APPENDIX H

LOCAL INITIATIVES SUBMITTED BY THE
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

DALLAS-FORT WORTH SERIOUS CLASSIFICATION
ATTAINMENT DEMONSTRATION STATE IMPLEMENTATION
PLAN REVISION FOR THE 2008 EIGHT-HOUR OZONE
NATIONAL AMBIENT AIR QUALITY STANDARD

Project Number 2019-078-SIP-NR
APPENDIX H: LOCAL INITIATIVES SUBMITTED BY THE
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

The North Central Texas Council of Governments (NCTCOG) has an assortment of locally implemented strategies in the Dallas-Fort Worth (DFW) area including projects, programs, partnerships, and policies.

These programs are expected to be implemented in the 10-county nonattainment area by 2020. Due to the continued progress of these measures, additional air quality benefits will be gained and will further reduce precursors to ground-level ozone formation. The following is a summary of each strategy:

AIR QUALITY PUBLIC EDUCATION AND COMMUNICATION

As policies, projects, and programs are implemented to fulfill obligations required under the variety of air quality mandates such as the Federal Clean Air Act, National Ambient Air Quality Standards, State Implementation Plan, etc., communication efforts are strategically created and implemented to educate and inform the region on current air quality levels, associated impacts, funding opportunities, and new programs and/or policies.

NCTCOG continues to promote air quality awareness throughout the North Texas region through campaigns such as Air North Texas. This campaign strives to create a unified message and brand related to air quality with regional partners. The campaign teaches local governments and the general public about health impacts of emissions and encourages the use of voluntary measures that help reduce emissions, including but not limited to, vehicle maintenance, combining errands, ridesharing, reducing idling and promoting existing NCTCOG emission reduction programs, like TryParkingIt.com, Engine Off North Texas, and Regional Smoking Vehicle Program (RSVP).

To help guide direction, an Air North Texas coalition was created in 2007. Air pollution alerts and Clean Air Corner, a monthly blog with sustainable clean air tips, are sent to those participating in the campaign. The Air North Texas campaign website will offer information on air quality programs and facts, resources, and educational and advertising resources for partners. The campaign may also include participation in community events around North Texas, radio and television public service announcements, paid advertising, social media, resources for children, and an awareness day in June called Clean Air Action Day.

Clean Air Action Day encourages North Texans to implement clean air strategies. The goal is for residents to incorporate easy lifestyle changes into their daily lives or, at the very least, during ozone season. Air North Texas and its partners continue to educate the business community on how to reduce their impact on air quality through their practices and operations.

BICYCLE/PEDESTRIAN PROJECTS

Projects to create and/or enhance bicycle/pedestrian pathways, sidewalks, and on-street bikeways throughout the region; extending and completing the region's roadway
and passenger rail transit network to link individuals to alternative methods of transportation other than driving a vehicle. By doing so, the automobile emissions that would otherwise be released from the automobile are removed completely. In the North Central Texas region, the Regional Veloweb and Community Paths are designed for use by bicyclists, pedestrians, and other non-motorized forms of active transportation. In addition to these, on-street bikeways also serve as another form of active transportation. In accounting for existing and future projects, NCTCOG has identified 1,883 miles of regional veloweb; 2,959 miles of community paths; and 2,113 miles of on-street bikeway projects serving the 10-county nonattainment area.

CLEAN CONSTRUCTION DEMONSTRATION PROJECT

NCTCOG has drafted a model Clean Construction Specification that can be used to establish emissions-based requirements for equipment in use on certain projects. The specification requires certain operational practices such as limits on idling, and stipulates that equipment meet specific emissions standards. This template language has been added to the NCTCOG Public Works Construction Standards North Central Texas, Fifth Edition, as Item 110, Air Quality Requirement for Equipment. These construction standards were approved by the NCTCOG Executive Board in October 2017 and are widely used by NCTCOG local governments as a starting point for local government construction contracts. NCTCOG will encourage local governments to integrate this language in new construction.

