

REGIONAL SAFETY ADVISORY COMMITTEE
North Central Texas Council of Governments
Friday, March 25, 2022
10:00 am – 11:30 am

AGENDA

1. Approval of January 28, 2022 Meeting Summary – Asma Tuly, RSAC Chair
2. Did Operating Speeds During COVID-19 Result in More Fatal and Injury Crashes on Urban Freeways? – Subasish Das, TTI
3. Safe Route to Schools Update – Shawn Conrad, NCTCOG Sustainable Development Team
4. North Texas Regional Parking Database – group feedback, Travis Liska, NCTCOG Sustainable Development Team
5. Statewide Safety Task Force Update – Michael Morris, NCTCOG Transportation
6. Update Items
 - a) 2022 Transportation Alternatives Call for Projects – Daniel Snyder, NCTCOG
 - b) Future Meetings – Sonya Landrum, NCTCOG
 - c) 2022-2023 RSAC Membership Appointments and Call for Vice Chair Opportunity Reminder – Sonya Landrum, NCTCOG
7. [Safety-Related Reference Items, Topics or Training Courses Website](#)
8. Upcoming Safety-Related Events and Training Announcements
 - a) [Distracted Driving Awareness Month](#): April 2022
 - b) [National Work Zone Awareness Week](#): April 11-15, 2022
 - c) [Traffic Incident Management First Responder and Manager Course](#):
 - o April 21-22, 2022, Offsite: Denton County Steve Copeland Govt. Center, Cross Roads, TX, 76227
 - o June 16-17, 2022, NCTCOG
 - d) Spring 2022 Traffic Incident Management Executive Level Course
 - o May 5, 2022, *Virtual*
 - e) [2022 Traffic Safety Conference](#)
 - o July 27-29, College Station
9. Other Business (Old or New): This item provides an opportunity for members to bring items of interest before the group
10. Next RSAC Meeting: July 22, 2022 at 10 am. Format to be determined.

Did Higher Operating Speeds During COVID-19 Result in More Fatal and Injury Crashes on Urban Freeways?

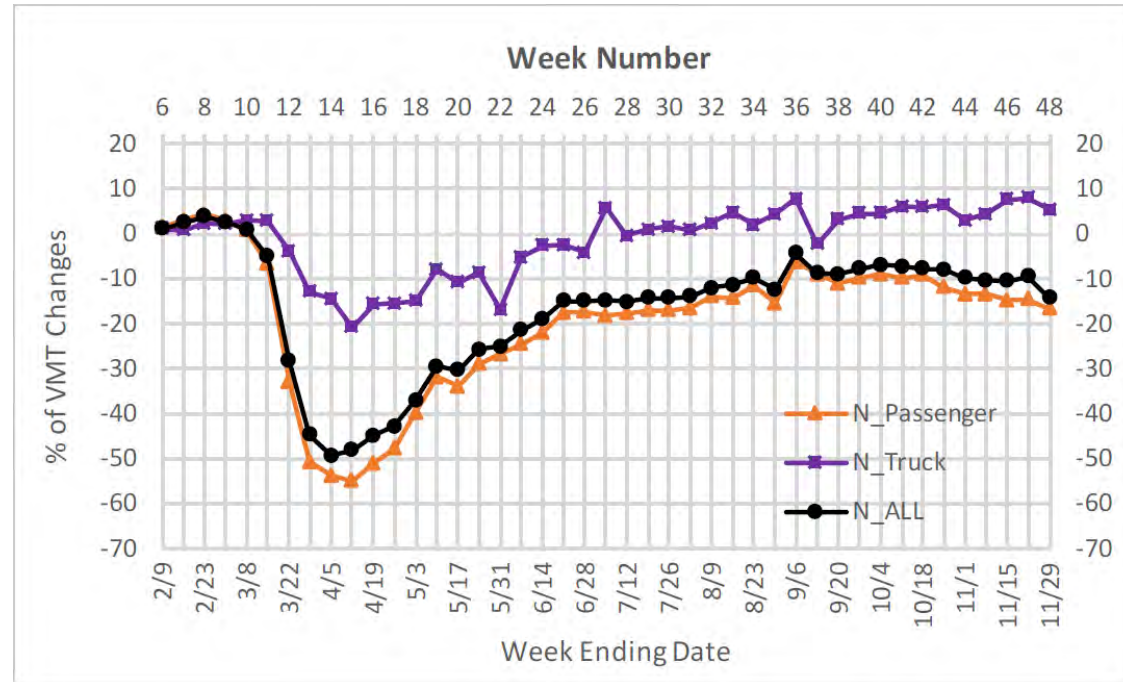
Subasish Das, PhD

Associate Research Scientist

March 25, 2022

Background

- Nationally, VMT 4%-49% decrease
- Dallas freeway volumes 3%-17% decrease
- COVID-19 Orders March-October, 2020
 - 38 State of Texas
 - 49 Dallas County



Interstate VMT, 2020
(USDOT)

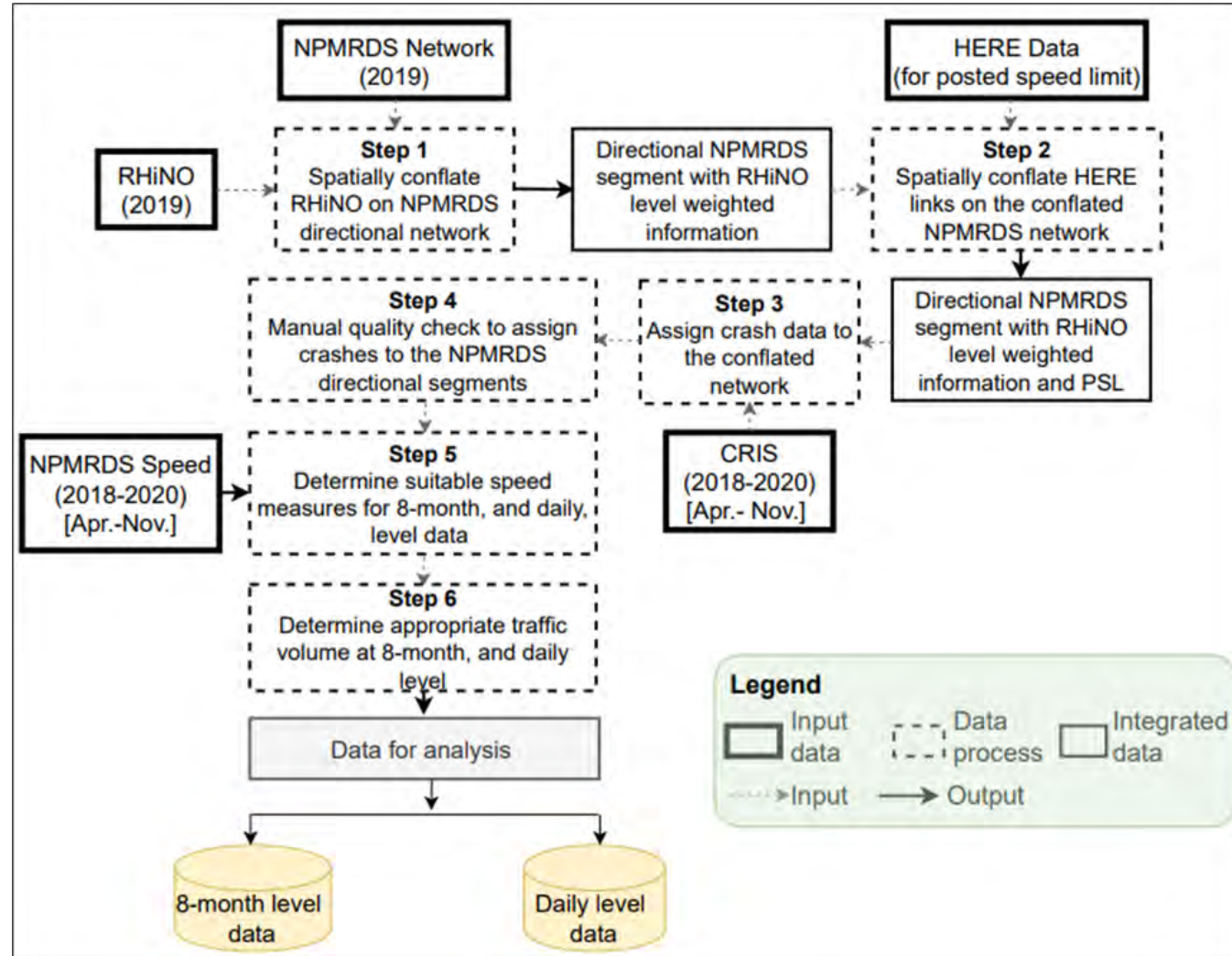
Research Questions

- Are operating speeds higher on freeways during 2020 (April to November) as compared to previous years?
- Are those higher operating speed measures associated with more KABC crashes during 2020 with consideration of other influential factors?
- Are 5-minute operational speed measures more useful for assessing the speed-crash relationship when analyzed at a 24-hour (daily) interval rather than annually?

