

Asset Management

Policy Brief



RTP 2026
**Regional
Transportation
Plan**



CEMPEL
INTERNATIONAL
TRANSPORTATION
CONSULTING

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Introduction

Preserving Infrastructure through Asset Management

Asset management extends beyond compliance—it is a proactive strategy for risk mitigation, cost-effectiveness, and stewardship. By focusing on preventive maintenance and lifecycle planning, agencies can avoid costly reconstruction, reduce user costs from congestion and vehicle wear, and extend the useful life of infrastructure. In this sense, asset management is not just about preserving assets, but about sustaining safety, reliability, and fiscal responsibility across the transportation system.

For northeastern Illinois, this priority is long-standing. The Chicago Metropolitan Agency for Planning (CMAP) and its stakeholders have consistently emphasized asset management through long-range planning, technical assistance, and project programming.^{i,ii,iii} Stakeholders broadly agree that expanding the region’s transportation system is unsustainable without first preserving existing infrastructure.

During the development of ON TO 2050^{iv}—the region’s current comprehensive plan—stakeholders frequently cited deteriorating infrastructure, along with safety and congestion, as top concerns.^v Underinvestment erodes system performance in multiple ways: for transit, it drives up operating costs and degrades service; for roadways, it leads to frequent construction, potholes, and safety risks. Maintaining a state of good repair (SOGR) is therefore not only about avoiding costly repairs, but also about supporting broader goals such as safety, resilience, climate action, and reliable ridership. Yet limited funding and aging assets continue to pose steep challenges: simply holding system performance steady—rather than expecting major gains—represents meaningful progress.

While CMAP does not directly manage transportation assets, it serves as a convener, coordinator, and funding advocate, aligning federal requirements with local practice and supporting agencies in making the most of constrained resources. A consistent theme in regional planning is that *stable, continuous funding* is essential for effective asset management: without predictable revenues, agencies are forced into short-term fixes



Figure 1: Benefits of Asset Management
(inspired by AASHTO Transportation Asset Management Guide)

rather than long-term preservation (see peer snapshot “Stable Funding in Action” for California’s example^{vi}). This strategy was formalized in the first CMAP comprehensive plan, GO TO 2040^{vii}, which recommended that the vast majority of the projected \$385 billion in transportation funding through 2040—about 97 percent—be dedicated to maintaining and modernizing the existing system, with under 3% allocated to new expansion projects.^{viii} ON TO 2050 continues this emphasis, allocating 82%—approximately \$431 billion—of the Financial Plan^{ix} to system maintenance, operations, and administration.

ON TO 2050 calls on counties, municipalities, and transportation agencies to adopt strategic, data-informed asset management practices. By integrating asset condition, risk assessment, and lifecycle cost analysis, asset management enables more strategic investment decisions that extend the useful life of infrastructure and improve system performance (**Figure 1**).^x These principles directly support regional goals related to reinvestment, fiscal stewardship, and long-term sustainability.^{xi}

Despite Progress, Key Policy Challenges Persist

Over the past decade, the region has made progress in maintaining and managing assets through increased use of performance-based planning, expanded local capacity for asset management, and improved coordination among transportation agencies. However, several policy challenges remain:

- **System Age and Funding.** Northeastern Illinois benefits tremendously from its robust legacy transportation system. However, much of this system is well past its useful life. Decades of underinvestment have left the region with aging infrastructure, as has insufficient, irregular funding—such as the tendency to approve state five-year capital

Peer Snapshot: Stable Funding in Action

→ **California Fix-It-First (SHOPP):** Caltrans’ 2024 State Highway Operation and Protection Program (SHOPP) is a four-year, \$21.2 billion fix-it-first initiative funded by dedicated state and federal revenues. The program focuses solely on repair and preservation projects rather than expansion, ensuring stable, predictable funding for asset management and staffing. The 2024 SHOPP is built entirely through Caltrans’ performance-driven asset management process. As Caltrans explains:

“By continuously repairing and rehabilitating the State Highway System (SHS), the SHOPP protects the enormous investment that has been made over many decades to create and manage the approximately 15,000 miles [of] SHS.”

Applicability to CMAP Region

→ SHOPP illustrates how consistent, dedicated funding enables a large DOT to systematically preserve an aging network. While Illinois faces different institutional and funding structures, the lesson is clear: predictable revenues are the foundation of proactive asset management.

bills only once a decade. This pattern complicates long-term planning and exacerbates the high costs of deferred maintenance. Reconstructing expressways or rebuilding rail lines is enormously expensive and disruptive, underscoring the scale of the challenge.

- **Changing System Needs.** Changing system needs—such as increased climate stress, new technologies and vehicles, and shifting commuting patterns—demand asset management strategies that can adapt to evolving conditions.
- **Maintaining vs. Expanding the System.** Agencies must balance competing demands for limited resources—particularly the tension between maintaining existing infrastructure and modernizing or expanding the system. With aging infrastructure and budget constraints, most regions, including ours, have shifted funding priorities toward asset management. Routine maintenance costs a fraction of full replacement and dramatically extends asset life. Skipping these basic tasks leads to far costlier emergency repairs and system disruptions in the future. The Federal Highway Administration (FHWA) finds that every \$1 invested in road, highway, and bridge upkeep yields roughly \$5.20 in benefits, including reduced vehicle operating costs, fewer traffic delays, lower fuel use, enhanced safety, and decreased emissions through smoother flow.^{xii} When expansion is pursued, it must be evaluated through the same lens—analyzing lifecycle costs^{xiii}, comparing them to anticipated revenues, and assessing long-term financial sustainability. ON TO 2050 encourages “right-sized” expansions: targeted, data-driven upgrades that deliver maximum regional benefit without undermining core maintenance.^{xiv}
- **Multimodal Assets, Data, and Planning.** Regions manage a wide range of transportation assets—transit vehicles, rail infrastructure, sidewalks, bike facilities, and supporting IT systems—each with distinct lifecycles, performance metrics, and maintenance needs. The IDOT Blue Ribbon Commission^{xv} (BRC) highlighted that prioritizing investments across these diverse modes is challenging because decision-making is often siloed by mode, geography, and level of government, and a comprehensive understanding of needs is not readily available across agencies or investment categories. Agencies may also lack complete performance indicators and asset inventories, particularly for local and non-motorized infrastructure, making it difficult to compare needs and allocate limited resources effectively. While there remain gaps in regional and local assets—and existing data are not always analyzed or linked to plans and programs—significant progress has been made in building data resources and tools. The next challenge is ensuring that this information actively informs decisions by translating condition data into agency workplans, investment priorities, and specific projects—ensuring that performance targets and planning processes are consistent across all asset types.

State of the Practice

Asset management is grounded in a federal framework that sets consistent expectations for how infrastructure is tracked, evaluated, and maintained. Since 2012, federal

transportation legislation has required state and transit agencies to develop asset management plans, monitor asset conditions, and set performance targets. These requirements promote a data-driven, lifecycle-based approach to preserving infrastructure and maximizing the impact of public investments. This section summarizes key federal mandates that guide asset management practices nationwide and describes how the CMAP region achieves compliance. Understanding the federal baseline provides context for how CMAP and its partners adhere to requirements.

