



# CMAQ Mid Performance Plan

September 10, 2024

**MPO Name: OKI Regional Council of Governments**  
**TMA and States: Cincinnati, OH-KY-IN**

This OKI CMAQ Performance Plan is prepared as an element of the Ohio Department of Transportation, Kentucky Transportation Cabinet, and Indiana Department of Transportation statewide CMAQ Performance reports for the mid-performance period in accordance with the requirements of 23 CFR 490.107(c) and 23 USC 149(l) by OKI staff in collaboration with the respective state departments of transportation, FHWA, and other stakeholders. Specifically, the report addresses the progress made toward the performance measures promulgated through the PM3 regulation Subpart G (Measures to Assess the CMAQ Program – Traffic Congestion) and Subpart H (Measures to Assess the CMAQ Program – On-road Mobile Source Emissions).

Table 1a shows the baseline and four-year target peak hours of excessive delay (PHED) per person, per year for the Cincinnati urbanized area. The data for this metric was derived from FHWA vehicle occupancy factors, HPMS traffic count data, and the NPMRDS travel time data set.

**Table 1a – Traffic Congestion Measures: Peak Hour Excessive Delay (PHED)**

<b>Measure</b>	<b>Metric (annual hours per person)</b>
Baseline PHED	7.1
2024 2-Year PHED Target	9.0
2026 4-Year PHED Target	9.0

Table 1b presents actual PHED per person, per year for the Cincinnati urbanized area for 2022 and 2023. In both years, PHED was below both the four-year target of 9.0 and the baseline of 7.1. The data for this metric was derived from FHWA vehicle occupancy factors, HPMS traffic count data, and the NPMRDS travel time data set.

**Table 1b – Traffic Congestion Measures: Actual Peak Hour Excessive Delay (PHED) Statistics**

<b>Year</b>	<b>Metric (annual hours per person)</b>
2022	3.7
2023	4.6

Table 2a shows the baseline, two-year, and four-year targets for non-single occupancy vehicle travel (Non-SOV) in the Cincinnati urbanized area. The data for this metric was derived from the American Community Survey Economic Characteristics table.

**Table 2a – Traffic Congestion Measures: Non-Single Occupancy Vehicle (Non-SOV) Travel**

Measure	Metric (% of total travel modes)
Baseline	20.0%
2-Year Target	18.5%
4-Year Target	18.5%

Table 2b presents actual Non-SOV travel in the Cincinnati urbanized area for 2021 and 2022. Non-SOV travel in both years was above both the two- and four-year targets of 18.5 percent. In comparison to the baseline, there was a slight increase of 1.4% in Non-SOV travel in 2021 and 3.4% in 2022. The data for this metric was derived from the American Community Survey Economic Characteristics table.

**Table 2b – Traffic Congestion Measures: Actual Non-Single Occupancy Vehicle (Non-SOV) Travel Statistics**

Year	Metric (% of total travel modes)
2021	21.4%
2022	23.4%

Table 3a shows the on-road baseline, two-year, and four-year quantitative emissions targets for Volatile Organic Compounds (VOC) and Nitrous Oxide (NOx) for the OKI region. The baseline data was derived from the CMAQ Public Access System and aggregated, by state and pollutant type for the years 2020 – 2023. The data for the two and four-year targets was derived from CMAQ-eligible projects in the OKI TIP with quantitative emissions benefits, for the years 2022 – 2025.

**Table 3a – On-Road Mobile Source Emissions**

Region	Measure	NOx (kg/day)	VOC (kg/day)
OKI Region	2020-2023 Baseline	13.47	6.63
	2024 2-Year Target	17.51	8.62
	2026 4-Year Target	40.40	19.90

Table 3b presents the on-road actual quantitative emissions statistics for VOC and NOx in fiscal years 2022 and 2023. During the two-year period, both Ohio and

Kentucky CMAQ-funded projects in the OKI region contributed toward statewide daily emissions reduction targets. Overall, 14 CMAQ-funded projects (Table 3c) contributed to daily emissions savings in the OKI region of 13.578 kg of VOC and 17.538 kg of NOx during fiscal years 2022 and 2023. This data was derived from the FHWA CMAQ Public Access System and encompasses all CMAQ-funded projects within the OKI region with on-road mobile source emissions savings that were obligated during 2022 and 2023.