Data Sources

- Road-Highway Inventory Network Offload (RHiNO): 2019
- National Performance Management Research Data Set (NPMRDS): Apr.-Nov., 2018-2020
- Crash Record Information System (CRIS): Apr.-Nov., 2018-2020
- HERE – Posted Speed Limits: 2019/2020

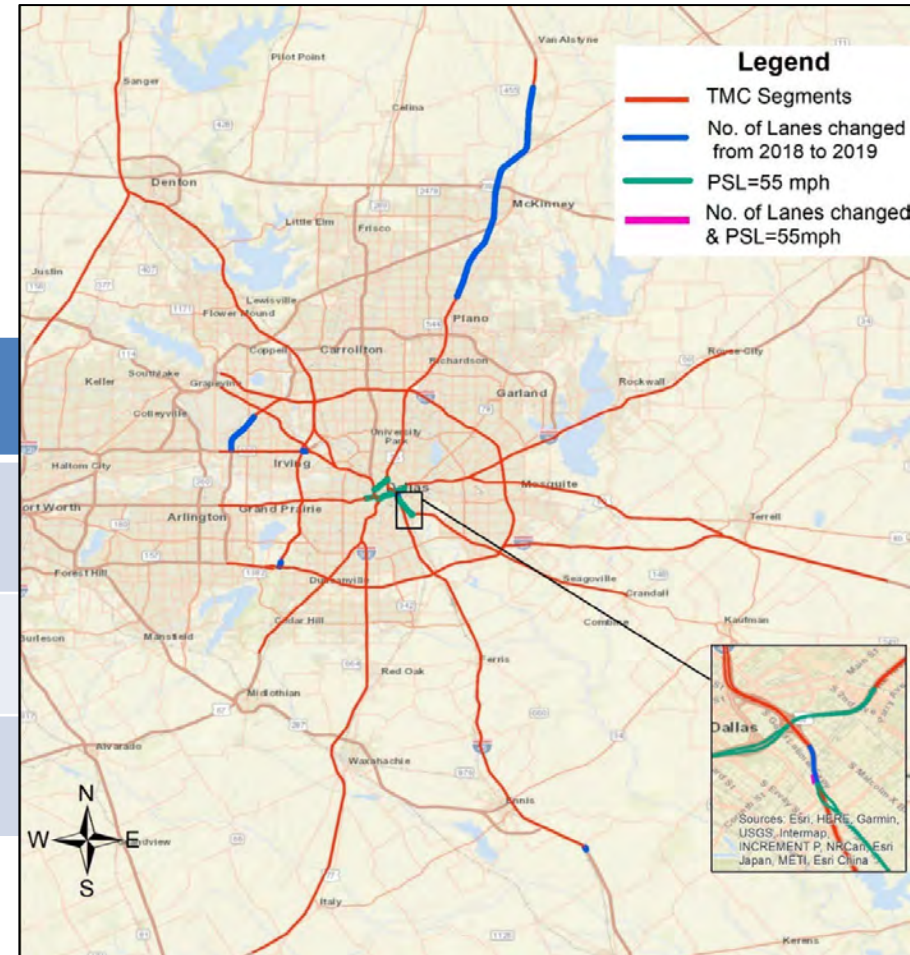
Data Preparation



Final Datasets (2018-2020)

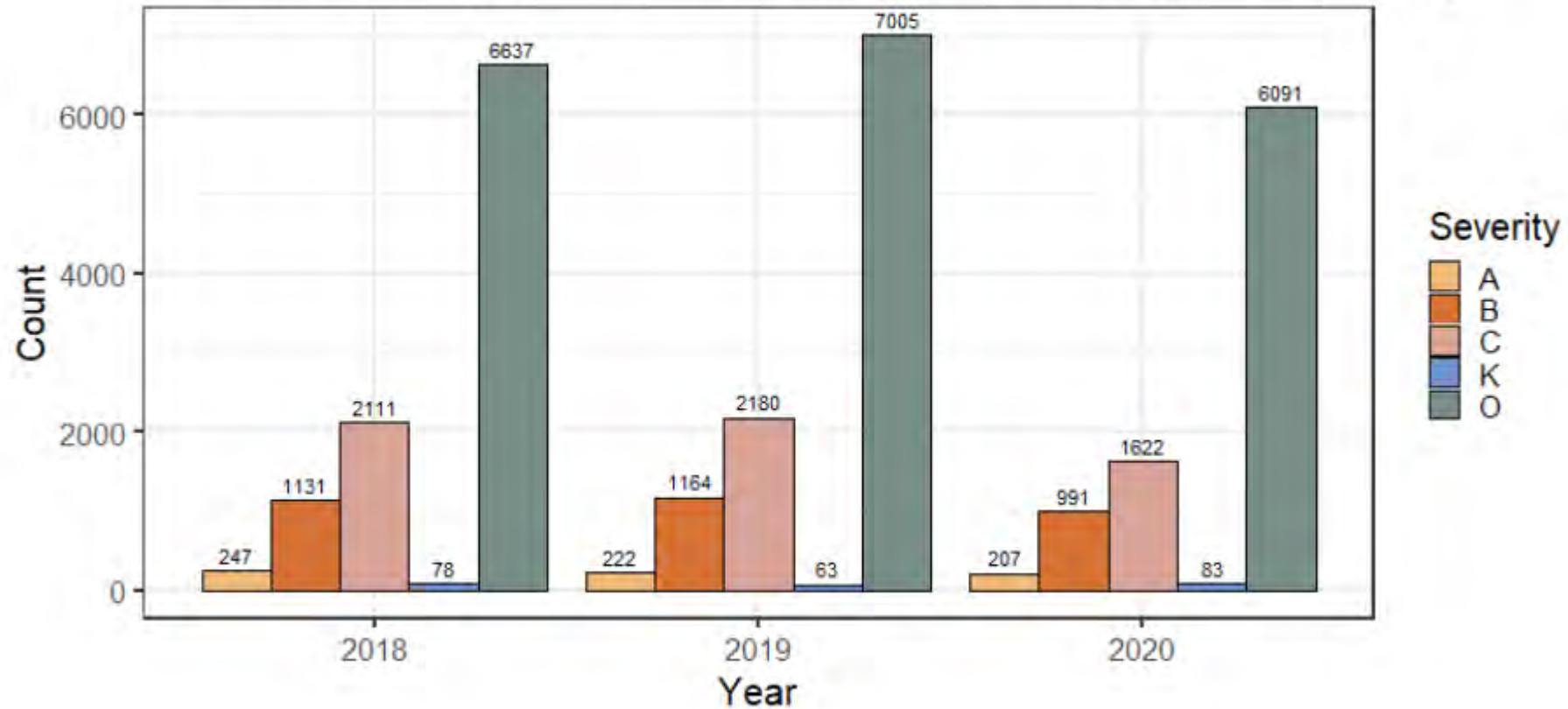
4,192 segments over
796 miles

Level	Total Records
8 Months (April-November)	12,576
Daily	3,068,544
Hourly	73,645,056