DALLAS-FORT WORTH CLEAN CITIES

Through the Dallas-Fort Worth Clean Cities Coalition (DFWCC), NCTCOG provides outreach, education, training, and technical assistance about ways to improve efficiency of vehicle operations. The efficiencies include use of alternative fuel vehicles, idle reduction technologies, fuel economy strategies, and other operational efficiencies which can reduce fleet emissions, conserve fuel, and lower operating costs. Fleet operations is the primary focus of DFWCC activities, though some general consumer engagement is also integrated through the Electric Vehicles North Texas (EVNT) program. Activities include maintenance of a website at www.dfwcleancities.org, development of region-specific newsletter and outreach/educational materials, and integration of national resources from the Department of Energy and national lab partners; participation and presentations at community, environmental, and fleet-oriented events; DFWCC-hosted face-to-face meetings, webinars, workshops/events, and trainings; and customized or one-on-one technical assistance to fleets. Through this work, NCTCOG is facilitating transition to cleaner-burning fuels that produce fewer ozone-forming pollutants. An Annual Report to the Department of Energy documents the use of these fuels and other clean vehicle technologies throughout the DFW area. The emissions reductions achieved through this program are above and beyond those reflected in emissions inventories because current modeling estimates all vehicle emissions based on gasoline or diesel fuel types and does not reflect the reduced emissions achieved through use of idle reduction technologies, hybrid vehicles, or vehicles powered by natural gas, propane, electric fuel.

CLEAN FLEET POLICY

The Regional Transportation Council (RTC) approved a Clean Fleet Policy in December 2014 which sets guidelines for efficient fleet operations. The policy calls for
emissions reductions, fuel conservation, partnership with NCTCOG and the Dallas-Fort Worth Clean Cities Coalition (DFWCC), and driver/operator education. Policy elements also include a requirement to adopt an idle reduction policy or standard operating procedure. As of July 2018, 68 entities have adopted the revised policy. NCTCOG will continue to promote adoption of the updated policy across the region, as well as continue to include the policy as either an eligibility criterion or evaluation measure in various funding programs.

**ELECTRIC VEHICLES NORTH TEXAS**

Through the Electric Vehicles North Texas (EVNT) program, NCTCOG coordinates efforts to increase awareness and adoption of electric vehicles (EVs) and promote local government initiatives that facilitate EV adoption [e.g. supporting installation of electric vehicle supply equipment (EVSE)]. Stakeholders include a variety of interests, including utility companies, fleets, local businesses, EV manufacturers, infrastructure producers, and interest groups. Through the early work of this initiative, the DFW area was a target market for early deployment of EVSE and now has a robust infrastructure of over 300 public-access recharging facilities. Moreover, the Federal Highway Administration has designated every major interstate that passes through the DFW area as, including US 75, either EV-ready or EV-pending due to the amount of infrastructure already available. Over 8,000 EVs were registered in the DFW area as of March 2018, and the number of registered EVs is expected to continue to steadily climb. These vehicles achieve real-world emissions reductions as compared to the on-road emissions inventory because currently, all vehicles are modeled as either gasoline or diesel, based upon Texas Department of Motor Vehicle registration data. This means that the current on-road emissions inventory does not reflect the market penetration of zero-emission vehicles. NCTCOG will continue to work toward increased adoption of EVs, including development of consumer awareness materials and outreach, fostering of partnerships and education with vehicle dealers, promotion of workplace charging, guidance on local government policies that can impact EV market penetration, and support for fleets’ transition to EVs.

**CONGESTION MANAGEMENT PROCESS**

The Congestion Management Process (CMP) provides for the effective management of new and existing transportation facilities through development and implementation of operational and travel demand management strategies, and by providing information to decision makers on system performance and the effectiveness of implemented strategies. Although major capital investments are still needed to meet the growing travel demand, the CMP also develops lower cost strategies that complement capital investment recommendations. The result is more efficient and effective transportation systems, increased mobility, and a leveraging of resources.

