



FRAME FOR MOBILITY · FIELD GUIDE

TRANSPORTATION BEST MANAGEMENT PRACTICES

The 100-Question Field Guide

One hundred questions, answered the way the evidence answers them. Each entry states the best practice plainly, then makes the data case for it and names its sources — so an official can act on the answer, defend it in public, and check it afterwards.

The questions run across the full surface transportation system: street safety, transit operations, fix-it-first maintenance, project delivery, automated vehicles, paying for the system, freight, and local control. They are the management companion to the FRAME Act — what the law looks like when it is run well.

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VISION ZERO, STREET SAFETY & PEDESTRIAN PROTECTION

Questions 1–12

1. What is the best federal policy practice for achieving Vision Zero and eliminating traffic deaths?

BEST PRACTICE

Make the Safe System Approach—the core engineering philosophy behind Vision Zero—the binding national policy for all public roads, rather than treating street safety as an optional side grant. Best practice requires designing streets under the premise that human beings will inevitably make mistakes, and road geometry must ensure those mistakes do not result in death or serious injury. To move cities and states from safety rhetoric to rapid deployment, the federal government should pay **100% of the cost** for proven safety countermeasures (eliminating local matching requirements) and enforce real financial accountability: if a state fails to make measurable progress reducing traffic fatalities for three consecutive years, 1% of its general formula funding should be forfeited and redirected directly to local governments within that state to fix high-injury corridors.

THE DATA CASE

U.S. traffic deaths reached 40,901 in 2023 and an estimated 39,345 in 2024, while pedestrian deaths have surged 57% since 2000 to over 7,100 annually. Cities using target-driven Vision Zero engineering have proven results: New York City cut pedestrian deaths by 45% (2023 vs. 2013), and Hoboken, NJ has recorded zero traffic deaths since January 2017.

Sources: NHTSA FARS; GHSA; NYC DOT; City of Hoboken

2. Why should proven street safety countermeasures receive 100% federal funding with zero local match?

BEST PRACTICE

Eliminate the traditional 20% local matching requirement for proven safety countermeasures and fund them at a **100% federal share**. Across the country, cash-strapped municipalities delay life-saving street redesigns—such as protected bike lanes, raised crosswalks, pedestrian refuge islands, leading pedestrian intervals, and road diets—because they lack the local capital budget to cover a 20% match. Meanwhile, standard highway projects enjoy steady formula subsidies. By paying 100% of the cost for physical safety retrofits and separating safety procurement from multi-year highway reconstruction packages, cities and states can immediately deploy systemic, low-cost traffic calming across their entire high-injury networks without waiting on local tax initiatives.

THE DATA CASE

Roadway fatalities have plateaued near 40,000 per year for over a decade (1.20 deaths per 100 million VMT), far above peer nations, even though proven, low-cost systemic engineering countermeasures exist and are ready to deploy.

Sources: NHTSA, 2025; FHWA Proven Safety Countermeasures

3. What is the best management practice for holding State DOTs accountable when traffic deaths rise?

BEST PRACTICE

Replace voluntary, unreviewable safety targets with federally verified fatality-reduction targets backed by an automatic **1% funding forfeiture**. Historically, state transportation departments have been allowed to set rising fatality targets—predicting more deaths than the year before—without federal review or financial consequence. Best practice requires the federal government to review and approve state safety targets based on empirical crash data. If a state misses its safety targets for three consecutive years, 1% of its core formula funds should be automatically withheld and converted into competitive safety grants awarded directly to cities, counties, and regional agencies inside that same state to redesign dangerous corridors.

THE DATA CASE

A federal audit of the 2014–2017 performance cycle revealed that states failed to meet most of their self-set safety targets, and nearly half of all states failed to even submit required progress assessments because federal regulators lacked authority to reject targets or penalize failure.

Sources: Government Accountability Office, GAO-20-53

4. How should cities fund Vision Zero Action Plans and safe street redesigns without getting bogged down in grant red tape?

BEST PRACTICE

Consolidate fragmented local safety, bus, and street discretionary grants into a **single, direct-to-local competitive grant front door** with no state DOT pass-through and a predictable statutory calendar. Rather than forcing city staff to write separate applications for planning grants, safety grants, and multimodal grants across different federal agencies, cities should apply through one unified Community Mobility competition. Existing local Vision Zero Action Plans should automatically satisfy planning prerequisites, and project awards should be scored strictly on projected reductions in deaths and serious injuries per dollar spent, with decisions guaranteed within seven months of the application deadline.

THE DATA CASE

Local governments own roughly 75% of the nation’s road miles where the vast majority of pedestrian and cyclist crashes occur, yet receive only 15% of federal formula dollars directly and lack the staff capacity to navigate over 100 fragmented federal programs.

Sources: Local Officials for Transportation Coalition, 2025; GAO-11-318SP

5. How can a city fix a deadly state-owned arterial highway running through an urban neighborhood?

BEST PRACTICE

Empower Metropolitan Planning Organizations (MPOs) and cities with **project concurrence veto power** alongside recaptured safety penalty funds. State-owned urban arterials—wide, high-speed multi-lane roads cutting through city commercial strips and residential neighborhoods—account for a disproportionate share of pedestrian deaths. Best practice gives the regional MPO formal sign-off authority before a state DOT can spend flexible formula block grant dollars inside a metropolitan boundary. If a state refuses to calm traffic on a deadly urban arterial, local leaders can withhold concurrence on highway spending and apply directly for the state’s forfeited 1% safety penalty funds to redesign the corridor themselves.

THE DATA CASE

Pedestrian fatalities have climbed 57% since 2000 (reaching 7,148 in 2024 after peaking at 7,737 in 2022), overwhelmingly concentrated on multi-lane arterial roadways designed for vehicle speed rather than pedestrian survival.

6. What is the best practice for funding school zone safety and student transit access?

BEST PRACTICE

Embed school zone traffic calming and youth transit access directly into core local mobility formula funding rather than treating Safe Routes to School as a tiny, isolated boutique program. Cities and school districts should co-program formula mobility dollars to build physical speed-reduction infrastructure within a half-mile of every school—including raised speed tables, curb extensions, pedestrian hybrid beacons, and protected bikeways—while simultaneously funding universal, fare-free youth transit passes. Combining safe physical crossings with free student bus and rail access eliminates morning drop-off traffic congestion and builds lifelong transit ridership habits.

THE DATA CASE

Pedestrian fatalities have risen 57% since 2000 while national public transit ridership remains 34% below its 2014 peak, making youth mobility and safe school corridors critical for both child safety and transit recovery.

Sources: NHTSA; APTA 2024 Fact Book

7. Should federal street safety funding be restricted to major highways, or can it be used on local neighborhood streets?

BEST PRACTICE

Make Safe System street redesigns eligible for federal funding on **any public road**, regardless of functional classification. Legacy federal highway rules often restricted formula investments to "federal-aid highways," starving locally owned residential streets, neighborhood collectors, and municipal intersections where children, seniors, and cyclists travel daily. Best practice removes artificial roadway classification barriers so municipal traffic engineers can deploy traffic circles, speed humps, daylighted intersections, and sidewalk networks wherever crash risks and vulnerable road users exist.

THE DATA CASE

Roughly 75% of all U.S. road miles are owned and maintained by local governments, yet local jurisdictions receive only about 15% of federal formula funding directly.

Sources: Local Officials for Transportation Coalition, 2025

8. How should agencies evaluate and rank local street safety projects for grant funding?

BEST PRACTICE

Score and rank safety grant applications using **quantitative crash-reduction modeling** rather than narrative storytelling. Grant evaluators and city engineers should prioritize projects based on the projected number of fatalities and serious injuries prevented per dollar invested, paired with measurable improvements in access to jobs, schools, and essential services for disadvantaged neighborhoods. By targeting investments to the top 5% to 10% of streets that make up a city's High-Injury Network, agencies achieve dramatic crash reductions quickly and transparently.

THE DATA CASE

Under target-driven, data-mapped Vision Zero management focusing capital dollars on high-injury intersections and corridors, New York City reduced pedestrian fatalities by 45% between 2013 and 2023.

Sources: NYC DOT

9. How should physical street design be combined with connected vehicle safety technology?

BEST PRACTICE

Treat connected vehicle technology (Vehicle-to-Everything, or V2X) as a supplement to—never a replacement for—physical Vision Zero street geometry. Cities should first narrow wide lanes, tighten corner turning radii, and build physical curb protection so drivers are physically unable to speed. Layered on top of safe geometry, agencies can use 100%-federally-funded digital infrastructure dollars to install roadside communication units at high-conflict urban intersections, broadcasting signal phase timing and pedestrian crosswalk occupancy directly to approaching vehicles to prevent blind-turn and red-light crashes.

THE DATA CASE

Connected V2X deployment has the documented potential to address up to 80% of non-impaired crash scenarios caused by human driver error, while physical Safe System street design has already delivered zero traffic deaths for nine straight years in Hoboken, NJ.

Sources: USDOT V2X Deployment Plan; City of Hoboken

10. What is the best practice for addressing rural road safety and high-speed lane departures?

BEST PRACTICE

Deploy systemic, corridor-wide roadway departure countermeasures funded at a **100% federal cost-share**. Rural two-lane roads experience high fatality rates due to high speeds, unforgiving roadsides, and head-on collisions. Rather than waiting to reconstruct an entire rural highway, state and county engineers should bundle low-cost systemic treatments—such as center and edge-line rumble strips, high-friction surface treatments on curves, cable median barriers, wider paved shoulders, and high-visibility retroreflective striping—into statewide maintenance contracts that simultaneously help human drivers and automated lane-keeping systems stay on the road.

THE DATA CASE

Total U.S. roadway fatalities remain near 40,000 annually (39,345 estimated in 2024), with rural roads carrying a disproportionate share of high-speed fatal run-off-road and head-on crashes.

Sources: NHTSA, 2025

11. How can transportation agencies stop "stealth highway widenings" disguised as safety or maintenance projects?

BEST PRACTICE

Establish a strict statutory boundary between true safety/maintenance work and roadway capacity expansion. State transportation agencies frequently package highway lane additions as "safety improvements" or "pavement rehabilitation" to avoid scrutiny and capture higher federal subsidies. Best practice requires stripping the maintenance/safety exemption from **any project that adds general-purpose through-lanes for half a mile (0.5 miles) or more**. Any such project should automatically drop to a 50% federal funding share and be required to publish a full public accounting of its induced vehicle miles traveled (VMT) and lifecycle carbon emissions.