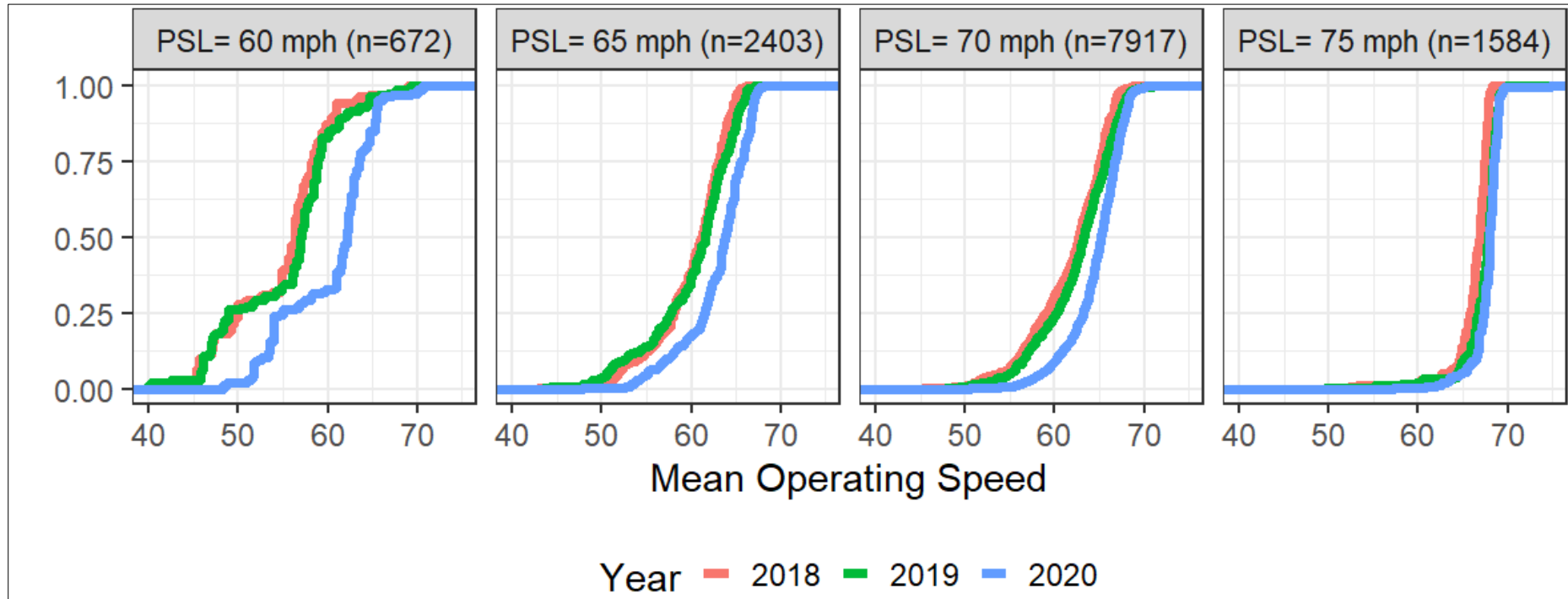


Data Exploration & Analysis

Selected Freeway Corridors in Dallas (2018-2020: April-November)



Mean Operating Speed

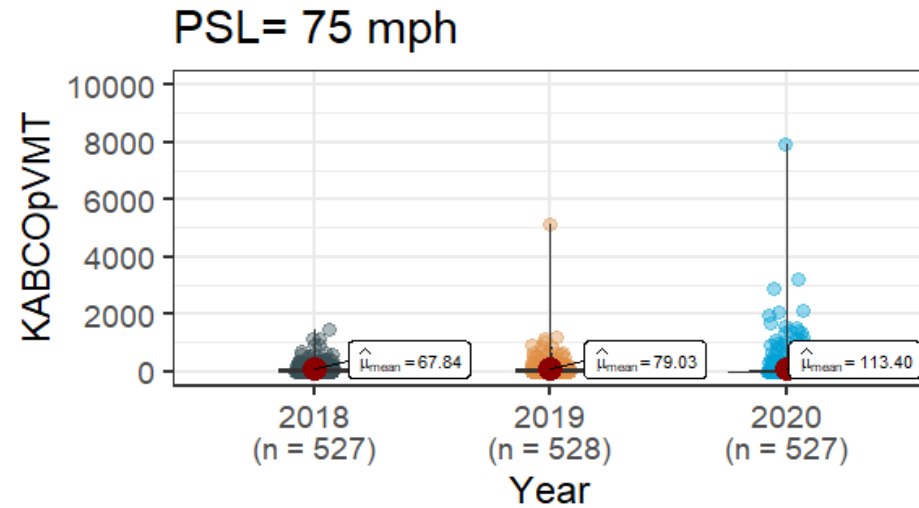
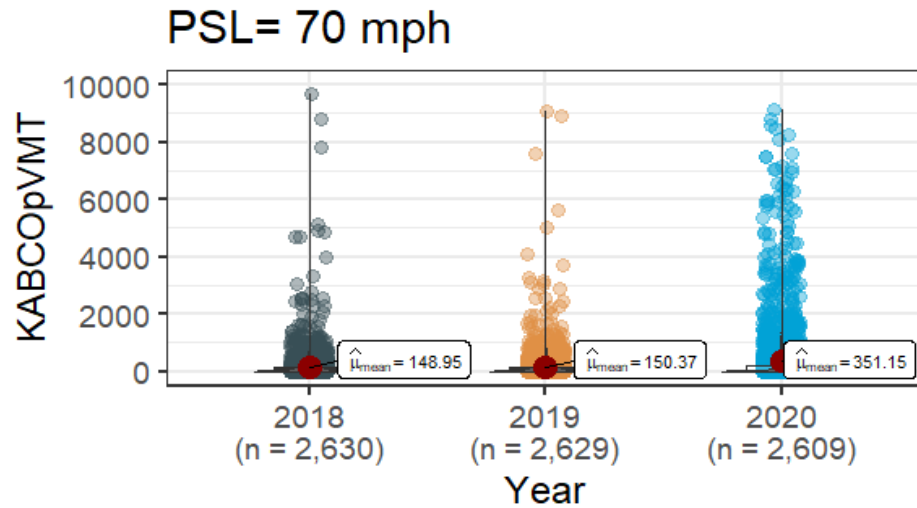
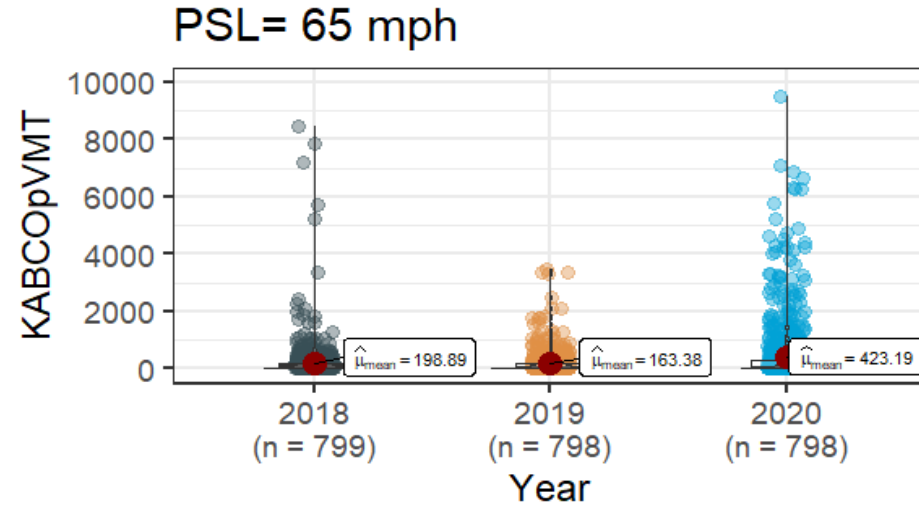
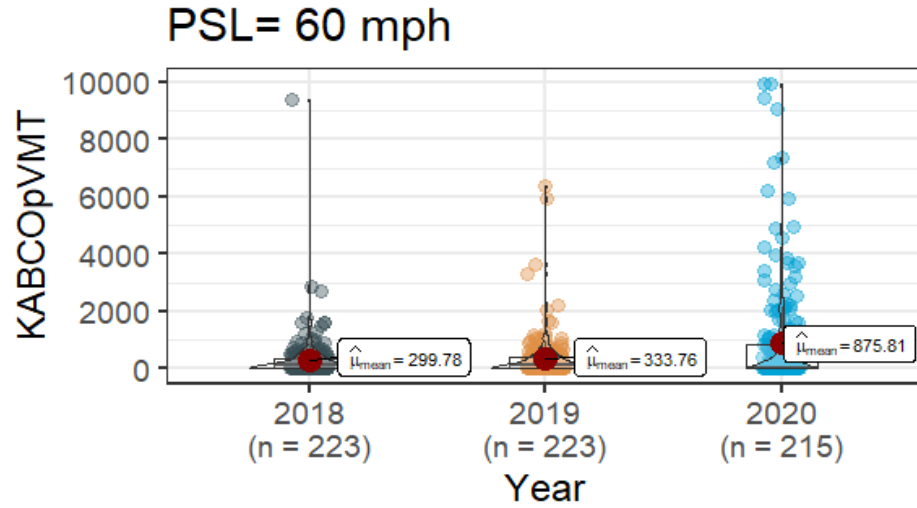


Speed Measures by Year

Posted Speed Limit (mph)	Mean Operating Speed (mph)			Difference in Mean Operating Speed between Years (mph)		
	2018	2019	2020	2019-2018	2020-2019	2020-2018
60	54.82	55.38	60.30	0.56	4.92	5.48
65	60.11	60.25	62.97	0.14	2.72	2.86
70	61.73	62.53	64.60	0.80	2.07	2.87
75	66.28	67.26	67.72	0.98	0.46	1.44
Posted Speed Limit (mph)	Standard Deviation of Operating Speed (mph)			Difference in Standard Deviation of Operating Speed between Years (mph)		
	2018	2019	2020	2019-2018	2020-2019	2020-2018
60	11.87	11.68	7.68	-0.19	-4.00	-4.19
65	8.90	9.17	6.94	0.27	-2.23	-1.96
70	8.23	8.69	6.49	0.46	-2.20	-1.74
75	5.16	5.49	4.62	0.33	-0.87	-0.54

Note: bold numbers/shaded cells are statistically significant.