Federal Asset Management Requirements

Federal law establishes clear requirements for managing highway and transit infrastructure to promote transparency, data-informed decision-making, and the efficient use of public funds. The foundation for these requirements was laid by the Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted in 2012, which defines asset management as a strategic, data-driven process to operate, maintain, and improve infrastructure over its lifecycle at the lowest total cost (23 U.S.C. 101(a)(2), MAP-21 §1103).^{xvi} Building on this framework, the Fixing America's Surface Transportation (FAST) Act, passed in 2015, continued to prioritize asset management. The FAST Act emphasized performance-based planning, lifecycle cost analysis, and streamlined project delivery as tools to improve accountability and maximize the impact of infrastructure investments.^{xvii}

Under these laws, state highway agencies are required to prepare a Transportation Asset Management Plan (TAMP) every four years for National Highway System (NHS) assets.^{xviii} These plans outline current conditions, investment strategies, and performance targets.

For transit, agencies receiving federal funds under 49 U.S.C. Chapter 53 must develop a TAMP, designate an accountable executive, and align asset management with safety planning.^{xix} The Federal Transit Administration's (FTA) Transit Asset Management (TAM) Final Rule, which took effect in October 2016, implements the asset management framework established by MAP-21 and the FAST Act. TAM plans must include an asset inventory, condition assessments, decision-support tools, and strategies for prioritizing investments. The accountable executive is responsible for overseeing the plan's implementation.^{xx}

Together, these federal statutes and regulations establish a clear, performance-based approach to asset management for both highway and transit systems. The requirements ensure that agencies not only inventory and assess infrastructure assets, but also set quantifiable targets, analyze lifecycle costs, and prioritize investments to achieve and maintain a SOGR.

How the Region Meets Federal Asset Management Requirements

In response to new federal asset management mandates and the influx of Rebuild Illinois and Infrastructure Investment and Jobs Act (IIJA) funding, which began in 2019 and 2021, respectively, the region has rapidly advanced its asset management framework—

modernizing inventories, closing critical backlogs, and embedding data-driven decision-making into planning and operations.

Governance and Roles

A wide range of actors contribute to asset management implementation in the region, each with distinct responsibilities across governance levels and transportation modes. Asset management in the region has historically advanced largely through the efforts of implementing agencies, with relatively limited CMAP involvement. CMAP's role is not to own or operate infrastructure, but to serve as a forum for coordination and dialogue. The agency helps set federal performance targets, develops the regional financial plan, and occasionally provides feedback on agency practices. More broadly, CMAP supports performance-based planning and acts as an advocate and observer—ensuring asset management goals are considered within the region's long-range planning and investment framework.

Federal Oversight

- **FHWA, FTA, Federal Railroad Administration (FRA):** Set performance requirements, inspection standards, and asset management mandates. Require TAMP/TAM and performance reporting for NHS and transit systems.

State and Regional Leadership

- **Illinois Department of Transportation (IDOT):** Leads for state-owned roads and bridges and related assets, leads target setting for NHS pavement and bridge conditions statewide, including Interstate and non-Interstate NHS routes; sets regional pavement targets with CMAP.
- **Regional Transportation Authority (RTA):** Oversees TAM planning and capital investment across the Chicago Transit Authority (CTA), Metra, and Pace; coordinates with the service boards to quantify system needs.
- **CMAP:** Coordinates regional performance targets (works with IDOT and local partners to review, affirm, or adopt alternative regional targets);

Peer Snapshot: ARC's Regional Transit Coordination

→ The Atlanta Regional Commission (ARC) sponsors a Group TAMP to support Tier II providers and maintain a regional asset database. ARC also integrates innovations such as MARTA's ISO 55000-certified asset management system—an international standard for asset management best practices—into performance-based planning. This ensures consistent, long-term preservation strategies across agencies.

Applicability to CMAP Region

→ **Tier II provider – Kendall Area Transit:** Participates in IDOT's group TAM plan. While historically not a direct participant in CMAP discussions, IDOT has emphasized the importance of including them in future coordination. Doing so would align with ARC's model of integrating Tier II providers into regional planning and help strengthen consistency across agencies.

integrates asset management into planning and funding decisions; supports local governments.

Other Asset Owners

- **Transit operators (CTA, Metra, Pace):** Own and manage fleets and facilities; maintain TAM plans; report condition data through the National Transit Database (NTD); set TAM targets.
- **Counties, municipalities, and townships:** Own and maintain local roads, sidewalks, and signals.
- **Railroads:** Maintain rail infrastructure under FRA regulation. ^{xxi}

Target Setting

To comply with federal requirements, regional agencies have established performance targets and implemented systems to monitor asset conditions. CMAP, as the federally designated Metropolitan Planning Organization (MPO), coordinates with IDOT and the region’s transit agencies to set quantitative condition targets for NHS pavements, bridges, and transit assets (**Table 1**).

These targets were first established in ON TO 2050 (2018) and updated with improved data with the 2022 Plan Update.^{xxii} This target-setting process is ongoing and regularly revised in accordance with federal performance management regulations.

Highway and transit targets have different requirements

- **Highway targets** follow a four-year performance period, with midpoint evaluations at two years. CMAP may either adopt IDOT’s statewide targets or, in coordination with partner agencies, adopt region-specific alternatives.
- **Transit targets** are updated annually by service boards and CMAP sets four-year targets in alignment with the RTP cycle All MPO targets are included in CMAP’s System Performance Report^{xxiii} and updated during major plan cycles, such as the development of ON TO 2050. They are also tracked through CMAP’s Performance Dashboards^{xxiv}. These efforts are essential to addressing visible SOGR challenges—particularly the region’s aging transit fleet, a major contributor to the overall backlog.

Table 1: Current Federally Required Targets for northeastern Illinois

Asset Type	Measure	Current Targets (CMAP Region)
Interstate NHS	% in Good Condition	≥70.0%
Interstate NHS	% in Poor Condition	≤5.0%

Asset Type	Measure	Current Targets (CMAP Region)
Non-Interstate NHS Pavement	% in Good Condition	≥84.7%
NHS Bridges	% of Deck Area in Poor Condition	≤8.0%
Transit Rolling Stock	% past ULB	- Bus: ≤8.2% - Rail: ≤16.1% - Other passenger vehicles: ≤29.9% - Ferryboat: ≤23.9%
Transit Facilities	% below condition 3.0 on TERM scale	≤20.0%

Lifecycle Analysis and Forecasting

Beyond tracking current asset conditions and setting formal performance targets, agencies in northeastern Illinois are using advanced tools to anticipate future needs and evaluate long-term investment strategies. This shift from reactive maintenance to proactive planning reflects a more mature asset management framework.

