

# 2

## Section 3

# Performance-Based Planning





## A. Federal Performance Measures

The Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act and the Fixing America's Surface Transportation (FAST) Act move performance measurement to the center of the transportation planning process. Performance measures were established through federal rulemakings as were associated schedules and deadlines to adopt associated targets. States are required to set targets based on observed data and trends. Metropolitan Planning Organizations (MPOs) are required to establish their own or support the State's targets also based on observed data and trends. Performance measures and targets are described in further detail in the **Goals, Objectives, Performance Measures, and Targets (GOPMT) section**.

The Colorado Department of Transportation (CDOT), transit agencies, and the NFRMPO are required to develop performance-based plans and processes which align with federal goals. The NFRMPO develops GOPMT to fulfill performance-based planning requirements and to drive project selection as MPOs are required to report in their Transportation Improvement Programs (TIP) and Regional Transportation Plans (RTP) the projects selected move the region towards achieving the goals, based on the targets adopted. The GOPMT are developed during the Planning stage of Performance-Based Planning.

Once CDOT and transit agencies adopt their targets, the NFRMPO generally has 180 days to set targets. NFRMPO staff analyzes its own data and data collected from CDOT and transit agencies to make an informed decision about setting their own targets or adopting targets set

by the other agencies. For the 2045 RTP, the NFRMPO Planning Council elected to adopt targets by supporting the targets set by the state and the transit agencies.

The federal performance measures are categorized into five areas, though only four have targets currently set:

- **Performance Measure (PM) 1: Highway Safety**
  - Number of fatalities
  - Rate of fatalities per 100M Vehicle Miles Traveled (VMT)
  - Number of serious injuries
  - Rate of serious injuries per 100M VMT
  - Number of non-motorized fatalities and serious injuries
- **PM2: Bridge and Pavement Condition**
  - Percent of Interstate pavement in Good condition
  - Percent of Interstate pavement in Poor condition
  - Percent of non-Interstate National Highway System (NHS) pavement in Good condition
  - Percent of non-Interstate NHS pavement in Poor condition
  - Percent of NHS bridges in Good condition
  - Percent of NHS bridges in Poor condition
- **PM3: System Reliability**
  - Percent of person-miles traveled on Interstate system that are reliable
  - Percent of person-miles traveled on non-Interstate system that are reliable
  - Truck travel time Reliability (TTTR) Index
  - VOC reduction

- CO Reduction
- NOx Reduction
- **Transit Asset Management (TAM) Targets**
  - Percent revenue vehicles meeting or exceeding useful life benchmark (ULB)
  - Percent service vehicles meeting or exceeding ULB
  - Percent passenger and maintenance facilities rated below condition 3
- **Transit Safety Targets**, which include the number of fatalities and rate per total vehicle revenue miles, number of reportable injuries and rate per total vehicle revenue miles, number of reportable safety events and rate per total vehicle revenue miles, and mean distance between major mechanical failures. These targets are due to be adopted after the adoption of the 2045 RTP.

CDOT collects data for the NHS throughout the State and provides the NFRMPO with data at the Statewide and MPO-level as agreed upon in the 2018 Memorandum of Understanding (MOU). The MOU provides an expectation for CDOT to provide data on a regular schedule to allow the NFRMPO to make informed decisions in the transportation planning process. Based on the

data provided, the NFRMPO can elect to set its own targets or adopt the Statewide targets.

The NFRMPO adopted the targets on the following schedules:

- PM1 targets are adopted annually and submitted to CDOT. The 2015-2019 Highway Safety Targets were adopted by the NFRMPO Planning Council on February 7, 2019.
- PM2 and PM3 targets are adopted prior to the adoption of the RTP and will be submitted to CDOT. PM2 and PM3 targets were adopted by the NFRMPO Planning Council on September 6, 2018.
- TAM targets are adopted annually by the transit agencies and submitted to the NFRMPO. The NFRMPO Planning Council adopted the TAM targets for the region on November 1, 2018.
- Transit Safety targets must be set by transit agencies by July 20, 2020. The NFRMPO will adopt transit safety targets by July 20, 2021.

For more information about performance measures, schedules, and expectations, visit the [FHWA TPM website](#).

## B. Goals, Objectives, Performance Measures, and Targets (GOPMT)

Starting with the 2040 RTP, the NFRMPO has adopted GOPMT to guide investments in the regional transportation system. With the final rulemakings being promulgated between 2016 and 2018, the NFRMPO has updated the region's GOPMT. NFRMPO staff worked with Technical Advisory Committee (TAC) members to update objectives and to draft new regional performance measures. These performance measures and targets are organized into four NFRMPO-specific goals, seven national goals, and 12 objectives.

