

PEDESTRIAN SAFETY ACTION PLAN

Summary Statistics

Lubbock District

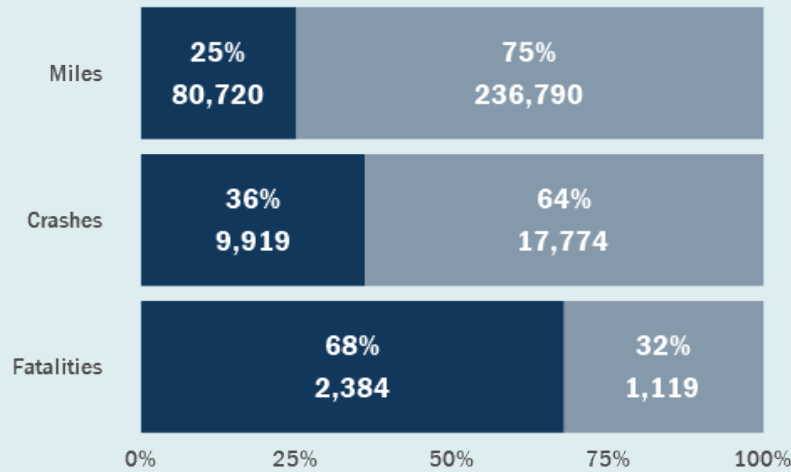


STATEWIDE Pedestrian Crashes¹ (2017-2021)