THE DATA CASE

Despite decades of highway widening justified in the name of safety and congestion relief, annual commuter traffic delays have grown 142% since 1990 (from 26 to 63 hours per commuter) while roadway deaths remain near 40,000 a year.

12. How do we reconnect neighborhoods divided by 20th-century urban highways?

BEST PRACTICE

Make neighborhood reconnection a permanent, core eligible purpose of both formula mobility block grants and competitive community grants, rather than a tiny, underfunded discretionary pilot. Cities should use guaranteed local formula dollars and direct competitive grants to cap inner-city expressways with parks, replace crumbling elevated viaducts with at-grade multimodal boulevards, and build safe pedestrian and transit bridges across rail and highway trenches—restoring the street grid and reconnecting residents to jobs, schools, and healthcare.

THE DATA CASE

In the 100 largest U.S. metropolitan areas, the typical resident can reach only 30% of jobs by transit within 90 minutes (and only 25% of low- and middle-skill jobs), a spatial disconnect worsened by physical highway barriers dividing urban neighborhoods.

Sources: Brookings Institution, Missed Opportunity

PUBLIC TRANSIT OPERATIONS, BUS RAPID TRANSIT & PARATRANSIT

Questions 13–24

13. What should the future of ADA paratransit service be?

BEST PRACTICE

Transition ADA paratransit from a rigid, day-ahead reservation mandate into a **modern, on-demand mobility service governed by strict rider-approved performance contracts**. Under legacy federal rules, transit agencies are locked into an expensive, inflexible delivery model requiring 24-hour advance booking and yielding long, unpredictable pickup windows. Best practice grants regulatory waivers to agencies that sign binding contracts—endorsed by their local disability rider committees—guaranteeing quantifiably superior outcomes: same-day on-demand booking via smartphone or phone, shorter maximum wait times, fewer refused trips, expanded service territories, and ADA-capped fares using dynamic routing and mixed fleets.

THE DATA CASE

The national average cost of an ADA paratransit trip was \$29.30 in 2010—3.5 times the \$8.15 cost of a fixed-route trip—and has escalated dramatically since, reaching **\$61.97 per trip** at Los Angeles County's Access Services in FY2023, straining municipal transit operating budgets nationwide.

Sources: GAO-13-17; LA Access Services FY2023 Report

14. Can federal transportation formula money be used to pay for daily transit operations, driver wages, and bus frequency?

BEST PRACTICE

Yes—best federal policy eliminates the artificial wall between "capital" and "operating" funds and makes **day-to-day public transit operations fully eligible under unified local mobility formula grants**. For decades, federal rules eagerly subsidized buying new buses for large cities while prohibiting agencies from using those same formula dollars to pay drivers to run the buses more frequently. Because riders experience transit through frequency, reliability, and hours of service—not the age of the bus barn—cities and transit authorities should have full flexibility to spend federal formula dollars on running 10-minute all-day bus networks.

THE DATA CASE

Only 30% of metropolitan jobs are reachable by transit within 90 minutes for the typical urban resident; research confirms the primary constraint is rarely the absence of vehicles, but inadequate service frequency and operating span. Meanwhile, transit demand rose 7% in 2024 to 7.7 billion trips where service actually runs.

Sources: Brookings Institution; APTA, 2025

15. How do we fix the \$140B–\$176B national transit state-of-good-repair backlog?

BEST PRACTICE

Merge separate highway and transit maintenance silos into a single **State of Good Repair & Resiliency Block Grant** funded at a **90% federal cost-share**, conditioned on a unified, risk-based asset management plan. Currently, aging subway signals, rail bridges, bus maintenance depots, and highway overpasses compete in disconnected funding buckets. By offering a 90% federal match for rehabilitating existing transit and road assets—compared to just 50% for adding new highway lanes—states and transit agencies are financially incentivized to clear their transit repair backlogs before system failures halt service.

THE DATA CASE

The Federal Transit Administration and Volpe Center placed the national transit state-of-good-repair backlog at \$140.2 billion in 2022 (10% of the \$1.34 trillion total replacement value of all U.S. transit assets), while broader ASCE infrastructure assessments place the inflation-adjusted backlog at \$176 billion—up 125% since 2000.

Sources: FTA / Volpe Center, 2025; ASCE Report Card

16. Why does it cost so much to build subways and rail transit in the United States, and what is the best practice to rein in costs?

BEST PRACTICE

Require **independent benefit-cost appraisals, verified engineering readiness before grant award, and public grading of all megaproject applications** in a single mode-neutral competition. U.S. transit projects suffer from severe cost escalation because projects are politically committed before engineering and environmental reviews are complete, and bespoke station designs are layered onto weak procurement structures. Best practice caps total federal participation at 80% (with a maximum 50% megaproject grant share), locks scope and budget into binding grant agreements, and pairs grants with a federal Center of Excellence offering standardized contract templates and Construction Manager/General Contractor (CM/GC) delivery incentives.

THE DATA CASE

Globally, 9 out of 10 transport megaprojects overrun their budgets, with rail averaging +45% cost escalation. In the U.S., NYU’s Transit Costs Project found urban rail averaging ~\$350 million per mile globally versus nearly \$4 billion per mile for New York’s Second Avenue Subway Phase 2—over 11 times the global norm due to institutional and delivery failures.

Sources: Flyvbjerg et al., 2003; NYU Marron Institute Transit Costs Project; GAO-19-562

17. What is the best practice for deploying on-demand microtransit in low-density suburbs and rural areas?

BEST PRACTICE

Use flexible Community Access & Mobility formula funds and direct Community Mobility competitive grants to deploy **agency-integrated on-demand microtransit** in suburban and rural zones where fixed-route buses run empty. Rather than running 40-foot buses on 60-minute headways through cul-de-sac subdivisions, transit agencies should deploy dynamically dispatched vans and small shuttles that connect riders directly to high-frequency regional rail stations, bus rapid transit spines, grocery stores, and medical clinics, integrated under a single regional fare system.

THE DATA CASE

While transit service vehicle-miles increased 18% between 2000 and 2024, total ridership fell from its 2014 peak of 10.8 billion trips to ~7.1–7.7 billion trips, reflecting a spatial mismatch between legacy routes and decentralized suburban job centers.

Sources: American Public Transportation Association, 2024 Fact Book

18. How should federal policy reward states and regions that actually grow public transit ridership?

BEST PRACTICE

Establish a **5% Pay-for-Performance Bonus Pool** that financially rewards states and metropolitan regions for exceeding verified transit ridership, safety, and congestion-reduction targets. Under current federal law, transit and highway formulas distribute money based on historical legacy shares and lane-miles, regardless of whether anyone rides the system. Best practice sets aside 5% of total block grant funding to reward states that measurably grow transit ridership and system reliability—turning transit mode shift into a lucrative financial win for state budget directors.

THE DATA CASE

Transit ridership rebounded 7% in 2024 to 7.7 billion trips where agencies restored frequent, reliable service, proving that riders return when agencies prioritize operational performance.

Sources: APTA, 2025

19. How can small and mid-sized transit agencies replace aging diesel buses and rebuild bus barns without filing three separate federal grants?

BEST PRACTICE

Consolidate Bus & Bus Facilities grants, RAISE grants, and local street safety grants into a **single annual Community Mobility competitive grant** with direct local eligibility. Small and mid-sized transit agencies rarely have the grant-writing consultants needed to track multiple federal notices of funding opportunity across different agencies. A single competitive door allows a city or transit authority to submit one cohesive application covering zero-emission or clean replacement buses, depot charging/maintenance upgrades, and bus-priority street redesigns—with a 90% federal share for state-of-good-repair facility upgrades.

THE DATA CASE

Over 100 separate federal surface transportation programs currently exist, pricing small and mid-sized communities out of competitive discretionary grants due to administrative complexity.

Sources: GAO-11-318SP; Local Officials for Transportation Coalition, 2025

20. How do we protect rider rights and disability equity when modernizing ADA paratransit?

BEST PRACTICE

Make **formal endorsement by the local Committee of Riders with Disabilities** a mandatory statutory prerequisite before any agency can enter a paratransit modernization pilot, and establish a hard legal floor for service quality. Best practice guarantees that ADA fare caps remain strictly enforced, the underlying legal entitlement to service is never diluted, and performance is audited annually against the agency's own prior-year baseline. If an agency fails to reduce average wait times, fails to lower trip denials, or fails to expand service hours/territory, the federal government revokes the waiver and restores standard rules immediately.

THE DATA CASE

Paratransit riders across the U.S. routinely face day-ahead booking mandates and high trip denial or late-arrival rates despite per-trip agency costs exceeding \$60 in major metro areas.

Sources: GAO-13-17; LA Access Services, 2023

21. What is the best practice for speeding up city buses stuck in mixed traffic?

BEST PRACTICE

Pair **100%-federally-funded traffic signal technology** (transit signal priority and automated bus-lane enforcement cameras) with **90%-funded street rehabilitation** to build dedicated Bus Rapid Transit (BRT) and bus-only lanes during routine repaving. Because software and digital systems should be legally treated as capital infrastructure on par with concrete, municipal DOTs and transit agencies can co-fund red-painted bus lanes, boarding islands, and real-time signal priority without enduring multi-year megaproject red tape.

THE DATA CASE

Commuter traffic delays have increased 142% since 1990 to 63 hours per year, trapping surface buses in congestion and driving down bus speeds and ridership nationwide.

Sources: Texas A&M Transportation Institute, 2025; APTA, 2024

22. How should transit operations be funded if a city implements congestion pricing or variable road pricing?

BEST PRACTICE

Mandate by statute that **100% of net peak-hour congestion surcharge revenues return directly to the metropolitan transportation authority** where the fees were collected to fund transit service, microtransit, and active transportation alternatives. Road pricing only wins public support when commuters see a fast, visible improvement in their daily travel options. Returning peak-period variable mileage surcharges directly to regional transit operations creates a self-sustaining local revenue loop for bus and train frequencies.

THE DATA CASE

Congestion costs the U.S. economy \$269 billion annually in wasted time and fuel, while public support for abstract road pricing sits at just 24% unless paired with direct motorist hold-harmless credits and visible local mobility benefits.

Sources: Texas A&M TTI, 2025; NCHRP Synthesis / Mineta Transportation Institute

23. How can we make non-federal transit operating investments transparent to taxpayers?

BEST PRACTICE

Require every state's annual **Infrastructure Health Report Card** to publicly disclose all federal and non-federal spending on public transit operations alongside highway capital spending. In many states, governors and legislatures claim to "fully fund transportation" while starving local bus and rail operating budgets, forcing cities to rely on regressive local sales taxes. Publishing state and local transit operating contributions on a standardized national portal exposes funding disparities and holds state leaders accountable for multimodal access.