Much of the GOPMT framework did not change between the 2040 RTP and the 2045 RTP. The NFRMPO, its member communities, and transit agencies continue to believe in the need to invest in infrastructure, reduce delays, improve access to non-Single Occupancy Vehicle (SOV) transportation, and ensure projects are delivered in a timely manner. NFRMPO Goals and Objectives are shown alongside the seven National Goals in **Table 2-21**.

### Goals

Goals are the first step to supporting the vision statement. Goals address the key desired outcomes for the region. In the 2040 RTP, the NFRMPO used CDOT's and the federally-established goals as the basis for the regional goals. For the 2045 RTP, the NFRMPO worked with TAC to ensure these goals reflect the region's current expectations.

### Objectives

Objectives are needed to support and accomplish the established goals. For the 2040 RTP, objectives had not been released at the national level; rather, NFRMPO staff used CDOT objectives and local data to determine appropriate objectives for each goal. These were taken to TAC for input and updated as needed.

**Table 2-21: NFRMPO GOPMT Framework**

**Value Statement**

We seek to provide a multi-modal transportation system that is safe, as well as socially and environmentally sensitive for all users that protects and enhances the region’s quality of life and economic vitality.

	<b>Goal Area 1</b> Economic Development & Quality of Life			<b>Goal Area 2</b> Mobility			<b>Goal Area 3</b> Multi-Modal			<b>Goal Area 4</b> Operations		
<b>MPO GOAL</b>	Foster a transportation system that supports economic development and improves residents’ quality of life			Provide a transportation system that moves people and goods safely, efficiently, and reliably			Provide a multi-modal system that improves accessibility and transportation system continuity			Optimize operations of transportation facilities		
<b>NATIONAL GOALS</b>	Infrastructure Condition			Safety			Infrastructure Condition			Congestion Reduction		
	Freight movement and economic vitality			Congestion Reduction			System Reliability			Freight Movement and Economic Vitality		
	Environmental Sustainability			System Reliability						Reduced Project Delivery Delays		
<b>OBJECTIVES</b>	Conform to air quality requirement	Maintain transportation infrastructure and facilities	Increase investment in infrastructure	Reduce number of severe traffic crashes	Reduce congestion	Improve travel time reliability	Support transportation services for all including the most vulnerable and transit-dependent populations	Increase mode share of non-single occupancy vehicles (SOV) modes	Develop infrastructure that supports alternate modes and connectivity	Optimize the transportation system	Enhance Transit Service in the NFR region	Reduce project delivery time frame

## Performance Measures and Targets

Performance measures are a key part of the NFRMPO Call for Projects, [Transportation Improvement Program](#) (TIP), and [RTP](#). The NFRMPO has five categories of performance measures: Highway Safety; Bridge and Pavement Condition; System Performance; Transit Asset Management; and Regional Performance Measures. The first four are set by the USDOT, while the NFRMPO established its own performance measures based on regional priorities. The individual performance measures and trends are explored in **Appendix C: System Performance Report**. **Table 2-22** shows the

federally required roadway performance measures and targets. **Table 2-23** shows the federally required transit-related performance measures and targets. **Table 2-24** shows the regional performance measures and targets. Performance measures will be updated with each future [RTP](#) to ensure compliance with federal regulations and to ensure regional expectations are being met. Annually, Highway Safety targets are adopted by the NFRMPO and TAM targets are adopted by the transit agencies annually.

**Table 2-22: Federal Roadway Performance Measures and NFRMPO Targets**

Performance Measure	Statewide Target
<b>Highway Safety</b>	
Number of fatalities	644
Fatality rate per 100 million vehicle miles traveled	1.20
Number of serious injuries	2,909
Serious injury rate per 100 million vehicle miles traveled	5.575
Number of non-motorized fatalities and serious injuries	514
<b>Bridge and Pavement Condition</b>	
Percent of pavement on Interstate System in Good condition	47.0%
Percent of pavement on Interstate System in Poor condition	1.0%
Percent of pavement on non-Interstate System in good condition	51.0%
Percent of pavement on non-Interstate System in poor condition	2.0%
Percentage of NHS bridges in good condition	44.0%
Percentage of NHS bridges in poor condition	4.0%
<b>System Reliability</b>	
Percent of person-miles traveled on Interstate that are reliable	81.0%
Percent of person-miles traveled on non-Interstate NHS that are reliable	64.0%
Truck Travel Time Reliability Index	1.5
Total emissions reduction	105.000 kg/day VOC reduction 1,426.000 kg/day CO reduction 105.000 kg/day NOx reduction

