehicles on our roads than their White counterparts (Reichmuth 2019), largely due to their proximity to pollution sources like roadways positioned by redlining and segregation (Lane et al. 2022), and suffer greater health impacts from the same amount of pollution exposure due to its interactions with many other social determinants of health (Spiller et al. 2021). They also face higher rates of traffic fatalities for all modes, in particular as pedestrians, due to inadequate and unsafe infrastructure (Raifman and Choma 2022; Davis, Rodriguez, and Wright 2024). Additionally, people of color are routinely subjected to harassment, violence,

arrest, and death at the hands of law enforcement, often in interactions that happen on our transportation networks (Seo 2021; Carpio 2019).

We can use many other lenses to see transportation inequity. Lower-income people are disproportionately burdened by the costs of car ownership and transit fares than higher-income people. Youth, who frequently cannot drive, rely on other transportation options and often cannot afford to get to school (Youth Way on the MBTA 2011). Older adults are also likely to be less able than others to access the transportation system and face increased social isolation and barriers to health care as a result (Lamanna et al. 2020; Syed, Gerber, and Sharp 2013). People with disabilities, which almost everyone is at some point in the life, rely more on public transit than most, yet many services either do not meet or are barely compliant with the Americans with Disabilities Act (Disability Mobility Initiative 2021; World Health Organization 2011). Women and nonbinary people face more threats to personal safety and lack of access to transportation than do men (Song et al. 2023; Frank 2023). People of LGBTQ+ communities are more likely to experience economic hardship and lack of personal safety in public space and in our transportation system (Rosas 2023; Reed 2018; Reich 2023). Indigenous people face limited access to food and other resources, transportation data gaps, disproportionate impacts from climate change, and a systematic disadvantage for public infrastructure funds (Scully et al. 2018; Grisham 2024). Immigrants are often unable to obtain a driver's license and face high financial burdens to car ownership (Zivarts 2024; Sheller 2018). And when these identities intersect in individuals, they result in distinct effects of their own (Song et al. 2023; Aguilar 2020). This is just a glimpse of the many ways our transportation system divides us (Van Dort et al. 2019).

Lack of transportation also creates barriers to public participation in the very processes that shape our ability to get around. For example, how can you tell the transportation agency about your lack of transportation when you cannot get to a public meeting (Cantilina et al. 2021)? It follows that inadequacy in transportation and access to polling destinations is linked to decreased voter participation (de Benedictis-Kessner and Palmer 2023; Rowangould et al. 2024). In addition, decisionmakers on transit agency boards, metropolitan planning organization (MPO) boards, and state departments of transportation do not mirror the communities they represent. While diversity is improving, studies have shown that these decisionmaking bodies on average underrepresent women by 21–26 percent and people of color by 17–27 percent.[15]

Investing in more transportation options such as transit, walking, and biking along with more convenient land use not only helps those who are most burdened by the status quo but benefits everybody. Just as curb cuts devised for people using wheelchairs ended up helping everybody, from people pushing strollers to workers pushing heavy carts, or how seat belts adopted initially to protect young children have saved hundreds of thousands of lives since

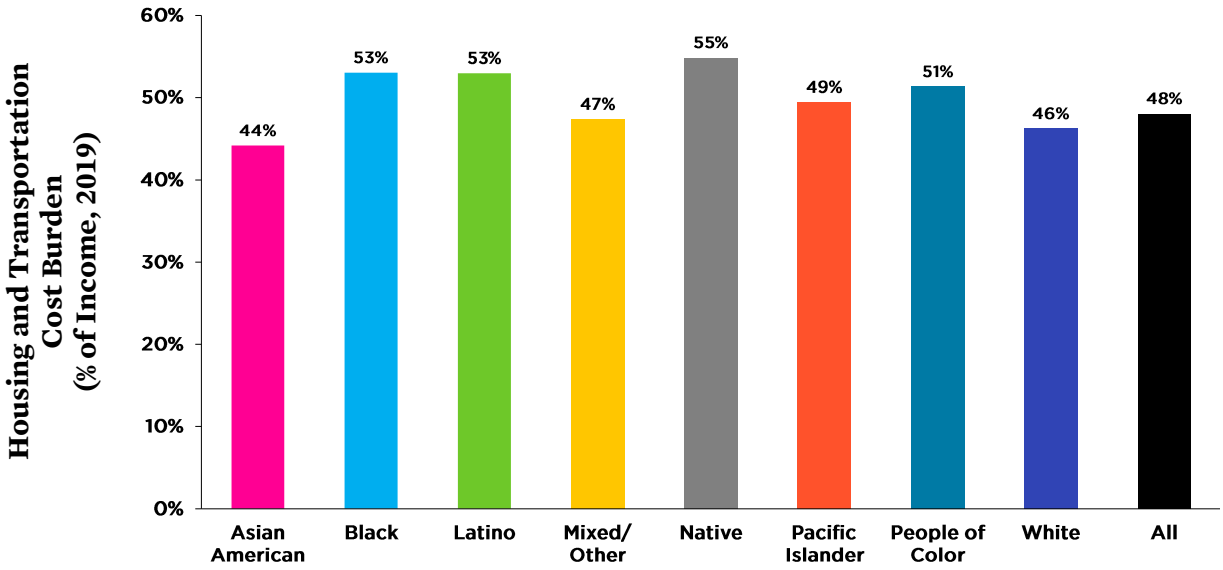
[15] *According to a sample of 108 board members of transit agencies examined by TransitCenter, only 30 percent were women and 36 percent were people of color, compared to 51 percent and 63 percent of transit riders, respectively. In a survey of 50 MPOs published in 2008, board members were only 25 percent women and 12 percent people of color, compared to a general US population of 51 percent women and 39 percent people of color in those metropolitan areas at that time. Human resources data for 2022 from the American Association of State Highway and Transportation Officials (AASHTO) have shown that the highest-ranking state department of transportation executives were 29 percent female and 15 percent people of color, whereas the US population was 50 percent women and 41 percent people of color that year. See TransitCenter 2022b; Sanchez 2008; AASHTO 2024; and Streetsblog 2024.*

widespread adoption, designing for nondrivers helps even those who drive. A new nearby train line can help save you thousands in car ownership costs (Blackwell 2016). And a bus route can prove useful when your car inevitably goes to the shop for repairs or maintenance. Even if we do not change our primary transportation choice, providing more options allows our nearby community to thrive economically and benefits the essential workers and caregivers we rely on to live our lives (TransitCenter 2020; DeLacey 2024).

Industry Profits from the High Costs of Car Ownership

Although the highway lobby profits from our car dependence, we all bear the costs, with impacts falling hardest on people of color and people with low income. On average, people spend nearly half their income on housing and transportation, and 60 percent of people in the United States are living in neighborhoods where housing and transportation costs are unaffordable. People of color are 15 percent more likely to live in a neighborhood with unaffordable housing and transportation costs and pay 5 percent more of their income on housing and transportation than White people do (Figure 7). Low-income US households spend over 30 percent of their after-tax income on transportation alone (BTS 2024).

Figure 7. Housing and Transportation Cost Burdens Are High for All, Especially Households of Color

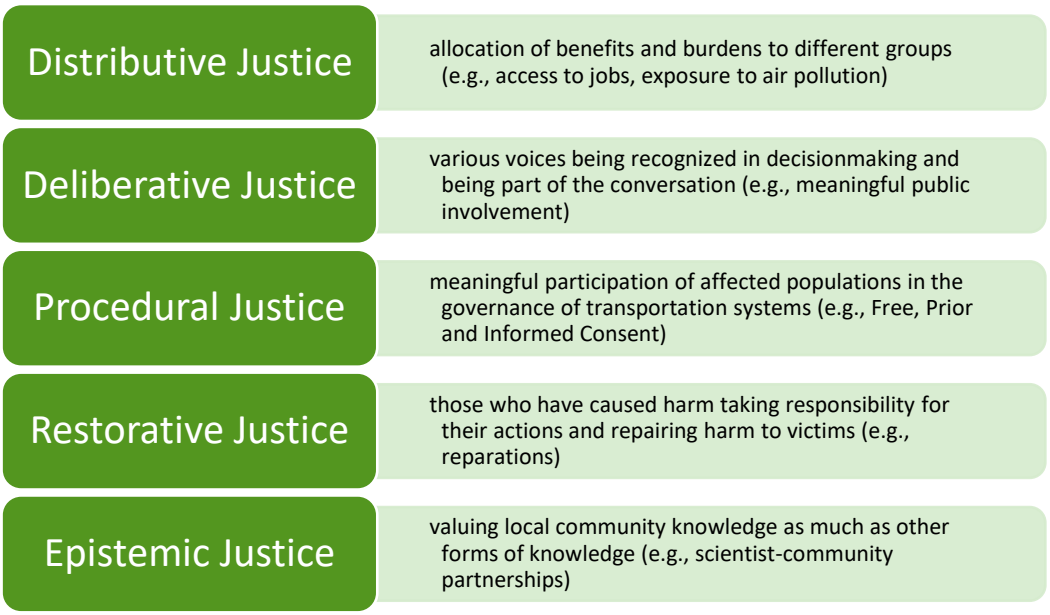


On average, people in the US spend nearly half of their income on housing and transportation costs, whereas Black, Latino, and Native American people pay 5 percent, 5 percent, and 7 percent more of their income, respectively, on housing and transportation than the average. Center for Neighborhood Technology (CNT) sets a benchmark for affordability at no more than 45 percent of household income. Much of this disparity is attributed to the intersection of race and income. The average transportation cost burden is 23 percent, though car-dependent infrastructure affects both housing (i.e., land use) and transportation costs.
SOURCE: UCS analysis of local data from CNT's Housing + Transportation Affordability Index (CNT 2024).