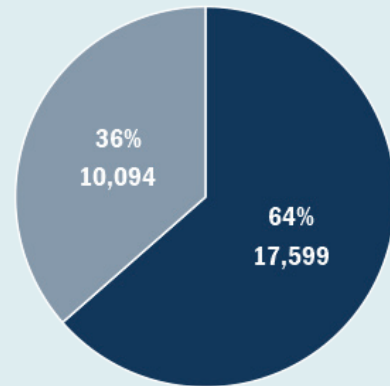
27,693 Crashes

80,720 Miles²

ON-SYSTEM v OFF-SYSTEM



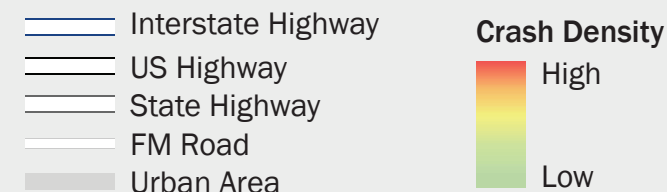
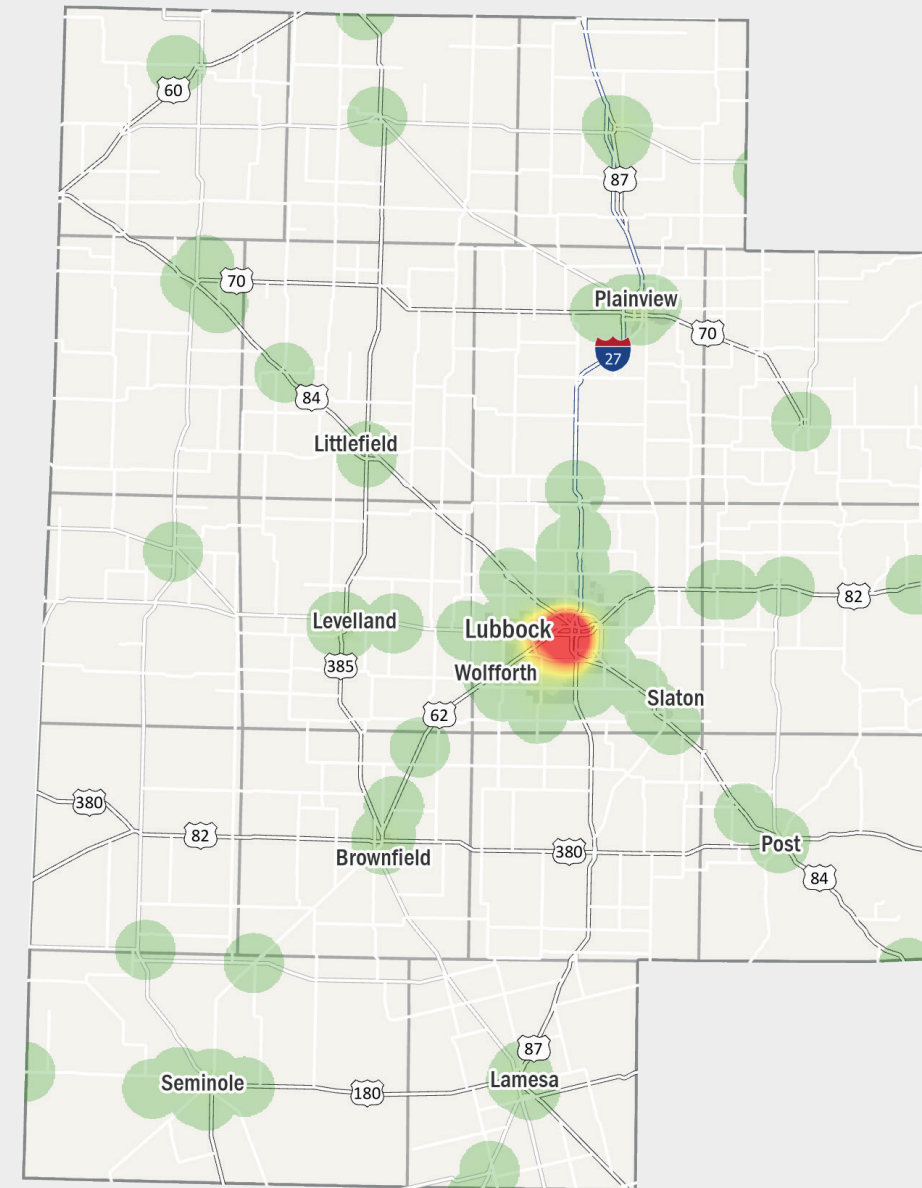
INTERSECTION v NON-INTERSECTION CRASHES



¹All reportable pedestrian crashes.
²On-system miles.

Data Filters
This summary includes pedestrian reportable crashes.

District-wide Pedestrian Crash Heatmap



DISTRICT WIDE Pedestrian Crashes (2017-2021)

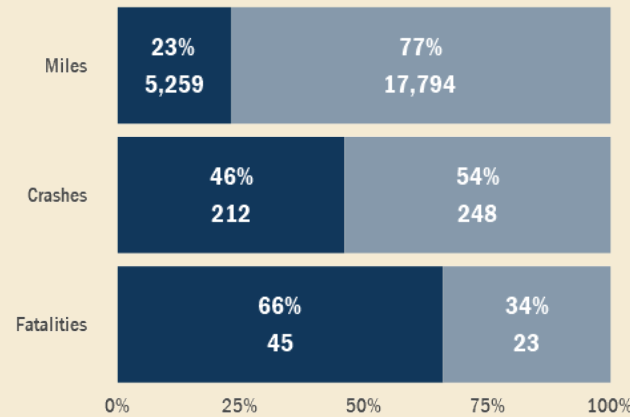
460 Crashes

2% of statewide crashes

23,054 Miles

7% of statewide miles

ON-SYSTEM v OFF-SYSTEM



FACTORS AND CONDITIONS³ FOR ALL PEDESTRIAN CRASHES

56% Low light conditions

57% Pedestrian failed to yield to vehicle

8% Driver or pedestrian inattention

³As reported by the investigating police officer at the time of the crash.