**ENGINE OFF NORTH TEXAS**

The Engine Off North Texas Program is designed to reduce emissions by reducing vehicle idling. Efforts focus on improving public awareness of idle-reduction technologies, regulatory options, and campaign strategies organizations can use to reduce idling from various vehicle types. As part of this program, NCTCOG educates local governments of the State Idling Rule (TAC 114.512). To date, 30 entities (4 counties and 26 municipalities) have adopted Locally Enforced Idling Restrictions and
signed a memorandum of agreement with the Texas Commission on Environmental Quality (TCEQ) to enforce this rule at the local level, covering over 50 percent of the region (by population). NCTCOG will continue to promote adoption, education, and enforcement of idling restrictions throughout the region, along with broader idle-reduction strategies.

**FREeway AND ARTERIAL BOTTLeneCK REMOval**

Bottleneck removal strategies are low cost, quickly implementable solutions to improve locations of isolated congestion. These types of strategies include adding travel lanes, restriping merging or diverging areas, reducing lane or shoulder widths to add a travel and/or auxiliary lane, providing bypass routes, modifying weave patterns, metering or closing entrance ramps, improving traffic signal timing on arterials, and implementing high occupancy vehicle or managed lanes. Regional transportation providers coordinate with local governments in the identification and mitigation of bottlenecks. Corridor studies and sub-regional traffic management teams are forums to identify potential bottleneck locations and recommendations for improvements.

**GRADE SEPARATION PROJECTS**

Idling time that would otherwise be created by intersection blockage is eliminated by separating a road or railroad track from a crossroad. With this elimination of idling, grade separations increase the efficiency of traffic flow, thereby improving travel time and minimizing delay. Thus, vehicle emissions and fuel consumption are reduced. In accounting for existing and future projects, NCTCOG has identified 98 locations in the 10-county nonattainment area. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted for in the on-road mobile source emission inventories.

**HIGH-EMITTING VEHICLE PROGRAM**

The High-Emitting Vehicle Program (HEVP) conducts regional programs to reduce emissions from on-road mobile sources. These initiatives focus on public awareness and enforcement of emissions standards. Identifying high-emitting vehicles and encouraging drivers to address emissions problems that may develop in the period between annual emissions inspections helps the highest polluting vehicles be repaired or replaced sooner. The following list outlines specific programs/projects under the HEVP umbrella program:

- **North Texas Car Care Clinics**
  To aid motorists in understanding the basics of how to care for a car, in 2013, NCTCOG began partnering with automotive repair shops throughout the North Central Texas region to host free Car Care Clinics. NCTCOG is particularly focused on working with repair facilities to help address check engine light issues and assist motorists in identifying the cause. Vehicles with check engine lights illuminated have malfunctioning emissions control systems, so targeting these vehicles for diagnosis and repair leads to greater air quality benefits for the region. As part of this effort, NCTCOG developed marketing and outreach materials for participating facilities and promoted the clinics through various outreach events and publications.
Regional Emissions Enforcement Program

The Regional Emissions Enforcement Program (REEP) was developed to help identify and remove high-emitting vehicles from roadways with counterfeit, expired, fictitious, fraudulent, improper state emissions inspections. REEP takes a four-pronged approach including: conducting covert operations on state vehicle emissions inspection stations to identify and prosecute inspectors performing improper inspections, finding and prosecuting dealers and manufacturers of fictitious or counterfeit vehicle inspection reports, investigating and pursuing civil litigation against car dealers selling improperly inspected vehicles, and on-road emissions enforcement of vehicles traveling in our region. Also, as part of this collaborative effort, NCTCOG developed the NCTCOG Emissions Database (NED) in coordination with the Texas Commission on Environmental Quality (TCEQ) and the Texas DPS to allow law enforcement 24/7 access to emissions inspection data to aid in the enforcement of the State I/M Program. This program has been highly utilized and has become a valuable tool to law enforcement in their efforts to build a case against stations performing illegal activity related to vehicles emissions testing. REEP training will be enhanced to include other enforcement-related projects including truck lane restrictions, smoking vehicles and idling restrictions.