The current transportation system privileges those who have access to a car, but nondrivers make up a significant portion of the population. Across the United States, around 30 percent of people do not have a driver's license, and many more licensed people do not drive for a host of other reasons, such as not being able to afford to drive or being too young or old (Zivarts 2024). In addition, over 10 million households do not own a car, and these households are disproportionately households of color or low-income households (Box 3).

Amid these conditions, grassroots advocates are leading the change with their vision of the future. The remainder of this section features three grassroots advocates battling different forms of mobility injustice (Figure 8). We collaborated with them to tell their stories, each ending with their vision for a mobile and just future with more transportation options.

Figure 8. Mobility Justice Is a Nested Approach Centering Marginalized Communities



Mobility justice scholars and activists, such as The Untokening, have helped advance the understanding of mobility justice in their work to center the lived experiences of marginalized communities. In the transportation field, many people focus on distributive justice without acknowledging the other forms that justice can take.
SOURCE: Sheller 2018

Box 3. Zero-Car Households

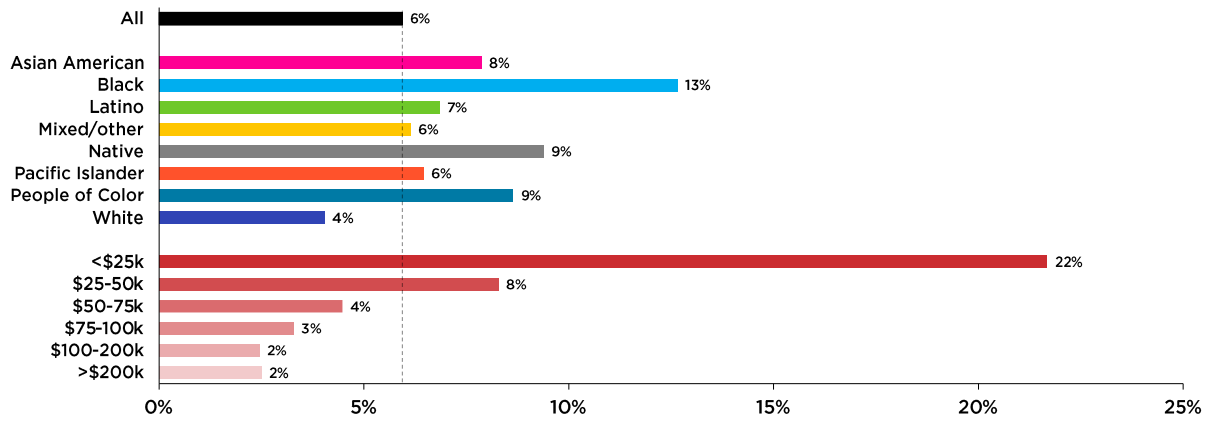
The country's prioritization of highway expansion rather than an explicit investment in mobility has led to an autocentric transportation system. Consequently, over 90 percent of households own cars. But what can we say about those who do not own cars? Based on 2022 Census data, people living in households without cars are disproportionately people of color (Figure 9). They also have significantly lower household incomes, though this is also related to them living in generally smaller households (US Census Bureau 2022a).

Unsurprisingly, households without a car are much more likely to use public transportation than the national average, at 227 transit trips per person in 2017 (Godfrey, Polzin, and Roessler 2019). Despite these riders representing a small share of the overall population, their trips represent nearly half of all transit trips in the United States.

Transit may alleviate some of the mobility challenges for carless households, but since 90 percent of these households are in an urban area (EPA 2014), there can be significant misalignment between housing and access to jobs, particularly for households with lower income (Tomer et al. 2011). Additionally, a growing share of people living below the poverty line live in suburban, not urban, areas (Kneebone and Berube 2023). Such areas have seen disinvestment in transit services over time, and lower population densities can make for longer trips by both time and distance.

Car dependency represents a significant barrier to mobility and opportunity, a challenge highlighted by those households lacking access to a privately owned vehicle.

Figure 9. Households without Cars are Disproportionately Lower-income and Households of Color



Percentage of People Living in Households Without a Vehicle by Race/Ethnicity and Household Income

SOURCE: Integrated Public Use Microdata Series USA, American Community Survey 2018-2022 Estimates (Ruggles et al. 2024). Methodology draws from PolicyLink and USC ERI 2024.

Grassroots Feature: Fighting for Affordable and Fair Transit Service in Boston, MA

Boston holds a prominent place in US history, from its past role in the country's founding to its current role as an educational and technological hub. It is also the birthplace of US public transit. Part of the current Massachusetts Bay Transportation Authority (MBTA) Green Line was the first subway to exist in the country, and the city was one of the earliest examples of public agencies committing to investing in expanding transit services through the early twentieth century, going against subsidies for car commuting and zoning laws that hampered transit development in the 1920s.

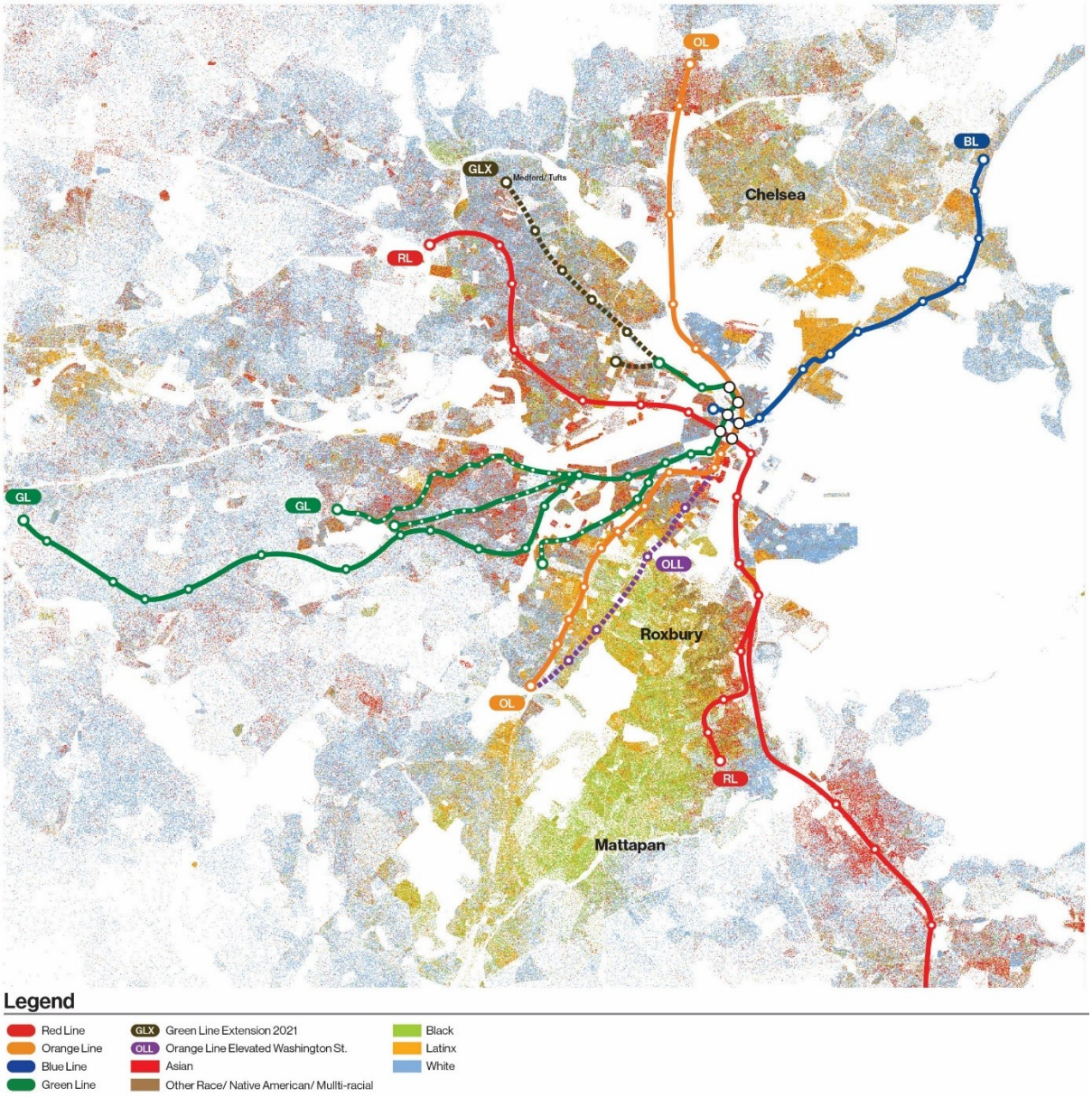
All the while, the region has a long history of segregation and racism. The Great Migration in the first half of the twentieth century created many of the current Black communities in Boston—with many Black people moving to neighborhoods like Roxbury, Dorchester, and Mattapan, driven by the racial terror of the Jim Crow South as well as the promise of economic opportunity in the North (Ciurczak, Jennings, and Schuster 2023; Gumprecht 2023). Segregation was cemented throughout the 1900s by a series of restrictive covenants, redlining, White flight, and urban renewal, and continues to be maintained today by housing discrimination and predatory lending (Harvard Chan-NIEHS Center for Environmental Health 2022; Taylor 2019). For instance, urban renewal in the 1950s and 1960s consisted of implementing subsidized local government-run programs to clear "blighted" land, which in practice displaced and targeted neighborhoods of color for redevelopment (Digital Scholarship Lab 2018). In Boston, funding of over $780 million in grants led to the displacement of over 3,200 families of color, of which 1,228 were due to the Washington Park Project in Dorchester and Roxbury.