Crash Frequencies by PSL



KABC Crash Prediction Model (All PSL)

Fixed Effect	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	5.530	1.460	3128	3.786	0.000	***
Length (mi.)	2.317	0.072	12540	32.153	< 2e-16	***
AADT (1000 vpd)	0.002	0.000	12190	4.458	0.000	***
Num of Lanes	0.164	0.021	2710	7.816	0.000	***
Lane Width (ft.)	-0.314	0.101	2294	-3.124	0.002	**
SpdAve (mph)	-0.041	0.010	5202	-3.946	0.000	***
SpdStd	0.032	0.012	8075	2.613	0.009	**
PSL65	0.629	0.176	1496	3.578	0.000	***
PSL70	0.643	0.163	1545	3.944	0.000	***
PSL75	0.255	0.199	1536	1.279	0.201	
AADT Truck (1000 vpd)	0.028	0.008	2078	3.671	0.000	***
K_FAC	-0.107	0.050	6079	-2.148	0.032	*
Year2019	0.030	0.032	11780	0.941	0.347	
Year2020	0.088	0.037	12530	2.386	0.017	*
Random Effect	Variance	Std. Error				
TMC (intercept)	1.434	1.197				
Residual	1.927	1.389				
REML criterion at conv.	46694.600					

Significance Codes
 0 '***' 0.01 '**' 0.05 '*'
 0.1 '.'

KABC Crash Prediction Model (PSL=65 mph)

Fixed Effect	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	10.120	6.019	979	1.681	0.093	.
Length (mi.)	3.257	0.189	2331	17.257	< 2e-16	***
AADT (1000 vpd)	0.000	0.001	2242	0.042	0.966	
Num of Lanes	0.007	0.048	822	0.152	0.879	
Lane Width (ft.)	-0.665	0.482	991	-1.381	0.167	
SpdAve (mph)	-0.049	0.019	1045	-2.495	0.013	*
SpdStd	0.021	0.027	1293	0.772	0.440	
AADT Truck (1000 vpd)	0.060	0.018	608	3.390	0.001	***
K_FAC	0.025	0.112	856	0.221	0.825	
Year2019	0.018	0.069	2008	0.256	0.798	
Year2020	0.123	0.089	2379	1.373	0.170	
Random Effect	Variance	Std. Error				
TMC (intercept)	1.384	1.176				
Residual	1.893	1.376				
REML criterion at conv.	8958.2					

KABC Crash Prediction Model (PSL=70 mph)

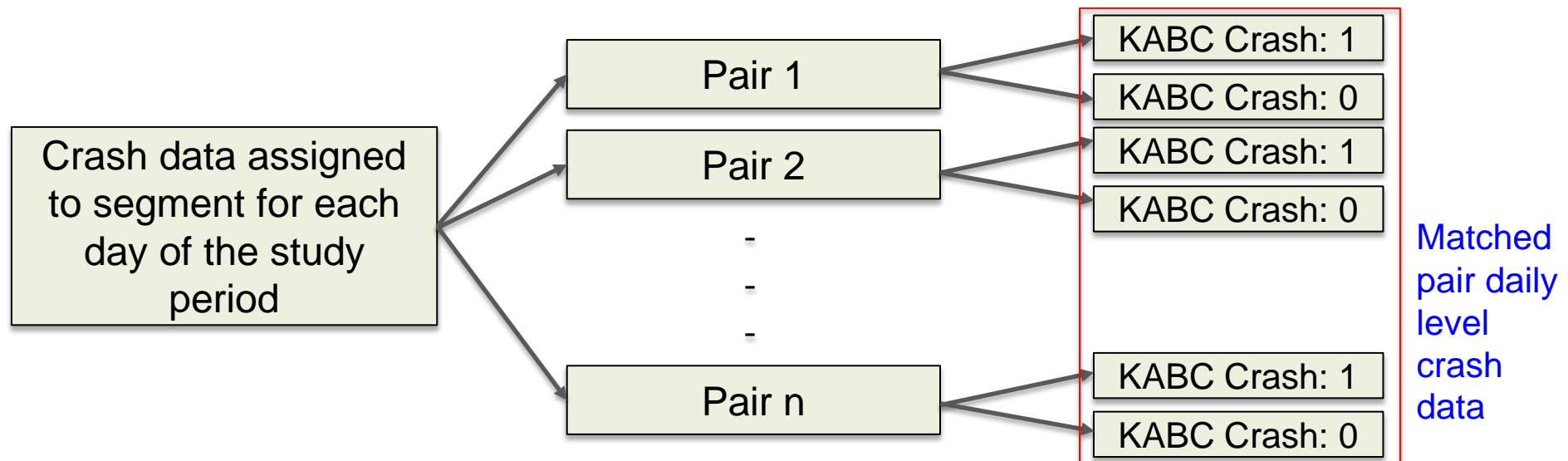
Fixed Effect	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	5.969	1.824	2351	3.273	0.001	**
Length (mi.)	2.689	0.099	7901	27.207	< 2e-16	***
AADT (1000 vpd)	0.003	0.000	7613	5.395	0.000	***
Num of Lanes	0.218	0.028	1668	7.834	0.000	***
Lane Width (ft.)	-0.248	0.112	1366	-2.208	0.027	*
SpdAve	-0.043	0.014	3756	-3.017	0.003	**
SpdStd	0.030	0.016	5163	1.853	0.064	.
AADT Truck (1000 vpd)	0.018	0.009	1276	1.959	0.050	.
K_FAC	-0.188	0.073	3250	-2.574	0.010	*
Year2019	0.028	0.043	7658	0.651	0.515	
Year2020	0.085	0.048	7870	1.764	0.078	.
Random Effect	Variance	Std. Error				
TMC (intercept)	1.531	1.237				
Residual	1.973	1.405				
REML criterion at conv.	29618.200					

KABC Crash Prediction Model (All PSL, 2020 only)

Fixed Effect	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	-4.159	1.594	966	-2.608	0.009	**
Length (mi.)	2.761	0.112	3752	24.662	< 2e-16	***
AADT (1000 vpd)	0.010	0.001	920	10.842	< 2e-16	***
Num of Lanes	0.000	0.026	1021	-0.001	0.999	
Lane Width (ft.)	0.014	0.100	1239	0.137	0.891	
SpdAve	0.044	0.013	752	3.554	0.000	***
SpdStd	0.128	0.016	671	7.787	0.000	***
AADT Truck (1000 vpd)	0.005	0.008	771	0.683	0.495	
K_FAC	-0.058	0.058	1099	-0.994	0.320	
Random Effect	Variance	Std. Error				
TMC (intercept)	0.563	0.750				
Residual	1.913	1.383				
REML criterion at conv.	15486.100					

Daily Level Analysis

Group	Segment	Geometry	Day Of Week	Year	SpdAve	AADT	KABC Crash
1	A01	B01	Wed	2018	68.5	18000	1
1	A01	B01	Wed (1 to 4 weeks before or after)	2018	67.2	18000	0
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1	A0n	B0n	Fri	2020	72.1	33000	1
1	A0n	B0n	Fri (1 to 4 weeks before or after)	2020	69.1	33000	0



KABC Crash Prediction Model (All PSL, Daily Level)

Fixed Effect	Estimate	LL	UL	
(Intercept)	-2.937	-3.516	-2.359	**
VMT	-0.003	-0.007	0.000	
SpdAve (mph)	0.031	0.023	0.039	***
SpdStd	0.124	0.114	0.134	***
Median Width (ft.)	0.002	0.001	0.003	**
Num of Lanes	-0.029	-0.052	-0.006	**
Shoulder Inside (ft.)	0.004	-0.001	0.009	
Shoulder Outside (ft.)	0.000	-0.011	0.011	
Year2019	-0.041	-0.108	0.026	
Year2020	0.256	0.182	0.331	***
Random Effect	Std. Error			
Segment ID	0.000			
AIC	27411.200			
BIC	27506.270			
LogLikelihood	-13693.600			

Research Questions

- Are operating speeds higher on freeways during 2020 (April to November) as compared to previous years?
 - Yes
- Are those higher operating speed measures associated with more KABC crashes during 2020 with consideration of other influential factors?
 - Yes
- Are 5-minute operational speed measures more useful for assessing the speed-crash relationship when analyzed at a 24-hour (daily) interval rather than annually?
 - Yes



Key Findings

- The 8-month model showed that the higher operating speeds in 2020 were associated with more fatal and injury crashes.
- Daily-level models show daily mean operating speed is associated with more daily fatal and injury crashes.