THE DATA CASE

Only 30% of metro jobs are reachable within 90 minutes by transit, and roughly half of states fail to transparently report comprehensive progress assessments under legacy federal reporting rules.

Sources: Brookings Institution; GAO-20-53

24. How should transit agencies pay for the transition to Paratransit Modernization Pilots if there is no new standalone pilot earmark?

BEST PRACTICE

Capitalize and operate modern paratransit dispatch software and on-demand fleets using **flexible Community Access & Mobility formula funds** and **100%-matched digital infrastructure provisions**. Because best policy makes both public transit operations and software/dispatch platforms eligible uses of core formula funds, transit CFOs do not need a separate boutique earmark to modernize paratransit—they can immediately deploy formula dollars to upgrade routing software and cut their \$60-per-trip operating losses.

THE DATA CASE

With ADA paratransit trips costing 3.5x to 7x more than fixed-route trips (\$29.30 national baseline vs. \$8.15 fixed-route; \$61.97 in LA), efficiencies unlocked by dynamic dispatching pay for their software costs rapidly.

Sources: GAO-13-17; LA Access Services, 2023

FIX-IT-FIRST, BRIDGE & PAVEMENT MAINTENANCE & CLIMATE RESILIENCE

Questions 25–35

25. What is the best practice for implementing a true "Fix-It-First" infrastructure policy?

BEST PRACTICE

Change the federal price signals so that **fixing existing roads, bridges, and transit pays a 90% federal cost-share, while adding new general-purpose highway lanes pays only a 50% federal share**. For 70 years, the federal government paid an identical 80% share whether a state repaired a crumbling bridge or built a brand-new suburban highway bypass. That flat match subsidized expansion while maintenance was deferred. By creating a 40-percentage-point price spread between repair (90%) and expansion (50%), maintaining existing assets becomes the smartest, cheapest fiscal decision a state budget director or mayor can make.

THE DATA CASE

America's roads earn a D+ grade with 39% to 43% of major roads in poor or mediocre condition, costing the average driver over \$1,400 per year in extra vehicle repairs and operating costs. Meanwhile, bridge preservation costs 12 times less than reconstruction, and pavement preservation costs 5 times less than rehabilitation.

Sources: ASCE 2025 Report Card; Caltrans Life-Cycle Analysis

26. How do we prevent the nearly 50% of "Fair" condition U.S. bridges from tipping into "Poor" condition?

BEST PRACTICE

Require every state to maintain a **risk-based, lifecycle asset management queue** as a mandatory condition of receiving State of Good Repair formula funds. In current practice, states often let "fair" bridges deteriorate until they become structurally deficient emergencies, then spend 12 times more reconstructing them. Best practice requires programming highway and transit bridge preservation in one unified plan ordered by risk and deterioration curves—sealing decks, repairing joints, and retrofitting piers while bridges are still in fair condition.

THE DATA CASE

While 6.8% of U.S. bridges are currently rated in "poor" condition, a massive cohort of **49.1% are rated only "fair"**—sitting just one deterioration cycle away from requiring full-scale reconstruction at a 12:1 cost penalty.

Sources: ASCE 2025 Infrastructure Report Card; Caltrans

27. How should agencies fund climate resilience and extreme weather protection for roads and rail?

BEST PRACTICE

Embed resilience retrofits directly into the core **State of Good Repair & Resiliency Block Grant at a 90% federal share**, rather than treating climate resilience as a separate grant competition. When a bridge, coastal road, tunnel, or rail line is already open for routine rehabilitation, engineers should simultaneously upgrade drainage capacity, elevate

flood-prone electrical equipment, stabilize slopes, and reinforce seismic joints. Buying weather protection during scheduled maintenance costs a fraction of rebuilding after a catastrophic flood or earthquake.

THE DATA CASE

Every **\$1 spent on federal hazard mitigation and resilient infrastructure saves \$6** in avoided disaster recovery and reconstruction losses.

Sources: National Institute of Building Sciences, Natural Hazard Mitigation Saves

28. Why should highway widening and new general-purpose lanes face a 50% federal cost-share penalty?

BEST PRACTICE

Price new general-purpose highway lane additions (of one mile or more) at a **50% federal match** to account for induced demand and long-term maintenance liabilities. Decades of empirical traffic engineering prove that adding general-purpose highway lanes generates induced travel—new drivers and longer trips rapidly refill the added lanes, leaving congestion worse than before while saddling state taxpayers with perpetual resurfacing costs. Requiring states to put up 50% of their own money forces rigorous fiscal discipline before pouring new concrete.

THE DATA CASE

Despite trillions spent widening highways since 1990, annual commuter delay has increased 142% (from 26 hours to 63 hours lost per commuter annually), costing the nation \$269 billion a year.

Sources: Texas A&M Transportation Institute, 2025 Urban Mobility Report

29. How do we stop states from raiding maintenance budgets to fund political ribbon-cuttings?

BEST PRACTICE

Lock State of Good Repair & Resiliency block grant dollars to projects that appear inside a **verified, public State Asset Management Plan**. Under best practice, projects that are not in the risk-based asset inventory simply do not qualify for the grant. Furthermore, every state must publish an annual **Infrastructure Health Report Card** showing the exact percentage of its pavement, bridges, and transit assets in good, fair, and poor condition—preventing governors from hiding deferred maintenance behind new highway groundbreakings.

THE DATA CASE

Deferred maintenance across highways and transit has left 39% of major roads in poor or mediocre condition and created a \$140.2 billion transit repair backlog.

Sources: ASCE 2025 Report Card; FTA / Volpe Center, 2025

30. What is the best practice for measuring and disclosing the climate and traffic impact of new highway lanes?

BEST PRACTICE

Require a standardized **Carbon and VMT Scorecard** for every state and for any major project adding roadway capacity. System-wide, states should report annual per-capita vehicle miles traveled (VMT) and total surface transportation CO_2 emissions on their annual report card. Project-by-project, any project adding general-purpose through-lanes (for 0.5 miles or more) must calculate and publish its projected **induced VMT and full**

lifecycle carbon emissions using a single, uniform federal methodology developed with environmental regulators prior to approval.

THE DATA CASE

Currently, project-level induced demand and carbon estimates are either omitted entirely or calculated using inconsistent, state-specific models that cannot be compared or audited nationally.

Sources: FRAME Policy Analysis; GAO-11-318SP

31. Should highway maintenance and transit maintenance be planned in separate silos or together?

BEST PRACTICE

Program highway, bridge, tunnel, rail, and bus asset rehabilitation under **one unified grant and one multimodal asset plan**. When a state or metro region rehabilitates a major commuter corridor, fixing the highway deck, upgrading the dedicated busway, and modernizing the parallel rail bridge are all keeping the same commuter shed moving. Breaking down the statutory firewall between Title 23 (highways) and Title 49 (transit) for state-of-good-repair funding lets regions allocate preservation dollars to whichever asset faces the highest failure risk.

THE DATA CASE

Dividing surface transportation across more than 100 separate modal programs has resulted in a \$140.2B transit backlog alongside 49.1% of bridges sitting in fair condition.

Sources: GAO-11-318SP; FTA/Volpe, 2025; ASCE, 2025

32. What is the lifecycle cost difference between timely pavement preservation and delayed road reconstruction?

BEST PRACTICE

Intervene early on "fair" pavements with preventive surface treatments (micro-surfacing, thin overlays, crack sealing) funded at a **90% federal share**, rather than waiting for sub-base failure. Asset management systems should prioritize preservation treatments at the top of the deterioration curve. When federal funding rewards early preservation with a 90/10 match, state and municipal public works departments can stretch their paving budgets five times further.

THE DATA CASE

Lifecycle engineering analyses demonstrate that deferred road repair costs **5:1 (rehabilitation vs. preservation per lane-mile)** and **12:1 for bridges** when assets are allowed to deteriorate to failure.

Sources: California Department of Transportation / Caltrans Life-Cycle Cost Analysis

33. How can cities fund local street resurfacing and municipal bridge repairs?

BEST PRACTICE

Give cities two reliable paths for local street and bridge repair: first, a **guaranteed direct sub-allocation** of formula mobility funds; and second, direct access to the **Community Mobility competitive grant program** where locally owned road and bridge rehabilitation qualifies for a **90% federal cost-share**. Because local governments own half the nation's bridges and three-quarters of its roads, they should never be forced to pay 100% of local resurfacing costs out of municipal property taxes while state highways get federal subsidies.

THE DATA CASE

Local governments own ~75% of U.S. road miles and ~50% of U.S. bridges, yet receive only ~15% of federal formula transportation dollars directly.

Sources: Local Officials for Transportation Coalition, 2025

34. How should we fund the replacement of mega-bridges and tunnels that are too large for annual formula budgets?

BEST PRACTICE

Channel mega-bridge and tunnel replacements into a single, mode-neutral **Strategic Infrastructure Investment Program (SIIP)** where they compete on empirical merit, readiness, and benefit-cost ratios. When a multi-billion-dollar interstate river crossing or harbor tunnel reaches the end of its structural life, no single state's annual formula apportionment can absorb the cost. A consolidated megaproject competition provides up to 50% direct grant funding (80% total federal cap) once preliminary engineering, environmental review, and non-federal matching commitments are fully locked in.

THE DATA CASE

Fixed-link megaprojects (bridges and tunnels) historically average **+34% cost escalation** globally when committed before engineering and risk appraisals are complete.

Sources: Flyvbjerg, Holm & Buhl, 2003

35. How do we make road maintenance prepare our streets for the future instead of just repeating 1970s specs?

BEST PRACTICE

Upgrade pavement markings, signage, and safety geometry **during routine repaving cycles** at marginal cost. Every time a city or state repaves a corridor using 90%-matched State of Good Repair funds, engineers should narrow overly wide lanes, install high-visibility crosswalks, add protected bike lanes, and lay uniform, high-contrast machine-readable lane striping (per voluntary AV-ready standards). Never repave a dangerous, outdated street back to its exact old layout.

THE DATA CASE

Upgrading lane geometry and installing machine-readable striping during scheduled resurfacing avoids the 5:1 to 12:1 cost penalty of standalone retrofits while addressing the 40,000 annual crash toll.