VULNERABLE POPULATIONS

12% Involved a child pedestrian aged 16 and younger

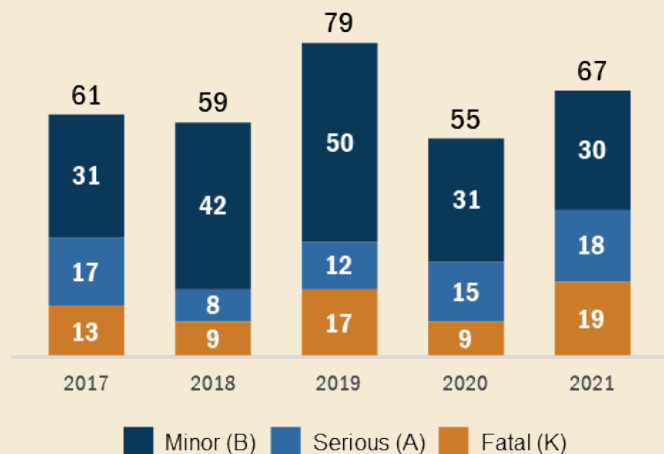
8% Involved an adult pedestrian aged 65 and older



65 Pedestrian Fatalities
14% of district fatalities

72 PEDESTRIAN Serious Injuries
5% of district serious injuries

PEDESTRIAN CRASHES BY INJURY SEVERITY



PEDESTRIAN SAFETY ACTION PLAN

Systemic Pedestrian Crash Analysis

Lubbock District



FOCUS FACILITIES

A subset of facilities (focus facilities) was used to narrow the crash analysis to roadways where most crashes are occurring in each District. Four primary roadway attributes were considered to identify the focus facilities using District-specific criteria: area type (urban v rural), functional class, roadway division type, and speed limit.

RISK FACTORS

Risk Factors are the roadway attributes and traffic characteristics present where crashes were reported. Risk factors are not necessarily contributing factors and may or may not have contributed to any/all crashes at an individual site. They may indicate a greater potential for severe focus crashes to occur at the site or similar sites.

Types of Risk Factors

- Directly actionable
- Actionable but not easily
- Not actionable but important indicators

Methods

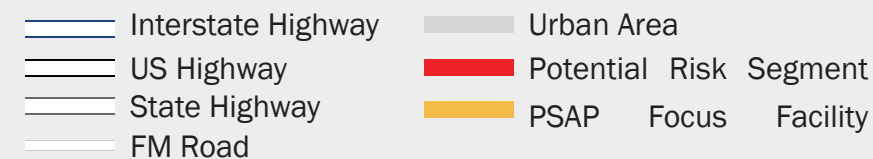
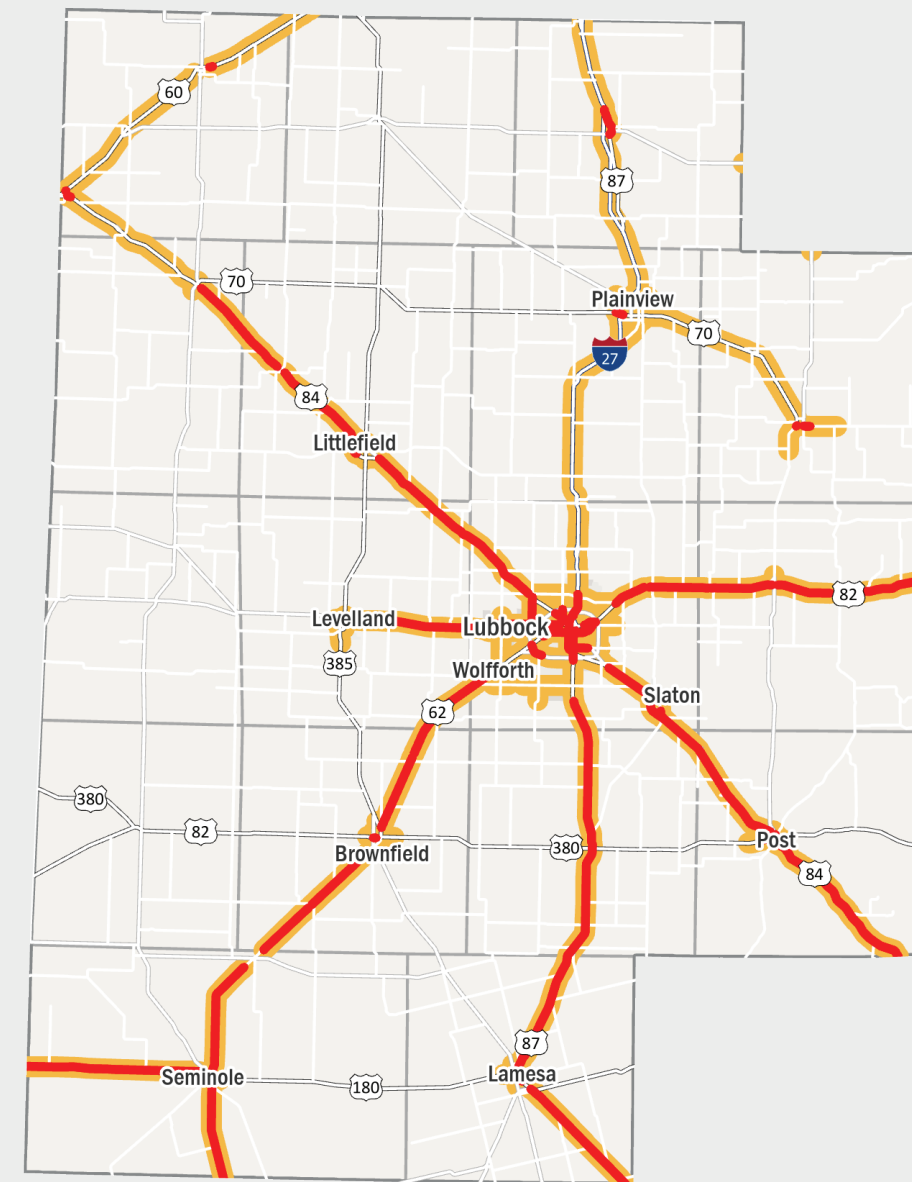
Overrepresentation analysis is data-driven, flexible and ensures analysis will have meaningful results. It is documented in FHWA's Systemic Safety Project Selection Tool (SSPST).