**Table 2-23: Transit Asset Management Performance Measures and NFRMPO Targets**

Agency	Percent Revenue Vehicles Meeting or Exceeding Useful Life Benchmark	Benchmark (years)	Target
Transfort	Bus	15	25%
	Articulated Bus	17	
	Cutaway Bus	12	
	Automobile	10	
	Minivan	10	
	Truck/SUV	10	
GET	Bus	14	5%
	Cutaway (Fixed-Route)	7	10%
	Cutaway (Paratransit)	8	20%
Statewide Tier II	Bus	14	20%
	Cutaway Bus	10	7%-20%
	Automobile	8	50%
	Minivan	8	38%
Agency	Percent Service vehicles Meeting or Exceeding Useful Life Benchmark	Benchmark (years)	Target
Transfort	Automobile	10	25%
	Truck and other rubber-tire vehicles		
GET	Equipment	10	1%
Statewide Tier II	Automobile	8 to 14	28%
	Truck and other rubber-tire vehicles		
Agency	Percent Passenger and Maintenance Facilities Rated Below Condition 3	Target	
Transfort	Passenger Facility	25%	
	Passenger Parking		
	Maintenance		
	Administrative		
GET	Administrative	10%	
Statewide Tier II	Passenger Facility	19%	
	Passenger Parking		
	Maintenance		
	Administrative		

**Table 2-24: Regional Performance Measures and Targets**

Performance Measure	Regional Target
Population within publicly-operated paratransit and demand response service area within the NFRMPO boundary	≥ 75%
Non-motorized facility miles	↑ 50%
Percent of non-single-occupant vehicle (SOV) commuter trips	≥ 25%
Fixed-route revenue hours per capita within service areas	↑ 10%
Daily VMT per capita	≤ 24
Federally-funded projects within the NFRMPO boundary reported as financially inactive for more than three quarters	0
Travel Time index on RSCs	90% ≤ 1.5
Miles of fiber for connected roadways	250 miles

### C. Progress of 2040 RTP GOPMT

The NFRMPO tracks data based on the 2040 RTP GOPMT. **Table 2-25** reports on progress for the 10 targets established in the 2040 RTP. Statuses with a green background have been achieved, while those in red have made progress toward or do not currently achieve the target. The data used is the most readily available but may not perfectly match data available from when the 2040 RTP was prepared. The best equivalent was used for comparison.

**Table 2-25: 2040 RTP GOPMT Progress Report**

Performance Measure	2040 Target	Status
Air quality conformity tests on plans and programs	Passes conformity	All NFRMPO conformity tests since the <u>2040 RTP</u> have passed conformity.
Number of facility samples with poor surface conditions	Reduce by 1%	The State Highway System saw a reduction from 110 miles to 29 miles of low-rated pavement.
Bridges with a sufficiency rating below 50.0	Less than 5 percent of bridges	6.0 percent of bridges in the NFRMPO region are rated as poor.
Five-year rolling average of serious injury and fatal crashes	No increases in crashes	The five-year rolling average increased from 169.3 to 216.8 in Larimer and Weld counties.
Regionally significant congested corridor with a travel time index of 2.5 times or less than free flow	Maintain at least 80%	99.9 percent of RSCs have a TTI of 2.5 or less.



Population and essential destinations within paratransit and demand response service area within the NFRMPO boundary	At least 85%	The current percentage is 65.1 percent.
Non-motorized facilities per capita	Increase by at least 2 percent	The NFRMPO population growth outpaced growth in non-motorized facilities.
Fixed-route revenue hours per capita within service areas	Increase by 30%	Revenue hours per capita increased by 25.1 percent between 2014 and 2017.
Transit service vehicles within useful life parameters established by FTA	Maintain 75%	20 percent of transit service vehicles were beyond ULB parameters set by FTA in 2017.
VMT growth per capita	Change in VMT should not exceed change in population	VMT grew by 12.9 percent while population grew at 7.7 percent.
Fixed-route ridership per capita within service areas	Increase by 10 percent	Ridership per capita has increased by 58.5 percent in the region since 2014.

## D. Call for Projects

The programming stage of performance-based planning is carried out through the NFRMPO-administered Call for Projects in which federal funds are awarded for surface transportation projects. The NFRMPO awards funding from three federal programs: Congestion Mitigation and Air Quality Improvement (CMAQ), Surface Transportation Block Grant (STBG), and Transportation Alternatives (TA). These programs fund a wide variety of transportation projects, including bridges, major roadways, non-motorized transportation, transit, projects which reduce congestion and improve air quality, and environmental mitigation projects.

The FY2020-2023 TIP identifies projects programmed in the North Front Range region for the first four years of the 2045 RTP. The NFRMPO held two Calls for Projects to award funds for the FY2020-2023 TIP. Projects with funding in FY2020 and FY2021 were awarded during the 2016 Call for Projects and projects with funding in FY2022

and FY2023 were awarded during the 2018 Call for Projects.