Sources: Caltrans; NHTSA, 2025

PROJECT DELIVERY, NEPA ENVIRONMENTAL REVIEW, BUY AMERICA & WORKFORCE

Questions 36–49

36. What are the best practices in transportation project delivery to cut years off construction schedules?

BEST PRACTICE

Attack project delivery delays at their three real bottlenecks: **make State-led environmental review assignment permanent**, **put a 30-to-120-day shot clock on Buy America waivers**, and **pay a +5% federal funding bonus (up to 95% total share) for projects using modern contracting methods** like Design-Build or Construction Manager/General Contractor (CM/GC). Delays rarely happen because environmental standards are too strict; they happen because sequential federal-state paperwork queues, unbounded procurement waivers, and outdated design-bid-build contracting create years of administrative dead time.

THE DATA CASE

Federal Environmental Impact Statements take an average of **4.5 years** (with 25% taking over 6 years); Buy America waivers take **6+ months** with no statutory deadline; and **9 out of 10** legacy projects overrun their budgets.

Sources: Council on Environmental Quality; Michigan DOT / BPC; Flyvbjerg et al., 2003

37. How can we speed up NEPA environmental reviews without weakening environmental laws?

BEST PRACTICE

Make the **State Environmental Review Assignment program permanent and program-wide**, backed by **100%-federally-funded Capacity-Building Grants** so states can hire environmental attorneys, biologists, and GIS specialists. Under legacy rules, state DOTs prepare the environmental analysis and then wait years in a queue for understaffed federal reviewers to check the same record under identical standards. Letting qualified states assume federal NEPA review authority under a 10-year contract—audited publicly every two years, with zero reduction in substantive environmental protection—eliminates duplicate review queues.

THE DATA CASE

A study of all 1,276 federal EISs completed between 2010 and 2018 found a mean duration of **4.5 years** (median 3.5 years). Meanwhile, GAO found state and federal environmental reviews are substantially similar with little added value from sequential duplication.

Sources: CEQ EIS Timeline Study; GAO-15-71

38. How do we fix the Buy America (BABA) waiver backlog that leaves city and state projects in limbo?

BEST PRACTICE

Keep strict domestic-content manufacturing standards intact, but put every Buy America waiver on a **single public website** and enforce a strict **statutory decision clock: 30 days for repeat non-availability waivers and 120 days for new requests**. Furthermore, if federal officials deny a waiver claiming an American manufacturer exists, the denial must publicly name the domestic supplier in a national directory. Transparency and binding deadlines stop projects from sitting frozen while contractors hunt for specialty electronics, transformers, or steel components that aren't made domestically.

THE DATA CASE

Roughly **23% of surveyed FY2022 federal discretionary grant awardees still had no signed grant agreement by 2024–2025**, citing Build America, Buy America compliance and 6+ month open-ended waiver waits as primary bottlenecks.

Sources: GAO-25-107166; Bipartisan Policy Center; Michigan DOT

39. Why does traditional "Design-Bid-Build" contracting cause cost overruns, and what is the better alternative?

BEST PRACTICE

Shift complex projects away from traditional Design-Bid-Build toward **Design-Build, Construction Manager/General Contractor (CM/GC), or Public-Private Partnerships (P3)**, incentivized by a **+5% federal cost-share bonus (up to 95% total federal share)**. In traditional contracting, engineers design a project in isolation, put it out to the lowest bidder, and then get hit with massive change orders when the contractor discovers underground utilities or soil issues. Bringing the builder into the room during design (CM/GC) or uniting design and construction under one contract resolves constructability risks before prices are locked.

THE DATA CASE

Across 258 projects in 20 countries, 90% suffered cost overruns—averaging +20% for roads, +34% for bridges/tunnels, and +45% for rail—with zero improvement over 70 years of traditional procurement.

Sources: Flyvbjerg, Holm & Buhl, 2003

40. How can small states and city agencies learn to use modern contracting methods safely?

BEST PRACTICE

Establish a federal **Center of Excellence for Project Delivery** that provides standardized contract templates, risk-allocation guides, case studies, and hands-on technical advisors for first-time agency users. The highest risk in Design-Build or CM/GC occurs the very first time a city or state agency writes the contract. Providing free federal legal templates and embedded procurement experts eliminates the learning-curve barrier so mid-sized cities can deliver projects just as fast as major state DOTs.

THE DATA CASE

Each year, states fail to obligate billions in federal highway funds on schedule—resulting in **\$7.62 billion being redistributed in August FY2025 alone**—demonstrating a severe project-delivery capacity gap across agencies.

Sources: FHWA Notice N4520.291, FY2025 August Redistribution

41. What is the best practice for solving the severe construction and transportation workforce shortage?

BEST PRACTICE

Create an outcome-based **10% Workforce Performance Bonus** for states that measurably grow their skilled transportation labor force, rather than creating a top-down federal training bureaucracy. States should be judged on three verified, public metrics: (1) year-over-year growth in graduates from certified trade programs, (2) growth in active registered apprenticeships, and (3) a reduction in median time-to-hire for critical agency and craft positions. States that beat their workforce targets earn a 10% bonus on their core transportation apportionment, which they can spend flexibly on any eligible infrastructure project.

THE DATA CASE

In the 2026 AGC–NCCER Workforce Survey, **87% of construction firms reported unfilled hourly craft openings**, and **42% reported project delays caused directly by worker shortages**—the single largest cause of construction delay. The industry needs 349,000 net new workers in 2026 and 456,000 in 2027.

Sources: AGC & NCCER 2026 Workforce Survey; Associated Builders and Contractors

42. Why do states return over \$7.5 billion in unspent federal highway authority every August, and how do we fix it?

BEST PRACTICE

Address the annual "August Redistribution" churn by fixing the three root causes of slow obligation: **agency staffing shortages, environmental review queues, and Buy America procurement holds**. When states return \$7.6 billion in unused obligation authority at the end of the fiscal year, it proves the bottleneck is delivery capacity, not just funding. Funding state NEPA staff at 100% federal share, rewarding state trade/engineering hiring with a 10% bonus, and capping BABA waiver reviews at 30/120 days keeps capital moving on schedule.

THE DATA CASE

FHWA redistributed **\$7.62 billion in unused obligation limitation in August FY2025** (following \$7.9B in FY2023 and ~\$7.5B in FY2026) from states unable to deliver projects on time to states that could.

Sources: Federal Highway Administration Notice N4520.291

43. How do we prevent megaprojects from getting locked in politically before we know their true cost?

BEST PRACTICE

Enforce a strict **two-stage readiness and merit gate** before any federal megaproject grant is awarded, and **publish the grades of every applicant—including rejected projects**. First, evaluate whether the project is worth doing via an independent benefit-cost analysis covering productivity, safety, and supply chains. Second, verify readiness: preliminary engineering and NEPA review must be complete, sensitivity analysis performed, and non-federal financing committed before a dollar is awarded. Making "Not Recommended" ratings public stops poorly scoped projects from advancing via backroom lobbying.

THE DATA CASE

GAO found that federal transit megaproject cost-estimating practices failed to meet 5 of the 12 core steps in GAO's Cost Estimating Guide—specifically omitting sensitivity analysis that identifies which assumptions can break a project's budget.

Sources: Government Accountability Office, GAO-19-562

44. Should states that assume federal NEPA environmental review still have to analyze climate and traffic impacts?

BEST PRACTICE

Yes—any state assuming permanent federal environmental review authority must enter a binding 10-year contract that includes a mandatory duty to **publicly analyze induced VMT and carbon emissions for any project adding general-purpose highway lanes**. Streamlining the review queue should cut bureaucratic wait times, not hide environmental impacts. Combining state-led review speed with mandatory climate and induced-demand disclosure delivers fast, honest decision-making.

THE DATA CASE

Seventeen of the 18 states with state environmental policy acts already allow adoption of federal analyses to satisfy state law, proving that unified, single-record reviews can evaluate both local environmental rules and carbon impacts simultaneously.

Sources: GAO-15-71

45. How can the federal government use Buy America data to actually rebuild American manufacturing?

BEST PRACTICE

Use the centralized **Public Buy America Waiver Registry** to publish an annual **Domestic Manufacturing Gap Report** for Congress and private industry. Right now, waiver requests are scattered across agency dockets, so domestic manufacturers have no idea which transportation components are repeatedly waived due to domestic non-availability. Aggregating every waiver request onto one machine-readable portal creates an instant market map showing private investors exactly which sensors, rail parts, and electrical components America needs to manufacture at home.

THE DATA CASE

Because no centralized public register of waiver requests and rationales currently exists, every project sponsor researches domestic non-availability from scratch while industry lacks visibility into national supply chain gaps.

Sources: Bipartisan Policy Center; AAPA Reauthorization Docket

46. Can a state get more than a 95% federal share when combining variable match bonuses with innovative contracting?

BEST PRACTICE

Cap the combined innovative contracting bonus at a **maximum 95% federal cost-share** (outside of 100% safety/digital projects) so state and local sponsors always retain "skin in the game" on major construction contracts. While a +5% federal match bonus provides a powerful incentive for agencies to adopt Design-Build or CM/GC on an 80% or 90% state-of-good-repair project, maintaining at least a 5% local/state capital stake ensures the project sponsor vigilantly manages contractor costs and schedule performance.

THE DATA CASE

International megaproject data across 258 projects shows that sponsor financial accountability and early contractor risk-sharing are essential to curbing the +20% to +45% average cost escalation rate.

Sources: Flyvbjerg et al., 2003

47. How do we ensure accountability when states take over federal environmental reviews?

BEST PRACTICE

Subject every state participating in permanent NEPA assignment to **mandatory federal audits at least once every two years**, with all audit findings published on a public portal, backed by federal authority to revoke or remediate non-compliance. Furthermore, states must waive sovereign immunity to the extent needed so citizens retain the exact same right to challenge an environmental record in federal court as if USDOT had signed the Record of Decision itself.

THE DATA CASE

Seven states currently hold NEPA assignment authority under pilot rules, demonstrating that state-led review can cut years off the 4.5-year average EIS timeline while operating under federal legal standards.

Sources: CEQ; GAO-15-71

48. What is the best practice for fixing delays between a discretionary grant announcement and a signed grant agreement?

BEST PRACTICE

Lock competitive grant programs into a **fixed statutory calendar** and require **engineering and environmental readiness prior to award** for major capital investments. When USDOT awards discretionary grants to conceptual projects that haven't cleared preliminary design, Buy America scoping, or local match votes, grant agreements languish unsigned for years while inflation eats the budget. Requiring readiness up front and standardizing grant agreement templates gets shovels in the ground within months of award.

THE DATA CASE

A GAO survey of FY2022 discretionary grant recipients found that **23% still did not have a signed grant agreement two to three years after award announcement**.

Sources: GAO-25-107166

49. How should agencies measure whether public-private partnerships (P3) and Design-Build are actually saving time and money?

