

Broad Category of Traffic Technologies

Strategies	Description	Secondary Category	Online Resources / PSC Information	Guidance Notes (countermeasure percent, priorities, equity concerns, local initiatives, etc.)
Advanced Driver Assistance Systems (ADAS)	ADAS are vehicle-based safety technologies that work by alerting or assisting drivers to prevent or mitigate crashes.	Speed Management	https://www.itskrs.its.dot.gov/briefings/executive-briefing/vision-zero-and-its	
Advanced Signal Timing / Smart Signals	Allocates right-of-way to intersection traffic based on mode and fluctuations in demand over the course of each day, week, and year.	Intersections	https://mrcog-nm.gov/259/Intelligent-Transportation-Systems	In the Albuquerque metropolitan area consider the ITS Priority Corridors and consult the ITS Strategies Matrix (https://www.mrcog-nm.gov/DocumentCenter/View/6133/ITSStrategiesMatrix_V83c_Final).
Advanced Vehicle Detection	Uses technology to acquire vehicle counts, speed of each individual vehicle, traffic analysis, and vehicle categorization.	Intersections	https://www.standards.its.dot.gov/ApplicationArea/10	In the Albuquerque metropolitan area consider the ITS Priority Corridors and consult the ITS Strategies Matrix (https://www.mrcog-nm.gov/DocumentCenter/View/6133/ITSStrategiesMatrix_V83c_Final).
Bicycle Signal Pilot Project	Install a bicycle light at intersections to test the viability.	Planning / Engineering	https://nacto.org/publication/urban-bikeway-design-guide/bicycle-signals/	Existing infrastructure needs to be present for installation.
Bus Queue Jump Signals / Signal Priority	Allows buses to easily enter traffic flow in a priority position using Advanced Vehicle Detection.	Transit	https://nacto.org/publication/transit-street-design-guide/intersections/signals-operations/	In the Albuquerque metropolitan area consider the ITS Priority Corridors and consult the ITS Strategies Matrix (https://www.mrcog-nm.gov/DocumentCenter/View/6133/ITSStrategiesMatrix_V83c_Final).
Dynamic Message Signs	Electronic signs on the roadway that provide drivers with real time traffic alerts.	Roadways	https://www.standards.its.dot.gov/ApplicationArea/8	
Emergency / Incident Management Plans	Develop and implementation of a plan that coordinates a multi-disciplinary response to traffic incidents and other emergency situations.	Planning / Engineering	https://ops.fhwa.dot.gov/tim/	Current update is in progress for the Albuquerque Traffic Incident Management Plan. The final draft is in circulation to the stakeholder agencies.
Emergency Signal Preemption Systems (ESPS)	ESPS are designed to disrupt the regular timing of traffic signals and grant a green light to emergency vehicles approaching intersections.	Intersections	https://www.itskrs.its.dot.gov/briefings/executive-briefing/vision-zero-and-its	This enables emergency vehicles to navigate through intersections quickly and safely to reach their destinations without delay.
Flashing Yellow Arrow	A signal with a flashing yellow arrow indicates that left turns are permitted, but you must first yield to oncoming traffic and pedestrians and then proceed with caution.	Intersections	https://www.dot.state.mn.us/trafficeng/signals/flashingyellowarrow.html	
Green Wave Systems / Coordinated Signals	Coordinated signal timing synchronizes traffic movements and manages the progression of drivers. Signals can be timed to a target speed limit to encourage drivers to drive at safer speeds. Coordinated signal timing can limit drivers to safe speeds.	Speed Management	https://www.researchgate.net/publication/276497476_Green-Wave_Traffic_Theory_Optimization_and_Analysis	
Intelligent Lane Control Signs (ILCS)	Overhead signals that indicate whether a lane is open or closed due to various reasons such as traffic collision, breakdown, or reversed lanes.	Roadways	https://ops.fhwa.dot.gov/publications/fhwahop12046/rw/m17_minnesota1.htm	