Factors Not Considered

- Traffic enforcement
 - Change in response protocols
 - Change in priorities
- Risky Behaviors/Mental health
 - Lower seat belt use (more ejections)
 - Increased impaired driving: Drugs/Alcohol
- Weather

Acknowledgements

- TTI Center for Transportation Safety
- Minh Le, Associate Research Engineer
- Kay Fitzpatrick, Senior Research Engineer
- Jason Wu, Assistant Research Scientist
- Manya Umamahesh, Associate Transportation Researcher



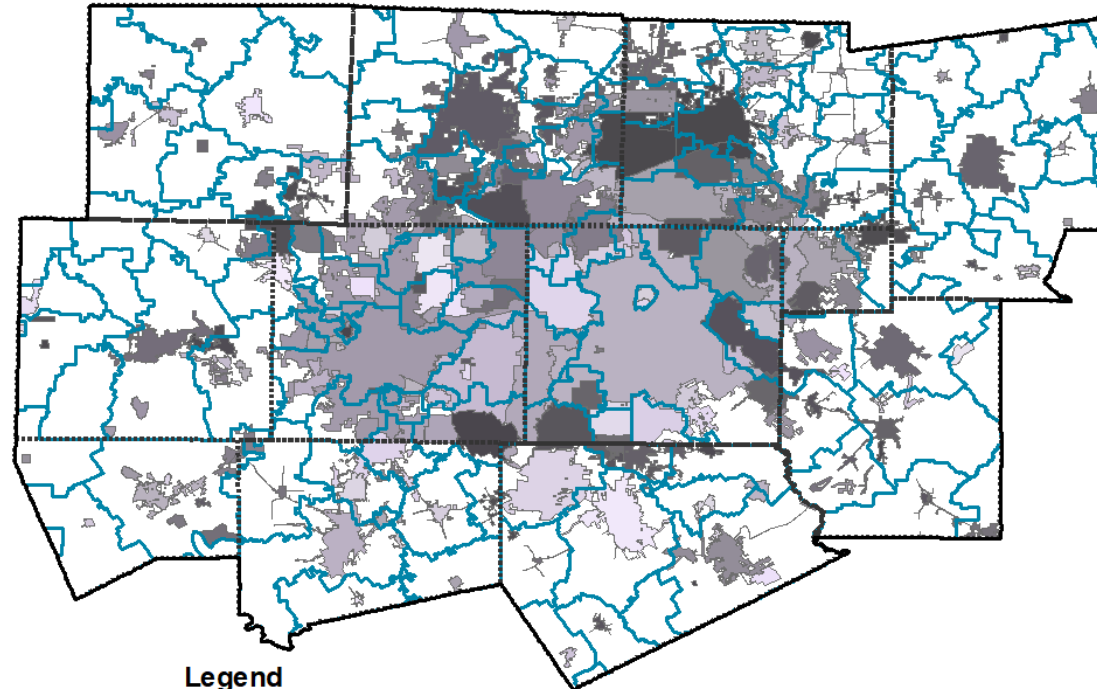


NCTCOG PRESENTATION

SAFE ROUTES TO SCHOOL IN NORTH TEXAS

Shawn Conrad
Regional Safety Advisory Committee
3.25.22

Metropolitan Planning Area Statistics



Legend

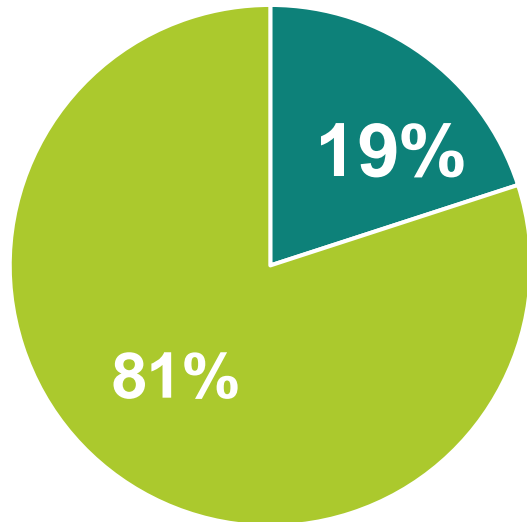
- Metropolitan Planning Area
- Counties
- Independent School Districts
- Cities

- » **9,300** square miles
(larger than the states of New Hampshire, New Jersey, Connecticut, Delaware, and Rhode Island)
- » **>7.7 million** people
- » **252** cities
- » **143** Independent School Districts (ISDs)

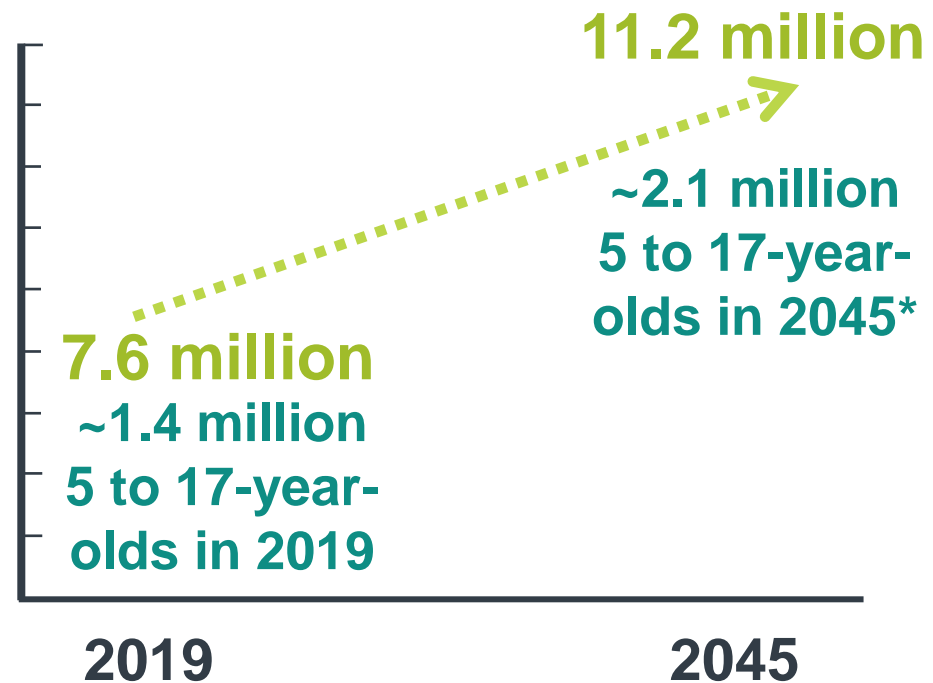


Population Growth in the Region

2019 Population (12-County MPA)



- 5-17 Age Group
- All Other Ages



*Assuming proportion of 5-17-year-olds will remain 19% in 2045

» ***How will we accommodate the increase of students?***



Regional Transportation Council Policy Supporting School Districts

Active Transportation:

Advocate for:

- Safe Routes to School Program
- Precious Cargo Program
- Transportation Alternatives Program

Outreach & Engagement:

- Engage students to design the cover of Progress North Texas
- Advocate for Science, Technology, Engineering, and Mathematics (STEM) fields



School Siting:

- Pilot school siting Programs
- School bus stop coordination
- Technical assistance for school districts

Air Quality:

- RTC Clean Fleet Vehicle Policy
- Clean school bus Programs
- Energy audit Programs
- Vehicle idling-reduction Programs
- Air quality-friendly contracting initiatives



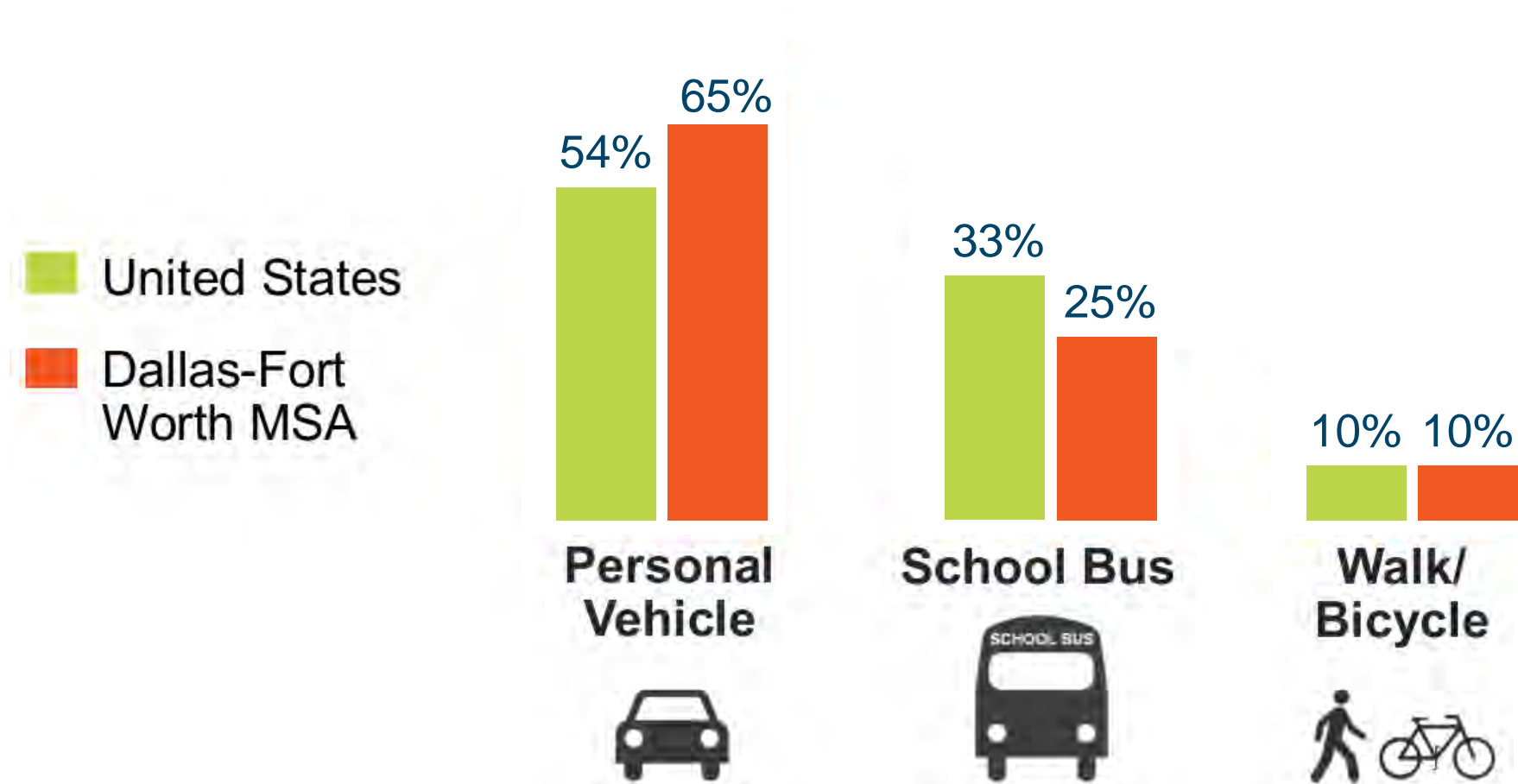
Why Do We Need Safe Routes to School Programs?