Tools and Approaches in Use

Typical lifecycle analysis and forecasting approaches and tools include:

- **Lifecycle Cost Analysis (LCCA):** Agencies use LCCA to evaluate the full cost of different maintenance or replacement strategies over time. This method helps prioritize treatments that extend asset life and minimize life-cycle costs.^{xxv}
- **Scenario Forecasting Models:** IDOT’s TAMP uses scenario analysis to evaluate how asset conditions change under different investment levels and risk assumptions.^{xxvi} RTA and the service boards use a version of FTA’s Transit Economic Requirements Model (TERM Lite)^{xxvii} to project transit asset conditions under constrained and unconstrained funding scenarios. CMAP’s project scoring process for Regional Capital Projects in the RTP incorporates operating cost considerations to ensure that new projects can be sustained over time.^{xxviii}
- **Enterprise Asset Management (EAM) Systems:** These systems help agencies track and manage assets throughout their entire lifecycle. Examples include:
 - The **CTA** maintains an inventory of more than \$68.3 billion in assets and uses an EAM system (i.e., Infor) to centrally manage data on the condition and age of buses, railcars, tracks, and facilities. CTA’s five-year Capital Improvement

Plan is aligned with asset management goals, though it still faces a \$5 billion critical needs funding.^{xxix}

- **IDOT** launched its own EAM system to integrate pavement and bridge condition data statewide. This centralized platform enhances the agency’s ability to monitor asset health, prioritize interventions, and plan investments more consistently across the system. By supporting timely, data-driven maintenance strategies, the EAM system helps extend asset life and reduce long-term costs through more efficient, cost-effective decision-making.^{xxx}

These tools help agencies compare the long-term performance and cost-effectiveness of different investment strategies, enabling better prioritization of limited funds and more resilient infrastructure planning.

Regional Asset Condition Trends: 2017–2024 Snapshot

Regional performance has shown mixed results. While some condition metrics have remained stable, others reveal clear trends. For example:

- **Transit facilities** have improved significantly in condition.
- **Non-interstate pavements** have continued to deteriorate.
- **Bridges in poor condition** have increased slightly and remain above federal targets.
- **Transit rolling stock**—particularly buses and railcars—still represents a large portion of the region’s SOGR backlog.

Table 2 summarizes current asset conditions based on federal performance requirements, compared to baseline values from approximately 2016–2018. The comparison highlights regional trends in the condition of highway, bridge, and transit infrastructure over time. For full data sources and methodology, see the **CMAP System Performance Report**^{xxxi}.

Since 2016, the share of bridge deck area rated in good condition on NHS bridges has declined from 38% to 25%, while the fair condition category has grown to 64%, making up the majority of the system. Although the percentage of poor condition bridges has slightly increased, it remains slightly above CMAP’s goal of 8% and close to the federal threshold 10%. Overall, most bridges are still rated fair or better. Federal asset management regulations impose penalties for failing to meet minimum asset condition thresholds. This highlights the importance of viewing good condition declines in context, as the overall level of service remains relatively stable despite a shift away from the highest performance tier. While this approach has stabilized overall system performance, it can result in less emphasis on preventive maintenance for assets currently in good condition. Over time, this may undermine cost-effective preservation and accelerate the decline of assets that could have been maintained at a lower cost.

The trends in **Table 2** reveal two key conclusions:

- 1. Fair and good categories together reflect broader system stability**, which is important for communicating realistic performance.
- 2. CMAP’s targets set a higher bar**, and recent data suggests that achieving those targets—particularly for non-interstate pavement—remains challenging despite recent reinvestment.

Table 2: Regional Transportation Asset Condition Trends

Asset Type	Baseline Condition (Earliest Year)	Trend Summary (Changes through intervening years)	Most Recent Condition (Latest Year)
Interstate Pavement (Good)	61% (2016/17)	Minor fluctuations between 54–61%	55% (2022/23)
Interstate Pavement (Poor)	≤1% (2016/17)	Consistently ≤1%	1% (2022/23)
Non-Interstate Pavement (Good)	21% (2016/17)	Slight decline to 18% in 2017/18, rose to 22% in 2021/22	20% (2022/23)
Non-Interstate Pavement (Poor)	5% (2016/17)	Varied between 5–11% across the period	11% (2022/23)
NHS Bridges (Good)	38% (2016)	Declined steadily	25% (2024)
NHS Bridges (Poor)	9% (2016)	13% (2019 to 2022) with a slight recent drop	11% (2024)
Bus Stock Past Useful Life Benchmark (ULB)	9% (2017)	Increased through 2021 to 28%	12% (2023)
Rail Stock Past ULB	21% (2017)	Rose to peak in 2021 (36%)	35% (2023)

Asset Type	Baseline Condition (Earliest Year)	Trend Summary (Changes through intervening years)	Most Recent Condition (Latest Year)
Pace Non-Fixed Route Vehicles Past ULB	13% (2017)	Sharp rise in 2021 to 75%	16% (2023)
Transit Equipment Past ULB	57% (2018)	Peaked at 63%, returned to baseline	61% (2023)
Transit Non-Revenue Vehicles Past ULB	36% (2018)	Improved steadily	31% (2023)
Transit Facilities (Poor Condition)	19% (2019)	Marked improvement	7% (2023)
Metra Track Under Performance Restriction	3% (2017)	Remained low (2–5%)	4% (2023)
Regional Track Under Performance Restriction	4% (2017)	Remained steady near target; regional target for 2026 is 4%	5% (2023)

Note: Baseline years vary by asset type depending on earliest available data (typically 2016–2018). “Most Recent Condition” reflects values from the 2022–2024 period. See CMAP’s Existing Conditions Report for full data sources and methodology.

Given the twin pressures of aging infrastructure and limited budgets, holding the line on overall conditions is itself an accomplishment. The data also point to where the region gets the most value from reinvestment, especially when guided by condition metrics and lifecycle planning.

As agencies continue to weigh trade-offs between preservation and reconstruction, and respond to aging infrastructure and extreme weather, performance-based planning will play a critical role in targeting resources effectively. Transportation asset managers should continue to monitor these trends and identify where strategic reinvestment can slow decline and improve resilience.

IDOT TAMP Metrics and Performance Goals

IDOT updated its TAMP^{xxxii} for FY2023–2032, leveraging Rebuild Illinois state funds and IJJA resources to support highway and bridge improvements. Pavement conditions are monitored through the Condition Rating Survey (CRS), with a score of 5.5 or higher on Interstates and 5.0 or higher on other state routes defined as the “state of acceptable condition” for cost-effective preservation. For bridges, IDOT sets the acceptable threshold at a component rating of 5 or above, which corresponds to fair or better condition. In addition to these internal benchmarks, IDOT reports annually to FHWA on the share of NHS pavements and bridges in “Good” or “Poor” condition, consistent with federal rules. Data collection follows a regular cycle: Interstate pavements are surveyed annually, non-Interstates every two years, and bridges visually inspected at least biennially, with longer intervals permitted for structures in good condition.

IDOT’s Remaining Challenges

While the TAMP provides a clear structure for measuring progress, translating those goals into sustained outcomes is another matter. Several persistent challenges continue to limit IDOT’s ability to implement lifecycle-based strategies at scale. Historically, IDOT relied on a “worst-first” approach, directing funds to costly rehabilitation and reconstruction rather than preventive maintenance. With the adoption of asset management principles, the agency has shifted toward a more proactive preservation strategy. Yet performance goals remain constrained: not by technical expertise, as IDOT staff already operate mature asset management systems, but by inconsistent funding and project delivery capacity, which together limit the ability to implement lifecycle-based strategies at scale.

A useful point of contrast is the Illinois Tollway. Supported by dedicated toll revenues, the Tollway benefits from a stable, predictable resource base that enables regular reconstruction cycles. Its stronger performance also reflects structural factors: a smaller and often newer network (for example, I-355 is still within its first pavement cycle), and corridors that in places experience lower intensity of use. As a state-authorized tolling authority, the Illinois State Toll Highway Authority (ISHTA) also operates under a distinct governance and revenue structure, making it less directly influenced by regional policy processes than IDOT. These conditions, in addition to dedicated revenues, explain why the Tollway’s 300-mile system is in comparatively stronger shape.

