



FRAME FOR MOBILITY

DATA ARCHITECTURE

Title IV, Subtitle D · Performance, Planning, and Data Modernization

A FRAME Policy Paper · The FRAME Act, Official Draft of December 15, 2025 · Sections 409–411

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PART I

THE PROBLEM

Every instrument in this title — targets, report cards, scorecards, bonuses, forfeitures — rests on a premise the current system does not satisfy: that a number reported by one State means the same thing in another. Today it does not. Definitions, formats, and filing practices differ by State and by program, so the figures on which billions turn cannot be added up, compared, or audited on common terms. The performance regime is being run on data that does not aggregate.

The fragmentation is documented at the top of the system. The Government Accountability Office found the federal surface transportation effort spread across more than 100 separate programs, duplicative and fragmented, with no clear documentation of results (GAO-11-318SP). The same failure appears inside mandatory reporting itself: reviewing State safety targets, GAO found nearly half of States did not provide the required assessment of progress under the current regime (GAO-20-53) — and where formats are voluntary and definitions local, non-reporting is easy to miss and comparison is impossible. The annual symptom is financial: in FY2025, \$7.62 billion of obligation limitation had to be redistributed in August to States able to use it (FHWA Notice N4520.291).

THE PROBLEM IN NUMBERS

100+

Federal surface transportation programs, duplicative and fragmented (GAO-11-318SP)

1 in 2

States failed to file the required progress assessment on safety targets (GAO-20-53)

\$7.62B

Obligation limitation re-routed in August FY2025 (FHWA Notice N4520.291)

THE PROPOSED SOLUTION

Subtitle D builds the foundation the rest of the title stands on: one national data standard, one public portal, and a statistics bureau whose job, in law, is to run both. The proposal works in five steps.

- **One standard for every number.** A single national data standard sets uniform definitions and machine-readable formats for the five kinds of data the whole framework runs on: pavement and bridge condition; safety, including deaths and serious injuries; system reliability and congestion; freight movement; and the data behind the climate scorecard.
- **Written by the statisticians, in public.** The standard is established by the Bureau of Transportation Statistics — the federal government’s transportation data agency — through public rulemaking, within two years. Definitions are set once, openly, by the institution whose profession is measurement.
- **A condition of the money.** Beginning a year after the standard is final, following it is a condition of receiving federal funds under the Act. Adoption is not left to volunteerism: the standard arrives with the money, the way safety and reporting conditions already do.
- **One public portal.** Within three years, a single national website holds every state’s annual report card and the status, funding, and key performance figures of every major project the Act funds — searchable, in one place, instead of scattered across fifty state sites and a hundred program offices.
- **Open by default, run by a bureau with the mission in law.** Everything on the portal is published in open, machine-readable form through a documented public interface, so researchers, journalists, and software builders can work with it directly. And the statistics bureau’s legal mission is rewritten to match its assignment — lead federal agency for transportation data standardization, collection, analysis, and dissemination — with the authority to require data from anyone receiving the Act’s funds and a dedicated budget to modernize its systems.

The architecture is deliberately unglamorous: definitions, formats, a website, an agency mission. It is also the part of the title everything else depends on. A target reviewed against inconsistent data is an opinion; a report card published in fifty different formats is fifty documents, not one account. The standard and the portal are what turn the rest of the title from paperwork into a system.

WHAT CHANGES

Definitions and formats become uniform and machine-readable across all fifty States, adherence becomes a condition of federal funds, and the entire performance record — report cards and major projects alike — becomes visible in one public, open portal.

WHAT DOES NOT CHANGE

States still collect and report their own data, and no new reporting topics are created: the standard governs the data the Act already requires. What changes is that the numbers must mean the same thing everywhere.

THE LEGISLATIVE PROPOSAL

SECTION 409 – NATIONAL TRANSPORTATION DATA STANDARD

Section 409(a) states the standard's purpose: to ensure that all transportation data required to be reported under the Act is "consistent, comparable, machine-readable, and of high quality across all 50 States." Section 409(b) directs the Secretary, acting through the Director of the Bureau of Transportation Statistics, to establish the National Transportation Performance Data Standard through public rulemaking under section 553 of title 5, not later than two years after enactment. Section 409(c) requires the standard to establish, at a minimum, uniform definitions and machine-readable formats for five domains: infrastructure condition data for pavement and bridges; safety performance data, including traffic fatalities and serious injuries; system reliability and congestion data; freight movement data; and the data required for the Carbon and Vehicle Miles Traveled Scorecard under section 407. Section 409(d) gives the standard force: beginning in the first fiscal year that begins one year after the standard is finalized, adherence to it is a condition of receiving federal funds under the Act.

SECTION 410 – NATIONAL INFRASTRUCTURE DATA PORTAL

Section 410(a) states the Portal's purpose: "a single, authoritative, and publicly accessible source for all data related to the performance and condition of the Nation's surface transportation system." The Secretary, acting through the Director of the Bureau of Transportation Statistics, must establish and maintain the Portal not later than three years after enactment (**Sec. 410(b)**). It serves as the primary repository for all data collected under the section 409 standard and must display, in a user-friendly and searchable format, every State's annual Infrastructure Health Report Card and the status, funding, and key performance metrics of all major projects funded under the Act (**Sec. 410(c)**). Section 410(d) requires that all Portal data be available to the public in open, machine-readable format via a publicly documented Application Programming Interface, "to foster research, innovation, and accountability."