Together, this history shows up in the transportation system we see today. Black and Brown neighborhoods like Roxbury, Mattapan, and Chelsea have long been deprioritized for transit service (Figure 10). As of 2024, Black people in the City of Boston have around 50 percent less access to jobs within 45 minutes than White people do (TransitCenter 2023). They are also served by 18 percent less transit service intensity, and it takes them 27 percent longer to get to the nearest hospital than their White counterparts. Many neighborhoods of color, such as Chinatown, were torn apart by highway construction and were the site of some of the biggest highway revolts that set the precedent for the environmental impact review process used in current transportation planning (Crockett 2018).

These transportation injustices are happening amid a time of struggle for the city's transportation system. Some 65 percent of MBTA assets are not in a state of good repair, raising operating and maintenance costs as well as increasing the risk of failure. The MBTA estimates that $24.5 billion is needed to update the system—a necessity for a pillar of Boston's economy (MBTA 2024; Massachusetts Taxpayers Foundation 2024).

Meanwhile, Massachusetts has set some of the most ambitious climate targets in the country with strict transportation sector limits but has shown signs of lagging on EV adoption goals. The state also needs to greatly shift its transportation spending and transit investment to reduce vehicle miles traveled (MilNeil 2024).

Figure 10. Black and Brown Neighborhoods Like Roxbury, Mattapan, and Chelsea Have Long Been Deprioritized for Transit Service



The Roxbury and Mattapan communities are predominantly people of color, yet they are underserved by MBTA light rail service. The Washington St. Elevated, in dashed purple, long served Roxbury through the 1900s but shut down in 1987 when the Orange Line moved to its current route to the west. This change eliminated a key service from some of Boston's most vibrant communities of color.
SOURCE: Reproduced with permission from Gewirth 2021.

With costs of housing and transportation continuing to rise, with over 44 percent of people in the metropolitan area living with housing and transportation costs they cannot afford. On average, people in the Boston metropolitan area spend 46 percent of their income on housing

and transportation, with households of color paying on average 8 percent more than their White counterparts do (CNT 2024). From Roxbury to Egleston Square and from Nubian Square to Chinatown, new housing developments have been pushing up housing costs and threatening displacement. While some policies such as the recently passed low-income fare will help, much more needs to be done to alleviate these disproportionate burdens (Public Transit Public Good 2023).

Alternatives for Community and Environment in Roxbury

Alternatives for Community and Environment (ACE) is a grassroots organization building power with Massachusetts' communities of color and low-income communities in Massachusetts to eradicate environmental racism and classism, create healthy and sustainable communities, and achieve environmental justice. Rooted in the Roxbury neighborhood of Boston since its start in 1994, ACE is recognized for its community work that has reverberated to the state and national levels.

Currently, ACE focuses on four program areas:

1. The Roxbury Environmental Empowerment Project (REEP) is a youth-led program that builds power across Roxbury, Dorchester, and Mattapan to organize and win environmental justice campaigns.

2. Environmental Justice Legal Services (EJLS) guides ACE's organizational and coalition work with a robust legal framework grounded in federal and state civil rights and environmental law. EJLS also provides legal and technical assistance to allies and mobilizes legal and scientific resources to support organizing efforts throughout Boston.

3. T Riders Union (TRU) is an ACE-organized group of riders that fights for first-class MBTA transit services in Greater Boston, particularly in lower-income communities and communities of color.

4. Environmental Justice Assistance Network (EJAN) is ACE's 20-year statewide pro bono technical assistance network responding to the legal, scientific, and technical needs of communities on the front line of environmental and energy hazards.

Roxbury is often regarded as the center of Black Boston, as its community members are 46 percent Black, 29 percent Hispanic, 15 percent White, and 4 percent Asian (WBUR 2024). In recent decades, the neighborhood has been changing rapidly, as many of the low-income Black people are displaced and higher-income White people move in; in 1990, Roxbury's population was 79 percent Black and 4 percent White (Barstein et al. 2022; Lewis and Edozie 2019). Within these categories, communities are also increasingly diverse; Roxbury has a large multigenerational Black American population and also a thriving Cape Verdean, Haitian, Dominican, and Puerto Rican population (Ciurczak, Jennings, and Schuster 2023; BPDA 2024).

Roxbury was also the center of the civil rights movement in Boston, including the 1967 Grove Hall sit-in and riot that sparked the city's civil rights protests; the site of key civil rights hubs, such as the Freedom House, NAACP, and the Dudley Street Neighborhood Initiative; the home of Malcolm X in his early years; and the start of many civil rights protests led in part by Dr. Martin Luther King Jr (Fong 2018; Dunham, n.d.).

Two of ACE's priorities are fighting for first-class transit services in Boston to improve access for low-income communities and communities of color whose households often do not own a car, and reducing tailpipe pollution in communities like Roxbury that already bear the brunt of many other pollution sources.

The effects of transit racism are apparent in Roxbury. From 1901, the Washington Street Elevated constituted the southern portion of MBTA's Orange Line, which connected major commercial and population hubs such as Dudley Square (now Nubian) and Egleston (Carter 2012). In 1970, under extreme pressure from community members and the People before Highways movement, Governor Francis Sargent called for a moratorium on highway construction, leaving 110 acres of already-cleared land in Roxbury and Jamaica Plain for a new segment of Orange Line, shifted westward away from the major population centers. When the Washington Street Elevated ended service in 1987, as restitution, the Roxbury community was promised a replacement transit service that would be "equal or better," initially the #49 bus. In 2002, after 15 years of debate while ACE and others of the Washington Street Corridor Coalition were advocating for a light rail replacement, the MBTA built the Silver Line, a bus rapid transit project that many advocates called the "Silver Lie," as if a silver coat of paint had been applied to the existing #49 bus (Belcher 2024). A journey downtown on both the Silver Line and #49 took roughly double the time as the old elevated Orange Line. Advocates have made multiple civil rights complaints but largely regard the lack of investment in majority-Black Roxbury but large investments in commuter rail and the Big Dig project serving White suburban commuters as a stark example of transit racism.

Now, Roxbury remains a gap for rapid transit in the region, though it is clear that its community members do rely on it. Some 45 percent of Roxbury's population does not have access to a car (over 9,300 households), which is around 11 percent higher than rates in the rest of the city (US Census Bureau 2022b). At Nubian Station, almost 28,000 people pass through every day. This occurs amid the many other cumulative impacts that Roxbury community members already face from air pollution, other environmental injustices, and displacement (Agyeman 2005).

ACE has done major work in Boston's transportation justice for over 20 years, much of it through the T Riders Union—a group of over 500 riders. Through the years, they've focused on a series of efforts:

- In 1997, ACE worked with the Clean Buses for Boston coalition, organizing over 75 youth and community and environmental groups to win a consent order for the MBTA to buy 350 compressed natural gas buses to begin replacement of its diesel fleet.

- In 2000, TRU won free bus transfers and reduced-cost subway-bus passes for all transit riders after a four-month Higher Fares Are No Fair campaign to lessen the burden of fare increases on lower-income riders (Loh 2006).

- Through 2000 to 2003, TRU participated in the Boston MPO's Environmental Justice Committee to try to get transit projects prioritized, democratize the MPO, and bring decisionmaking power to community hands. Unfortunately, this collaboration ended after it was recognized that TRU's input was not being considered and that the MPO process largely diverted community energy from the real sources of decisionmaking power, such as the state (Loh 2006).

- Another long campaign was built on nine years of relentless advocacy for a Youth Pass, culminating in 2014 with a sit-in that led to 21 youths being arrested. Still, the result was a win in 2015, when MBTA finally agreed to a Youth Pass pilot and then full implementation in 2016 (ACE 2016).