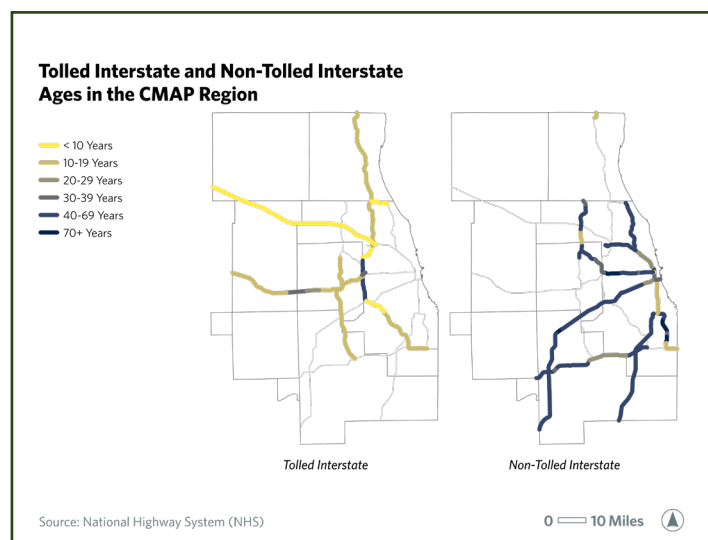


Figure 2. Tolled vs. Non-Tolled Interstate Ages in the CMAP Region (CMAP’s Existing Conditions Report)

By contrast, IDOT’s non-tolled expressways—many dating back to the 1950s and 1960s—face steeper deterioration curves and far more complex reinvestment needs. **Figure 2**, drawn from CMAP’s Existing Conditions Report ^{xxxiii}, highlights the stark differences in age and condition profiles between these systems.

Therefore for the broader expressway network, dependence on inconsistent state and federal funding streams, combined with irregular investment schedules, makes it much harder to achieve similar outcomes as the Tollway. At the same time, IDOT is also adapting to new legislative requirements^{xxxiv} that mandate a performance-based, multimodal approach to programming. Public Act 102-0573 (2021)^{xxxv} requires IDOT to integrate climate, equity, and economic development considerations into project selection, moving away from siloed modal programs. In response, IDOT has introduced a Data-Driven Decisions (DDD) tool for evaluating capacity projects, updated its TAMP in 2023, and begun implementing an EAM system to better align preservation with lifecycle planning. These tools represent important progress toward more transparent and accountable investment decisions.

Adding to these pressures, inflation has eroded much of the value of recent funding increases, further constraining progress toward SOGR needs. Taken together, these dynamics underscore the importance of long-term, stable revenues and delivery capacity to support proactive asset management across Illinois’ transportation system. CMAP’s role in addressing these challenges is to convene regional partners, advocate for reliable funding, and coordinate practices that improve long-term system performance.

Beyond Federal Requirements: A Complex yet Coordinated Asset Management Ecosystem

Federal regulations define broad goal areas for asset management (e.g., pavement and bridge condition and the state of good repair for transit assets) but leave significant flexibility to states and regions in how targets are set and how asset management practices are carried out. The federal framework focuses primarily on NHS infrastructure and federally funded transit assets and does not prescribe specific methods or cover many locally owned or emerging asset types, such as local roads, sidewalks, traffic signals, stormwater infrastructure, or digital systems.

In northeastern Illinois, however, agencies have developed practices that go beyond these baseline requirements. This section examines how asset management is implemented on the ground, focusing on the governance structures that determine who owns and controls both infrastructure and the data behind it, and who makes investment and operational decisions. It also highlights the coordination efforts across agencies and jurisdictions that enable more integrated, data-informed, and responsive approaches to maintaining and upgrading the region’s public infrastructure.

What Gets Measured: Asset Types and Data Collection

For asset management to fulfill its promise, it depends on accurate, timely condition data across every mode in the region’s transportation network. Each asset class relies on its own inspection tools and performance metrics. Some practices are federally required, providing a consistent baseline (e.g., NBIS bridge inspections), while others represent regional or local efforts that go beyond federal minimums. **Table 3** provides an overview of the current data collection practices, highlighting both the required and supplemental approaches used across asset types.

Table 3: Data collection practices across different asset types

Asset Type	Who Collects Data	Tools / Metrics	Current Practices
Pavement	IDOT, counties, municipalities, townships	Pavement Surface Evaluation and Rating (PASER), International Roughness Index (IRI), Pavement Management Systems (PMS)	Assessed using PASER and IRI as part of PMS to model performance and guide maintenance.
Bridges	IDOT, counties, municipalities	National Bridge Inspection Standards (NBIS), National Bridge Inventory (NBI)	Federally mandated inspections every 24 months under NBIS ensure consistent condition data.
Tollways	Illinois State Toll Highway Authority (Illinois Tollway)	In-house condition assessments, capital planning tools, pavement & bridge metrics	Regular inspections of pavement and bridge conditions, use of lifecycle cost analysis to prioritize investments, and the development of long-range capital plans.
Transit Vehicles & Facilities	CTA, Metra, Pace	Lifecycle schedules and condition ratings per FTA’s TAM Plan	Managed using federally required TAM plans that guide replacement and investment.
Traffic Signals & ITS	Municipalities, counties, with CMAP support	Local standards	Increasingly recognized as essential assets, but management varies across jurisdictions.
Non-motorized Infrastructure	Municipalities	Visual inspections; some use Geographic Information Systems (GIS) for mapping	Formal inventories are rare; some agencies conduct visual checks for defects and safety.
Railroads	Amtrak and freight	FRA-regulated inspections using high-tech detection and trained inspectors	Subject to rigorous inspection under federal standards due to heavy usage.

Asset Type	Who Collects Data	Tools / Metrics	Current Practices
	railroads (e.g., BNSF, UP, NS)		

For **local roads**, data coverage continues to be uneven. CMAP’s ON TO 2050 System Performance Report and regional pavement indicators highlight that many municipalities lack comprehensive pavement condition data. Participation in regional pavement data collection varies, leading to gaps in available information on local roadway conditions and maintenance needs. Since county and municipal governments own and manage a significant share of the regional network, these gaps are especially important: local roads often experience the same deterioration pressures as state facilities but have far fewer resources for systematic condition monitoring or long-term capital planning. While counties such as Cook (5-Year Transportation Improvement Program^{xxxvi}) and DuPage (Annual Highway Program^{xxxvii}) have adopted pavement and capital programs, regional coverage remains uneven.

Sidewalks present another persistent data gap. There is no comprehensive regional inventory of sidewalk condition or Americans with Disabilities Act (ADA) compliance. In 2018, CMAP developed a Regional Sidewalk Inventory^{xxxviii} that documents the existence of sidewalks across the region and whether sidewalks have a barrier or buffer from moving traffic. However, the inventory does not measure sidewalk accessibility, catalog curb cuts, or assess condition. Curb ramps and other accessibility features—critical for ADA compliance—remain unevenly documented across the region. Some counties, including Cook and DuPage, have developed more detailed or partial inventories, but coverage remains fragmented and uneven.