District Risk Factors

Lubbock Risk Factors	Rural		Urban	
	Interstate/Freeway	Arterial	Interstate/Freeway	Arterial
ADT	25k to 30k	10k to 14k	50k to 60k & 120k to 130k & 130k to 140k	15k to 25k
Area Type			Large Urbanized	Large Urbanized
Bus Pad Offset		40 ft to 45 ft		
Bus Pad Width				
TWLT Presence				
Crosswalk Presence				
Crosswalk Width		95 in to 100 in		
Curb Cut Offset	80 ft to 85 ft	25 to 35 & 40 to 45 ft		
Curb Cut Presence			Present - One Side	Present - Both Sides
Curb Presence				
Functional Class		Other Principal Arterial	Interstate	Other Principal Arterial
Highway Division		Divided		
Inside Shoulder Type				
Inside Shoulder Use				
Inside Shoulder Width		3 to 4 & 13 to 14 ft		
Lane Width				
Max Speed	75	55	60	45
Median Presence	Median		Median	Median
Median Type				
Median Width				0 ft
Minimum ROW				100 ft to 125 ft
Number of Lanes		4	6 & 8	
Outside Shoulder Use				
Outside Shoulder Width				
Roadbed Width	80 ft to 85 ft			
Shoulder Presence				
Sidewalk Condition				
Sidewalk Presence				
Surface Width			90 ft to 100 ft	50 to 60 & 85 to 90 & ≥100 ft
Transit Stop Presence				Present
Truck ADT	8k to 9k		13k to 14k	
Truck Pct	30% to 33%	3% to 9% & 12% to 15%	9% to 12%	<9%

Data Filters
The systemic pedestrian crash analysis includes pedestrian KAB crashes that were located, non-intersection related, on-system, and reportable.

Systemic Safety Analysis Results: Potential Risk Segments on Focus Facilities



TARGETED ANALYSIS

“Sliding Windows” technique that creates uniform crash densities to identify historic hot spots for pedestrian crashes.