BEST PRACTICE

Require a **biennial empirical report to Congress and the public** auditing every project that received the +5% innovative contracting bonus against its baseline cost and schedule estimates. Rather than taking alternative delivery claims on faith, tracking real-world change orders, completion dates, and lifecycle performance across Design-Build, CM/GC, and P3 projects builds a verified national evidence base on which contracting method works best for each project type.

THE DATA CASE

Across 70 years of transport project data, cost forecast accuracy failed to improve because agencies rarely audited delivery methods systematically against initial baseline estimates.

Sources: Flyvbjerg, Holm & Buhl, 2003

AUTONOMOUS VEHICLES (AVS), CONNECTED VEHICLES (V2X) & DIGITAL INFRASTRUCTURE

Questions 50–61

50. What should the nation do right now regarding Autonomous Vehicles (AVs)?

BEST PRACTICE

Prepare the road, not just the car. Commercial driverless vehicles are already operating at scale on public streets, yet our roads are still striped, signed, and maintained strictly for human eyeballs. Best federal practice is to establish a voluntary **National AV-Ready Infrastructure Standard** covering uniform machine-readable pavement markings, digitally readable traffic control devices, and digital twins of the highway network—and make bringing roads up to that standard eligible for **90% State of Good Repair formula funds** and **100% digital innovation cost-share**. That way, cities and states upgrade their roads for automated driving during routine resurfacing and signal replacement at marginal cost.

THE DATA CASE

Autonomous deployment is a present reality, not a future projection: by autumn 2026, Waymo was operating **over 4,000 driverless vehicles** providing **500,000+ paid rides per week** with **271.3 million rider-only miles** logged through June 2026, while federal regulators granted Zoox the first commercial exemption for a vehicle with no steering wheel or pedals in July 2026.

Sources: Waymo LLC / CNBC, Sept 2026; NHTSA, July 2026

51. Can cities and states use federal highway money to buy software, data platforms, and digital twins?

BEST PRACTICE

Yes—modern transportation policy must legally define **software, data systems, traffic management platforms, and digital twins as capital "infrastructure"** eligible across all formula and competitive grant programs, and qualify certified digital infrastructure for a **100% federal cost-share**. In a 21st-century mobility network, bits are as essential as bricks. Allowing agencies to capitalize cloud traffic-signal optimization, curb-management APIs, and real-time digital twins stops agencies from pouring concrete when a software upgrade can move more people safely at a tenth of the cost.

THE DATA CASE

Congestion costs the U.S. \$269 billion annually, yet legacy federal rules historically favored physical roadway expansion (which averages +20% cost overruns) over high-return digital signal and corridor optimization.

Sources: Texas A&M TTI, 2025; Flyvbjerg et al., 2003

52. What is the best practice for deploying Connected Vehicle (V2X) technology across cities and highways?

BEST PRACTICE

Turn USDOT's non-binding V2X roadmap into a **funded National V2X Deployment Strategy** where installing roadside communication units (RSUs) and integrating signal data into traffic management centers explicitly qualifies for **100% federal funding** under both freight and community mobility block grants. Instead of scattered, incompatible local pilot projects, a unified national strategy ensures that when a vehicle approaches an intersection anywhere in America, it can digitally communicate with the traffic signal and detect pedestrians around blind corners using a single interoperable standard.

THE DATA CASE

USDOT's "Saving Lives with Connectivity" plan targets V2X deployment on 20% of the National Highway System by 2028, 50% by 2031, and 100% by 2036, citing the potential of V2X to eliminate up to **80% of non-impaired crash scenarios** caused by human error—yet the plan currently lacks dedicated statutory grant hooks.

Sources: USDOT National V2X Deployment Plan, 2024

53. How do we avoid a costly separate retrofit program to make roads readable for Autonomous Vehicles?

BEST PRACTICE

Fold machine-readable pavement striping and digital traffic signage directly into **routine State of Good Repair resurfacing and maintenance schedules**. Roads are restriped every few years and resurfaced every decade; traffic signals are replaced on predictable lifecycle schedules. By establishing a uniform national specification for lane-line width, contrast, and retroreflectivity and making it eligible under core maintenance block grants, agencies never have to pay for a standalone "AV retrofit program"—they simply lay machine-readable markings the next time the striping truck goes out.

THE DATA CASE

Paying for standalone retrofits or delayed rehabilitation costs 5 to 12 times more than incorporating upgrades into scheduled preservation cycles.

Sources: Caltrans Life-Cycle Cost Analysis

54. Who should regulate Autonomous Vehicle operations vs. AV road infrastructure—cities, states, or the federal government?

BEST PRACTICE

Maintain a clean institutional division of labor: **leave vehicle operational licensing and commercial AV rules to state and federal vehicle regulators, while using federal infrastructure standards and grant incentives to standardize the physical and digital roadway**. Where states preempt municipal AV operational rules, cities still control physical street geometry, curb management, traffic signal timing, and digital twin data. Standardizing machine-readable roads federally ensures AV fleets don't face 50 different striping and digital signage languages across state lines.

THE DATA CASE

States like Texas (SB 2807, 2025) have already authorized statewide commercial AV operations and preempted local vehicle regulation, while commercial robotaxi fleets surpass 500,000 weekly paid rides across multiple metro markets.

Sources: Texas SB 2807; Waymo / CNBC, 2026

55. What is a "Digital Twin" of a transportation network, and why should transportation agencies build one?

BEST PRACTICE

Build a **shared, machine-readable Digital Twin**—a live virtual replica of roadway geometry, lane widths, speed limits, work zones, bridge clearances, and traffic control devices—co-funded at a **100% federal innovation share**. A digital twin allows city and state engineers to simulate crash risks, test signal timing changes, broadcast live work-zone lane closures directly to connected and autonomous vehicles, and track asset deterioration in real time rather than relying on outdated paper maps or manual field inspections.

THE DATA CASE

Half of U.S. states currently fail to submit complete safety progress assessments, and asset data sits fragmented across incompatible databases while 49.1% of bridges sit in fair condition needing close lifecycle tracking.

Sources: GAO-20-53; ASCE, 2025

56. How can V2X and connected technology improve freight movement and port logistics?

BEST PRACTICE

Deploy **freight-corridor V2X, smart truck parking sensors, and automated port-gate appointment systems** using National Commerce & Freight block grants at a **100% federal cost-share for qualifying digital technology**. Connecting commercial trucks digitally to highway traffic signals, weigh-in-motion stations, and real-time rest-area parking availability reduces idle time at port gates, smooths corridor speeds, and allows long-haul drivers to locate safe night parking before their legal driving hours expire.

THE DATA CASE

Congestion costs the U.S. trucking industry a record **\$108.8 billion annually** (1.2 billion hours of delay, or \$7,588 per combination truck), while **75% of truck drivers** report difficulty finding safe parking at night.

Sources: ATRI 2024 Update; FHWA Jason's Law Survey

57. Why do machine-readable pavement markings help human drivers as much as Autonomous Vehicles?

BEST PRACTICE

Adopt the **AV-Ready uniform pavement marking standard** (high-contrast, wider 6-inch retroreflective edge and lane lines) across all state and local resurfacing projects because it is a dual-benefit safety investment. High-contrast, durable lane markings allow computer-vision cameras and lidar on automated and driver-assist vehicles to lock onto lanes reliably in rain and fog, while simultaneously giving human drivers—especially older drivers at night—dramatically clearer visual guidance to prevent fatal lane departures.

THE DATA CASE

U.S. traffic deaths remain near 40,000 per year (39,345 estimated in 2024), with nighttime and rural lane-departure crashes representing a major share of fatal collisions.

Sources: NHTSA, 2025

58. How do we prevent cities and states from buying proprietary "smart city" tech that locks them into one vendor?

BEST PRACTICE

Require all federally funded digital infrastructure, V2X roadside units, and data platforms to comply with the **open, machine-readable National Transportation Data Standard** and open API architectures. When agencies buy closed, proprietary software, they cannot share data with neighboring jurisdictions or switch hardware vendors without ripping out the entire system. Conditioning federal grant receipt on open, standardized, machine-readable data interfaces guarantees vendor interoperability across all 50 states.

THE DATA CASE

Federal transportation spending is currently fragmented across 100+ programs with incompatible state reporting formats that cannot be aggregated or compared nationally.

Sources: GAO-11-318SP; GAO-20-53

59. Should the federal government mandate that every rural town install AV and V2X equipment immediately?

BEST PRACTICE

No—make AV-ready road standards and V2X deployment **voluntary and incentive-driven**, backed by 90% to 100% federal funding eligibility rather than an unfunded mandate. Dense urban centers and major interstate freight corridors where autonomous fleets and heavy commercial traffic are already operating can deploy digital twins and V2X roadside units immediately, while rural counties can adopt high-visibility machine-readable lane striping organically as their roads come up for routine repaving.

THE DATA CASE

Commercial driverless operations (500,000+ weekly rides) and freight congestion (80%+ of goods trade concentrated in the top 100 metros) are highly concentrated geographically, calling for targeted, incentive-led rollout.

Sources: Waymo, 2026; Brookings Institution

60. How should cities manage curb space as robotaxis, ride-hailing, and commercial delivery vans surge?

BEST PRACTICE

Digitally map municipal curb zones into a **machine-readable digital curb inventory** (part of the network Digital Twin) funded under the 100% digital infrastructure share. When pickup/drop-off zones, commercial loading bays, bus stops, and bike lanes are published in a standardized digital format, cities can dynamically price commercial curb access, direct autonomous vehicles to safe drop-off spots away from crosswalks, and prevent double-parking from blocking bus lanes and bikeways.

THE DATA CASE

Urban traffic delays have risen 142% since 1990 (costing \$269 billion annually), while commercial autonomous ride-hailing has scaled past 500,000 paid trips per week.

Sources: Texas A&M TTI, 2025; Waymo, 2026

61. What is the best practice for integrating work-zone safety with connected and automated vehicles?

BEST PRACTICE

Require contractors on federally funded road projects to broadcast **real-time, machine-readable digital work-zone data feeds** into the state's Digital Twin and National Data Portal. Automated vehicles and navigation apps rely on accurate lane-closure data; when a construction crew shifts lanes with orange cones, broadcasting those exact coordinates digitally warns approaching vehicles in advance and protects highway construction workers from work-zone intrusions.

THE DATA CASE

With 39% of major roads in poor or mediocre condition and 49.1% of bridges in fair condition, construction work zones will expand nationwide as states shift to a 90%-matched Fix-It-First program.

