

MEMORANDUM OF UNDERSTANDING (MOU)

By and between

THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT)

And

THE DENVER REGIONAL COUNCIL OF GOVERNMENTS (DRCOG)

for the

ESTABLISHMENT OF A PROCESS TO FACILITATE SAFETY, INFRASTRUCTURE
CONDITION, SYSTEM PERFORMANCE, TRAFFIC CONGESTION, AND AIR QUALITY
TARGET SETTING FOR THE FAST ACT PERFORMANCE MEASURES

23 USC 150(c) establishes requirements for performance measures and targets for safety, infrastructure condition, system performance, freight, and air quality. The pertinent federal regulations require an agreement between CDOT, DRCOG, and public transit agencies, including activities related to required safety, infrastructure condition, system performance, and transit performance metrics measure targets.

This MOU document defines specific roles regarding setting required national performance measure targets and is a subset to the federally required Metropolitan Planning Agreement (MPA) between CDOT and DRCOG, and the Regional Transportation District (RTD). This MOU addresses all non-transit-related national performance measure targets.

This MOU document supersedes THE ESTABLISHMENT OF A PROCESS TO FACILITATE SAFETY TARGET SETTING FOR THE FIVE PRESCRIBED FAST ACT PERFORMANCE MEASURES MOU signed by DRCOG in May 2018.

The FAST Act and subsequent Federal rulemaking of 23 CFR 490 established performance measures related to safety, infrastructure condition, system performance, and CMAQ. Federal regulations require state departments of transportation to establish and report safety performance measure targets by August 31, 2018 and update annually. Federal regulations require state departments of transportation to establish and report infrastructure condition and system performance measures targets by May 20, 2018 and update them every two- and four-year period. CDOT has established statewide targets for the required performance measures.

DRCOG is required to establish performance measure targets by either establishing its own targets or supporting the state DOT's statewide targets within 180 days of the state DOT setting its targets. CDOT and DRCOG also set joint targets for two measures. The total list of measures addressed in this MOU are:

1. Safety:
 - a) Number of fatalities;

- b) Number of serious injuries;
 - c) Rate of fatalities per 100 million vehicle miles traveled;
 - d) Rate of serious injuries per 100 million vehicle miles traveled; and
 - e) Number of non-motorized fatalities and serious injuries.
2. Infrastructure Condition:
 - a) Percent of Interstate Pavement in Good Condition;
 - b) Percent of Interstate Pavement in Poor Condition;
 - c) Percent of Non-Interstate National Highway Pavement in Good Condition;
 - d) Percent of Non-Interstate National Highway Pavement in Poor Condition;
 - e) Percent of National Highway System Bridges in Good Condition; and
 - f) Percent of National Highway System Bridges in Poor Condition.
 3. System Performance:
 - a) Percent of the Interstate System providing Reliable Travel Times;
 - b) Percent of the non-Interstate National Highway System providing Reliable Travel Times;
 - c) Percent of the Interstate System providing for reliable Truck Travel Times;
 4. Traffic Congestion
 - a) Annual Hours of Peak-Hour Excessive Delay per capita;
 - b) Percent of non-SOV travel; and
 5. On-Road Emissions
 - a) Total on-road emissions reduction benefits in nonattainment and maintenance areas for CMAQ criteria pollutants.

CDOT, DRCOG, and public transit agencies shall cooperatively determine their mutual responsibilities in carrying out the metropolitan planning process pursuant to 23 USC 134 and in accordance with 23 CFR 420, 450 and 490. Failure to comply with federal regulations will indicate non-compliance with 23 CFR 420, 450 and 23 CFR 490 and the MPA with DRCOG results in penalties assessed from FHWA;

In consideration of the mutual promises and representations contained herein, the parties agree as follows:

1. Parties to Memorandum of Understanding (MOU):

This agreement is entered by and between CDOT and the DRCOG. This MOU provides procedures and defines roles and responsibilities identified in the Memorandum of Agreement for Transportation Planning and Programming by and between CDOT and DRCOG.

2. Purpose:

The purpose of this MOU is to set forth the general procedures, mutually acceptable to DRCOG and CDOT, for the establishment of a process to facilitate safety, infrastructure condition, system performance, traffic congestion, and air quality target setting and reporting

for the FAST Act performance measures. This includes the five elements in 23 CFR 450.314 (h) (1) which are:

- a. When one MPO serves an urbanized area;
- b. When more than one MPO serves an urbanized area; and
- c. When an urbanized area designated as a Transportation Management Area (TMA) overlaps into an adjacent MPA serving an urbanized area that is not a TMA.
- d. Provisions shall be documented as part of the metropolitan planning agreements required under paragraphs (a), (e), and (g) of 23 CFR 450.314; or
- e. Documented in some other means outside of the metropolitan planning agreements as determined cooperatively by the MPO(s), State(s), and providers of public transportation.