- Subset of network into peer groups
- Split roads into chains of short segments of equal length, compute a smoothed crash density for each segment
- Assign a crash density tier (minimal to critical) to each short segment based on its smoothed crash density relative to the rest of the peer group.

Inputs

- All located pedestrian crashes in Texas (2017-2021).
- All Texas roadway segments (2020 TxDOT Roadway Inventory).

Outputs

- Roadway segments with assigned tier based on pedestrian crash density relative to peer group.

Data Filters

The pedestrian crash targeted analysis includes located pedestrian crashes.

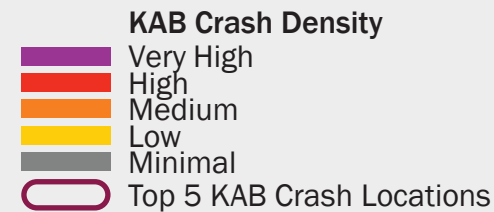
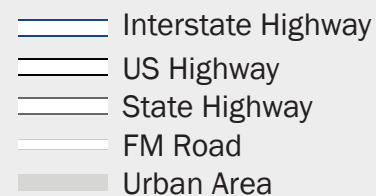
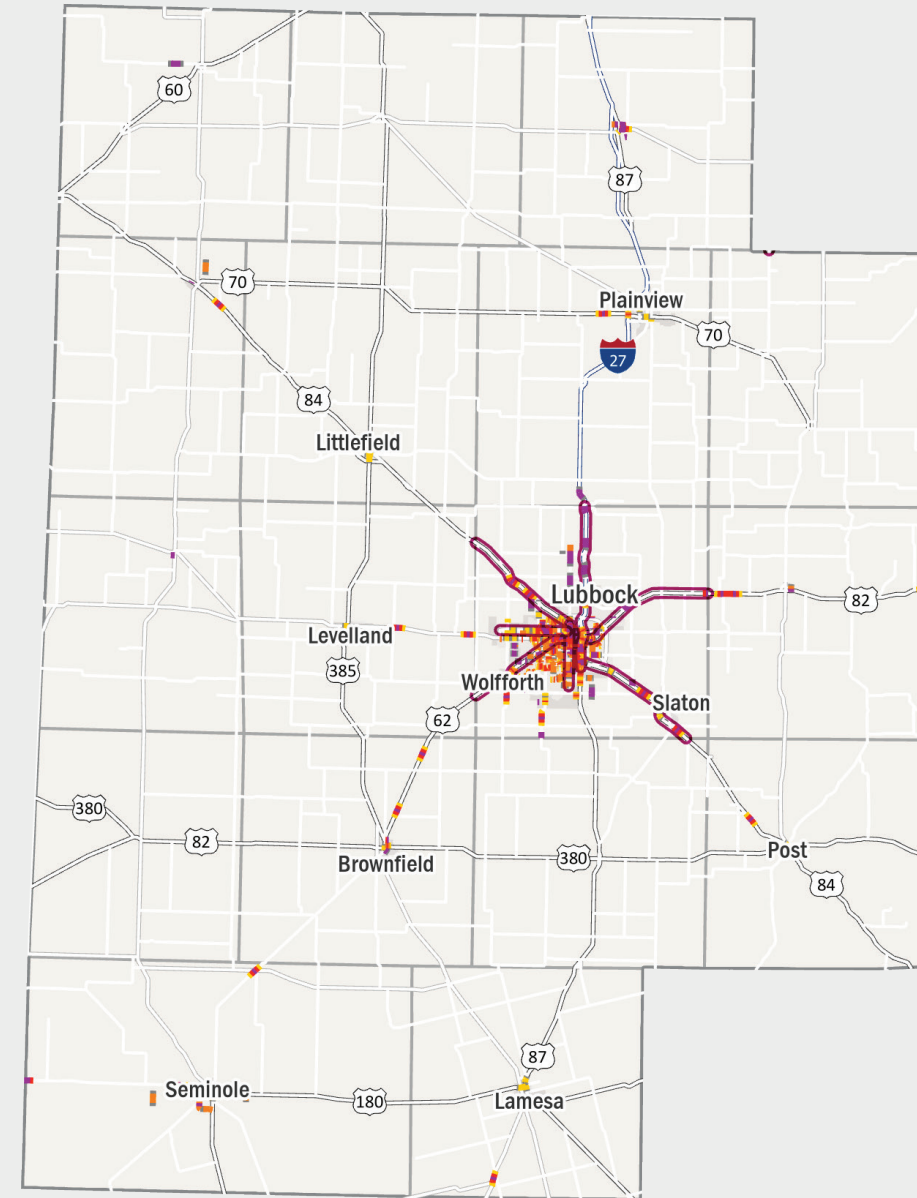
District Targeted (KAB Crashes)