Sources: ASCE 2025 Report Card

HIGHWAY TRUST FUND SOLVENCY, EV FEES, VMT ROAD PRICING & TARIFFS

Questions 62–73

62. How do we fix the insolvent Highway Trust Fund now that the gas tax is dying?

BEST PRACTICE

Replace decades of General Fund bailouts with a **three-part fiscal bridge to a permanent user-fee system**: (1) **immediately dedicate existing imported steel and iron tariff revenues** directly into the Highway Trust Fund; (2) establish a **fair, per-mile transitional fee on Battery Electric Vehicles (BEVs)** capped at what an average gas car pays; and (3) launch a **5-year, voluntary nationwide Vehicle Miles Traveled (VMT) Choice Pilot** that ends in a legislative blueprint to replace the federal fuel tax altogether.

THE DATA CASE

Under the February 2026 Congressional Budget Office baseline, the **Mass Transit Account runs out of money in FY2027** and the **Highway Account is exhausted in FY2028**, facing a **\$295 billion cumulative shortfall by 2036** after already requiring \$275 billion in General Fund bailouts since 2008.

Sources: Congressional Budget Office, Feb 2026 Baseline

63. Why is the federal gas tax failing, and why can't we just rely on it forever?

BEST PRACTICE

Acknowledge that the 18.4-cent federal gasoline tax is structurally expiring due to inflation and fleet electrification, and begin building its per-mile replacement immediately. Unchanged since 1993 and unindexed to inflation, the gas tax has lost nearly 40% of its purchasing power while construction costs have soared. Simultaneously, rising vehicle fuel economy and rapid adoption of electric vehicles mean every mile driven generates less tax revenue for the roads those vehicles use.

THE DATA CASE

The 18.4¢/gallon gas tax has lost **~39% of its purchasing power** since 1993; real-world fleet fuel economy reached a record **27.1 mpg in MY2023** (up 40% since 2004); and EVs/PHEVs reached **11.5% of new vehicle production** in MY2023 (projected at 14.8%), paying \$0 in federal gas tax.

Sources: ITEP; EPA 2024 Automotive Trends Report

64. What is the fairest way to charge Electric Vehicles (EVs) for road maintenance without punishing clean car buyers?

BEST PRACTICE

Charge Battery Electric Vehicles a **actual per-mile road usage fee**—not a punitive flat annual registration fee—subject to a strict statutory **Equity Cap** guaranteeing that no EV owner ever pays more in a year than the average gasoline vehicle pays in federal fuel tax. Flat annual EV fees (often \$200+ in some states) unfairly penalize low-mileage urban and senior EV drivers. Pricing EV road use by the mile via an annual odometer reading on the owner's

federal tax return ensures light drivers pay little, heavy drivers pay proportionally, and nobody pays a penny more than a comparable gas car.

THE DATA CASE

An average gasoline car driving ~12,000 miles at 27.1 mpg pays roughly \$81/year in federal gas tax, whereas battery electric vehicles currently contribute \$0 to the Highway Trust Fund despite using roads at full weight and mileage.

Sources: EPA, 2024; CBO, 2026

65. How do we design a Vehicle Miles Traveled (VMT) per-mile fee pilot that protects driver privacy?

BEST PRACTICE

Give every participant in a national VMT pilot **two clear choices**, with **privacy-first odometer reporting as the default**:

1. **Simple Odometer System (Default)**: Counts total annual miles driven at a flat rate with **zero GPS or location tracking of any kind**.
2. **Smart VMT System (Opt-In Only)**: Uses location technology to offer lower rates on rural roads and peak-hour congestion pricing in major metros.

Mandate by statute that all pilot data be encrypted, minimized, anonymized, and **strictly barred from law enforcement or surveillance use without a court-ordered warrant**.

THE DATA CASE

Abstract public support for mileage fees sits at just **24% across national surveys** largely due to privacy fears and unfamiliarity, even though 13 states have run small-scale pilots since 2016 showing acceptance rises sharply once drivers experience privacy-protected options firsthand.

Sources: NCHRP Synthesis / Mineta Transportation Institute; GAO

66. How can we get drivers across America—urban, suburban, and rural—to volunteer for a national VMT pilot?

BEST PRACTICE

Make participation completely risk-free by **holding volunteers financially harmless** (refunding or crediting 100% of the federal gas taxes or EV fees they pay during the pilot) and paying every participant a **\$100 to \$400 annual financial incentive** for contributing data. Recruit a demographically and geographically representative national sample—spanning urban, suburban, and rural drivers across all income brackets and vehicle types (gas, hybrid, EV)—so the 5-year trial produces ironclad evidence ready for national conversion.

THE DATA CASE

While 13 states and 2 multistate coalitions have tested road usage charges under the federal STSFA program since FY2016, none has operated at a unified national scale capable of supporting a full federal tax transition.

Sources: Government Accountability Office

67. Why should imported steel and iron tariffs be dedicated to the Highway Trust Fund?

BEST PRACTICE

Automatically deposit **100% of existing tariff revenues collected on imported steel and iron directly into the Highway Trust Fund** rather than letting them disappear into the general Treasury. Steel and iron are the foundational physical inputs of bridges, guardrails, transit tracks, and reinforced roadways. Dedicating duties already collected at the border creates an immediate, non-bureaucratic revenue stream for infrastructure repair without imposing a single new form or tax on American drivers—acting as the first span of the fiscal bridge while EV and VMT user fees scale up.

THE DATA CASE

Under current law, tariff collections default into the general Treasury rather than infrastructure accounts, while the Highway Trust Fund faces exhaustion in FY2027 (Transit) and FY2028 (Highways) and a \$295B ten-year deficit.

Sources: Congressional Research Service; CBO Feb 2026 Baseline

68. How do we prevent EV owners from being double-charged if they join the national VMT pilot?

BEST PRACTICE

Write an explicit **statutory double-payment exemption** into the law: any Battery Electric Vehicle owner who volunteers for the 5-year American VMT Choice Pilot is automatically exempt from the transitional EV mileage fee for every year they participate in the pilot. Similarly, gasoline and diesel drivers in the pilot receive a full tax credit for fuel taxes paid at the pump. Seamless integration between the transitional EV bridge and the long-term VMT pilot guarantees no driver is ever taxed twice for the same mile.

THE DATA CASE

With BEV/PHEV production reaching 11.5% to 14.8% of the new fleet, coordinating transitional EV fees with permanent VMT pilot testing is essential to closing the \$295B Trust Fund gap fairly.

Sources: EPA, 2024; CBO, 2026

69. How can a VMT system help rural drivers while fighting urban traffic congestion?

BEST PRACTICE

Test **variable geographic and time-of-day pricing** inside the voluntary Smart VMT opt-in tier: charge a **discounted per-mile rate on designated rural roads** where drivers have no transit alternatives and roads are uncongested, and apply a **peak-hour congestion surcharge in heavily congested metropolitan corridors**. Crucially, return 100% of that urban congestion surcharge back to the local metropolitan transit and transportation agency where it was generated so commuters get faster buses and trains in exchange.

THE DATA CASE

Urban commuters lose 63 hours per year to traffic congestion (\$269B national cost), while rural residents must drive longer distances with zero public transit access.

Sources: Texas A&M Transportation Institute, 2025

70. How should the transitional EV mileage fee be collected without building a costly new government agency?

BEST PRACTICE

Collect the transitional EV per-mile fee **once a year on the vehicle owner's existing federal income tax return** via a certified odometer reading, cross-checked against existing state DMV inspection, registration, and title-transfer records. Include simple pro-rata adjustments when a car is bought, sold, totaled, or driven outside the country during the year. Using the existing IRS filing pipeline avoids creating 50 separate state collection bureaucracies or installing mandatory hardware in private cars.

THE DATA CASE

Administrative collection costs are a primary hurdle in state-level road-charging pilots; piggybacking on annual tax filings and existing state DMV odometer logs reduces collection overhead to near zero.

Sources: GAO; FRAME Policy Paper

71. What happens when a 5-year national VMT pilot finishes—does it just sit on a shelf?

BEST PRACTICE

Mandate by law that the pilot conclude with an actionable **Legislative Conversion Blueprint** delivered to Congress, containing a recommended long-term per-mile rate schedule designed to keep the Highway Trust Fund permanently solvent and a phased schedule for **repealing the federal gasoline and diesel taxes**. A pilot without a statutory destination is just an academic study; designing the pilot as the operational dress rehearsal for repealing the 1993 gas tax ensures Congress has the data needed to act.

THE DATA CASE

The Highway Trust Fund has required \$275 billion in ad-hoc General Fund bailouts since 2008 because Congress has postponed structural revenue reform for nearly two decades.

Sources: Congressional Budget Office

72. How does ending "solvency by bailout" help city and state transportation directors plan multi-year projects?

BEST PRACTICE

Restore the Highway Trust Fund to a **self-sustaining, predictable user-fee and dedicated-revenue foundation** so states and transit agencies can plan 10-year capital programs with confidence. When the Trust Fund lurches from one emergency General Fund bailout to the next, long-term bridge replacements, rail extensions, and pavement schedules face recurring threats of obligation slowdowns and funding freezes.

THE DATA CASE

Both the Mass Transit Account (FY2027) and Highway Account (FY2028) hit zero inside the current planning horizon under CBO's February 2026 baseline.

Sources: CBO, Feb 2026

73. What happens if steel tariffs are lowered or changed in the future—does the Trust Fund collapse?

BEST PRACTICE

Design the steel tariff dedication as **one span of a three-part revenue architecture**, not a standalone cure-all. Because tariff collections naturally fluctuate with global trade and trade policy, best practice pairs immediate tariff

deposits with the scaling transitional EV per-mile fee (which grows every year as the fleet electrifies) and the 5-year transition to a universal VMT fee—ensuring long-term stability regardless of trade policy shifts.

THE DATA CASE

EV and plug-in share of vehicle production is climbing steadily (from 11.5% in MY2023 toward 14.8%+), providing a growing user-fee base as transitional and permanent mileage charges take effect.

Sources: EPA Automotive Trends Report, 2024

FREIGHT, PORTS, SUPPLY CHAINS & TRUCK PARKING

Questions 74–82

74. What is the best practice for funding national freight corridors and supply chains?

BEST PRACTICE

Give freight its own **dedicated National Commerce & Freight formula block grant** and a consolidated **National Commerce Corridors competitive grant program** that funds freight the way goods actually move: **across an entire multimodal corridor—port, rail, bridge, and highway together—rather than split by mode**. Require states to maintain a current Freight Plan developed in mandatory consultation with port authorities, freight railroads, MPOs, and private logistics operators, and block any project that isn't in that plan.