Mobile Automated Speed Cameras	A portable system that uses a camera and a speed measurement device to detect and capture images of vehicles travelling in excess of the speed limit. It may also include other offenses such as running through a red light or unauthorized use of a bus lane.	Speed Management	https://highways.dot.gov/safety/proven-safety-countermeasures/speed-safety-cameras	Mobile units can reduce crashes on urban principal arterials up to 20% for fatal and injury crashes. Automated traffic enforcement supports the objective of consistent and unbiased enforcement of speeding, red light running and other traffic violations without regard to driver race or socioeconomic status. However, choosing locations for camera enforcement should include members of the BIPOC community.
Rest on Red	Traffic signals that remain in the red phase in all directions until a driver is detected. Speed detection can be added, and if a driver is traveling above the speed limit the red phase can be held to stop the driver. Manage excessive driver speeds.	Speed Management	https://trid.trb.org/View/61088	Currently being tested on Lead/Coal in Albuquerque: chrome-extension://efaidnbmnnnibpcjpcglclefindmkaj/https://www.cabq.gov/coal/uncil/documents/lead-coal-rest-in-red-7-28-2021-final-1.pdf
Signal Clearances	Evaluate the time between one direction of travel getting the red phase signal and the opposing direction getting the green phase signal. A longer clearance can be achieved by having an all-red phase to increase time for intersections to be cleared before opposing traffic.	Intersections	http://www.pedbikesafe.org/pedsafe/countermeasures_detail.cfm?CM_NUM=45	
Signal Phasing Modifications	Can reduce conflicting movements between turns, vehicles going straight, and/or pedestrian and bicyclist movements.	Intersections	https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/traffic-signals/coordinated-signal-timing/	
Smart Work Zones	Dynamic management of work zone traffic, such as queue warning, speed management and lane merging.	Speed Management	https://ops.fhwa.dot.gov/wz/its/index.htm	
Speed Cameras	A camera which may be mounted beside or over a road or installed in an enforcement vehicle or mobile device to detect speeding, vehicles going through a red traffic light, and other offenses.	Speed Management	https://highways.dot.gov/safety/proven-safety-countermeasures/speed-safety-cameras	Fixed units can reduce crashes on urban principal arterials up to 54% and 47% for injury crashes. P2P units (multiple angles) can reduce crashes on urban expressways, freeways, and principal arterials up to 37% for fatal and injury crashes. In New York City, fixed units reduced speeding in school zones up to 63% during school hours. Automated traffic enforcement supports the objective of consistent and unbiased enforcement of speeding, red light running and other traffic violations without regard to driver race or socioeconomic status. However, choosing locations for camera enforcement should include members of the BIPOC community.
Speed Feedback Indicator Signs	Manage driver speeds by comparing the driver's current speed with the speed limit.	Speed Management	https://www.nhtsa.gov/book/countermeasures-that-work/speeding-and-speed-management/countermeasures/other-strategies-behavior-change/dynamic-speed#:~:text=Unstaffed%20speed%20display%20devices%2C%20also,some%20drivers%20to%20slow%20down	

Traveler Information	Messaging signs that update drivers on current roadway conditions such as delays, incidents, weather, emergency alerts, and alternate routes.	Roadways	https://ops.fhwa.dot.gov/travelinfo/about/aboutus.htm	An example of capturing this information and providing a map display for reference in addition to dynamic message signs: https://nmroads.com/mapIndex.html?
Vehicular Technology Speed Detection	Continue to support vehicular technologies directly related to safety such as limiting speed and detecting other vehicles and people walking, biking, or rolling.	Speed Management	https://www.nts.gov/news/press-releases/Pages/NR20231114.aspx#:~:text=Passive%20SA%20systems%20warn%20a.responsible%20for%20slowing%20the%20car	California recently introduced a bill that would require 2027 or newer vehicles built and sold within CA to have a speed limiter that could prevent them from going more than 10 mph over the speed limit. https://highways.dot.gov/safety/proven-safety-countermeasures/variable-speed-limits
Yellow Change Intervals	Adequate timing on yellow signal following a green signal. Appropriately timed yellow change intervals can reduce red-light running and improve overall intersection safety.	Intersections	https://highways.dot.gov/safety/proven-safety-countermeasures/yellow-change-intervals	Yellow Change Intervals can result in a 36-50% reduction in red-light running, 8-14% reduction in total crashes, and 12% reduction in injury crashes.