**Table 3b – Actual On-Road Mobile Source Emissions Statistics**

Year	State	NOx (kg/day)	VOC (kg/day)
2022	Indiana	0	0
	Kentucky	0	0
	Ohio	7.232	9.088
2023	Indiana	0	0
	Kentucky	0.031	0.169
	Ohio	6.315	8.281

**Table 3c – FY2022 and FY2023 CMAQ-funded Projects Actual Emissions Benefits**

Year	PID	State	Facility/Agency	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
22	100816	Ohio	WAR SR 48 11.54	Deerfield Rd. from E. Turtlecreek Union Rd. north along Cornett Rd., to Forge Rd.	Construction of a MUP	0.022	0.03	0.001	Encourages alternate modes	Encourages alternate modes
22	104712	Ohio	CLE VAR ITS Phase 3	Clermont County	Interconnect and upgrade traffic signals at 20 locations in county	0.52	0.37	0.03	Reduces congestion and delay	N/A
22	106573	Ohio	HAM OKI FY2022 Rideshare	Rideshare Program	Rideshare Program	1.053	2.898	0.356	Removes multiple vehicles from network	Encourages carpooling
22	106574	Ohio	HAM OKI FY2023 Rideshare	Rideshare Program	Rideshare Program	4.32	4.208	0.185	Removes multiple vehicles from network	Encourages carpooling

Year	PID	State	Facility/Agency	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
22	107302	Ohio	WAR US 42 Roundabouts	T- intersections of US-42 with Bethany Rd. and Mason Morrow Millgrove Rd.	Conversion of T- intersections to modern roundabouts. Construction of a shared use path from Bethany Rd. along US-42 and connecting to the Mason Sports Park on Mason Morrow Millgrove Rd.	1.291	1.516	0.042	Reduces congestion and delay	N/A
22	111788	Ohio	WCTS	WCTS	Vehicle replacements.	0.026	0.066		Removes multiple vehicles from network	Encourages transit ridership
23	107130	Ohio	HAM CR 284 1.33	Intersection of Pfeiffer Road and Deerfield Road	Construct roundabout	0.06	0.07	0.002	Reduces congestion and delay	N/A
23	107866	Ohio	HAM CR 239/IR 275/Ramp Y	Omniplex Drive south to Ramp Y (WB I-275 on -ramp)	Additional right turn lane from SB Winton onto WB I-275 on- ramp. Dual right turns on ramp.	0.49	2.114	0.01	Reduces congestion and delay	N/A
23	108014	Ohio	HAM US 50 8.43 Thornton Ave	Thornton Av from Forbes Rd across the RR and River Road (US 50)	Bike/ped crossing along south side of Thornton Av, across River Rd and RR tracks to Fernbank Park	0.02	0.02	0.001	Encourages alternate modes	Encourages alternate modes
23	108254	Ohio	CLE CR 3 Aicholtz Rd Roundabouts	Aicholtz at Eastgate Dr., Aicholtz at Glen Este Withamsville north and south.	Construction of three roundabouts. Cul-de-sac Old Aicholtz, Larma Lan, and Wuebold Lane in Clermont County, Ohio.	1.21	1.32	0.04	Reduces congestion and delay	N/A

Year	PID	State	Facility/Agency	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
23	111260	Ohio	HAM OKI SFY 2024 Rideshare	Rideshare Program	Rideshare Program	4.32	4.208	0.185	Removes multiple vehicles from network	Encourages carpooling
23	114214	Ohio	HAM US 42 14.78	US 42 from Reading Road to East Kemper Road	Construction of a shared use path with a connection to Sharon Woods in Sharonville, Ohio.	0.215	0.25	0.012	Encourages alternate modes	Encourages alternate modes
23	118532	Ohio	SORTA	SORTA	Bus Replacement DERG		0.299	0.002	Removes multiple vehicles from network	Encourages transit ridership
23	6-03038	Kentucky	Boone County	Southpark Drive @ KY 237	Congestion Reduction, Left-Turn / Managed lanes	0.031	0.169	0.013	Reduces congestion and delay	N/A
<b>Total Emissions Reductions</b>						<b>13.578</b>	<b>17.538</b>	<b>0.879</b>		

Table 4 lists all of the CMAQ-eligible projects in the TIP with quantitative emissions benefits for the years 2022-2025. Additionally, each project includes a description on how OKI anticipates these projects will contribute to the achievement of the PHED and Non-SOV targets.

**Table 4 – Future Projects Estimated Emissions Benefits**

Year	PID	State	Facility	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
22	100816	Ohio	WAR SR 48 11.54	Deerfield Road and from E. Turtlecreek Union Road north along Cornett Road, adjacent to SR 48, to Forge Road.	Construction of a MUP	0.022	0.030	0.001	Encourages alternate modes	Encourages alternate modes
22	104712	Ohio	CLE VAR ITS Phase 3	Clermont County	Interconnect and upgrade traffic signals at 20 locations in Clermont County.	0.520	0.370	0.030	Reduces congestion and delay	N/A
22	106573	Ohio	HAM OKI FY2022 Rideshare	Rideshare Program	Rideshare Program	1.053	2.898	0.356	Removes multiple vehicles from network	Encourages carpooling