THE DATA CASE

Congestion cost the U.S. trucking industry a record **\$108.8 billion in 2022**—consuming **1.2 billion hours of delay** (equal to 436,000+ truck drivers sitting idle for a full working year) at a cost of **\$7,588 per combination truck**. Meanwhile, the 100 largest metro areas handle over 80% of all U.S. goods trade by value.

Sources: American Transportation Research Institute, 2024 Update; Brookings Institution

75. How do we solve the national truck parking shortage that forces tired truck drivers to park on highway shoulders?

BEST PRACTICE

Make constructing and upgrading **safe, legal commercial truck parking facilities and real-time parking availability technology** an express priority of the dedicated National Commerce & Freight formula grant. Under federal hours-of-service safety laws, truck drivers must stop and rest after their legal driving window expires; when rest areas are full, drivers are forced onto dangerous highway ramps or industrial city streets. Funding dedicated truck parking expansions and smart space-availability signs along major freight corridors improves both supply-chain productivity and highway safety.

THE DATA CASE

In FHWA's Jason's Law survey, **72.5% of State DOTs (37 states)** reported commercial vehicle parking shortages, and **75% of truck drivers** reported difficulty finding safe parking at night.

Sources: Federal Highway Administration, Jason's Law Truck Parking Survey

76. Why should ports, bridges, and freight highways compete in one grant program instead of three separate ones?

BEST PRACTICE

Consolidate separate federal freight-highway grants (INFRA), bridge grants, and port development grants into **one unified National Commerce Corridors competitive program**. In the real economy, a marine port terminal, the local connector road outside its gate, the load-posted bridge three miles inland, and the interstate freight rail crossing are **one single supply-chain asset**. Evaluating and funding them together in one competition—scored strictly on

projected reductions in freight travel time and shipping costs—ensures fixing one bottleneck doesn't just move the queue half a mile down the road.

THE DATA CASE

While 80%+ of goods trade moves through the top 100 metros, 6.8% of U.S. bridges are in poor condition and 49.1% are rated only fair; a single load-posted bridge on a port corridor severs the entire supply chain.

Sources: Brookings; ASCE 2025 Report Card

77. What is the best practice for eliminating road-rail conflicts where freight trains block city traffic?

BEST PRACTICE

Prioritize **at-grade railway-roadway crossing separations** (overpasses, underpasses, and trenching) under both formula freight block grants and competitive corridor grants. Where busy freight rail lines cross urban arterials and port access roads at ground level, long freight trains halt emergency vehicles, buses, and commercial trucks for hours each day, while creating severe collision hazards. Separating rail from road removes the conflict permanently for both modes.

THE DATA CASE

The Alameda Corridor freight rail trench in Southern California eliminated **more than 200 at-grade crossing conflicts**, slashing port drayage emissions and intersection delays across an entire metropolitan corridor.

Sources: Alameda Corridor Transportation Authority

78. How should federal evaluators score and audit competitive freight grant applications?

BEST PRACTICE

Judge freight corridor applications on **metered economic units: projected reductions in freight travel time and shipping cost per dollar invested**, alongside state-of-good-repair improvements and corridor resiliency. Lock those projections into binding grant agreements with post-completion performance reporting so auditors can verify whether the port gate modernization or bottleneck project actually reduced truck turn times and shipping costs as promised.

THE DATA CASE

Because ATRI meters trucking delay precisely in hours (1.2 billion hours) and dollars (\$108.8 billion / \$7,588 per truck), freight investments can be evaluated and audited against hard empirical baselines rather than vague economic narratives.

Sources: ATRI, 2024

79. Who should be at the table when a State DOT writes its State Freight Plan?

BEST PRACTICE

Mandate by statute that State DOTs develop their State Freight Plans and select freight projects **in formal consultation with Metropolitan Planning Organizations (MPOs), public port authorities, freight rail operators, and private supply-chain businesses**. Government highway engineers rarely have real-time visibility into private warehouse dwell times, intermodal rail switching bottlenecks, or port drayage queues. Putting the operators who actually move goods into the room where formula money is programmed ensures funds hit real-world choke points.

THE DATA CASE

All-traffic congestion on national corridors costs \$269 billion annually, with freight bottlenecks concentrated at port gates, urban interchanges, and intermodal transfers inside major metro areas.

Sources: Texas A&M TTI, 2025; ATRI, 2024

80. Should states build general-purpose highway lanes to relieve freight bottlenecks, or dedicated truck and intermodal facilities?

BEST PRACTICE

Apply the **50% federal cost-share penalty to general-purpose highway lane additions**, while funding **Freight State of Good Repair at 90%**, **freight digital logistics technology at 100%**, and **dedicated truck-only lanes, port connectors, and rail grade separations at 80%–90%**. When a state adds a general-purpose highway lane in the name of "helping trucks," passenger commuter cars immediately fill the lane via induced demand, leaving trucks stuck in the same traffic. Dedicated truck climbing lanes, port-gate connectors, and intermodal rail transfers protect freight velocity permanently.

THE DATA CASE

General highway expansion has failed to stop trucking delay from reaching a record 1.2 billion hours (\$108.8B) in 2022.

Sources: ATRI, 2024

81. How can ports and freight terminals use the 100% digital infrastructure bonus?

BEST PRACTICE

Use **100%-federally-matched innovation funds** under the National Commerce & Freight block grant and Commerce Corridors program to deploy **digital port-gate appointment systems, automated drayage staging, weigh-in-motion sensors, and V2X freight signal priority**. Coordinating container ship arrivals, rail schedules, and truck gate appointments digitally can double terminal throughput and slash neighborhood diesel truck idling without pouring an acre of new pavement.

THE DATA CASE

Qualifying freight-logistics technology receives a 100% federal share under FRAME Section 106/312, directly targeting the \$7,588 per-truck annual congestion penalty.

Sources: ATRI, 2024; FRAME Secs. 106, 207, 312

82. Can local governments and public port authorities apply directly for federal freight corridor grants?

BEST PRACTICE

Yes—open the **National Commerce Corridors competitive grant program** directly to **public port authorities, local governments, groups of local governments, MPOs, Tribal governments, and states** on an equal footing, with a predictable annual calendar (funding notice within 4 months of appropriation and at least 3 months to apply). Ports and port cities shouldn't have to wait for a state highway department's permission to modernize marine terminals or fix the last-mile city streets connecting port gates to the interstate.

THE DATA CASE

More than 80% of U.S. goods trade by value originates or terminates in the 100 largest metropolitan areas, where ports and last-mile connectors are frequently owned by municipal or regional authorities.

Sources: Brookings Institution

LOCAL CONTROL, MPO PLANNING, OPEN DATA & PROGRAM CONSOLIDATION

Questions 83–100

83. Why should the federal government consolidate 100+ transportation programs into 3 formula block grants and 3 competitive grants?

BEST PRACTICE

Repeal the tangled web of over 100 legacy modal programs and replace them with **three flexible formula block grants** (*State of Good Repair & Resiliency*, *National Commerce & Freight*, and *Community Access & Mobility*) and **three consolidated competitive grant programs** (*Strategic Infrastructure Investments*, *Community Mobility*, and *National Commerce Corridors*). Fragmented programs force city and state staff to spend thousands of hours chasing narrow silos instead of solving problems. Consolidation trades bureaucratic compliance for flexible funding governed by strict, auditable performance targets.

THE DATA CASE

The Government Accountability Office identified **more than 100 separate federal surface transportation programs** that are duplicative, fragmented, and lack clear documentation of results.

Sources: GAO-11-318SP

84. How do we guarantee that flexible formula block grants reach cities and don't get hoarded by State DOTs?

BEST PRACTICE

Lock two ironclad local protections into federal law: first, a **statutory direct sub-allocation and hold-harmless guarantee** in the Community Access & Mobility Block Grant ensuring metropolitan and local governments receive their share directly at no less than current levels; and second, **MPO Concurrence Veto Power** requiring a State DOT to obtain the formal agreement of the Metropolitan Planning Organization before placing *any* flexible block-grant project located inside a metro area into the statewide program.

THE DATA CASE

Local governments own ~75% of U.S. road miles and ~50% of bridges, yet currently receive only ~15% of federal formula dollars directly.

Sources: Local Officials for Transportation Coalition, 2025

85. How do we make transportation planning documents actually match performance targets?

BEST PRACTICE

Require every Metropolitan Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) to **demonstrate in writing how its selected list of projects will move the needle on approved safety, condition, congestion, and climate targets**. Right now, agencies write performance targets in one binder

and pick capital projects in another, with zero connection between the two. Requiring project lists to prove their expected impact turns capital programming into an evidence-based discipline.

THE DATA CASE

Under current rules, nearly half of states failed to even file required safety progress assessments, and states missed most of their self-set targets between 2014 and 2017 while continuing to program business-as-usual projects.

Sources: GAO-20-53

86. Why do we need a mandatory National Transportation Data Standard across all 50 states?

BEST PRACTICE

Direct the Bureau of Transportation Statistics (BTS) to establish a uniform, machine-readable **National Transportation Data Standard** covering five core domains—pavement/bridge condition, safety (deaths and serious injuries), congestion/reliability, freight movement, and carbon/VMT—and make compliance a **mandatory condition of receiving federal funds**. You cannot run a national Pay-for-Performance system, award 5% bonuses, or enforce 1% safety forfeitures when "fair pavement" or "serious injury" is defined and formatted differently in every state.

THE DATA CASE

GAO audits show federal performance management is crippled by inconsistent state definitions, non-standard formats, and missing filings across 50 states and 100+ programs.

Sources: GAO-11-318SP; GAO-20-53

87. What should be included on every state's annual Infrastructure Health Report Card?

BEST PRACTICE

Require every state to publish a simple, standardized annual **State Infrastructure & Transit Report Card** on its website and feed it into a single **National Infrastructure Data Portal**. The report card must show: (1) progress against approved safety, repair, reliability, and workforce targets; (2) the exact condition of roads, bridges, and transit assets; (3) total federal and non-federal investments (including transit operating funds); (4) system-wide per-capita VMT and CO_2 emissions; and (5) a searchable list of every major project funded that year, including induced-demand disclosures for any lane additions.

THE DATA CASE

Taxpayers and local officials currently have to dig through dozens of incompatible state PDF documents—asset plans, biennial reports, STIPs—to piece together what a state spent and whether road and transit conditions improved or worsened.