- Most recently, support has led to the implementation of a low-income fare in 2024, which will result in roughly 50 percent reduced fares and reduced weekly and monthly passes for those who are eligible for many other state assistance programs.

Through the years, TRU has organized riders in multiple ways, from supporting bus route captains in stewarding their routes, to advocating for state bills for MBTA funding, to organizing ride-a-thons and rallies to spread the word about key policy opportunities.

Alternatives for a Just, Mobile Future

TRU grounds itself in its transit justice platform built on these eight principles:

1. **Justice**
   We demand transit justice and an end to transit racism and classism.

2. **Equity**
   For too long, low-income communities and communities of color have endured unequal and subpar service from the MBTA. We demand equitable transit investment, quality bus service, and first-class service for transit-dependent riders.

3. **Affordability**
   We demand an MBTA that everyone can afford to ride.

4. **Respect**
   We demand safety and respect from transit police and an end to discriminatory policing by transit officers.

5. **Accountability**
   We demand worker and rider voice in decisionmaking, and accountability and transparency from the MBTA, Massachusetts Department of Transportation (Mass DOT), and elected officials.

6. **Sustainability and Quality in Funding**
   We demand full, dedicated, and sustainable MBTA funding from our governor and legislature, and removal of the Big Dig Debt from the MBTA.

7. **Public Transit = Public Good**
   We demand a fully public transit system that provides quality jobs to community members and is protected from threats of privatization.

8. **Community Stability**
   We demand that Mass DOT ensure new developments will strengthen our communities, not contribute to the displacement.

TRU aims to achieve this vision by working with coalitions to advance a number of different policies. Its members wish to see dramatically increased funding for the MBTA as well as fare-free routes and implementation of the low-income fare program. They are also active in preserving transit service for the community amid the MBTA's bus network redesign slated for December 2024. To combat poor air quality, the group recently won the start to commuter rail electrification with the Fairmont Indigo Line Coalition and advocated for an accelerated transition to electric buses by the MBTA along with equitable EV charging infrastructure. In 2024, ACE was selected to oversee $50 million in federal funding for regional environmental justice work (Bleichfeld 2024), and at the national level, it works with environmental justice organizations across the country to prioritize community-driven solutions and take part in the EPA's National Environmental Justice Advisory Council (NEJAC).

TRU also calls for shaping development for Boston's traditional low-income communities with civic and road design that reflects community needs and minimizes displacement. This advocacy for logical and fair design is in tandem with other environmental justice priorities, such as supporting siting reform for high-polluting energy facilities, expanding local air quality monitoring efforts and target setting, and promoting street and green space projects to counter heat and poor air quality.

Grassroots Feature: Rural Utahns Want More Transportation Options Like Transit

Transit in rural areas and small towns is an underrecognized lifeline for communities nationwide. For the over 100 million people living in such areas, transit means mobility, independence, and inclusion. Across the nation, around 30 percent of the population are not licensed to drive; many of those who are licensed do not drive for a number of other reasons (Zivarts 2024). While rural areas and small towns have long been associated with driving along open roads, they are far from immune from the impacts of lacking transportation options. Often, these issues are even more acute in rural areas, where a scarcity of public transit and large geographic distances can leave people without any option besides car transport.

Rural areas have specific demographic characteristics that increase the number of nondrivers living within them. For instance, rural areas have higher percentages of people over the age of 65, 18 percent of whom do not drive (Affordability and Accessibility 2022). While 13 percent of people in the United States report having a disability, according to the American Community Survey, people living in rural areas are 17 percent more likely to experience disability than their urban counterparts, and around 25 percent of people with disabilities in rural areas have given up on driving (Crankshaw 2023; Myers, Ipsen, and Standley 2022). People living in rural areas are also more likely to have lower incomes or live in poverty, which is especially severe for rural communities of color (Farrigan 2021). Yet transportation cost burden in rural areas is higher than in urban areas due to longer travel distances to reach the same destinations (BTS, n.d.). In addition, approximately 6 percent of households in rural counties do not have access to a car compared to 9 percent of households in urban counties (Bellis 2020; Laska and Bellis 2021).

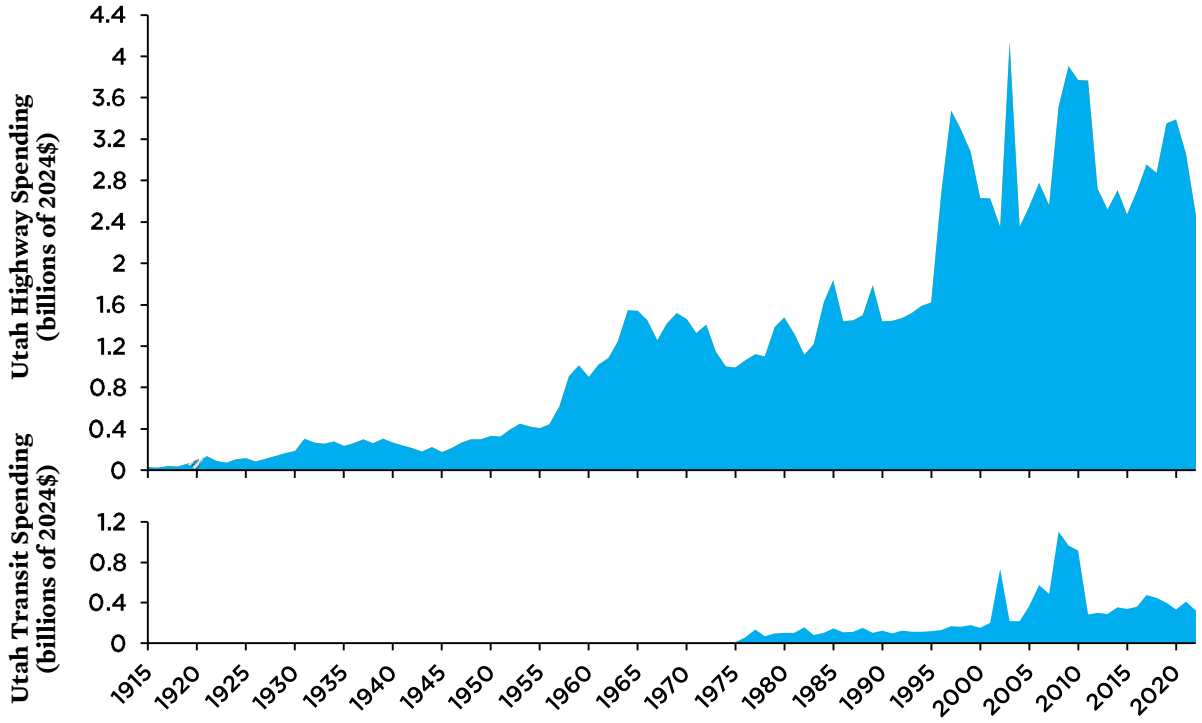
All these circumstances culminate in barriers to much-needed health care visits, community participation, and employment and economic opportunity (Arcury et al. 2005; Myers, Ipsen, and Standley 2022; Myers and Standley 2024; Rural Health Information Hub 2019). Whether people are nondrivers for most of their lives or for shorter moments, such as with a car breakdown, the availability of more transportation options helps lift these barriers.

Utah Has Not Invested Much in Transit outside of the Wasatch Front

Utah's development was drastically shaped by railroads, such as the transcontinental railroad completed in 1869. Until around 1920, the state's rail network had developed to touch all corners of the state, from Salt Lake City north to Butte, Montana, southwest past Cedar City to Las Vegas, and east through Carbon County to Grand Junction, Colorado (Haymond 1994). The railroads spurred mining industries, commerce, and banking.

Most passenger rail routes were discontinued in the latter half of the twentieth century because of the "subsidized highway widening" that started around 1909 with Utah's first State Road Commission and then accelerated by the time the Interstate Highway System was authorized in 1956 (Figure 11).

Figure 11. Utah Largely Funded Expanding Roadways throughout the 1900s



Prior to the establishment of the Utah Transit Authority in Salt Lake City, Utah's transportation spending was focused almost entirely on highways. The state invested substantial resources to transportation in the lead up to hosting the Winter Olympics in 2002, but the bulk of transit spending occurred in the build out of light rail prior to 2011. Cumulatively over the past 50 years, Utah has spent 8.5 times more money on highways than transit, a disparity that well exceeds the national average (5.5 times).

Since 1956, Utah has added over 17,500 miles (a 56 percent increase) in new roads, along with steady expansion of lane-miles averaging 400 miles a year, around the length of I-15 across the state. As a result, Utahns now drive 42 percent more per person than they did in 1981. Meanwhile, less than 3% of Utahns live within walking distance to frequent transit[16], and over 39,000 Utah households do not have access to a car (US Census Bureau 2022a). In addition, 51 percent of Utahns have unaffordable housing and transportation cost burdens (CNT 2024). Most transit service in Utah is concentrated in the Wasatch Front, whereas rural transit services outside of this region are scarce but essential lifelines.