Regional Smoking Vehicle Program

The North Central Texas Regional Smoking Vehicle Program (RSVP) is designed to encourage North Texans to voluntarily maintain and repair their vehicles and to promote public awareness regarding the harmful emissions and air pollution caused by smoking vehicles. By utilizing the existing AirCheckTexas Drive a Clean Machine Program infrastructure, the incorporation of RSVP encourages greater participation by providing local solutions to vehicle owners. Vehicles reported through this program are also logged in NED for law enforcement to cross-check when citing motorists for an emissions related offense.

HIGH OCCUPANCY VEHICLE/MANAGED LANES

High occupancy vehicle (HOV) projects promote carpooling; thereby, removing single occupancy vehicles and associated emissions released from the vehicle tailpipe. The increase in flow of HOV lanes offers incentive for drivers to carpool. Accounting existing and future projects, NCTCOG has identified 600 total lane miles of either HOV or managed lane projects in the 10-county nonattainment area. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted for in the on-road mobile source emission inventories.

INTELLIGENT TRANSPORTATION SYSTEM

The Intelligent Transportation System (ITS) improves traffic speeds and reduces idling time through advanced traffic control systems and more efficient incident and corridor management. ITS also combines the strengths of regional transportation planning models and traffic simulation models with overall transportation management strategies. Examples of ITS projects include transportation management centers, dynamic message signs, vehicle detectors, integration of systems, and closed-circuit television cameras. According to the Fort Worth Regional and Dallas Area Wide ITS Plans, transportation system capacity significantly increases by implementing these types of transportation management strategies, thereby enhancing the overall efficiency of the entire transportation system. In addition, benefits include fuel savings.
and air pollution reduction, safer streets and highways, and reductions in maintenance costs. Together with transit agencies, local governments, TxDOT, etc., the DFW metropolitan area is currently involved in the planning, programming, and implementation of ITS programs and projects. Using the National ITS Architecture as a model, the region has and continues to define a Regional ITS Architecture to guide future deployment and to build consensus for multi-agency systems integration. NCTCOG has identified 70 percent (Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties) and 90 percent (Collin, Dallas, Denton, and Tarrant counties) of ITS coverage within the region.

INTERSECTION IMPROVEMENT PROJECTS

Improvements to intersections including left and/or right turn lanes decrease the amount of time automobiles are left idling at intersections. This decrease in idling reduces fuel consumption and vehicle emissions. Accounting for existing and future projects, NCTCOG has identified 1,351 locations in the 10-county nonattainment area.

PARK-AND-RIDE PROJECTS

Park-and-Ride facilities promote carpooling and vanpooling. With each occupied parking space at these locations, it can be assumed that the otherwise additional “running” emissions from each parked vehicle are eliminated. Park-and-Ride lots that also serve as transit stations are not accounted for in this category as it is assumed most of these park and ride lots contain transit riders, which are then captured in Rail Transit Projects. NCTCOG has identified 29,575 parking spaces contained in Park-and-Ride projects that are complete and open to the public. Park-and-Ride facilities that are part of existing transit stations are included in the DFW regional travel model, so benefits from these projects are already accounted for in the on-road mobile source emission inventories.

PUBLIC TRANSPORTATION PROJECTS

Public transportation projects involve implementation of new or expanded transit services or facilities. The improvements may be accomplished for all types of transit such as rail, fixed route, paratransit, and demand response service. The three main components of improved transit are: system/service expansion projects, system/service operational improvements, and inducements. By improving regional transit systems, an increase in opportunity is created for new passengers, as well as an increase in air quality benefits. As a backbone of the public transportation system, transit projects reduce the number of cars on the roads, relieve congestion for people who drive, and improve air quality for all. Rail transit projects involve implementation of new or expanded rail services or facilities.

A few rail transit projects have been recently completed or under development, include Dallas Area Rapid Transit’s Blue Line south extension and Cotton Belt, and Trinity Metro’s TEXRail. In accounting for existing and future rail transit projects, NCTCOG has identified over 400 miles of rail projects in the 10-county nonattainment area. By improving regional transit systems, an increase in opportunity is created for new passengers, as well as an increase in air quality benefits. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted for in the on-road mobile source emission inventories. Additionally, 15
public transportation providers operate service within the 10-county nonattainment area providing over 70 million passenger trips in 2018.