Crash Density Tier	District On-system Miles	Percent	District Off-system Miles	Percent
Minimal	4,857	97.7%	17,670	99.4%
Low	51	1%	17	0.1%
Medium	7	0.2%	51	0.3%
High	30	0.6%	14	0.1%
Very High	27	0.5%	22	0.1%
Total	4,972	100%	17,774	100%

Top 5 Crash Corridors (Total KAB Pedestrian Crashes within County Limits)

1. US Highway 84 in Lubbock County (31 crashes)
2. US Highway 62 in Lubbock County (12 crashes)
3. Interstate 27 in Lubbock County (11 crashes)
4. Farm to Market 2255 in Lubbock County (10 crashes)
5. State Loop 289 in Lubbock County (10 crashes)

Targeted Analysis Results: Historically Crash-Dense Segments by Peer Groups



RECOMMENDED COUNTERMEASURES

Corridor Prioritization Method

Recommended safety improvements resulted from a review of TxDOT's HSIP Guidelines document, industry best practices, and the CMF Clearinghouse. Countermeasures were then assigned along segments and near intersections identified during the systemic targeted analyses. Nineteen countermeasures were assigned using individualized data-driven logic. The top risk-based and targeted locations were prioritized based on three primary characteristics; 1) Identified as a potential risk/ presence of crash history, 2) Accumulation of Fatal and Serious Injury crashes, 3) the [CDC's Social Vulnerability Index \(SVI\)](#). Additional countermeasures were considered including traffic operational or programmatic safety improvements were considered; however these were not directly applicable to specific locations. For a more detailed description of this process, please click on the link to the White Paper on the right side of the page.