3. Roles, Responsibilities, and Deliverables:

- a. As part of the target setting process, CDOT will:

1. Safety:

- a. Inform DRCOG of the five statewide performance measure targets, CDOT establishes by August 31 of each year.
- b. Provide data, based on availability, for the number of fatalities, number of serious injuries, vehicle miles traveled, and number of non-motorized fatalities and serious injuries for the five-year base period as close to the boundaries of DRCOG as possible by August 31 of each year.
- c. Provide target setting methodology guidance, if requested by DRCOG.
- d. Provide reasonable staff support necessary to assist DRCOG with calculating and adopting annual safety targets.

2. Infrastructure Condition and System Performance (not including PHED/Non-SOV/CMAQ):

- a. Inform the DRCOG of the performance measure targets established for the state each performance period by May 20 of each performance period.
- b. Provide the data necessary to evaluate the performance for each measure within the respective MPO boundaries to DRCOG no later before May 20 of each year.
- c. Provide target setting methodology guidance if requested by DRCOG
- d. Provide staff support to assist DRCOG with the process of establishing infrastructure condition and system performance targets
- e. Inquire the progress being made by DRCOG in the establishment of the aforementioned performance targets for the two and four-year reporting requirements.
- f. Share the results with DRCOG of FHWA determination of whether CDOT has met or made significant progress toward meeting its performance targets.
- g. Develop and implement an asset management plan to improve and preserve the condition of the assets and improve the performance of the National Highway System (NHS) in accordance with 23 CFR 515.9. An asset management plan should include at a minimum a summary listing of NHS pavement and bridge assets, regardless of ownership; and is not required, but

encouraged to include all other NHS infrastructure assets within the right-of-way corridor and assets on other public roads.

3. Traffic Congestion

- a. CDOT and DRCOG will collaboratively establish a single 2-year and 4-year target for the percent of non-SOV travel and a 4-year target for PHED in each applicable urbanized area by May 20th of each performance period.
- b. Provide reasonable staff support necessary to assist DRCOG with adopting joint traffic congestion targets.

4. Congestion Mitigation and Air Quality Improvement (CMAQ) - On-road mobile emissions for CMAQ pollutants performance measures are applicable to maintenance and non-attainment areas:

- a. Inform the DRCOG of the performance measure targets established for the state each performance period by May 20 of each performance period.
 - b. Provide the data necessary to evaluate the performance for each measure within the respective MPO boundaries to DRCOG no later than May 20th of each performance period.
 - c. Provide target setting guidance to MPOs should they decide to establish their own targets for one or more of the aforementioned performance measures.
 - d. Provide staff support to assist DRCOG with the process of establishing on-road mobile emissions for CMAQ pollutants targets.
 - e. Inquire the progress being made by DRCOG in the establishment of the aforementioned on-road mobile emissions for CMAQ pollutants targets for the two and four-year reporting requirements.
 - f. Share the results with DRCOG of the FHWA determination of whether CDOT has met or made significant progress toward meeting its on-road mobile emissions for CMAQ pollutants targets.
- b. As part of the target setting process, DRCOG will:
- 1. Safety:**
 - a. Inform CDOT of the five safety performance measure targets DRCOG establishes within 180 days of CDOT setting its targets, provide CDOT a letter confirming action by resolution of the DRCOG Board of Directors and the date of the approval. Such targets may support statewide targets or may be unique to the MPO planning area:
 - b. If DRCOG agrees to support CDOT safety performance measure targets, the MPO shall:
 - i. Establish its support for state targets in coordination with CDOT.
 - ii. Include CDOT safety performance measures and HSIP targets in the MPO Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP); OR
 - c. If DRCOG establishes its own safety performance measure targets, the MPO shall:
 - i. Establish targets for all public roads in the DRCOG Transportation Management Area.

- ii. Estimate VMT for all public roads within the DRCOG Transportation Management Area for rate-based safety targets.
- iii. Include the safety performance measures and the MPO's safety targets in the MPO RTP and TIP.

2. Infrastructure Condition and System Performance:

- a. Inform CDOT of whether DRCOG intends to establish its own specific numeric targets for all the performance measures, or support CDOT targets for infrastructure condition and system performance, or any combination
- b. If DRCOG agrees to support CDOT infrastructure condition or system performance targets, the MPO will:
 - i. Establish its support for state targets in coordination with CDOT.
 - ii. Include CDOT baseline system performance and infrastructure condition performance, targets and progress toward achieving these targets in the system performance report in the RTP and TIP; or
- c. If DRCOG establishes its own infrastructure condition or system performance targets, the MPO will:
 - i. Establish infrastructure condition targets for all national highway system roads in the metropolitan planning area in coordination with CDOT
 - ii. Establish system performance targets for all roads as specified within the statute criteria in the metropolitan planning area.
 - iii. Include the infrastructure condition or system performance targets in the MPO RTP and TIP.