SAVING MONEY AND REDUCING TRUCK EMISSIONS

The Saving Money and Reducing Truck Emissions (SMARTE) Program aims to improve industry awareness of freight traffic effects on air quality, promote the use of SmartWay®-verified technologies, and encourage industry-specific best practices in the freight industry. The initiative includes focus on idle reduction, emission reduction, and fuel saving strategies in the heavy-duty trucking industry. The SMARTE Program representatives educate drivers and fleet managers through public interaction and engagement in the field to ensure a large audience is reached, with an emphasis on small fleets and owner-operators who typically lack staff needed to identify fuel-efficient and cost-saving techniques on their own. SMARTE representatives provide informational materials on a variety of NCTCOG initiatives suitable for the trucking industry, including DFWCC, the Clean Fleet Policy, the Environmental Protection Agency (EPA) SmartWay Transport Partnership and SmartWay-verified technologies, and information on relevant funding opportunities to provide financial assistance with obtaining capital-intensive items.

SMARTWAY TRANSPORT PARTNERSHIP

The EPA SmartWay Transport Partnership (SmartWay), established in 2004, is a voluntary, public-private partnership with the ground freight industry designed to reduce emissions, reduce fuel consumption, and increase energy efficiency among the freight transportation sector. NCTCOG joined the SmartWay Transport Partnership as an Affiliate in 2006. In this role, NCTCOG has committed to outreach and education efforts related to the program in the DFW area. In addition, NCTCOG will pursue opportunities to implement projects that increase use of verified SmartWay technologies, including idle reduction and fuel saving activities. In 2009, NCTCOG received EPA National Clean Diesel Funding Assistance Program grant funds under the American Recovery and Reinvestment Act for a SmartWay Technology Upgrade Project. NCTCOG subgranted approximately $1.4 million to six sector companies to purchase and install SmartWay technologies on Class 8 HDDVs, including APUs for 73 trucks, low rolling resistance tires for 77 tractors and 69 trailers, trailer side skirts for 185 trailers, and cetane enhancers for at least 100 trucks. NCTCOG will continue to pursue implementation of projects which address the goals of the SmartWay Transport Partnership.

SOLAR

Increased adoption of solar technologies, at both the rooftop and industrial scale, is a critical step towards reducing harmful emissions resulting from electric generating units (EGU). For North Central Texas in particular, solar is the key to avoiding increases in EGU emissions in the face of a growing population. NCTCOG has participated in several projects to increase solar deployment across Texas, including Solar Ready II (in partnership with the National Association of Regional Councils, the Mid-America Regional Council, Meister Consultants Group, Inc., and Council of State Governments), a contract awarded by the State Energy Conservation Office, and a technical assistance award as a SolSmart Advisor. Through these projects, NCTCOG has conducted outreach to local governments about solar Best Management Practices (BMP), developed
template regional materials related to permitting and zoning ordinances, and hosted trainings for first responders, inspectors, permitting officials, and other staff to increase local governments’ comfort with solar technology. Ultimately, the goal is to streamline local regulatory processes, increasing the magnitude and rate of solar installations. As of March 2018, NCTCOG had assisted six municipalities in the DFW area in receiving SolSmart designation. This designation indicates that the cities have updated local policies and processes in a way that results in a more solar-friendly regulatory environment. NCTCOG developed and maintains extensive resources, including cost-benefit analysis tools for a variety of solar applications and template documents for local governments, online at www.GoSolarTexas.org. Stakeholders engaged in these initiatives have conducted region-specific research and estimated that total installed solar capacity in the 10-county DFW ozone nonattainment area was approximately 43,626 kW as of early 2016. As installed solar capacity continues to increase, additional emissions reductions will be gained through reduced demand on conventional EGUs.