Year	PID	State	Facility	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
22	106574	Ohio	HAM OKI FY2023 Rideshare	Rideshare Program	Rideshare Program	4.320	4.208	0.185	Removes multiple vehicles from network	Encourages carpooling
22	107302	Ohio	WAR US 42 Roundabouts	T-intersections of US-42 with Bethany Road and Mason Morrow Millgrove Road	Conversion of T- intersections to modern roundabouts. Construction of a shared use path from Bethany Road along US-42 and connecting to the Mason Sports Park on Mason Morrow Millgrove Road.,	1.291	1.516	0.042	Reduces congestion and delay	N/A
22	111788	Ohio	WCTS	WCTS	Vehicle replacements using CMAQ funds as a flex fund transfer thru SFY2022 OTP2 - Purchase 4 LTV - Fiberglass Over Steel.	0.026	0.066		Removes multiple vehicles from network	Encourages transit ridership
23	107130	Ohio	HAM CR 284 1.33	Intersection of Pfeiffer Road and Deerfield Road	Construct roundabout	0.060	0.070	0.002	Reduces congestion and delay	N/A
23	107866	Ohio	HAM CR 239/IR 275/Ramp Y	Omniplex Drive south to Ramp Y (WB I-275 on - ramp)	Additional right turn lane from SB Winton onto WB I-275 on-ramp. Dual right turns on ramp.	0.490	2.114	0.010	Reduces congestion and delay	N/A
23	108014	Ohio	HAM US 50 8.43 Thornton Ave	Thornton Av from Forbes Rd across the RR and River Road (US 50)	Bike/ped crossing along south side of Thornton Av, across River Rd and RR tracks to Fernbank Park	0.020	0.020	0.001	Encourages alternate modes	Encourages alternate modes
23	108254	Ohio	CLE CR 3 Aicholtz Rd Roundabouts	Aicholtz at Eastgate Dr., Aicholtz at Glen Este Withamsville north and south.	Construction of three roundabouts. Cul- de-sac Old Aicholtz, Larma Lan, and Wuebold Lane in Clermont County, Ohio.	1.210	1.320	0.040	Reduces congestion and delay	N/A

Year	PID	State	Facility	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
23	111260	Ohio	HAM OKI SFY 2024 Rideshare	Rideshare Program	Rideshare Program	4.320	4.208	0.185	Removes multiple vehicles from network	Encourages carpooling
23	114214	Ohio	HAM US 42 14.78	US 42 from Reading Road to East Kemper Road	Construction of a shared use path with a connection to Sharon Woods in Sharonville, Ohio.	0.215	0.250	0.012	Encourages alternate modes	Encourages alternate modes
23	118532	Ohio	SORTA	SORTA	SORTA DERG project to replace four 40' model year 2009 diesel powered transit buses with four 40' new model year 2021 diesel powered transit buses.		0.299	0.002	Removes multiple vehicles from network	Encourages transit ridership
23	6- 03038	Kentucky	Boone County	Southpark Drive @ KY 237	Congestion Reduction, Left- Turn / Managed lanes	0.031	0.169	0.013	Reduces congestion and delay	N/A
24	94484	Ohio	Cincinnati Traffic Signals Zone 1	CBD bounded by Mehring Way, Central Pkwy, Central Ave, Eggleston Ave	Install underground duct bank with fiber optic interconnect cable, upgrade signals to LED technology	0.238	0.580	0.004	Reduces congestion and delay	N/A
24	100816	Ohio	Countryside YMCA Trail Extension	Lebanon Bike Park E of SR 48 and the YMCA	Construction of new section of the Lebanon Countryside YMCA Trail. Includes rehab of E. Turtlecreek Union Road Bridge over SR 48.	0.022	0.030	0.001	Encourages alternate modes	Encourages alternate modes
24	103416	Ohio	Plainfield Rd. Roundabouts	Intersections with EB SR 126 ramps, Hunt Road and Peppermill Ln/Reed Hartman Hwy	Conversion of three signalized intersections to multi-lane modern roundabouts	0.400	0.290	0.020	Reduces congestion and delay	N/A