- Reduction of students walking and biking to school in favor of commuting via private vehicle in past 50 years
 - Vehicle trips to K-12 schools now account for 10-14% of traffic during the morning commute
- Easier, safer routes for students to walk and bike to school
- Healthier students from increased exercise
- Reduce school transportation costs, reduce need for hazard busing
- Household cost savings from reduced gas and car use

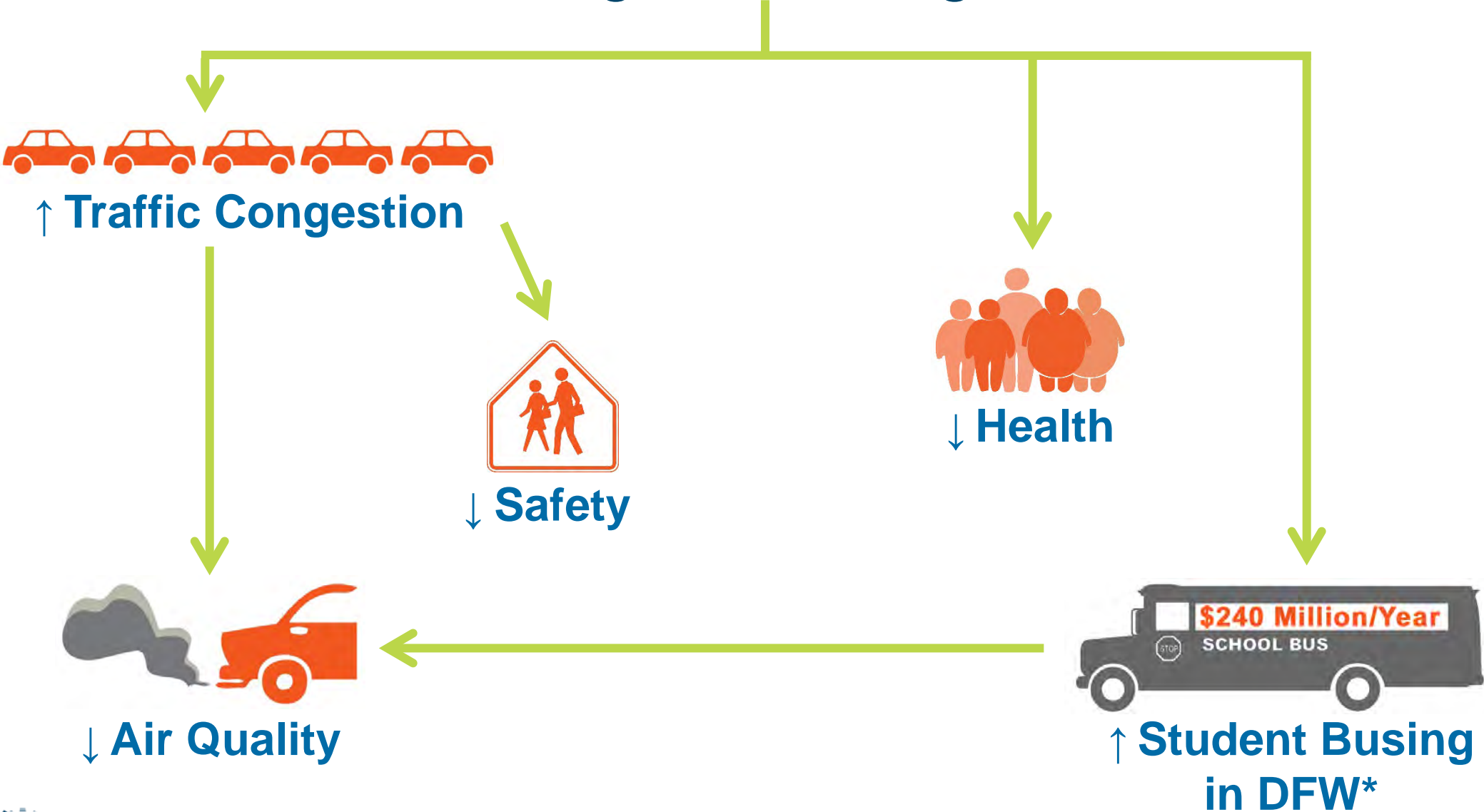


Decline in Walking and Biking to School

2017 Mode Share



Less Walking and Biking to School



*Source: Texas Comptroller, 2014.

Barriers to Walking/Biking to School

2005 CDC Survey of parents on barriers that prevented them from allowing their children to walk to school

- Distance to School: 61.5%
- Traffic-related danger: 30.4%
- Weather: 18.6%
- Crime Danger: 11.7%
- Opposing School Policy: 6%



Photo Courtesy of the City of Fort Worth



Children's Physical Activity

The CDC recommends that children and adolescents ages 6-17 do 60+ minutes of moderate to vigorous physical activity every day

- Only **24%** of children 6-17 meet this guidance

Students who are physically active tend to have better grades, school attendance, cognitive performance, and classroom behaviors



The 5 E's of SRTS

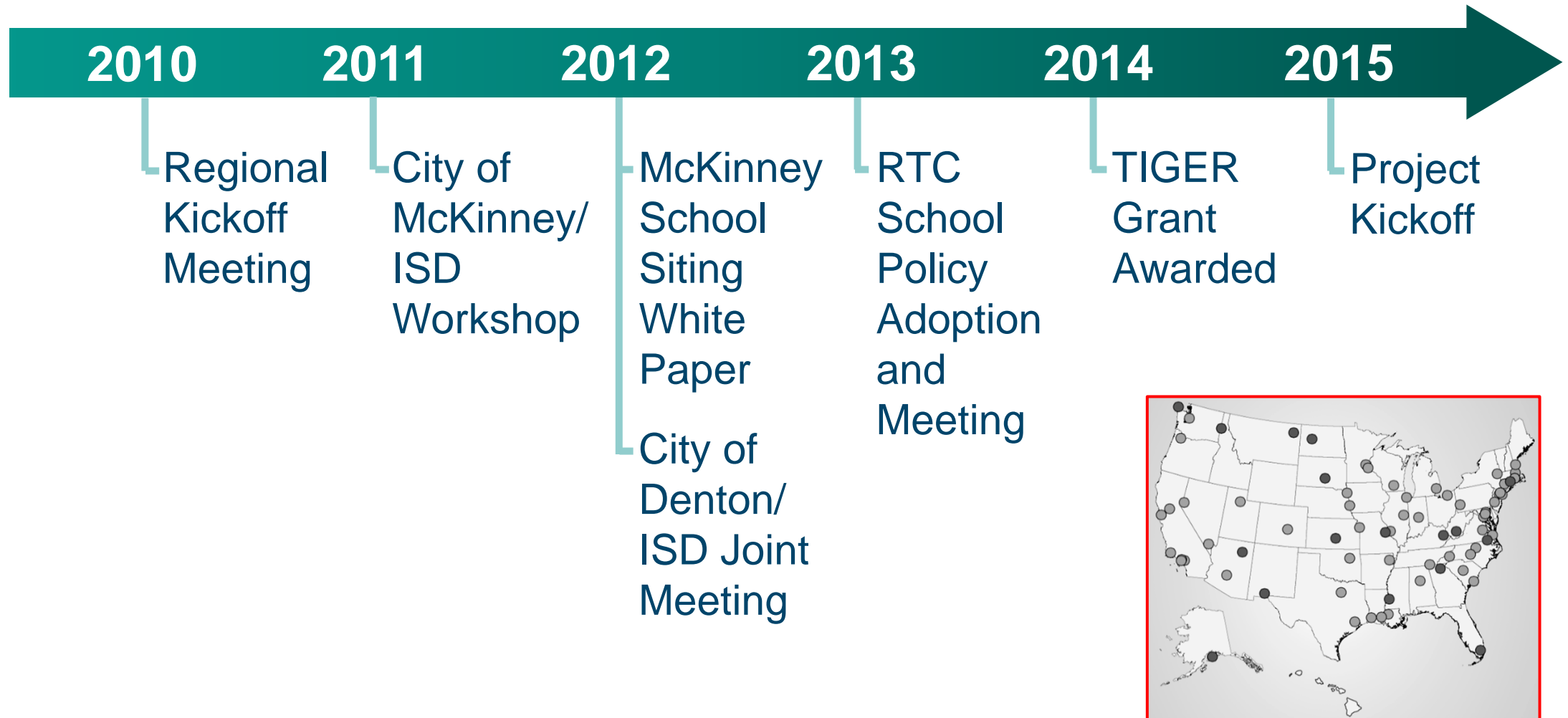
1. Engineering
2. Education
3. Enforcement
4. Encouragement
5. Evaluation