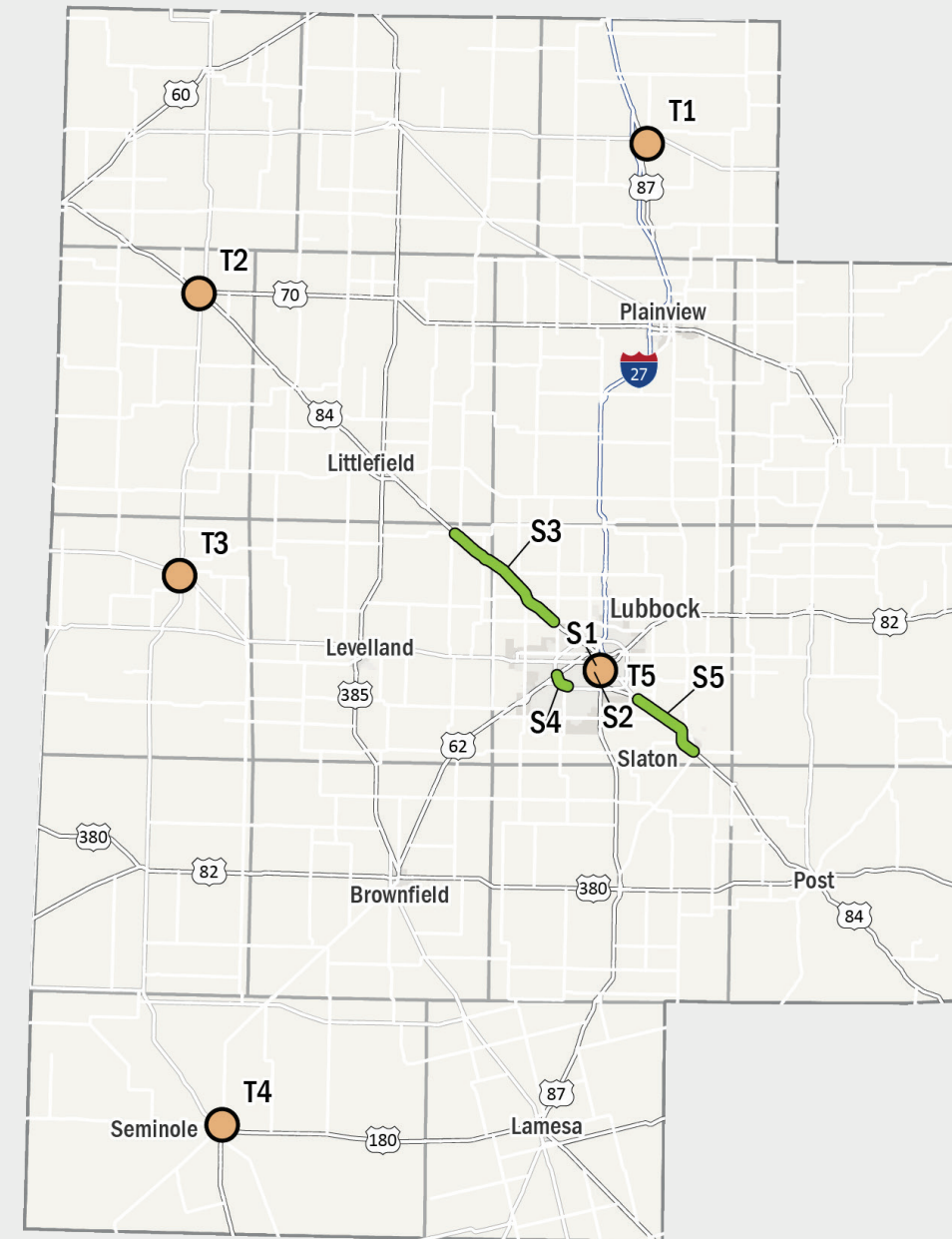
[Countermeasure Selection Methodology White Paper](#)

District Prioritized Segments and Recommended Countermeasures

Rank	Segment Name	County	Length	Countermeasure
S1	US Highway 84	Lubbock	0.5	Install School Zones, Install/Upgrade Lighting
S2	US Highway 84	Lubbock	0.6	Shared Use Path, Install School Zones, Install/Upgrade Lighting
S3	US Highway 84	Lubbock	16.8	Install Median Barriers, Install/Upgrade Lighting
S4	State Loop 289	Lubbock	2.1	Speed Limit Study
S5	US Highway 84	Lubbock	10.0	Install Median Barriers, Install/Upgrade Lighting

Rank	Segment Name	County	Length	Countermeasure
T1	Dakota Trl	Swisher	0.3	Install Sidewalks, Install In-Street Pedestrian Signs, Install/Upgrade Lighting, Install Raised Pedestrian Crosswalks
T2	W 13th St	Bailey	0.1	Install Sidewalks, Install In-Street Pedestrian Signs, Install/Upgrade Lighting, Install Raised Pedestrian Crosswalks
T3	W Grant Ave	Cochran	0.5	Install Sidewalks, Install In-Street Pedestrian Signs, Install Raised Pedestrian Crosswalks
T4	Ne Ave E	Gaines	0.3	Install Sidewalks, Install In-Street Pedestrian Signs, Install Raised Pedestrian Crosswalks
T5	34th St	Lubbock	0.2	Install Sidewalks, Install/Upgrade Lighting

Prioritized Segment Locations



- Interstate Highway
- US Highway
- State Highway
- FM Road
- Urban Area
- Systemic Segments
- Targeted Segments

Disclaimer

Countermeasures presented here were developed from a statewide planning perspective and are suggestions rather than recommendations. TxDOT staff is encouraged to review locations and apply local knowledge when implementing safety improvements.