SUSTAINABLE DEVELOPMENT

The promotion of livable communities supporting sustainability and economic vitality has become the objective of the North Central Texas region because of the interconnections between land use, transportation, economy, environmental quality, and livability. Sustainable development is utilized as a tool to help meet the coordination between land use, transportation, and improvement of air quality. Numerous studies have shown a reduction in vehicle miles traveled (VMT) due to higher density, mixed use, infill, or transit-oriented development (TOD) connected by alternative modes of transportation and pedestrian improvements due to the reduction in need for automobile usage to access various uses. As a result, transportation strategies and projects must be responsive to regional trends in economic expansion, population growth, development, quality of life, public health, and the environment in order to provide mobility and prevent the continued decline of the region’s air quality status. The RTC has adopted a variety of strategies and policies to ensure the development of transportation plans, programs, and projects which promote air quality improvements through sustainable development. These strategies are designed to (1) respond to local initiatives for town centers, mixed-use growth centers, transit-oriented developments, infill/brownfield developments and pedestrian-oriented projects; (2) complement rail investments with coordinated investments in park and ride, and bicycle and pedestrian facilities, and (3) reduce the growth in VMT per person. The shift toward alternative modes of transportation and lower VMT will lead to reduced transportation-related emissions and improved public health and quality of life.

NCTCOG’s Sustainable Development Funding Program was created by the RTC to encourage public/private partnerships positively addressing existing transportation system capacity, rail access, air quality concerns, and/or mixed land uses. By allocating transportation funds to land use projects promoting alternative transportation modes or reduced automobile use, NCTCOG and its regional partners are working to address escalating air quality, congestion, and quality of life issues. Four Calls for Projects were conducted in 2001, 2005-2006, 2009-2010, and 2017 and $241 million was programmed by the RTC, which includes $178 million of direct funds plus matching funds of $63 million from local governments to 106 projects. The funded sustainable
development projects include infrastructure, landbanking, and planning projects. NCTCOG staff worked with local governments and Independent School Districts (ISD) to promote efficient school siting and multimodal transportation connections around school locations. NCTCOG staff provided technical assistance to the City of Arlington, Little Elm, Kennedale, Fort Worth, Dallas, and Denton and funded sidewalks connecting to school locations in many locations. Staff will continue to coordinate and fund school siting and transportation projects in partnership with other local governments and ISDs in the region. Staff provided technical assistance to local governments related to corridor planning projects. Technical assistance was provided for a preliminary review of existing land uses, bike and pedestrian facilities, and a traffic flow analysis for the SH 183 corridor. Staff will continue to provide technical assistance to local governments on other land use-transportation projects in the region.

TECHNOLOGY IMPROVEMENTS

NCTCOG continues to offer programs providing financial assistance for projects that reduce emissions from on-road vehicles and non-road equipment. Most funding is directed toward early replacement of older fleet vehicles and equipment, but some funding has also been used to implement idle reduction infrastructure projects to reduce emissions from heavy-duty diesel vehicles at truck stops and trucking terminals. The primary source of this funding for the next few years is expected to be National Clean Diesel Funding Assistance Program grant awards; as of March 2019, NCTCOG is overseeing implementation of subaward projects funded under the 2018 Clean Fleets North Texas Call for Projects and is preparing to administer Calls for Projects to subaward funds received under several additional contracts. NCTCOG will continue to seek opportunities to provide financial assistance for projects that achieve NOx emissions reductions.

TRAFFIC SIGNAL IMPROVEMENTS

The DFW Metropolitan Area is involved in the planning, programming, and implementation of traffic signal improvement programs and projects. Arterial congestion accounts for 35 percent of the total congestion in the region, in turn adding emissions due to inefficient traffic patterns and unnecessary idling. Traffic signal improvements such as signal retiming and signal coordination can enhance traffic flow and help decrease vehicular emissions. Emphasis of the traffic signal improvement program in the North Central Texas region is placed upon major arterial corridors, where synchronizing a succession of traffic signals to operate as a continuous system has a great impact on a large volume of traffic. These improvements result in a more consistent travel speed and reduced delay, which decreases vehicular emissions due to minimizing frequent starts, stops, and unnecessary idling. Inventorying existing and future projects, NCTCOG has identified, through the Regional Traffic Signal Retiming Program, 1,118 locations with the potential for traffic signal retiming in the 10-county nonattainment area. Additionally, NCTCOG will pursue funding sources and opportunities for other signal improvements.