Traffic signal data is advancing but is due for a comprehensive update. CMAP’s Regional ITS Architecture (discussed more in “Regional ITS Architecture and Inventory” below) and Regional Signal Inventory assist state and local agencies in documenting signal infrastructure, but many inventories still lack consistent information on signal age, condition, and performance.

Other assets—such as bicycle paths and stormwater infrastructure—are often outside the scope of traditional asset management systems. No consistent regional inventory exists for these critical assets, though Cook County has taken a leading role by incorporating them into its countywide asset management system, discussed more in the “[How Asset Management Informs Investment Decisions](#)” section below.

How CMAP Supports Asset Management

CMAP's role in meeting federal performance-based planning requirements includes supporting coordination across state, regional, and local agencies. This work ensures that investment decisions are guided by asset condition data, long-term needs, and shared regional priorities.

Mandated Responsibilities

As the federally designated MPO for northeastern Illinois, CMAP is required to:

- **Coordinate** with IDOT and Transit agencies to support federally mandated performance management.
- **Integrate** highway and transit asset condition targets into the long-range transportation plan (LRTP), Transportation Improvement Program (TIP), and System Performance Report.
- **Ensure** that regional planning documents align with national goals for asset conditions and a SOGR.

These efforts ensure that investment planning aligns with federal expectations and supports SOGR across the transportation system.

Current Coordination Practices

To implement these mandates effectively, CMAP works closely with partners at all levels:

- **With IDOT**, CMAP coordinates on target setting for NHS pavements and bridges, especially where routes are owned by counties or municipalities.^{xxxix}
- **With CTA, Metra, and Pace**, CMAP incorporate transit performance targets developed through their TAM plans into project evaluation.^{xi}
- CMAP also engages directly with **local governments** to support investment planning.

This coordination ensures that asset management practices regionally are working from a shared understanding of asset needs and priorities.

Additional Support

Beyond its mandated responsibilities, CMAP provides technical and planning support that strengthens local asset management capacity through a range of supplementary initiatives.

Data Collection, Integration, and Analysis Efforts

Data is the foundation of effective transportation asset management, and CMAP plays a central role in compiling and summarizing infrastructure data across the region, along with IDOT, the RTA, and the transit service boards.^{xii} CMAP analyzes bridge condition information from the NBI and analyzes transit asset data provided by the NTD. In collaboration with the RTA, CMAP also utilizes the Capital Optimization Support Tool

(COST), which estimates reinvestment needs and asset backlogs across the transit system. COST helps align funding decisions with system condition trends and supports CMAP's Financial Plan.

Visualizations of the CMAP region's pavement, bridge, and transit asset datasets—along with other key transportation and land use information—are made available through its open Data Hub.^{xliii} The underlying raw data can be accessed through federal and state sites.

Regional ITS Architecture

At the core of this effort is CMAP's ITS inventory^{xliii}, a web-based tool that outlines the types of ITS assets—such as traffic signals, transit information systems, and highway communication technologies—owned or operated by various agencies. While not a detailed asset registry, the inventory provides a high-level understanding of what types of systems exist across the region and the roles of different entities in managing them. The scope of the architecture spans the entire Chicago metropolitan area and covers a broad range of services, including traffic and transit management, emergency response, commercial vehicle operations, construction and maintenance coordination, and data archiving.

CMAP's role in maintaining the Regional ITS Architecture has produced practical outcomes such as improved documentation and a shared reference for stakeholders. The Architecture itself, however, is not a tool for implementation; it is an inventory of systems and relationships maintained to meet federal requirements. Separately, partner agencies, particularly the counties, have expressed strong interest in more coordination between each other and with IDOT across ITS and operations.

Highway Traffic Signal Inventory

Beyond the architecture, CMAP also maintains a Highway Traffic Signal Inventory.^{xliiv} This dataset provides a region-wide point file of signal locations with limited attribute data and is part of a broader suite of reference datasets CMAP makes publicly available. Looking ahead, CMAP may have an opportunity to play a more active role in facilitating implementation coordination, should resources and authority align with regional interest.

Technical Assistance (TA) Program

CMAP plays a leading role in advancing local-agency asset management, particularly through its efforts to improve pavement data and planning on federal-aid eligible roads. ON TO 2050 recommended the creation of a regional pavement inventory and encouraged widespread adoption of pavement management systems to promote timely, cost-effective maintenance (core principles of asset management).^{xlv}

To operationalize these goals, CMAP launched a Pilot Pavement Management Program. Since its launch in 2018, CMAP has supported more than 65 municipalities and one county in northeastern Illinois through its pavement management program, helping them evaluate local road conditions, analyze budget scenarios, and prepare multi-year maintenance and capital plans.

Following the pilot, CMAP expanded its asset management support region-wide through its TA Program, which now offers direct pavement management planning as a core service. These efforts help institutionalize asset management at the local level by equipping communities with the data, tools, and plans needed to align spending with long-term infrastructure goals.

As of the June 2024 Technical Assistance Project list^{xlvi}, CMAP has awarded 86 projects to support the development of pavement management plans, providing assistance such as pavement condition assessments, PCI ratings, budget analysis, and multi-year capital planning. In addition, 8 projects have been awarded to support the implementation of full pavement management programs, helping communities institutionalize long-term, data-driven maintenance strategies and integrate pavement management into ongoing capital planning processes. Examples of completed plans include the City of Hickory Hills (Cook County), Village of Diamond (Will County), Village of Lake Villa (Lake County), and Village of South Holland (Cook County). Notable pavement management program recipients currently underway include the Village of Bannockburn (Lake County), Village of Fox Lake (Lake County), Village of Godley (Will County), and Village of Indian Head Park (Cook County).

Peer Snapshot: MTC's Pavement Technical Assistance Program (P-TAP)

→ Metropolitan Transportation Commission (MTC) offers a regional model through its P-TAP, which helps local jurisdictions maintain standardized pavement databases using StreetSaver and MTC's PCI. The program supports data collection, decision-making, and consistency across cities and counties—feeding into MTC's Vital Signs platform and shaping funding priorities under Plan Bay Area 2050.

Applicability to CMAP Region

→ CMAP's TA Program shares similar goals. A regionwide pavement data platform—modeled on StreetSaver—could improve data consistency and strengthen CMAP's Performance Dashboards.

How Asset Management Informs Investment Decisions

State Level

Through its TAMP, IDOT is applying its automated EAM system to conduct advanced lifecycle planning analyses that evaluate how different investment strategies affect system performance over time. Its data-driven project selection process incorporates pavement and bridge deterioration models, treatment costs, and risk factors to help prioritize maintenance activities that slow deterioration and reduce long-term costs. Using 10-year scenario analysis, IDOT models multiple lifecycle investment strategies to evaluate how different funding allocations—balancing preservation, major repairs, and capacity improvements—will impact future asset conditions, while also accounting for risks such as extreme weather and aging infrastructure. Over time, this approach is designed to shift more investment toward preservation and rehabilitation, increasing system resilience and value.^{xlvii}

Local Level

A leading example is the Cook County Department of Transportation and Highways, which has been developing a comprehensive asset management system since 2018. The program covers more than 15,000 lane miles and 211,000 assets, including pavements, bridges, culverts, traffic signs, and ADA ramps. Key components of the program include the creation of a standardized asset inventory, the establishment of condition assessment procedures, and the integration of several digital tools. These tools include Cityworks for work order management, GIS Cloud for spatial analysis, and PAVER for evaluating pavement condition. Together, these elements support a more proactive, data-informed approach to infrastructure maintenance and long-term capital planning.^{xlviii}

In addition, Cook County and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) recently announced a \$20 million joint investment in 26 critical stormwater management projects. This collaboration reflects an expanded view of infrastructure asset management that includes resilience and flood mitigation, further reinforcing the role of coordinated planning at the local level.^{xlix}

Peer Snapshot: MTC's Tech-Enabled Approach

→ MTC's mobileRater app, paired with its StreetSaver pavement management platform, empowers roadway owners/operators to collect real-time condition data and compute PCI scores on-site. This showcases how mobile technologies can accelerate infrastructure evaluation and improve asset management efficiency.

