



Selective Traffic Enforcement Program

Grant Application Process Pilot

Jim Markham – Director, Crash Data & Analysis, TxDOT

2026 AASHTOWare Connect | Des Moines, IA | April 21-22, 2026

STEP Overview

Federally funded TxDOT grant program supporting law enforcement crash-reduction efforts.

- Goal: Safer roadways through high-visibility enforcement (HVE) and agency partnerships.
- Eligibility: All accredited Texas law enforcement agencies; funding prioritized by local crash data.
- **Enforcement Zones:** Data-driven, limited areas (CRIS + DPS-HSOC) to focus impact.
- Performance: Measured by STEP-funded stops and **crash reduction** in zones.
- Support: Free TCOLE-accredited training (grant process, enforcement strategies, data analysis, safety)..

Enforcement Zones: Setup & Requirements

- Use **KA crash data** (fatal & serious injury) from CRIS + DPS-HSOC heat maps to define zones.
- Proposal must include \geq **2 Enforcement Zones**.
- All zones must be created via **STEP-COMP / STEP-CMV mapping portal**.
- **Types:**
 - *Linear Zones* – 4 miles (STEP-COMP) / 6 miles (STEP-CMV).
 - *Area Zones* – 4 square miles.

Enforcement Zones: Sustainability & Oversight

- Agencies requesting **3+ zones** must commit:
 - ≥ 40 hrs/month enforcement per zone (~480 hrs/year).
 - $\geq 1,200$ total annual enforcement hours.
- Zones must:
 - Be anchored on KA crash sites, expanded to include approaches.
 - Use supplemental data as needed.
- **TxDOT approval required** before enforcement begins.
- No “chasing spikes” — zones should target consistent historical crash areas.

Challenge: Identifying and documenting multiple enforcement zones for STEP proposal

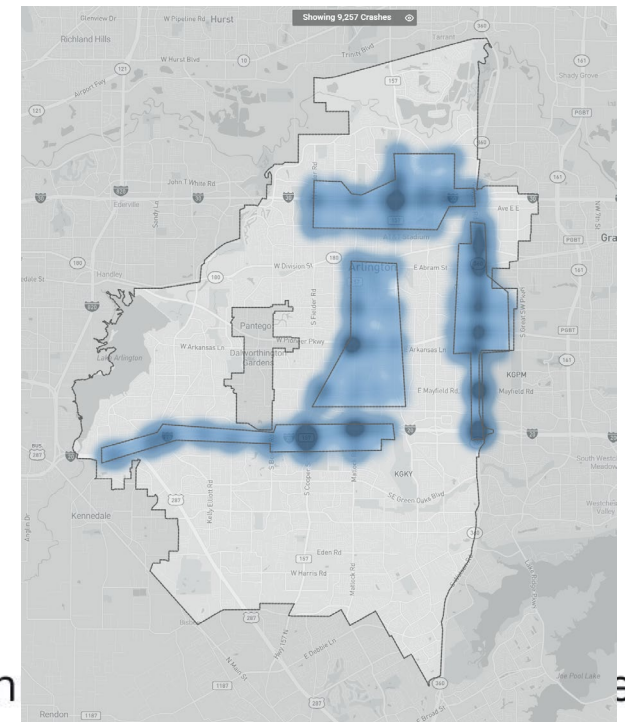
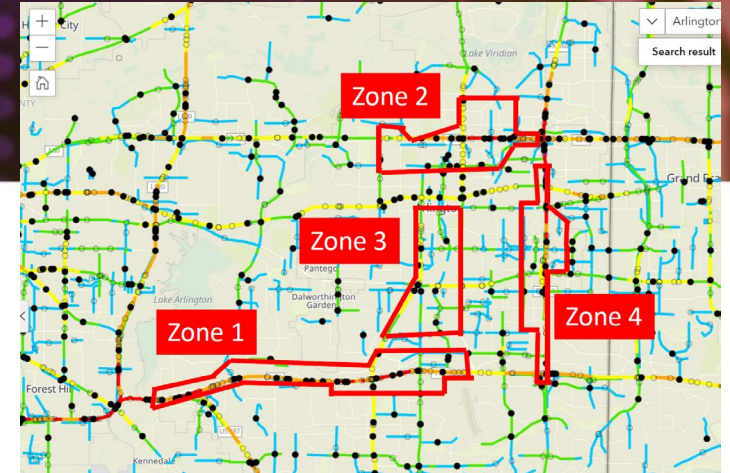
- Solution: AASHTOWare Safety Crash Query
 - Filter CRIS data for fatal/serious injury crashes.
 - Create and save custom queries by crash type, location, and timeframe.
 - Generate heat maps & reports supporting zone justification.
 - Capture multiple enforcement zones in a single saved query → simplifies proposal prep and ensures consistency with HSOC mapping.