Sources: FRAME Policy Paper / Title IV Analysis

88. Why should all federal transportation and project performance data be published via an open API?

BEST PRACTICE

Publish every state report card, project budget, Buy America waiver, and performance metric on the **National Infrastructure Data Portal in open, machine-readable formats with a documented public API**. Open-by-default data empowers civic technologists, university researchers, journalists, municipal planners, and private software

developers to audit spending, build commuter tools, and compare state performance without filing Freedom of Information Act requests.

THE DATA CASE

Modernizing the Bureau of Transportation Statistics as the lead statutory authority for open, machine-readable data eliminates the opacity that currently hides \$7.62B in annual obligation churn and 90% megaproject cost overruns.

Sources: FHWA, 2025; Flyvbjerg et al., 2003

89. How does the "Pay for Performance" framework balance state flexibility with federal accountability?

BEST PRACTICE

Give states broad flexibility by consolidating rigid program silos into three block grants, in exchange for **federally approved, data-defensible targets** backed by a **5% Bonus Pool for outperformance** and a **1% local reinvestment forfeiture for persistent safety failure**. Washington does not dictate which specific intersection or bridge a state must fix, nor does it set a state's targets—but states must defend their targets with empirical data and publish their results on common yardsticks.

THE DATA CASE

Under MAP-21's toothless performance rules, FHWA had zero authority to approve or reject state targets, leading states to miss most safety targets as annual road deaths hovered near 40,000.

Sources: GAO-20-53; NHTSA, 2025

90. What are the six core national goals that should govern all federal surface transportation spending?

BEST PRACTICE

Align every dollar of federal surface transportation funding around **six plain-language national goals**:

1. **Safety:** A significant reduction in traffic fatalities and serious injuries on all public roads toward zero;
2. **State of Good Repair:** Maintaining existing roads, bridges, tunnels, and transit in good condition;
3. **Congestion Reduction:** Measurable reductions in delay on the national network;
4. **System Reliability:** Efficient, dependable travel times for all users and modes;
5. **Freight Vitality:** A resilient supply-chain network supporting economic competitiveness;
6. **Environmental Sustainability:** Enhancing mobility while reducing carbon emissions and protecting the natural environment.

THE DATA CASE

On all six metrics—40,000 deaths, 39% poor/mediocre roads, \$140.2B transit backlog, 63 hours commuter delay, \$108.8B trucking delay—the mid-20th-century highway-expansion model has moved in the wrong direction.

Sources: NHTSA; ASCE; FTA/Volpe; TTI; ATRI

91. How do we make competitive grant calendars predictable for city and county grant writers?

BEST PRACTICE

Write a **fixed annual grant calendar into statute** for competitive programs: USDOT must publish the Notice of Funding Opportunity (NOFO) within **4 months** of funds becoming available, give applicants at least **3 months** to prepare and submit applications, and announce final award decisions—notifying every successful and unsuccessful applicant—within **7 months** of the deadline. Predictable calendars let small cities plan capital budgets around reliable annual cycles rather than erratic political announcements.

THE DATA CASE

Local governments own 75% of road miles yet struggle to compete across fragmented discretionary grants due to unpredictable application windows and multi-year award delays (23% of FY2022 awards still unsigned by 2024–25).

Sources: LOT Coalition, 2025; GAO-25-107166

92. Why should USDOT publish the ratings of rejected megaproject grant applications?

BEST PRACTICE

Require USDOT to assign every Strategic Infrastructure Investment Program (SIIP) megaproject application one of three transparent grades—**Highly Recommended, Recommended, or Not Recommended**—based on its Benefit-Cost Analysis and engineering readiness, and **publish the grades for every project considered, funded or not**. Publicly grading rejected applications eliminates backroom political spin, shows taxpayers why a project wasn't ready, and gives local sponsors clear feedback on how to fix their scope or financing for the next cycle.

THE DATA CASE

Across 258 global transport projects, 9 out of 10 overran budgets because weak projects were advanced without transparent, independent pre-award appraisal.

Sources: Flyvbjerg et al., 2003

93. How can a city transportation director use the Variable Federal Cost-Share (90 / 100 / 50) in local budget negotiations?

BEST PRACTICE

Use the **90% repair / 100% safety & digital / 50% new lanes** federal match structure to stretch municipal capital bond dollars up to five times further. When presenting a capital budget to the Mayor and City Council, a city DOT director can show that \$10 million in local bond funds unlocks **\$90 million in federal street/bridge repair (at 90/10)**, and **\$0 in local match unlocks 100% federal funding for Vision Zero intersection redesigns and smart traffic signals**—whereas widening a highway requires a 50% local/state cash match.

THE DATA CASE

Shifting from a flat 80/20 match to a 90/100/50 variable price signal aligns municipal budget math with the 5:1 (pavement) and 12:1 (bridge) lifecycle savings of early preservation and Vision Zero safety.

Sources: Caltrans; FRAME Sec. 106

94. What happens if a state misses its pavement, congestion, or freight targets vs. missing its safety targets?

BEST PRACTICE

Apply **technical assistance and public Corrective Action Plans** when a state falls short on condition, congestion, or freight targets, while reserving the **1% formula funding forfeiture strictly for persistent safety failure (three consecutive years of missed safety targets)**, paired with the **5% Bonus Pool** for states that beat their targets. This balanced design keeps the focus on constructive problem-solving while drawing a hard moral and fiscal line where human lives are at stake.

THE DATA CASE

Nearly 40,000 Americans die on public roads every year, yet under current law states face zero financial consequence for missing fatality targets year after year.

Sources: NHTSA, 2025; GAO-20-53

95. How should rural communities and Tribal governments access federal transportation funds under a consolidated system?

BEST PRACTICE

Protect rural and Tribal mobility through **two dedicated channels**: first, fold rural transit formula funding into the consolidated Community Access & Mobility Block Grant with protected sub-allocations that newly allow flexible spending on both **rural transit operations and on-demand microtransit**; and second, make Tribal governments, rural counties, and small towns **direct eligible applicants** for the consolidated Community Mobility competitive grant (with a 90% repair match and 100% safety match).

THE DATA CASE

Consolidating four formula programs and three local competitive grants eliminates the administrative grant-writing barriers that historically locked small rural and Tribal agencies out of federal discretionary funding.

Sources: LOT Coalition, 2025; GAO-11-318SP

96. How do we stop agencies from hiding highway lane expansions inside "resurfacing" or "interchange" projects?

BEST PRACTICE

Enforce a bright-line statutory threshold: **any project that adds general-purpose through-lanes for 0.5 miles or more automatically loses the maintenance exemption** on the Carbon and VMT Scorecard, and **any project adding a new general-purpose lane of 1.0 mile or more on the National Highway System drops to a 50% federal cost-share**. Clear, objective mileage thresholds prevent creative relabeling of highway widenings.

THE DATA CASE

Without objective statutory thresholds, highway capacity expansions have continued unabated while commuter delays rose 142% since 1990 and road repair backlogs reached 39% poor/mediocre pavement.

Sources: Texas A&M TTI, 2025; ASCE, 2025

97. Why should the Bureau of Transportation Statistics (BTS) be elevated in federal law?

BEST PRACTICE

Rewrite the statutory mission of the Bureau of Transportation Statistics to make it the **lead federal agency for transportation data standardization, collection, analysis, and public dissemination**, armed with the **legal authority to require standardized data from any grant recipient** and a dedicated modernization budget. An

independent professional statistics bureau—rather than modal grant-making offices grading their own homework—ensures national transportation metrics are objective, comparable, and trustworthy.

THE DATA CASE

Half of all states failed to file required safety progress assessments under legacy rules because no central statistical enforcement authority tied data compliance to grant receipt.

Sources: GAO-20-53

98. How can states earn extra federal money by doing the right thing on safety, transit, and workforce?

BEST PRACTICE

Stack two major performance incentives: states that significantly exceed their approved safety, repair, transit ridership, and congestion targets draw from a **5% Pay-for-Performance Bonus Pool** (Sec. 105), and states that beat their construction trade graduation, apprenticeship, and hiring-speed targets earn a **10% Workforce Bonus** (Sec. 405). Both bonuses can be spent flexibly on any eligible surface transportation priority—turning good governance into hundreds of millions of dollars in extra infrastructure funding.

THE DATA CASE

With 87% of contractors short on workers and 49.1% of bridges in fair condition, rewarding states for solving workforce and performance bottlenecks accelerates delivery across the entire network.

Sources: AGC–NCCER, 2026; ASCE, 2025

99. What is the single most important first step a City or State DOT Director can take today using these best practices?

BEST PRACTICE

Immediately **audit your current 5-year capital program (TIP/STIP) against the 90 / 100 / 50 rule and the Safe System Approach**:

1. Inventory all existing pavement, bridge, and transit assets by risk;
2. Unbundle Vision Zero safety countermeasures and digital signal/curb projects into standalone packages ready for 100% federal funding;
3. Shift local formula dollars into high-frequency bus operations and on-demand paratransit/microtransit; and
4. Subject any proposed highway lane widening to a rigorous induced-VMT, lifecycle carbon, and 50%-match fiscal test.

THE DATA CASE

Reallocating capital from highway expansion (which averages +20% cost overruns and induces congestion) toward preservation (5:1 to 12:1 lifecycle savings) and Vision Zero engineering (-45% pedestrian deaths in NYC; 0 deaths in Hoboken) delivers immediate, measurable returns.

Sources: Flyvbjerg; Caltrans; NYC DOT; City of Hoboken

100. What is the overarching philosophy of 21st-century transportation management under the FRAME model?

BEST PRACTICE

Stop managing decline and start engineering progress. Replace the mid-20th-century settlement—which blindly subsidized highway expansion through an unindexed gas tax—with four foundational management principles:

1. **Fix It First & Design for Survival:** Prioritize state of good repair (90% share) and Vision Zero Safe System engineering (100% share) over new lanes (50% share).
2. **Empower Local Communities & Transit Operations:** Guarantee direct local funding and legalize federal formula spending on daily bus and train operations.
3. **Pay for Performance in Public:** Tie funding to verified targets, workforce growth, and open machine-readable data.
4. **Pay for the System Honestly:** Bridge the Trust Fund from tariffs and capped EV mileage parity to a privacy-protected, user-based per-mile future.

THE DATA CASE

Addressing a \$269B congestion bill, ~40,000 annual traffic deaths, a \$140.2B–\$176B transit backlog, 39% poor/mediocre roads, and a \$295B Trust Fund deficit requires a clean statutory foundation built on empirical evidence.

Sources: TTI, 2025; NHTSA, 2025; FTA/Volpe, 2025; ASCE, 2025; CBO, 2026



FRAME FOR MOBILITY

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