Applicability to CMAP Region

→ The CMAP region could pilot mobile data-collection tools to streamline pavement assessments and reduce survey costs.

Emerging Trends and Key Issues

The region's asset management landscape is evolving amid technological, operational, and institutional changes. Emerging technologies—such as electric and autonomous vehicles, drones, AI, and LiDAR—are reshaping infrastructure demands and enabling more precise, predictive monitoring. At the same time, significant gaps persist: local roads, pedestrian and bicycle facilities, signals, and other non-NHS assets are inconsistently tracked, underfunded, or excluded from federal performance frameworks, limiting comprehensive planning and long-term system reliability.

Governance and coordination challenges further complicate asset management. Misaligned planning cycles, overlapping responsibilities, and uneven local capacity can hinder target-setting, investment prioritization, and performance-based decision-making across jurisdictions. By bridging these gaps, aligning timelines, and expanding technical support, CMAP can help the region adopt adaptive, data-informed strategies that integrate emerging technologies, fill coverage gaps, and strengthen collaborative governance for more resilient and efficient infrastructure management.

Technologies and Trends

As agencies refine lifecycle cost models and scenario planning to guide long-term investment, they also need to account for shifting demands on infrastructure driven by emerging technologies and trends. These emerging technologies and trends provide both opportunities and threats, and include the following:

- **Commercial Vehicle Travel** continues to place significant demands on the region's infrastructure, though volumes have leveled off since the immediate post-COVID spike. Even at these adjusted levels, heavier truck traffic remains a key factor accelerating pavement deterioration and shaping long-term maintenance needs. Reinforcing infrastructure to withstand freight activity can also divert resources from other priorities, including local road upkeep.
- **Electric vehicles (EVs)** are growing rapidly in Illinois, now exceeding 145,000 statewide (2025).ⁱ The added weight from batteries increases pavement wear and bridge stress, prompting a need to update design standards and maintenance practices.ⁱⁱ The wheels of electric trucks in particular create greater torque when accelerating, causing greater sheer forces on the pavement—something not considered in current pavement design. EVs also challenge the fuel tax funding model, as they pay less into the system, intensifying funding gaps even as they impose greater physical demands on infrastructure. While this is partially offset by Illinois' \$100 EV registration surcharge, these dual engineering and financial pressures are already acknowledged in Illinois' asset management plan, signaling a need for integrated policy and technical responses.ⁱⁱⁱ

- **Connected and Autonomous Vehicles (C/AVs)** may alter traffic patterns and concentrate wear through lane “platooning”—where vehicles travel in tight, automated formations. Unlike traditional traffic, which introduces natural variability in lane position and load distribution, platooning concentrates vehicle weight along identical tracks within a lane. Over time, this repeated stress on the same pavement segments may accelerate deterioration and require new design or maintenance approaches. On the other hand, connected vehicles offer promising new data streams to improve asset management. Vehicles equipped with sensors and vehicle-to-infrastructure (V2I) communication can act as roving inspectors, transmitting information on pavement roughness, potholes, bridge vibrations, and other conditions in real time.^{lviii} This rich data stream supports a more granular and continuous assessment of asset health, improving the accuracy and responsiveness of maintenance strategies.
 - The City of Chicago is already piloting smart infrastructure to support C/AVs, including the Array of Things sensor network and Connected Vehicle Roadside Equipment (CV RSE)^{liv}. These units use wireless communication to exchange data with passing vehicles, enabling real-time monitoring of traffic, environmental conditions, and field equipment. As adoption grows, this infrastructure will generate valuable data on travel patterns and operations.^{lv}
- **Unmanned aerial vehicles (UAVs), or drones**, offer a safe, efficient way to inspect hard-to-reach infrastructure like bridges, transit lines, and viaducts. In Chicago, a recent pilot project with City Tech, Verizon, and CTA demonstrated drone flights for rail infrastructure monitoring, using high-resolution cameras to detect track and structural issues on the CTA’s transit lines. These drones, equipped with machine learning image analysis, can identify defects or obstructions in real time. This reduces the need for manual inspections and can improve safety by catching problems early.^{lvi} IDOT and Illinois Tollway have also begun using drones for bridge inspections and surveying, which speeds up data collection without lengthy lane closures.^{lvii}
- **Artificial intelligence (AI) and machine learning** are increasingly used to process the vast data from infrastructure inspections. At the University of Illinois, researchers have developed AI models that detect and measure corrosion on metal structures from digital images, offering faster and more consistent assessments than manual methods.^{lviii} IDOT’s TAMP emphasizes the importance of updating analytical tools and training staff in emerging technologies.^{lix} Regionally, agencies are piloting similar approaches: CTA has tested drones and machine learning for infrastructure monitoring through its Drone Technology Demonstration Project^{lx} and is launching a 2025 Innovation Studio^{lxi} pilot using AI-equipped cameras, while the Illinois Tollway has introduced a drone training workshop^{lxii} as part of its Emerging Technology initiative. These efforts reflect a broader shift toward predictive maintenance, where AI can help agencies identify high-risk components before visible deterioration occurs.
- **Light Detection and Ranging (LiDAR)** is a remote sensing technology that uses laser pulses to create detailed 3D models of surfaces, offering a powerful tool for capturing

high-resolution, three-dimensional data on infrastructure conditions. This technology significantly reduces field time, enhances worker safety, and improves the accuracy of asset inventories. Although currently more expensive than other methods, the long-term benefits of LiDAR, especially when integrated with machine learning for automated analysis, position it as a valuable innovation for modernizing asset monitoring and advancing lifecycle management practices.^{lxiii}

- **Asset management practice innovations** can reshape how projects are scoped and evaluated:
 - Cross-asset bundling—packaging roadway, bridge, drainage, and sidewalk improvements into a single coordinated project—can reduce costs, minimize disruptions, and extend the benefits of individual investments.
 - Post-implementation evaluation is gaining traction as agencies seek to compare actual project outcomes against expected performance, ensuring that lessons learned feed back into future programming cycles.
 - Resiliency integration is emerging as a priority, requiring agencies to account for climate stressors, flooding risks, and extreme weather events in asset management plans.

More about these technologies are described in the separate **Emerging Technologies Policy Brief**.

Gaps in Asset Management Coverage

While emerging technologies are reshaping the future of infrastructure management, many critical asset types—particularly those outside the NHS or not covered by federal performance measures—remain inconsistently tracked, underfunded, or excluded from formal planning frameworks. Addressing these gaps is essential for building a resilient, data-informed, and equitable asset management system across the region.