3. Traffic Congestion:

- a. CDOT and DRCOG will collaboratively establish a single 2-year and 4-year target for the percent of non-SOV travel and a 4-year target for PHED in each applicable urbanized area by May 20th of each performance period.
- b. DRCOG will provide CDOT a letter confirming action by resolution of the DRCOG Board of Directors and the date of the approval of joint targets.

4. CMAQ:

- a. Inform CDOT of whether DRCOG intends to establish its own on-road mobile emission targets or support CDOT targets.
- b. If DRCOG agrees to support CDOT on road emission targets, the MPO will:
 - i. Establish its support for state targets in coordination with CDOT.
 - ii. Include CDOT's on-road emission targets and progress toward achieving these targets in the system performance report in the RTP and TIP; or
- d. If DRCOG establishes its own infrastructure condition or system performance targets, the MPO will:
 - i. Establish infrastructure condition targets for all national highway system roads in the metropolitan planning area in coordination with CDOT
 - ii. Include the on-road mobile emission targets in the MPO RTP and TIP.

4. Data Collection:

a. CDOT will collect and/or compile and share this data to the greatest extent practicable.

1. Safety:

- a. Traffic crashes in the DRCOG area are reported by different agencies throughout the state to CDOT. CDOT and DRCOG will rely on Fatality Analysis Reporting System (FARS) by the National Highway Traffic Safety Administration (NHTSA) as the source for calculating fatalities. The FARS Annual Report Pile (ARP) may be used if final FARS is not available.
- b. Data Source: NHTSA FARS

2. Bridge Condition:

- a. Considering all NHS bridges, classification is based on National Bridge Inventory (NBI) condition ratings for item 58 – Deck, 59 – Structure, 60 – Substructure, and 62 – Culvert. The bridge condition is determined by the lowest rating of deck, superstructure, substructure or culvert.
- b. Data Source: Annual Bridge Inspections

3. Pavement Condition:

- a. Considering pavements of the Interstate System and non-Interstate NHS, classification using the Highway Performance Monitoring System (HPMS) is based on international roughness index (IRI), rutting (asphalt pavements only), cracking, and faulting (concrete pavements only).
- b. Data Source: HPMS Pavement Condition Assessment

4. System Reliability and Freight Performance Metrics:

- a. Considering person miles traveled on the Interstate and non-Interstate NHS, determination of travel-time reliability is based on calculated travel time index as reported by the National Performance Management Research Data Set (NPMRDS).
- b. Data Source: NPMRDS

5. Peak Hour Excessive Delay:

- a. Determination of travel times of all traffic during each 15-minute interval for all applicable reporting segments in the travel time data set occurring for peak periods from January 1 through December 31 of the same year, for the applicable urbanized area, as reported by the NPMRDS.
- b. Data Source: NPMRDS

6. Non-Single Occupancy Vehicle Travel:

- a. Percent of Non-SOV travel for the applicable urbanized area will be based on American Community Survey 5-year estimates.
- b. Data Source: American Community Survey, table DP03, 5-year averages

7. On Road Mobile Emissions:

- a. Calculations for emission-reduction benefit for Volatile Organic Compounds (VOC), Particulate Matter, 10 micrometers or greater (PM10), Carbon

Monoxide (CO), and Nitrogen Oxides (NOx) will be based on CMAQ funded projects for the appropriate years for each performance period.

- b. Data Source: CMAQ Public Access System

5. Data Analysis:

- a. CDOT and DRCOG will share and analyze applicable data to help achieve target setting and progress reporting.
- b. CDOT and DRCOG will work collaboratively to create methodologies for the purposes of setting new targets in subsequent performance periods or reassessing targets when allowed by federal requirements.

6. Reporting:

- a. As part of reporting progress toward target achievement CDOT will:
 - 1. Share with DRCOG the results of the FHWA determination of whether CDOT has met or made significant progress toward meeting the infrastructure condition or system performance targets.
 - 2. Collaborate with DRCOG on the evaluation report.
- b. As part of reporting progress toward target achievement DRCOG will:
 - 1. Beginning in 2018, submit a CMAQ Performance Plan, in accordance with USC 490.105, to CDOT at the beginning of a four-year performance period and subsequently update the plan biennially through the performance period, once the midpoint (two years) and again at the end of the performance period (four years).
 - 2. Include in the RTP a systems performance report which evaluates results and progress of the adopted infrastructure condition or system performance targets.
 - 3. Include a description in the TIP of the anticipated effect of the TIP toward achieving the infrastructure condition or system performance targets in the RTP, linking investment priorities in the TIP to said infrastructure condition or system performance targets.

THE COLORADO DEPARTMENT OF TRANSPORTATION

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