For example, Moab Area Transit is a new fixed-route and on-demand fare-free transit service in Moab, serving its small town of less than 10,000 people. Before this, Moab had no transit for its community members and visitors. Circumstances started to change with state bill S.B.277 in 2017 that allotted $10 million to Moab as an area with significant economic development

[16] UCS analysis for block groups whose borders are within ½ mile of transit service that runs on average of 15 minutes or more, using 2024 GTFS feeds from transit agencies and American Community Survey 2022 5-year estimates (US Census Bureau 2022c). Draws upon methodology from CNT 2019.

impact associated with its recreation and tourism and a need to alleviate congestion. After scrapping plans for a parking structure, the Arches Hotspot Region Coordinating Committee facilitated a public process, where alternatives such as a transit/shuttle pilot program rose to the top as a priority, and around half of the survey respondents said they would use public transit if it were provided (Arches Hotspot Committee 2020, 26).

As a result, Moab served over 30,000 people in 2023, the first year of its five-year pilot program (McMurdo 2023). Through 2027, the service will be funded by a combination of Utah Department of Transportation (UDOT) funding, federal rural grant funding, COVID relief funding, and a match by the City of Moab. Although primarily addressing congestion, the program has significantly improved the lives of older adults, youth, and people with disabilities in the area who have been able to gain more independence.

In many more rural areas and small towns in Utah, over 800,000 people have no access to transit whatsoever (USDOT 2023b). Many more people's access might look like an intercity bus stop in their town with routes once per day (Richfield), a transportation system for older adults (Price), or a train station mainly serving freight trains (Helper). Some intercity services, such as UDOT-supported Elevated Transit, have been cut due to lack of funding. In comparison, the Colorado legislature recently allocated $30 million for a three-year pilot program to drastically increase service and $100 million more in ten years of funding for the Colorado Department of Transportation's intercity bus network called Bustang, which was launched in 2015 and connects rural towns via its Outrider routes (CDOT 2024b, 8).

A Future Transportation System That Serves Everyone, including Nondrivers

Nondrivers in rural Utah deserve more. Outside of the Wasatch Front, which runs in the central northern part of Utah and encompasses the biggest metro areas of Salt Lake City, Ogden, and Provo, the state mainly consists of small towns and rural areas. The over 900,000 rural Utahns comprise around 28 percent of the state's population. Further, rural Utahns support transit in these areas. In a 2023 survey of over 20,000 Utahns as a part of the Guiding Our Growth initiative led by the Governor's Office of Planning and Budget, over 50 percent of rural Utahns wanted state and local leaders to explore investments in statewide passenger rail, public transit in tourism areas, and transit services to connect smaller towns to larger cities, which was the largest category (Utah Governor's Office of Planning and Budget 2023b, 19).

So who are the nondrivers in Utah? Around one-third (33 percent) of people in Utah do not have a driver's license (FHWA 2024b). This is mostly the case because Utah has long been the state with the youngest population, but recent studies have shown that Utah will grow older due to declining fertility rates and the aging of the adult population (Bateman et al. 2024, 5).

For immigrants, who make up over 10 percent of Utah's population growth and move to both rural and urban areas (American Immigration Council 2022), many obstacles hinder their ability to drive. Utah has removed some barriers to accessing a driver's license by establishing a driver's privilege card for people who need to drive but do not meet the requirements for a driver's license. However, federal Immigration and Customs Enforcement officers can utilize state databases to run facial recognition technology on millions of people without consent and target detainment (Romboy 2019), so these initiatives still pose risks to undocumented immigrants, who respond by walking or taking transit. Even for immigrants with

documentation and the ability to drive, the cost burdens of car ownership are particularly acute as they face other economic barriers (Zivarts 2024).

A growing coalition called the Campaign for Transit in the 435, formed in late 2023, has been advocating for decisionmakers to prioritize rural transit in the 435 area code—most of the state outside of the Wasatch Front. Working with organizations such as United Today, Stronger Tomorrow and the Utah Rail Passengers Association, the group of roughly 60 people has been meeting virtually and visited the Capitol in February 2024, in the heat of budget negotiations, to connect with lawmakers on its perspectives (Condos 2024).

The Campaign for Transit in the 435 called for the legislature to follow Governor Spencer Cox's budget recommendations to allocate roughly $45 million in sales tax revenues to transit, roughly doubling ongoing funding for statewide projects as well as funding a $2.5 million transit pilot innovation program for locally operated transportation systems (Utah Governor's Office of Planning and Budget 2023a, 34). If the legislature had approved, this funding would have allowed different communities to design locally tailored transit solutions.

Rural communities deserve abundant, high-quality transit just as urban communities do. Though transit may take different forms, its core purpose remains the same—to provide people with additional, affordable, and accessible options to get where they need to go.

Grassroots Feature: The Movement for Communities over Highways in Shreveport, LA

Shreveport is the anchor of Northwest Louisiana and is the fourth largest metropolitan area in the state. The city began in the 1800s as a company town but grew quickly in the antebellum years on the backs of enslaved Africans, who picked cotton for the hundreds of planters in the region, which was transported through Shreveport down the Red River to New Orleans to market. This exploitation of Black labor was just the start of the many of racial injustices that plague Shreveport today. Even after slavery had been abolished, Black people were trapped in a cycle of debt bondage, indentured labor, tenant farming, and sharecropping (Brock 2001, chap. 3; Bayliss 2020).

Through the 1900s, Shreveport's economy was tied to the booms and busts of the fossil fuel industry. As the birthplace of offshore drilling, the area made significant profits during the 1920s and 1930s but suffered a deep, prolonged recession during the bust in oil exploration in the 1980s. More recently, the nearby Haynesville Shale gas exploration cushioned some of the effects of the Great Recession of 2008, but production was drastically reduced around 2013 (L. C. Scott 2023, 140; MineralAnswers.com 2024). These are some of the same industries that have caused hot spots of toxic air pollution along an 85-mile stretch of the Mississippi River in Louisiana nicknamed Cancer Alley (Younes et al. 2021; Human Rights Watch 2024).

Meanwhile, through the 1900s, the history of policy decisions leading to segregation and redlining from the 1950s kept Black people stuck in a cycle of disinvestment. In the early 1900s, the rise of racial zoning laws and racially restrictive covenants were designed to keep Black people out of White neighborhoods (Seicshnaydre et al. 2018). Through the 1930s, the Home Owners' Loan Corporation (HOLC), a federal agency, graded the "residential security" of loans through a practice known as redlining (Nelson and Winling 2023; Lewis 2020, 34). The Federal Housing Administration's pivotal 1938 Underwriting Manual emphasized how "infiltration of inharmonious racial groups" had a negative impact on credit risks. As a result, Black neighborhoods like Allendale were marked as "hazardous" or "declining," without hiding that the presence of people of color was the justification for a poor rating.[17] This made it more difficult for people in these areas to access federally subsidized mortgage financing and guarantees, cementing segregation, White flight, and disinvestment in central cities.

While many of these explicitly racist practices were ruled unconstitutional by the Supreme Court throughout the 1900s, practices of segregation continued through "neutral zoning" that placed Black neighborhoods next to harmful and noxious industrial land and associated them with "blight." Private market discrimination, segregated public housing, urban renewal, and predatory lending together upheld these practices to create today's highly segregated city (Seicshnaydre et al. 2018).

Racial inequality has led to a staggering situation. White people in Caddo Parish live an average of four years longer than Black people, are twice as likely to have a bachelor's degree, and earn $18,000 more each year. Generally wealthier areas exist between I-49 and the Red River and within suburban enclaves outside the city limits in Bossier and Caddo Parishes,