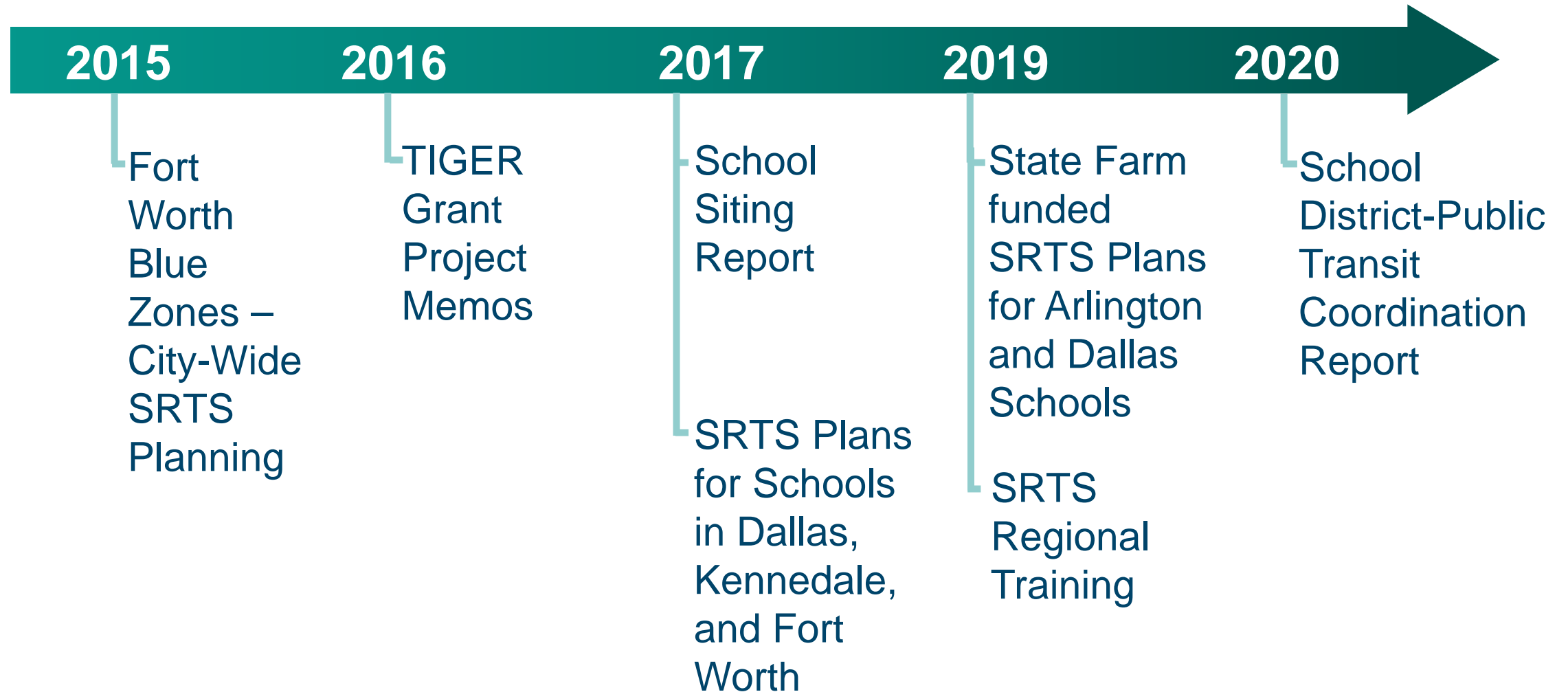
NCTCOG Safe Routes to School Initiatives



Sustainable Development: Previous Initiatives



Sustainable Development: Previous Initiatives, Part 2





Work Products

School District - Public Transit Coordination in the Dallas-Fort Worth Region:

- Information and tools for building partnerships between school districts and local public transit agencies

Planning for Community-Oriented Schools: A Guide To School Siting in North Texas

- Methods for advancing long-term planning for school siting and building community-oriented schools

Memos

- Coordinating Demographic Projections
- Review of State Legislation and Policies Related to School Siting Requirements
- Land Banking Programs and Best Practices Research

Safe Routes to School Plans

- Dallas, Kennedale, Fort Worth

All Work Products posted at www.nctcog.org/saferoutestoschool and www.nctcog.org/schoolsiting



State Farm SRTS Plan Grants: 2018

Grant prioritized schools with:

- >80% of students designated as economically disadvantaged
- At least one crash in the school's vicinity
- No previous SRTS funding

SRTS Plans:

- Evaluate existing conditions and provide recommendations to improve student safety and comfort walking/bicycling to school

Plans Created:

- Combined South Dallas Plan: Salazar Elementary, Cowart Elementary, and Stockard Middle School
- Arlington: Speer Elementary Plan and Webb Elementary Plan

Posted at www.nctcog.org/saferoutestoschool



Funding Opportunities for SRTS

Transportation Alternatives Call for Projects (TA CFP): Approximately every three years

Previous TA CFP Funding:

- 2020: \$7 million to 7 SRTS projects
- 2017: \$12.2 million to 22 SRTS projects
- 2014: \$5.7 million to 13 SRTS Projects

Summer 2022: Anticipated Call for Projects



NCTCOG Policy Bundle: Joint Coordination

The NCTCOG Policy Bundle is a voluntary list of policies local governments and transportation agencies can choose to adopt in exchange for Transportation Development Credits.

Schools Coordination:

“Engage TxDOT, the city, and all Independent School Districts within their jurisdiction to collaborate on topics related to school siting and safety.”



Current and Upcoming Activities/Initiatives



Technical Assistance

- Safe Routes to School Plan Development (UPWP)
- Safe Routes to School Project Implementation
- School Siting Planning
- General Information and Educational Presentations to Boards/Councils



Safe Routes to School Regional Action Plan

- Summarize SRTS activities in the region to date, provide analysis of trends and need for SRTS
- Develop recommendations for SRTS programs in different land-use contexts in the region
- Support City SRTS efforts
- Create a framework for prioritizing funding in the region
- Plan in progress, expected 2022



Walk To School Day Promotion

- Celebrates benefits of walking and bicycling
- NCTCOG provided planning resources and free prizes to participating schools
- 5,129 Walk to School events were held in 2019
 - >95 Schools in North Texas participated in 2019
- Walk to School Day promotion assistance returning for October 2022 Walk to School Day



Photo Courtesy of the City of Fort Worth



Education

Upcoming Workshops:

- Planning Street Networks for Fiscal Sustainability: Safe Routes to School Series Webinar 2 (Summer 2022)
- RTC Community Schools and Transportation Workshop (2022)

Previous Workshops:

- Subdivision Planning and Street Connectivity Webinar – First in Planning for Safe Routes to School Series (January 2022)
- Building Schools, Building Communities: A School Siting and Collaboration Workshop (February 2019)



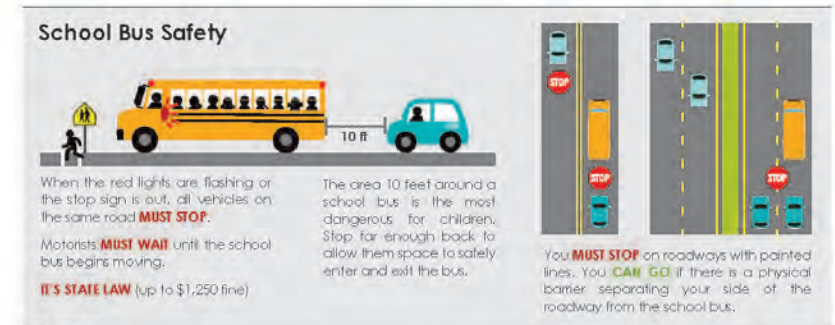
Education/Outreach Materials

SRTS and Safety Materials, Tools for Parents/Schools (www.nctcog.org/saferoutestoschool, www.nctcog.org/schoolsiting)