- **Underserved Roadways - Beyond the NHS:** Roads outside the NHS, maintained primarily by local governments, are not subject to federal targets or standardized condition reporting. Many of these networks suffer from inconsistent funding and limited asset management capacity, particularly in under-resourced communities. Despite recent progress in regional data collection and performance-based planning, smaller municipalities often lack the staffing, tools, or resources to support long-term infrastructure planning and reinvestment.
- **Non-Motorized Infrastructure - A Missing Piece:** Pedestrian and bicycle facilities—sidewalks, ramps, trails, and bikeways—remain outside the scope of federal performance measures. As a result, these assets are often under-inventoried and under-maintained, even as ON TO 2050 calls for Complete Streets that serve users of all ages and abilities. Including these facilities in asset management frameworks is a key step toward a more equitable and multimodal transportation system.

- **Signals and Intelligent Transportation Systems (ITS) - Critical but Underrepresented:** Signals and ITS infrastructure are vital for system efficiency, safety, and supporting connected vehicle technologies. Yet responsibility for these systems is fragmented across jurisdictions, leading to data gaps and inconsistent maintenance. While CMAP’s regional ITS architecture provides a shared framework for planning and coordination, additional work is needed to integrate these assets into performance-based, lifecycle-oriented investment programs.
- **Other Overlooked Assets:** Supporting features—such as retaining walls, overhead signs, and other ancillary structures—also are not consistently tracked or managed, despite their importance to system reliability and safety.

Governance and Coordination

Implementing asset management in the Chicago region has revealed several governance challenges, including coordinating targets and timelines across agencies, adapting federal rules to local needs, and aligning performance reporting with real-world investment decisions. CMAP initially set region-specific targets but later aligned some with IDOT’s, requiring negotiation to balance statewide and urban priorities.^{lxiv}

Timing misalignments between federal performance cycles and regional planning horizons have introduced complexity into asset management. For example, MPOs like CMAP are required to update highway asset targets every four years—a cycle that generally aligns with long-range planning processes. However, other measures, such as transit asset targets and safety performance metrics, are on an annual cycle. While this frequency supports consistent tracking, it is often out of sync with the multi-year capital planning and visioning processes used by regional and local agencies. In practice, this can limit the usefulness of annual targets for strategic investment planning, especially when data or funding conditions change more slowly than the reporting cycle allows.

Federal measures do include non-motorist safety metrics (such as pedestrian and bicyclist fatalities and serious injuries), but they do not account for assets like sidewalks, curb ramps, or station quality. Recognizing this, CMAP developed supplementary indicators in ON TO 2050 to address these locally important priorities.

Peer Snapshot: Portland’s Cross-Asset Governance Model

→ The Portland Bureau of Transportation (PBOT) leverages an Asset Management Advisory Committee, bringing together engineers, operations staff, IT managers, and finance teams. This cross-functional body sets asset management priorities and integrates them into PBOT’s business practices—ensuring consistent alignment across planning, budgeting, and condition tracking.

Applicability to CMAP Region

→ A similar cross-agency coordination body could help the CMAP region align data, funding, and performance tracking across infrastructure owners.

For transit, TAM reporting requires annual data submissions and coordinated updates across service boards—a process that transit agencies generally manage smoothly, though some observers note that the one-year cycle may offer limited support for long-range planning. More broadly, regional efforts like CMAP’s Capacity Building Program^{lv} provide training and assistance to help local governments strengthen internal systems and advance long-term infrastructure planning, which complements but is distinct from formal asset management requirements.

Even where asset categories are well-defined, governance and coordination challenges can limit the effectiveness of asset management practices. Timelines that vary by agency or asset class, overlapping responsibilities, and uneven local capacity complicate efforts to set targets, allocate funding, and implement performance-based planning across jurisdictions. Building on its existing role as a regional convener and data resource, CMAP is well-positioned to help bridge these gaps by supporting shared performance frameworks and expanding technical assistance to strengthen local implementation.

CMAP’s Role in Emerging Trends and Key Issues

The next generation of asset management in the Chicago region must address gaps in coverage, uneven local capacity, and evolving infrastructure demands. Emerging technologies—EVs, connected and autonomous vehicles, drones, AI, and LiDAR—combined with innovations like cross-asset project bundling, post-implementation evaluation, and resiliency integration, underscore the need for adaptive, data-informed approaches.

Persistent gaps—such as underserved local roads, non-motorized infrastructure, ITS, and ancillary assets—highlight an imbalance between infrastructure needs and the region’s ability to manage them. Closing these gaps requires coordinated data development, strengthened local capacity, consistent integration of diverse assets, and stable funding to ensure long-term investment and maintenance.

Effective governance and coordination are critical, enabling aligned priorities, synchronized planning cycles, and performance-based investment. CMAP can support agencies by providing data, technical guidance, peer learning, and practical tools to translate innovation into resilient, efficient, and equitable infrastructure investments.

Peer Region Comparisons in Asset Management

This section benchmarks the CMAP region asset management practices against three comparable MPO regions—the Metropolitan Transportation Commission (MTC, San Francisco Bay Area), the North Central Texas Council of Governments (NCTCOG, Dallas–Fort Worth), and the Atlanta Regional Commission (ARC, Atlanta)—to highlight national best practices and inform regional improvements. By comparing metrics such as pavement and bridge conditions, funding allocation, performance targets, and governance approaches, the analysis identifies the CMAP region’s strengths (preservation focus,

regional coordination, integration into long-range planning) and areas for growth (linking condition data to capital programming, adoption of innovative tools and data-driven prioritization). The peer examples underscore that effective asset management depends on stable funding, cross-agency coordination, and robust data systems, providing actionable insights for the CMAP region to enhance investment decisions, support local agencies, and advance resilient, performance-based infrastructure management.

Table 4 summarizes key metrics, including pavement and bridge conditions, asset management spending and its share of total transportation funding, performance targets, primary revenue sources, and the MPO’s role in advancing asset management. The comparison highlights both the scale of infrastructure needs and how each MPO prioritizes asset management in long-range planning. It also shows where the CMAP region stands relative to peers, underscoring opportunities to strengthen investment strategies, integrate data more effectively, and apply innovative tools to improve asset performance over time.

Table 4: Comparison of Asset Management Practices and Metrics Across Peer Metropolitan Regions

Region (MPO)	% Interstate Good	% Interstate Poor	% Non-Interstate Good	% Non-Interstate Poor	% Bridge Good	% Bridge Poor
Northeastern Illinois (CMAP)	55%	1%	20%	11%	25%	11%
Bay Area (MTC)	44.9%	3.1%	25.5%	7.1%	66.5%	4.8%
Dallas–Fort Worth (NCTCOG)	64.5%	0.1%	51.7%	1.3%	49.2%	1.1%
Atlanta (ARC)	67.4%	0.1%	49.2%	0.6%	79.1%	0.5%

Note: Data sources include CMAP’s Asset Condition Report (2022/23–2024); MTC’s 2023 TIP Federal Performance Report^{lxvi} (2016/2017 baseline); TX 2025–2028 STIP Appendix E^{lxvii} (2021 baseline); and GA System Performance Report^{lxviii} (2021 baseline). Differences in reporting years reflect the latest available data from each agency.