Utilizing AASHTOWare Safety for Pilot

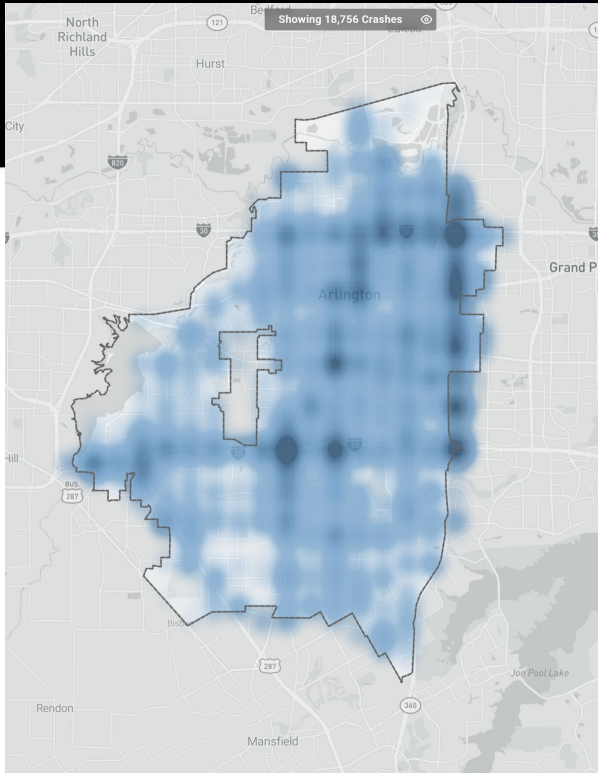
- Enhanced functionality was implemented to add polygon areas to mapping
 - Additional request to rename polygons still in queue
- Pilot will utilize saved Crash Query searches for each agency to:
 - Identify areas of concern to focus efforts
 - Define patrol zones (can ensure size works now)
 - Track year-over-year intervention efficacy(!)
 - Update zones from year to year as new areas of concern are identified

AASHTOWare Safety STEP One

- Legacy system required zone building in DPS HSOC provided GIS system
 - Crash data is available, but not in the same system where agencies outside DPS view that data
 - Post-implementation analysis requires multiple follow-on queries and is not persisted year-to-year
 - Network analysis based on underlying roadway characteristics and their interaction with crash types and locations completely unavailable



Let's name the zones...



Zones make up 17% of land area

- 49% of all crashes
- 47% of KA crashes



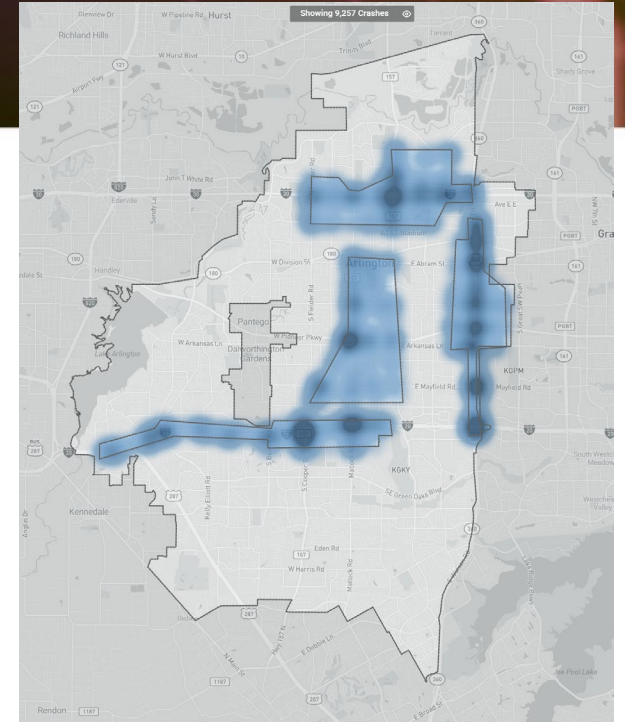
TxDOT Summary		Crash
Total Crashes	18,756	100.00%
Intersection Related	7,646	40.77%
DUI Related (All)	1,506	8.03%
DUI Related (Alcohol)	1,314	7.01%
Work Zone Related	1,289	6.87%
CMV Related	721	3.84%
Motorcycle Related	280	1.49%
DUI Related (Drugs)	253	1.35%
Show all (10 more)	449	2.40%