TRANSPORTATION SAFETY PROGRAM

The Transportation Safety Program focuses on improving traffic safety throughout the region by supporting planning efforts to develop safety policies, programs, and projects. NCTCOG offers a Traffic Incident Management Training Program for
emergency responders that helps to initiate a common, coordinated response to traffic incidents that will build partnerships, enhance safety for emergency personnel, reduce upstream traffic crashes, improve the efficiency of the transportation system, and improve air quality in the Dallas-Fort Worth region. As a complement to the Traffic Incident Management Training course, NCTCOG also offers Photogrammetry Training that assists with faster roadway clearance during a crash investigation. The Regional Mobility Assistance Patrol Program operates on congested corridors to improve roadway safety and simultaneously reduces non-recurrent congestion due to crashes.

TRUCK LANE RESTRICTION PROGRAM

A pilot study to improve operational efficiency and highway safety was conducted to study the effects of restricting trucks with three or more axles from using the left lane on controlled access, state-system facilities with three or more lanes in each direction. Truck lane restrictions were implemented on segments of IH 20 and IH 30 in the DFW region from August 2005 through January 2006. Results showed truck lane restrictions effectively controlled trucks from using the left lane, slightly reduced truck speeds, increased safety by reducing truck versus car conflicts, thus reducing ozone precursor emissions.

In 2012, TxDOT requested all eligible corridors without truck lane restrictions within the state have the restrictions implemented where appropriate and feasible. Within the region, this included additional sections of IH 20, IH 30, IH 45, IH 820, as well as new corridors, including portions of IH 35E, IH 35W, IH 635, US Highway 75, US Highway 175, SH 114, SH 121, SH 360, and Loop 12. Once the full implementation of these additional corridors is complete, there will be a total of 513 miles of truck lane restrictions within the region. While the number of remaining eligible corridors is small, additional restrictions will be implemented along these corridors in the future.

VANPOOL PROJECTS

Vanpool projects include a group of 6 to 15 commuters who travel to and from the same area, have similar work hours, share the costs of operating the van, and usually meet at a centralized location such as a Park-and-Ride lot. By consolidating travelers into one vehicle, these projects reduce air pollution, reduce traffic congestion, and help conserve fuel. The Regional Vanpool Program is operated by the Dallas Area Rapid Transit (DART), the Denton County Transportation Authority, and Trinity Metro and includes a total of 286 vanpools serving the 10-county nonattainment area.

AUTOMATED VEHICLES AND RELATED TECHNOLOGIES

Through its automated vehicle (AV) programs, NCTCOG is exploring and advancing vehicle technology solutions that may reduce emissions. Many AVs are being developed on an electric vehicle platform, which will have air quality benefits. Many developers are working to advance a shared vehicle use model under which fleets of AVs operating many hours each day serve a substantial portion of a city’s mobility needs. This has the potential to reduce the number of vehicles required for surface mobility and could have associated environmental benefits such as reducing the amount of land and built structures to provide parking and other services to privately owned vehicles. In a related development, AVs are likely to roll out in new vehicle types that are smaller and lighter than today’s vehicles. This has potential air quality
and other environmental benefits. AVs in the freight sector have the potential for improving emissions by substituting relatively small electric-powered freight delivery robots for the full-sized delivery trucks used today. The data generated by AVs will be a highly useful source of information for highway operators to use to optimize highway operations, generating air quality and other benefits. As part of its AV program, NCTCOG has worked with local cities to (1) make their traffic signal data accessible to the developer community to power connected vehicle applications that optimize traffic flow and (2) utilize roadway incident reports and traffic speed data accessible through the Waze Connected Citizens Program to optimize traffic signal timing, provide improved information to travel navigation services to steer vehicles around road closures, and more efficiently target pothole repair, and the like.