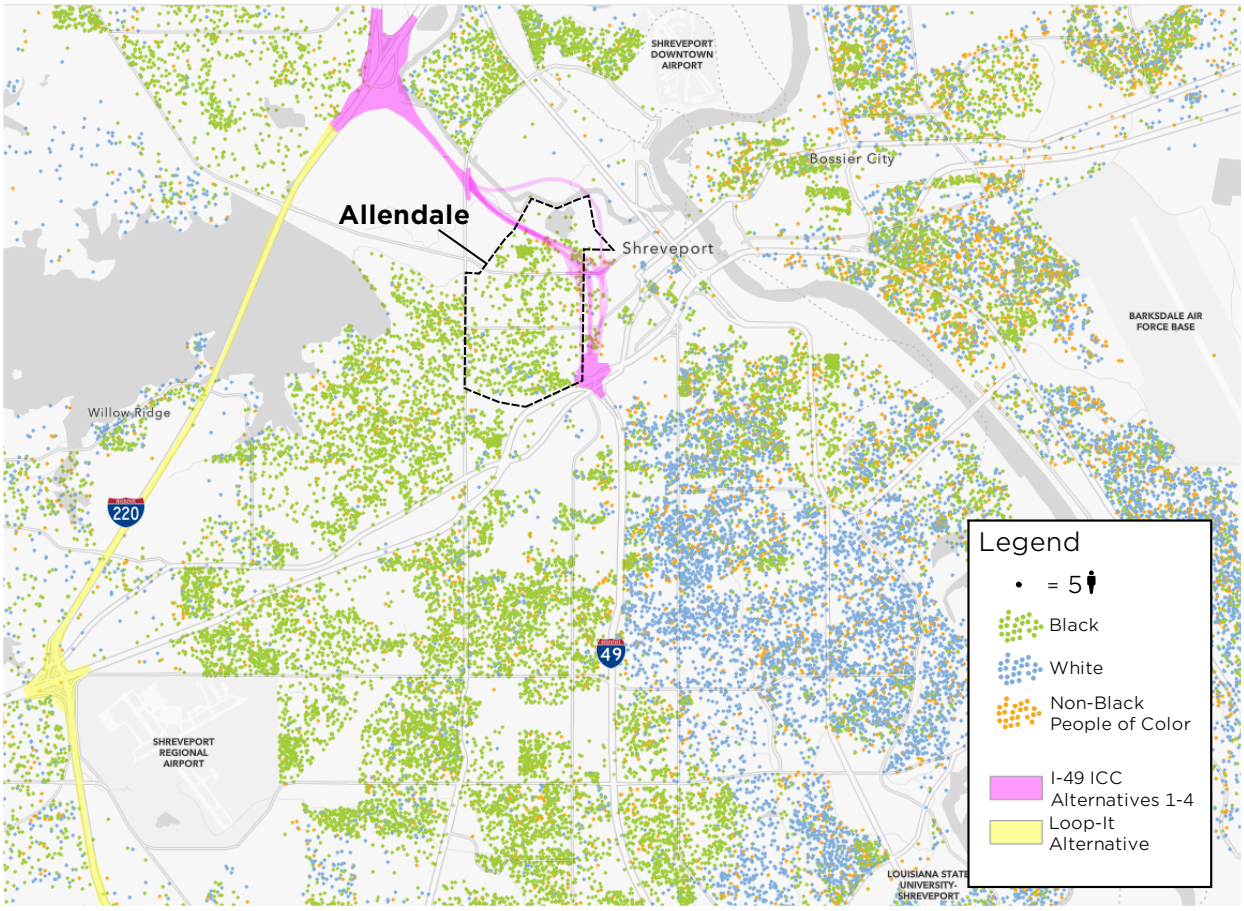
[17] *Aside from a small White population of "older citizens of the city of the better class," the HOLC rating for the historically Black Allendale neighborhood of Shreveport was marked down due to area descriptors of "Black laborers" and "lower class wage earners." In Shreveport, all the areas marked "Best" or "Still Desirable" were 100 percent White (Nelson and Winling 2023).*

whereas places with the lowest incomes are concentrated in the urban core west of I-49 (Figure 12).

Then In Came the Highways

The construction of the urban interstate segments added to these harms, not just for Black neighborhoods but for the city overall. Through the 1950s to 1960, while Shreveport was a "city on-the-grow," its leaders decided to cut through the heart of the city with I-20 east to west and I-49 south to north (Mitchell 2019). Thriving "Crosstown," the first Black settlement following the Civil War, was wiped out, and other vibrant African American neighborhoods were severed (Moore 2011). Shreveport was a compact city in 1950 with around 127,000 people living in 24 square miles. The commitment to the I-20 and I-49 urban highways marked the shift to car-dependent infrastructure expansion and the beginning of population decline in

Figure 12. Shreveport is Highly Segregated by Race



Shreveport is divided by I-49, with Black communities concentrated to the West having substantially lower life expectancy, economic status, and quality of life than White communities to the East (Lewis 2020). Most of the proposed I-49 Intercity Connector (ICC) expansions extend that boundary to the north through Allendale, while alternative proposals could circumvent further harm by routing through traffic along a rebuilt State Route 3132 in the South to the existing I-220 loop.
SOURCE: Modified from Esri 2023 to include the I-49 ICC proposals.

historically Black core neighborhoods in the city, such as Allendale, where the population dropped from 34,600 in 1959, when I-20 construction began, to 16,000 by 1970. The threat of I-49 through Allendale caused continued property disinvestment and population loss to 3,700 by 2020 (Lau 2014).

But this harm was not enough. Completely outside of Eisenhower's envisioned highway system, completed in 1992, the creation of I-49 was promoted by business and fossil fuel industries (Interstate 49 International Coalition, 2013). Its southward portion from I-20 in Shreveport to Lafayette was completed in 1996, and north of Shreveport to Texarkana in 2018. I-49 avoids crossing the center of cities such as Texarkana and Opelousas, but by 1996, it had already cleaved majority-Black neighborhoods in Alexandria and had sapped nearby property values, dead-ended streets that provided access to downtown, and facilitated sprawl (White 2007). Lafayette has experienced a decline similar to Allendale's. A longtime threat of a promoted I-49 Connector cutting through predominantly Black central city neighborhoods and threatening the Lafayette drinking water aquifer has caused abandonment and disinvestment.

In 1997, plans for the 3.8-mile I-49 Connector north of I-20 through Allendale to the I-220 loop were officially terminated by the FHWA and Louisiana Department of Transportation (LADOT). But in 2009, the zombie freeway was politically revived. The Northwest Louisiana Council of Governments (NLCOG) and the LADOT released an over-2000-page stage 0 feasibility study to connect the two portions of I-49 through Shreveport in an effort called the I-49 Inner City Connector (I-49 ICC). While only a stretch of less than four miles, this urban freeway threatened the loss of 2,300 homes from 1970 to 2000. The unjust disproportionate impacts continue for over 100 remaining households in the historic Black community of Allendale, as nearby property values are devastated and community members experience a host of air quality, safety, and economic harms.

> *"The last place that [this money] needs to be expended is on an unnecessary and destructive highway, when the surrounding roads, streets, sidewalks, water, drainage, and sewer systems within many of our neighborhoods are still awaiting long-promised but still yet undelivered equitable investments from the local, state, and federal governments." – Kim Mitchell*

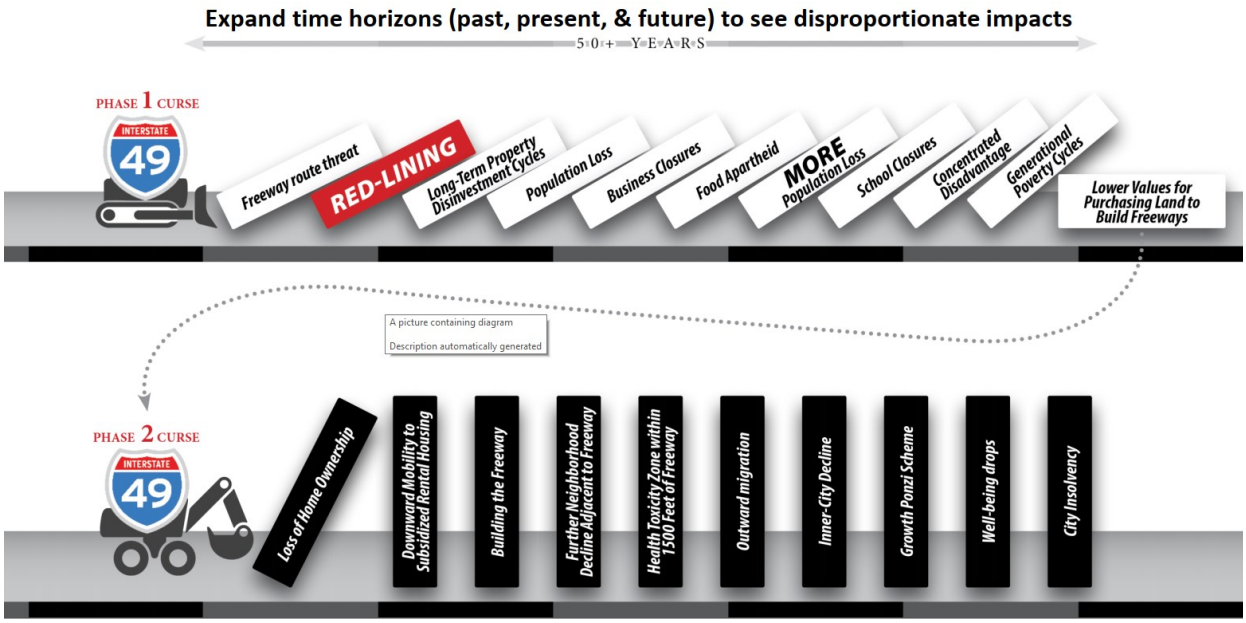
Often, the impacts from constructing highways are portrayed as something of the past in the Eisenhower era of the 1960s. But situations like the one in Shreveport remind us that the fight still lives on today. Even the mere mention of a possible highway triggers ongoing cycles of disinvestment (Figure 13).

Allendale Strong Has Been Building Community for over a Decade

Against these concrete behemoths, grassroots advocates are fighting for the communities they have built and love.