SHSP Emphasis Areas		Crash
Intersection Related	7,646	40.77%
Roadway and Lane Departures	3,150	16.79%
Impaired Driving	1,437	7.66%
Occupant Protection	531	2.83%
Motorcycle (VRU)	280	1.49%
Pedestrian (VRU)	224	1.19%
Pedalcyclist (VRU)	84	0.45%
Distracted Driving	2	0.01%
Speed Related	1	0.01%

TxDOT Summary		Crash
Total Crashes	9,257	100.00%
Intersection Related	3,507	37.88%
Work Zone Related	741	8.00%
DUI Related (All)	713	7.70%
DUI Related (Alcohol)	625	6.75%
CMV Related	377	4.07%
Motorcycle Related	132	1.43%
DUI Related (Drugs)	118	1.27%
Show all (10 more)	177	1.92%

SHSP Emphasis Areas		Crash
Intersection Related	3,507	37.88%
Roadway and Lane Departures	1,508	16.29%
Impaired Driving	678	7.32%
Occupant Protection	274	2.96%
Motorcycle (VRU)	132	1.43%
Pedestrian (VRU)	86	0.93%
Pedalcyclist (VRU)	32	0.35%
Show all (2 more)	0	0%

Arlington FY24 STEP



Crash summary area and TxDOT Emphasis Areas are in line with city-wide averages


Follow-on Analysis

- Crash influence across Arlington enforcement zones during FY24:
 - 8.4% reduction in all crashes (annualized)
 - KA crash total reduced by 19%
 - Contributing factors shifted, indicating a transition to lower-risk (in general) behaviors
 - Followed Too Closely and Failed to Control Speed both increased (as a percentage of crashes) by over 10%

BEFORE/AFTER REPORT

Arlington STEP Demo

Created on March 20, 2026
 Created by Jim Markham
 Data extents: August 1, 2020 to July 30, 2024



Applied Filters

City (Geo) = Arlington Shape: Polygon Shape: Polygon Shape: Polygon Shape: Polygon

Time Ranges

Range	Start - End	Days	K	A	B	C	O	Total Crashes
1	August 1, 2020 - July 31, 2023	1095 days	53 (0.6%)	261 (2.9%)	1,821 (20.3%)	2,132 (23.8%)	4,431 (49.4%)	8967 Crashes
2	August 1, 2023 - July 30, 2024	365 days	17 (0.6%)	70 (2.6%)	634 (23.2%)	604 (22.1%)	1,341 (49.0%)	2737 Crashes

K = FATAL INJURY, (K) Fatal Injury, B = SUSPECTED MINOR INJURY, (B) Suspected Minor Injury, C = POSSIBLE INJURY, (C) Possible Injury, O = NOT INJURED, (O) Not Injured, A = SUSPECTED SERIOUS INJURY, (A) Suspected Serious Injury

Change Overview (annualized)

-17 (19%) Serious Crashes	-1 (4%) Fatal Crashes	\$63.8M (10%) Crash Cost
------------------------------	--------------------------	-----------------------------

Crash Counts & Cost (annualized)	1	2	+ / -
(K) Fatal Injury	\$70.7M (17.7)	\$68.2M (17)	-\$2.5M (-0.6)
(B) Suspected Minor Injury	\$200.3M (607)	\$209.8M (635.7)	+\$9.5M (28.7)
(C) Possible Injury	\$17.1M (710.7)	\$14.5M (605.6)	-\$2.5M (-105)
(O) Property Damage-Only	\$9.9M (1477)	\$9M (1344.6)	-\$887K (-132.4)
(A) Suspected Serious Injury	\$348M (87)	\$280.8M (70.2)	-\$67.2M (-16.8)

Contributing Factors	1	2	+ / -
Followed Too Closely	3.3%	18.2%	+14.9%
Failed To Control Speed	2.6%	14.9%	+12.3%
Failed To Drive In Single Lane	2.2%	12.1%	+9.9%
Driver Inattention	1.8%	11.3%	+9.5%
Changed Lane When Unsafe	4.4%	11.2%	+6.8%
Disregard Stop And Go Signal	1.7%	10.3%	+8.6%
Failed To Yield Right Of Way - Turning Left	1.4%	9.8%	+8.4%
Under Influence - Alcohol	1.3%	7.9%	+6.5%
+ 62 more	59.3%	36%	-23.3%

Next Steps

- Post-hoc analysis of the crash behaviors across the zones for the year of execution
 - Not just KA, but all crashes
 - All contributing factors, by crash severity, over time
- Near-real time monitoring of the zones over the course of the year
 - Pattern analysis for future zone development
- Telematics data examination
 - Time-correlated views of what occurs during LE patrols for STEP
 - Insight into driver behaviors temporally upstream of crash events