Performance-based planning is an integral component of the Call for Projects. In 2016, submitted projects were scored and selected using the 2040 GOPMT adopted by the NFRMPO Planning Council on September 4, 2014. In 2018, submitted projects were scored and selected using the 2045 GOPMT adopted by the NFRMPO Planning Council on October 4, 2018. In addition, all CMAQ and STBG projects had to address at least one federally-required performance measure. By incorporating the GOPMT into the project selection process, the NFRMPO ensures selected projects will contribute toward achievement of the region's targets.

In total, \$34.4M federal funds were awarded through the two Calls for Projects, as shown in **Table 2-26**. Projects awarded through the Call for Projects are identified in the FY2020-2023 TIP

and online at <https://nfrmpo.org/tip/call-for-projects/>. Each project awarded funding supports at least one of the four goals included in the 2040 and 2045 GOPMT. **Figure 2-35** identifies the amount of federal funding awarded in support of each of the four goals. Projects

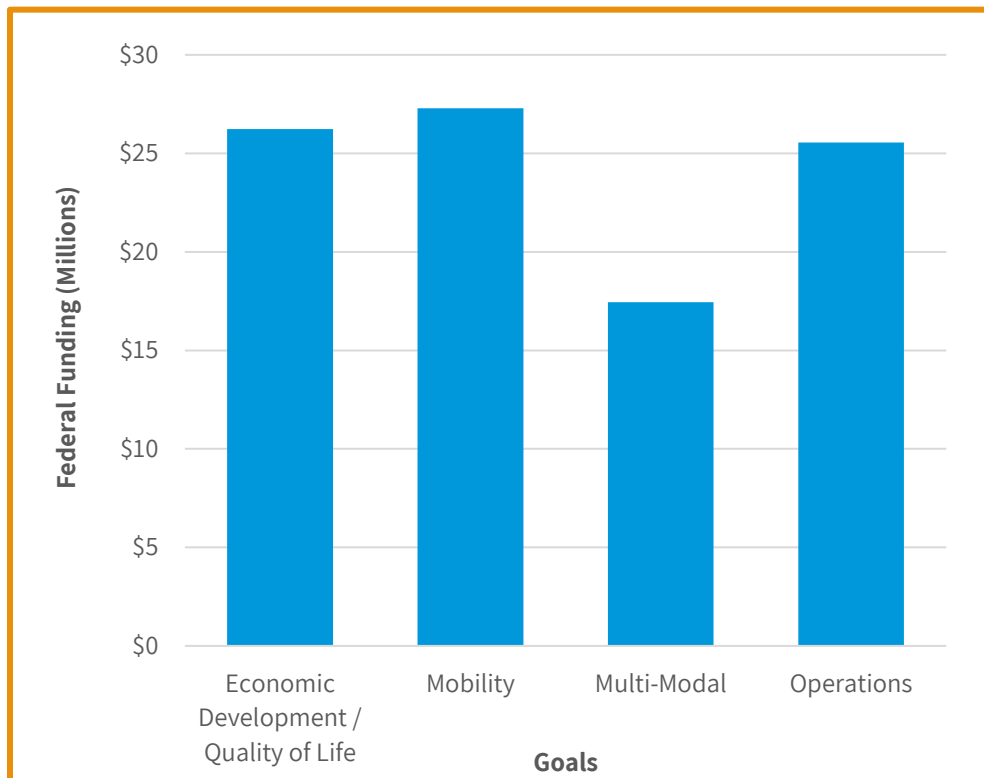
supporting the Mobility goal received the highest amount of funding, with \$27.3M, followed by Economic Development/Quality of Life at \$26.2M, Operations at \$25.6M, and Multi-Modal at \$17.4M.

**Table 2-26: 2016 and 2018 Calls for Projects Award Summary**

Funding Program	Federal Funding	Number of Projects
Congestion Mitigation & Air Quality Improvement (CMAQ)	\$19,012,654	13
Surface Transportation Block Group (STBG)	\$14,252,805	10
Transportation Alternatives (TA)	\$1,101,656	3
<b>Total</b>	<b>\$34,367,115</b>	<b>25*</b>

*\*The number of projects by funding program exceeds the total number of projects because one project received both STBG and TA funding.*

**Figure 2-35. Project Funding by Goal, 2016 and 2018 Calls for Projects**



*Note: Most awarded projects contribute to multiple goals. The sum of federal funding contributing to each goal exceeds the total federal award amount of \$34.4M to comprehensively reflect the impacts of the awarded projects.*