In 2005, many evacuees from Hurricane Katrina moved to Shreveport and needed a place to stay. At this time, I-49 ICC was officially a dead project. Community Renewal International and the Fuller Center for Housing banded together to help not only provide first-time homeowner housing but also reverse the cycle of poverty and high crime that often befalls urban neighborhoods. The Center built 48 houses in Allendale, where Hurricane Katrina

Figure 13. The Proposed I-49 ICC Has Brought Decades of Disinvestment and Burdens



As Kim Mitchell has said, "If you want to understand disproportionate impacts, you have to expand your time horizons." *Looking over a longer term shows how the proposed I-49 ICC has spurred a larger cycle of disinvestment beyond the direct impacts to those in the proposed right-of-way to the neighborhood and city.*
SOURCE: Graphic by Danielle Richard and reproduced with permission from Allendale Strong

victims and other low-income individuals and families were able to invest sweat equity to buy homes with interest-free mortgages. The community is anchored by two Friendship Houses, community centers inside homes, and since 2005, crime has dropped by more than 70 percent. In 2009, after new homeowners were already growing a safe and loving community, NLCOG revived the I-49 ICC concept, with the agency's preferred route running over most of the new homes and the two Friendship Houses. Those that would not be run over would be left in the toxicity zone of the elevated freeway.

In 2012, with growing mistrust of the I-49 ICC public process facilitated by NLCOG, an Allendale Strong initiative called Loop-It was established as a learning-doing community committed to preserve, promote, and grow its community values and connections to other Shreveport neighborhoods. Community members documented the history of elevated, limited-access inner-city expressways and collected information about worldwide trends to tear down existing and block new elevated expressways. The initiative sprang into action, circulating positions and letters, organizing community members to attend NLCOG meetings, and pursuing legal action. Using the Freedom of Information Act (FOIA) to obtain NLCOG's travel demand model, Loop-It brought on a technical modeling expert to debunk NLCOG's modeling methodologies in a series of memos and to show how the employment growth assumptions accelerate depopulation of the city.

Thus began the more-than-10-year battle against NLCOG, LADOT, and business interests running a $100,000 misinformation ad campaign promoting the I-49 ICC. As the group has learned, the process is long and is meant to wear out anyone fighting a freeway.

"Why don't downtown leaders get it? Downtown thrived when Allendale thrived." – Allendale community member at a neighborhood planning meeting in 2013

Throughout the years, Allendale Strong has been rooted in the strength of its community. It began to attract scientists, communications experts, and all sorts of people with skills to help the cause. National organizations such as the Congress for the New Urbanism, Smart Growth America, and Strong Towns have used their voices in the media and helped the group navigate bureaucratic processes. In 2021, Allendale Strong was one of the early organizers of the Freeway Fighters Network, a coalition of community advocates across the country who work in solidarity to advocate for national-level USDOT policies to prioritize people over highways and reconnect communities from past highway harm. More recently in 2024, Allendale Strong banded with groups across the state, including in New Orleans, Lafayette, Monroe, Baton Rouge, and Natchitoches, as the Louisiana 4-Corners Coalition for Transportation Planning Reform.

For Dorothy Wiley, the founder of Allendale Strong, enough is enough. She lived on Claiborne Avenue in New Orleans before Hurricane Katrina and watched how the construction of the I-10 elevated expressway sapped the community. Dorothy and her husband Charles have also lived in Portland, Oregon, where they experienced the harmful aspects of gentrification. After moving to Allendale, she faces the same threat yet again, with the specter of a highway-threatening displacement.

I was powerless against a hurricane named Katrina, but I am not powerless against a man-made roadway that could equally destroy my home and life. – Dorothy Wiley

We Deserve a Future without the Harms of Highway Expansion

Allendale Strong seeks to prioritize community values in transportation planning, not the values of the past legacies of unsustainability and inequity. The group envisions a future prioritizing growth within the city based on multimodal, safe, wealth-building streets with local ownership. For the I-49 ICC, it sees a ground-level business boulevard as a nearby investment while routing through traffic to the existing I-220 loop that surrounds the city and connects I-49 north and south of the city (thus the name "Loop It").

Its members have joined over 209 other organizations to endorse the Communities over Highways principles (America Walks et al. 2024) which call for a moratorium on highway expansions until climate, equity, and maintenance goals are met, and in the meantime, demand investment in fixing existing roads and bridges, prioritizing safety over speed, making transit functional, and reconnecting communities already divided by highways.

In the 1950s, US cities began an untested experiment to grow economic prosperity by accelerating outward growth of cities' infrastructure. Land use planning was disconnected from transportation planning. Allendale Strong's learning-doing community exposed how outdated 1950s transportation planning assumptions about the benefits of driving more, driving farther, and driving faster have continued to inform technical engineering practices and economic justification calculations that support highway capacity expansion. These outdated assumptions prevent decisionmakers and transportation planners from seeing important realities: (1) cities have overbuilt infrastructure they cannot afford to maintain; (2)

urban highways have harmed cities socially, environmentally, and economically; and (3) in older parts of cities, once-destination places along pedestrian-preference, wealth-building streets have declined due to "stroad"[18] investments that prioritize through traffic over pedestrian safety. Transportation planning assumptions are in direct conflict with community desires for unique and quality places that are the basis for city master plans. And while transportation plans continue to be funded, city master plans remain unfunded. The negative outcomes generated by this conflict will not be addressed without intention. Allendale Strong has proposed collaborating with the metropolitan planning commission to

1. Shift transportation planning aspirational values to prioritize city master plan aspirational values.

2. Reconnect transportation planning to land use planning that prioritizes community values over engineering values.

3. Engage community members in meaningful learning-doing opportunities to holistically cocreate solutions to problems generated by transportation planning–induced growth pattern realities.

4. Participate in Louisiana 4-Corners Coalition for Transportation Planning Reform's statewide campaign to engage community members in unstroading Louisiana cities.

5. Form community-led street design teams to set design criteria values for city wealth-building streets and place-connecting roads.

[18] *"Stroad," a term first coined by Strong Towns, describes a roadway that neither supports economic development as destinations (street) nor acts as an effective thoroughfare for higher-speed travel (road). A hybrid of a street and road, a stroad is a wide, high-speed roadway (generally with speeds from 20–50 mph) with sparse walking and biking infrastructure. Yet, stroads contain crucial access points for goods, services, and opportunity (StreetLight 2024). They are particularly dangerous for pedestrian and bicyclist safety, are an inefficient maintenance responsibility for already-struggling municipal finances, and prevent sustainable and equitable transportation options outside of a car (Strong Towns 2018).*

Chapter 5
Policy Recommendations: Prioritize People before Highways

All of us, from all walks of life, deserve to get to where we need to go with abundant, sustainable transportation choices. No matter where we call home, we deserve affordable transportation options outside of expensive car ownership that helps our communities economically thrive. Yet, with pushes from self-interested auto, oil, and road-building industries, policymakers at the federal, state, and local levels continue to reinforce the current car-dependence of the United States. For communities across the country, expanding transportation options, ensuring decisionmaking through an equity and climate lens, and rendering decisionmaking processes more accessible, democratic, and equitable are crucial ways to create a clean, prosperous, and just future.

Greatly Expand Transportation Options

We need to move from historical disinvestment in a complete set of transportation options to investment in a system that offers abundant access to everywhere we need to go and that promotes economically thriving communities in both urban and rural areas. This shift means investing in networks of safe sidewalks for pedestrians, paths for biking and micromobility, and frequent, wide-ranging, affordable, and clean public transportation. These efforts depend on land-use changes that allow people to live near high-quality transit without displacement (Chapple and Loukaitou-Sideris 2019), dismantling structural racism in community safety (Bharoocha and Burch 2024; Transportation Equity Caucus 2024), and ensuring good jobs with high labor standards while enabling working people to move freely (Labor Network for Sustainability 2021, BlueGreen Alliance 2023). Several potential policies exist in this regard:

Establish a program for federal transit operations funding. Transit expenses fall into two categories—operating expenses, which are everyday costs, like paying operators or purchasing fuel, and capital expenses, which are costs to acquire, maintain, or update assets, such as buying new trains and buses. Currently, federal transit funding goes primarily to capital expenses, whereas operating expenses help improve transit service, fares, and maintenance to provide the needed service for riders. Creating a new program, such as the one outlined in the Stronger Communities through Better Transit Act (H.R.7039) for operating support, would shift this paradigm. UCS research has shown that $20 billion in federal operating funds each year could result in 100 million additional transit service hours, or a 37 percent increase above current levels. This boost could translate to more frequent buses and trains, more expansive transit routes, and drastic economic and employment benefits for communities across the country (Shen 2024; C+CP and National Campaign for Transit Justice 2024).

Increase federal assistance and funding for small-town and rural transit. Rural transit agencies often lack sufficient funding and capacity to coordinate procurement and other improvements. Establishing a standard for rural mobility service tied to increases in the Federal Transit Administration's (FTA) Rural Formula Program grants could help guarantee

service improvements. And expansions to the federal procurement clearinghouse could help lower capital costs. Also, a competitive rural mobility innovation fund could improve service for agencies who lack capacity to experiment. Improving transit service in rural areas is an important part of an equitable transportation system that improves options for all people.