Year	PID	State	Facility	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
24	107292	Ohio	CLE US 50/SR 132 Intersections	US 50 and SR 132 intersections in Village of Owensville	Add turn lanes, curb, sidewalk, storm sewer, curb ramps and upgrade signals.	0.358	0.421	0.012	Reduces congestion and delay	N/A
24	107301	Ohio	HAM US 22/SR 3 9.66 Silverton	US 22 at Highland Ave, Sampson Ln, Plainfield Rd, and Elwynne Dr.	Upgrade signals at Higland, Sampson and Elwynne. Upgrade signal at Plainfield. Access management.	0.040	0.040	0.000	Reduces congestion and delay	N/A
24	108014	Ohio	HAM US 50 8.43 Thornton Ave	Thornton Ave from Forbes Rd across the RR and (US 50)	Bike/ped crossing along south side of Thornton Av, across River Rd and RR tracks to Fernbank Park	0.018	0.024	0.001	Encourages alternate modes	Encourages alternate modes
24	114214	Ohio	US 42 Shared Use Path	Between Downtown Sharonville and East Kemper Road	Construct a shared use path	0.215	0.250	0.012	Encourages alternate modes	Encourages alternate modes
24	114348	Ohio	SORTA OKI Bus Replacement FY 24	SORTA	Replacement of 15 10' buses with clean diesel technology buses	0.154	6.938	0.032	Removes multiple vehicles from network	Encourages transit ridership
25	109079	Ohio	HAM Uptown Smart Hub	Within an area bounded by Reading Road (US 42), Whitter Avenue, I-71 and MLK Drive	Multi-modal transportation facility with fixed route bus and institutional shuttles. Includes park and ride and connection to bike/ped facilities	5.863	8.089	0.297	Removes multiple vehicles from network	Encourages transit ridership
25	115277	Ohio	HAM VAR CTCs OTR West End	West End, Queensgate, Pendleton and OTR neighborhoods	Establish a fiber optic communications platform to interconnect traffic signals. Includes underground	1.445	1.267	0.047	Reduces congestion and delay	N/A

Year	PID	State	Facility	Location	Description	VOC (kg/day)	NOx (kg/day)	PM2.5 (kg/day)	PHED Benefit	Non-SOV Benefit
					duct bank, fiber cable, network communication s, traffic signal controllers for adaptive system.					
25	115941	Ohio	SORTA OKI Bus Replacements FY25	SORTA	Bus replacements for SORTA through OKI's CMAQ program for SFY25	0.024	1.012	0.022	Removes multiple vehicles from network	Encourages transit ridership
25	115942	Ohio	SORTA North College Hill Transit Center	Along Goodman Av. And Galbraith Rd.	SORTA's North College Hill Transit Center construction project through OKI's CMAQ program for SFY25	6.036	5.759	0.284	Removes multiple vehicles from network	Encourages transit ridership
25	117001	Ohio	BUT Oxford Area Trail Phase 5	Peffer Park to Talawanda Middle School and Chestnut Fields Multi-Modal Hub	Construct three segments of the Oxford Area Trail	0.037	0.041	0.002	Encourages alternate modes	Encourages alternate modes
25	117016	Ohio	HAM WW to Glenwood Gardens Trail	West Fork Mill Creek Greenway Trail to Harbor Loop Trail in Winton Woods	Extension of trail	0.161	0.187	0.009	Encourages alternate modes	Encourages alternate modes
Total Emissions Reductions						28.588	42.467	1.622		

## Appendix

### Appendix 1 – Ohio Performance Management Form FY2022 and FY2023

Project Description	VOC (kg/day)	CO (kg/day)	NOx (kg/day)	PM2.5 (kg/day)
Traffic Flow Projects - Traffic Engineering - Turn Lanes.	0.52		0.37	0.03
Pedestrian/Bicycle Project - Facilities - Separate Path.	0.237		0.28	0.013
Facilities, Other - Description, Bike/Ped Path	0.02		0.02	0.001
Congestion Reduction, Left-Turn/Managed lanes, design				
Operating Assistance and Fuel, Expansion, Bus, Operating Assistance (Yrs. 1), Description, Funding for operating assistance to expand bus service.	9.719		11.679	0.728
Congestion Reduction, Left-Turn/Managed Lanes, Construction	3.051		5.02	0.094
<b>Total Emissions Benefit</b>	<b>13.547</b>		<b>17.369</b>	<b>0.866</b>

### Appendix 2 – Kentucky Performance Management Form FY2022 and FY2023

Project Description	VOC (kg/day)	CO (kg/day)	NOx (kg/day)	PM2.5 (kg/day)
Traffic Flow Projects - Traffic Engineering - Turn Lanes.				
Pedestrian/Bicycle Project - Facilities - Separate Path.				
Facilities, Other - Description, Bike/Ped Path				
Congestion Reduction, Left-Turn/Managed lanes, design				
Operating Assistance and Fuel, Expansion, Bus, Operating Assistance (Yrs. 1), Description, Funding for operating assistance to expand bus service.				
Congestion Reduction, Left-Turn/Managed Lanes, Construction	0.031	0.178	0.169	0.013
<b>Total Emissions Benefit</b>	<b>0.031</b>	<b>0.178</b>	<b>0.169</b>	<b>0.013</b>