Northeastern Illinois faces greater challenges in maintaining its transportation assets. Interstate pavement conditions (55% good) trail those in Dallas–Fort Worth and Atlanta but remain stronger than the Bay Area’s, while non-Interstate pavement and bridge conditions lag all three peers. These results illustrate the impact of long-term funding constraints: pavement and bridge conditions are improving in peer regions with more stable and sustained investment. This highlights that with more consistent funding, the CMAP region could make measurable progress toward improving asset conditions and closing the gap with other major metropolitan areas.

Peer State Case Study Practices

To further illustrate how peer MPOs are advancing transportation asset management, **Table 5** highlights notable practices across regions. It focuses on each MPO’s institutional role, financial prioritization strategies, robust integration of performance-based planning

into regional processes, and innovative tools or policies. These case studies provide insight into how regions are operationalizing asset management principles to address infrastructure needs and long-term system performance.

Table 5: Peer State Case Study Practices

MPO / Region	Role & Coordination	Financial Prioritization	Performance-Based Planning	Innovations
MTC	MPO for nine counties; oversees planning, funding, TIP updates, and FTA grant distribution; coordinates with Caltrans and local agencies.	Plan Bay Area 2050 invests ~\$600B; about two-thirds dedicated to maintenance/operations; leverages SB-1 funds.	Tracks system conditions via Vital Signs; supports local agencies with Pavement Management Technical Assistance Program (using StreetSaver).	StreetSaver pavement management + MobileRater inspection app; promotes shared condition data region-wide.
NCTCOG	MPO for 12 counties; allocates transit funds; supports subrecipients via Access North Texas and Group TAMPs; works with TxDOT	Mobility 2045 emphasizes fix-it-first; ~\$1.6B in low-cost operational improvements across 22 corridors	Uses performance-based planning for TIP and MTP; sets regional transit asset targets in coordination with providers (aligned with FTA rules)	Introduced Asset Optimization Framework that systematically identifies low-cost fixes across 22 corridors; publishes regional asset management report.
ARC	MPO for metro Atlanta; sponsors Tier II Group TAM plan for small transit providers	MTP (to 2050): 63% of \$168B to maintenance/operations of existing infrastructure; 21% to expansion.	TIP evaluation framework includes asset management and resiliency among project-scoring criteria.	Supports scenario-based SOGR planning; leveraged MARTA’s ISO 55000 asset management system into long-range and performance-based planning

Across all three peer regions, successful asset management practices share several common threads: strong institutional coordination between MPOs, state DOTs, and transit providers; sustained funding commitments that prioritize maintenance and SOGR over expansion; and robust integration of performance metrics into planning, programming, and project selection. Innovative approaches—such as NCTCOG’s Asset Optimization Framework^{lxix}, ARC’s system operations strategies^{lxx}, and MTC’s comprehensive approach combining major funding alignment through Plan Bay Area with region-wide pavement management tools like StreetSaver^{lxxi} and MobileRater^{lxxii}—demonstrate how MPOs are leveraging data-driven strategies to guide reinvestment decisions.

Benchmarking Takeaways

Although the CMAP region is broadly on par with peer regions in Interstate pavement condition, it lags behind with non-Interstate pavement and bridge condition performance. A review of peer MPO practices highlights strategies the region can build upon to strengthen its approach beyond compliance. Across the Bay Area (MTC), Dallas–Fort Worth (NCTCOG), and Atlanta (ARC), the most effective approaches pair strong institutional coordination with sustained funding and innovative tools to guide investment decisions.

CMAP Strengths

- **Strong integration** of asset goals into long-range planning (ON TO 2050)
- **Commitment to preservation** (82% of revenues to maintain/operate system)
- **Leadership role in coordinating** with transit agencies and IDOT

CMAP Region Growth Areas

- Unlike some peers, the CMAP region does not yet link asset condition directly to capital programming at scale, as seen with MTC’s StreetSaver or NCTCOG’s Asset Optimization framework
- Integration of innovative tools—like AI, scenario modeling, or real-time condition data—is still emerging

Recommendations

Northeastern Illinois has laid a solid foundation for asset management, guided by federal requirements, informed by long-range planning through ON TO 2050, and supported by early steps toward greater regional coordination. However, new and intensifying pressures—climate risks, the rise of electric and digital infrastructure, aging assets, and shifting mobility patterns—are raising the stakes for infrastructure management across the region.

In this context, CMAP’s most important contribution is to sustain its role as **convener and advocate**. CMAP can help ensure that local governments, transit agencies, and IDOT are working from consistent data and performance measures, while also making the regional case for stable, long-term funding to support state-of-good-repair needs.

Areas where CMAP’s convening and support role can make the most impact include:

- **Advocacy for consistent funding.** Irregular and unpredictable funding streams continue to undermine IDOT and RTA’s ability to meet federally required targets. Coordinated regional advocacy for enhanced and more reliable state and federal resources—including revenue solutions such as expanded tolling of the expressway system—will be crucial.

- **Convening and coordination.** CMAP can continue to provide a trusted forum for aligning targets, data, and reporting across IDOT, the RTA/service boards, and local partners, ensuring transparency and shared priorities without duplicating existing responsibilities.
- **Technical assistance.** By scaling its support for local governments—through pavement management pilots, regional data tools, and training—CMAP can continue strengthening local capacity which can help address current gaps in asset management coverage.

Conclusion

Achieving and sustaining a state of good repair across northeastern Illinois requires coordinated action and commitment from all levels of government and transportation agencies. IDOT is responsible for the stewardship of state-owned highways and bridges, setting statewide performance targets and leading asset management for the NHS. The RTA, together with CTA, Metra, and Pace, oversees transit asset management, capital investment, and system condition reporting for the region’s extensive transit network. Counties and municipalities play a critical role in maintaining local roads, sidewalks, signals, and other infrastructure assets that are essential for community connectivity and safety.

A key challenge for all these agencies is the need to manage a diverse, multimodal asset base—including highways, bridges, transit vehicles and facilities, sidewalks, bike infrastructure, and intelligent transportation systems. Each mode presents unique lifecycle, maintenance, and funding requirements, and effective asset management depends on filling data gaps, planning, and investment strategies across these systems.

However, progress toward a state of good repair is fundamentally constrained by unstable and insufficient funding. Irregular capital bills, variable revenue streams, and the erosion of traditional funding sources (such as the Motor Fuel Tax) undermine the ability of IDOT, RTA, counties, and municipalities to plan and deliver long-term preservation and modernization projects. The Illinois Tollway’s experience demonstrates that dedicated, stable funding enables regular reinvestment and stronger asset conditions—a model that has lessons for the broader transportation system.

To move forward, the region must prioritize consistent, sustainable, and long-term funding mechanisms. Only with stable financial resources can state, regional, and local partners maintain existing infrastructure, address deferred maintenance, and invest in the modernization needed to support safety, resilience, and multimodal mobility. This includes balancing the ongoing need to maintain and preserve existing assets with any future system expansion—ensuring that investments in growth do not undermine core maintenance priorities. CMAP’s most valuable role is to convene these partners, align performance targets and data, and advocate for funding solutions that close the gap—

ensuring that every mode and every community benefits from a robust, well-maintained transportation system.

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