Flex federal highway formula funding for transportation options. Since the ISTEA in 1991, state departments of transportation and MPOs have been able to flex funding from Federal-Aid Highway Programs to pay for transit, bike, and pedestrian infrastructure projects. Given that states and MPOs have much discretion over the direction of their transportation projects, this federal flexibility allows these agencies to invest in more transportation options and better serve community needs, though it has been highly underutilized. Still, states such as New Jersey and Vermont have used this flexibility to fund transit service and make up for other missing streams of dedicated transit funding (TransitCenter 2022a). Some 30 states currently ban the use of state gas tax revenue on nonhighway projects, however, even when those investments in transportation options are more sustainable, equitable, and accessible for more people (Kenny 2023). Such state policies that reinforce the expensive status quo should be challenged.

Fund transit, pedestrian, and biking infrastructure through state and local legislation and referenda. With the need for more diverse funding sources to fund transportation choices amid unsteady budgetary horizons (Freemark and Rennert 2023), states, regions, counties, and municipalities often take portions of sales tax or property tax to support transit service in to supplement much-needed federal funding. States like Minnesota, Colorado, and Pennsylvania have passed landmark funding for transit (Brey 2023; Miller 2024; Fitzgerald and Saint 2024). Other states have passed temporary measures to stave off immediate needs (Sears 2024). Many localities also place transit funding on ballot referendums every year, with over $46 billion of total transit funding up for a vote across the country in 2024 (APTA 2024). These initiatives can meaningfully improve transit service and bike and pedestrian infrastructure in communities while countering fossil fuel industry campaigns that stifle investments (Tabuchi 2018).

Make Transportation Decisions through an Equity and Climate Lens

Our transportation projects should be prioritized in rational ways, including the extent to which they help achieve climate goals, limit further harm to communities hit heavily by their impacts, and improve access for those who need it most. This will necessarily mean meeting more rigorous standards for funding expensive, high-polluting highway expansion projects that commit us to excessive maintenance costs. Instead, we must first prioritize the long backlog of existing infrastructure maintenance. State departments of transportation and MPOs also need to be accountable and transparent in how they decide on what gets built. Many policies at all levels of government can help us make these decisions in ways that prioritize the climate and community benefits:

Adopt a moratorium on highway expansion projects until equity, climate, and maintenance goals are met. Highway expansion projects have received over a quarter of federal surface transportation funding in the past two years yet are financially wasteful, harmful to the climate, and detrimental to equity (Salerno 2024; Horrox and Delattre 2023; Duranton and Turner 2009; Bullard, Johnson, and Torres 2004). Engineers and planners have shown that highway expansions fail to decrease congestion and produce little benefits to employment or other economic activity (Handy 2015). Economists have shown that freeways

have been placed in neighborhoods with high growth potential but then stymie local economic growth and productivity (Brinkman and Lin 2022). Public health research has shown that proximity to highway traffic comes with major cardiovascular, respiratory, and maternal health consequences (Samuels and Freemark 2022). Social scientists and legal scholars have shown how highway construction has been instrumental in segregation and the destruction of Black and Brown communities and risks continuing to repeat the same mistakes today (Archer 2020; Karas 2015). Meanwhile, in 2020, polling showed high bipartisan support for a 10-year highway expansion moratorium to reorient investments toward repairing infrastructure, and high support for transit investments even among car users (Ray et al 2020). At the federal, state, and regional levels, focusing on maintenance before constructing new, larger highways is a science-based policy that prioritizes benefits to communities, not special interests.

Set federal and state metrics for transportation greenhouse gas emissions. Many state departments of transportation and MPOs do not track the greenhouse gas emissions from transportation. Yet this is a commonsense first step in bringing awareness to the impacts of our transportation system with regularly reported, standardized data to inform transportation decisions. Implementation of measures such as the FHWA's greenhouse gas performance measure (Shen 2023) and other policies for state-level transportation greenhouse gas limits can help bring transparency to nebulous processes and planning by requiring specified methodologies, emissions target setting, and regular reporting (e.g. Massachusetts EOEEA 2022). These can help communities hold their state and regional transportation agencies accountable for their choices' impacts on the climate.

Require roadway expansion projects to assess and mitigate climate and air pollution emissions. At the project level, modeling that informs decisions is often based on antiquated science that does not account for induced demand and that overestimates emissions benefits of free-flowing traffic (Wilson 2024). State-level policies enacted in Colorado and Minnesota and proposed in New York and Maryland require assessment of the emissions impacts of roadway capacity expansion projects using updated methodologies and providing commensurate greenhouse gas mitigation projects, such as investments in transit or bike and pedestrian infrastructure (CDOT 2024a; Move Minnesota 2024; New Yorkers for Transportation Equity 2024; Transform Maryland Transportation 2024). While avoiding the harms of highway expansion altogether is the most ideal policy, mitigating its harms is a second-best approach.

Ensure that benefits of transportation investments serve historically marginalized communities. President Biden's Justice40 Initiative created in Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, is one of the first meaningful federal attempts in decades to prioritize historically marginalized and overburdened communities, requiring 40 percent of the overall benefits of certain federal investments to flow to "disadvantaged" communities (Kumar 2024). However, in transportation, less than 30 percent of transportation funding is covered by this requirement.[19] Expanding and codifying Justice40 for transportation spending, in consultation with affected communities, would help right historic wrongs and build a more equitable transportation system for the future. In addition, states, with their large discretion over which transportation projects get funded, have adopted

[19] This is largely because Justice40 is limited to "climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of critical clean water and wastewater infrastructure." We see a role for Justice40 principles to be applied to all programs, however. See the full list ofJustice40-covered programs at White House 2023.

similar policies explicitly requiring investments in historically marginalized communities, such as the Climate Leadership and Community Protection Act in New York (Equitable and Just National Climate Platform 2024). Programs to address past highway-expansion harms to communities, such as the Reconnecting Communities Program, are also promising but require more funding and updated policies and practices to ensure community benefits.

Make Decisionmaking More Democratic, Accessible, and Equitable

Transportation decisionmaking processes should be representative of and meaningfully engage the people and communities who are most affected by proposed projects. For decades, the auto, road-building, and fossil fuel industries have profited from excessive highway expansion and denying us choices in modes of transportation. All of us, whether Black, Brown, or White, US-born or immigrant, deserve to have a seat at the table to ensure transportation projects truly benefit our communities. Some potential policy approaches include:

Require MPO boards to have proportional representation by population. When MPOs were created in 1962 and given significant responsibilities to coordinate federal funding in 1991, they were mostly appointed under the principle of one-government-one-vote (Luna 2015). For decades, this paradigm has overrepresented suburban counties and underrepresented urban jurisdictions, which often have higher populations of people of color. As a result, MPOs with more suburban representatives allocate more money to highways than transit (Nelson et al. 2004). This voting structure is a common struggle for grassroots efforts for more transportation choices, with some notable examples in Houston, Austin, Dallas, and Boston (DeGood 2024). Having decisionmakers more closely represent the populations they serve can better align final decisions with benefits to communities.

Require report backs and strengthen community engagement requirements. While community engagement is legally required, many state and local agencies do not have the capacity or expertise to go beyond the bare minimum, leaving these spaces difficult to navigate and inaccessible to most people. Fully utilizing and expanding federal funding for meaningful community engagement activities (USDOT 2023a, 12), as well as creating report-back mechanisms are promising ways transportation agencies can create genuine community engagement. More recommendations, such as on improving accessibility of public processes, are outlined in *Beyond Checking the Box: A Scorecard for Meaningful Community Engagement in Transportation Planning* (Bacare et al. 2024).

Increase the Freedom to Move, Together

How can we advance some of these policy changes? One important avenue is the federal surface transportation reauthorization, a must-pass piece of legislation that comes around every five years or so in which Congress examines our transportation system and guides agencies in how they should alter their course. The most recent reauthorization contained in the Bipartisan Infrastructure Law is set to expire in September 2026; the next reauthorization is a critical opportunity for clean and just transportation policy. Members of Congress, especially those on key committees, need to hear from communities themselves about the importance of more transportation options, accountability to communities for climate and equity in decisionmaking, and community voice in transportation decisionmaking.

In addition, year by year, state, regional, and local governments shepherd hundreds of billions of dollars to build transportation projects across the country. Each state, in conjunction with MPOs and municipalities, is required to develop a statewide transportation improvement program outlining upcoming projects. Some places also have legislated climate targets and planning processes to ensure they are on track for emissions goals. While these processes can be overwhelming and numerous for everyday community members and advocates, engagement with these initiatives, both inside and outside public meetings, can help shape important state and local decisions.

We all deserve a seat at the table, and for individuals and advocates who want to see or are already working toward these changes in our communities, we can claim our place by connecting with other advocates and coalitions, organizing and advocating, and educating our communities, wherever we are. It is up to us to fight for a future that will save us all trillions of dollars as we build a clean energy future and a transportation system that connects all of us, without expensive household costs funneling into industry profits. Together, we can advance science-based policies that ensure we all have the freedom to get where we need to go, for generations to come.

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