SECTION 411 – THE BUREAU OF TRANSPORTATION STATISTICS

The administrative machinery is brief. Section 411(a) amends section 6302(b) of title 49 to make the Bureau's mission that of "the lead Federal agency for transportation data standardization, collection, analysis, and dissemination," and section 411(c) authorizes its Director to require data submission from any recipient of federal funds under the Act. Section 411(d) authorizes \$50,000,000 for each of fiscal years 2027 through 2031 for a complete modernization of the Bureau's technology stack, including cloud infrastructure, advanced data science tools, and cybersecurity. A drafting note for the record: section 411(b) cites section 408 for the data standard and section 409 for the Portal; the standard and the Portal are established by sections 409 and 410 respectively, and the citations should be conformed.

The three sections are sequenced as a build order: the standard first (**Sec. 409**), the repository it feeds second (**Sec. 410**), and the institution charged with both third (**Sec. 411**) — with the Bureau's funding and data-submission authority sized to the assignment. The drafting slip at section 411(b) noted above is the kind of error the conforming process exists to catch; it does not disturb the operative duties, which sections 409 and 410 impose directly.

THE DATA CASE

The fragmentation is documented at the top of the system. The Government Accountability Office found the federal surface transportation effort spread across more than 100 separate programs, duplicative and fragmented, with no clear documentation of results (GAO-11-318SP). The same failure appears inside mandatory reporting itself: reviewing state safety targets, GAO found nearly half of states did not provide the required assessment of progress under the current regime (GAO-20-53). Where every program and State defines, formats, and files its own numbers, comparison is impossible and non-reporting is invisible. A performance system cannot be run on data that cannot be added up.

The strongest evidence for section 409's design comes from transit, and from a city. In December 2005, Portland's TriMet partnered with Google to publish its schedules in a single standardized, machine-readable format; that format — the General Transit Feed Specification — became the global standard for transit data, now used by thousands of transit agencies around the world, and it created an ecosystem of hundreds of trip-planning and analysis applications that no agency could have commissioned on its own (Shared-Use Mobility Center, case study of TriMet's open systems program). The lesson is structural: a common format plus open access compounds. Section 410's requirement of a publicly documented API applies the same lesson to the whole surface transportation program, and section 409's funding condition answers the one weakness of the voluntary model — uneven adoption — by making the standard a term of the money.

The funding condition is the load-bearing choice, and the GTFS record is what justifies it. GTFS spread because it was useful, but it spread unevenly and over years, and it governed schedules — data no funding decision turned on. Title IV turns funding decisions on its data from the first cycle: targets are reviewed against it, bonuses and a forfeiture are computed from it, report cards are published in it. A standard that prices money cannot be adopted at leisure. Making adherence a condition of funds from a fixed date, with a two-year rulemaking runway and a further year before the condition bites, is the mechanism that converts a format specification into a national dataset — the precondition for every other number in this title to be believed.

The Portal's second function is as important as its first. Displaying the status, funding, and key performance metrics of all major projects (**Sec. 410(c)**) gives the public — and Congress — a single vantage point from which the program's delivery can be watched project by project, instead of being reconstructed from fifty State websites at appropriations time. GAO's duplication finding was, at bottom, a finding that no such vantage point existed: a system that cannot be seen whole cannot be managed whole, and the Portal is the instrument that makes the whole visible.

EVIDENCE CHECK

GTFS succeeded bottom-up and voluntarily; FRAME's standard is established top-down and enforced through funding conditions — a different adoption model, carrying real compliance costs for States. The case for subtitle D rests on comparability: every other Title IV instrument prices, scores, or sanctions numbers that must first mean the same thing in all fifty States.



First, make the numbers mean the same thing.

Subtitle D is the foundation the rest of Title IV stands on: one data standard as a condition of federal funds, one public portal with an open API, and a Bureau of Transportation Statistics charged by statute with standardization, collection, analysis, and dissemination.

SOURCES & COLOPHON

SOURCES

Legislative text: FRAME Act, Official Draft of December 15, 2025, title IV, subtitle D (Secs. 409–411), including the amendment to 49 U.S.C. 6302(b) at Sec. 411(a); cross-reference to Sec. 407 (subtitle C) as cited in the text. U.S. Government Accountability Office, *Opportunities to Reduce Potential Duplication in Government Programs* (GAO-11-318SP, 2011), as summarized by the Senate Committee on Homeland Security and Governmental Affairs — <https://www.hsgac.senate.gov/media/rep/senator-collins-government-needs-to-get-its-house-in-order/>. U.S. Government Accountability Office, *Traffic Safety* (GAO-20-53, 2019) — https://www.gao.gov/product_recommendations/GAO-20-53. Shared-Use Mobility Center, *The Building Blocks of Smart Mobility: TriMet's Open Systems Approach to Transit Modernization* (case study) — <https://learn.sharedusemobilitycenter.org/casestudy/the-building-blocks-of-smart-mobility/>. Federal Highway Administration, Notice N4520.291, *August Redistribution of FY2025 Obligation Limitation* — <https://highways.dot.gov/media/69361>.

On the evidence: the fragmentation findings are the Government Accountability Office's — GAO-11-318SP on the program structure, GAO-20-53 on State reporting under the current performance regime. The standardization precedent is the Shared-Use Mobility Center's documented case study of TriMet's open systems program and the GTFS format it produced with Google in December 2005. The redistribution figure is FHWA's published notice for FY2025. No figure in this paper is drawn from the Act itself except the provisions quoted in Part III.

Within Title IV, this paper is the fourth of four: subtitle A (National Transportation Performance Management) sets the targets, subtitle B (Workforce Development) the workforce measures, and subtitle C (Modernization of Transportation Planning) the Report Card — all of them reported in the standard this subtitle establishes and published on the Portal it builds.

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