- SRTS Brochure
- Tips for Safe Bicycling and Walking
- School Zone Safety Tips
- Other Resources
 - Safe Routes to School National Partnership
 - Local Examples
 - EPA Smart School Siting Tool

Look Out Texans Program (www.lookouttexans.org)

- Safety tips for walking, biking, and driving safely
- School Resources: lesson plans, educational videos (TEKS)



Contact Us



Karla Windsor, AICP
Senior Program Manager
KWindsor@nctcog.org

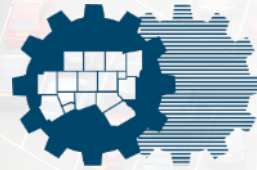


Shawn Conrad, PhD
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SConrad@nctcog.org



Erin Curry
Transportation Planner
ECurry@nctcog.org





NCTCOG | Transportation Department

North Texas Regional Parking Database

Travis Liska, AICP

Regional Safety Advisory Committee
3.25.2022

Do we have too much parking?



Effects of Too Much Parking

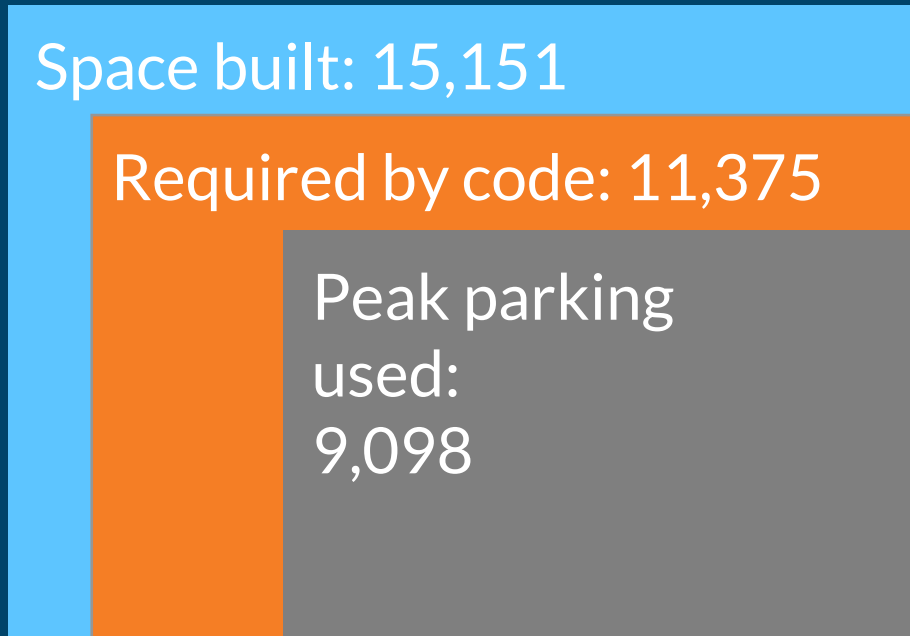
- Increased development costs (Garage: \$17,000 - \$40,000 per space)
- Less contribution to tax base
- Lost land for housing/other development (~300 square feet per parking space)
- Dependence on our cars

**How do we be more efficient as the region grows?
(11 million population by 2045)**



Data/Decision-Making Challenges

2018 DART Red and Blue Line Corridors TOD Parking Study



~6,000 Spaces built went unused (40%)

Codes: May be using outdated formulas and estimates



- City development codes requiring parking
- Institute of Transportation Engineers (manual)
- Other formulas

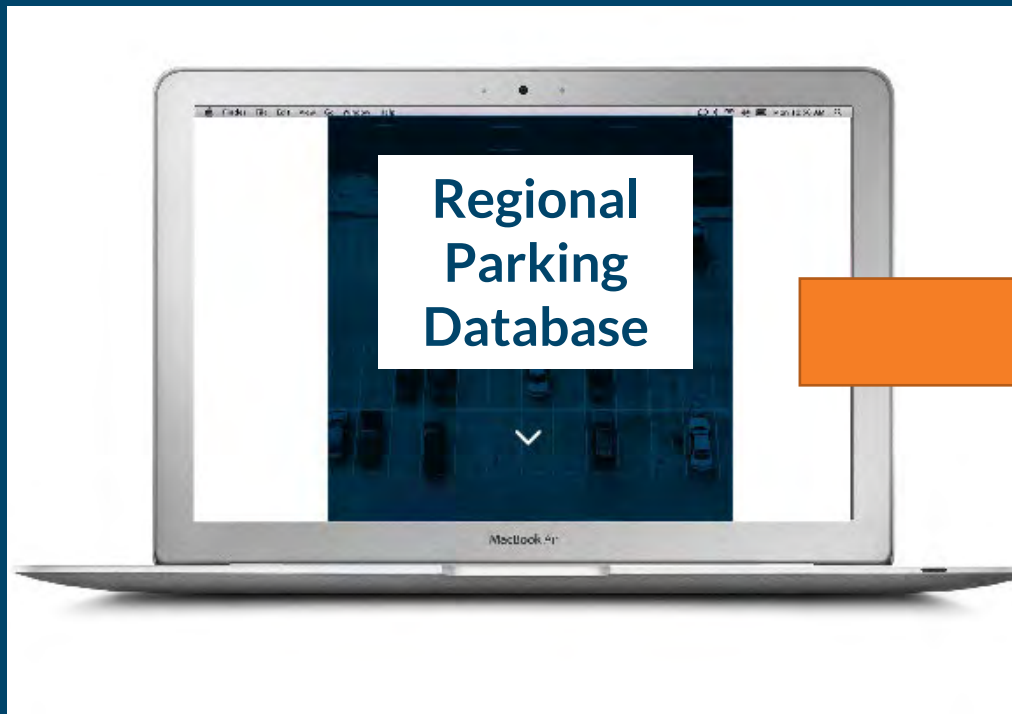
Communication: Other stakeholders make assumptions on parking management shaping our cities



- Banks/lenders
- Commercial tenants
- Brokers



Parking Database: Informing the Region



Inform city **codes** with a clearinghouse of count data (from NCTCOG and others)



Communicate better knowledge on how to develop more efficient parking



Data Collection



Utilization & Supply

Counts of on-site parking spaces and peak use



Building Occupancy

Information on occupied units and leased space, number of units



Site Characteristics

Type of parking, special rules, related amenities, site age, etc.



Area Context

Transit availability, available street parking, walkability



Data Collection

Step 1 – Communication and Identifying Sites

Property Owner/Manager Survey

- Documents property approval to conduct counts on-site
- Building occupancy
- Site characteristics

Properties located in NCTCOG's 12-county region
Most commercial property types, including:

- Industrial/warehouse uses
- Office
- Entertainment/theaters/gyms
- Hospitality/hotels
- Restaurants
- Multi-family residential/apartments
- Retail (all types)
- Mixed-use site

North Central Texas Council of Governments

Section 2: Property Contact Information

Building Name (if applicable) _____ Street: _____
Property Address _____ City: _____ Zip: _____
Property Management Company Name _____
Property Management Contact (the person who NCTCOG staff will contact with follow up questions and to arrange access to parking facilities) Name: _____
Email: _____ Phone: _____

Section 3: Property Characteristics

How would you describe the land use(s) at the property? (e.g., movie theater)

Which land use classification best fits the land use(s) described above?

- Mixed-use, e.g., 2 or more uses per building (complete sections 4, 5, and 6)
- Hospitality (complete section 4)
- Restaurant (complete section 5)
- Retail (complete section 5)
- Office (complete section 5)
- Industrial/Warehouse (complete section 5)
- Entertainment (complete section 5)
- Multi-family residential (complete section 6)
- Other: _____ (complete sections 4, 5, and 6)

Section 4: Hospitality Land Use: Property Characteristics
(only complete this section if the property includes "hotel" use)

Total number of hotel units _____
Total square feet of meeting/conference space _____

Section 5: Commercial Land Use: Property Characteristics
(only complete this section if the property includes any kind of commercial use)

Total square feet of leasable tenant space _____
Square feet of tenant space currently occupied _____
Total square feet of commercial common space (space not leasable by tenants) _____

Section 6: Residential Land Use: Property Characteristics
(only complete this section if the property includes any kind of residential use)

What kind of housing is available? (e.g., student housing, senior living, assisted living, etc.)

	Studio	1 Bedroom	2 Bedroom	3+ Bedroom	Total
Total Number of units					
Number of vacant units only					
Current monthly average rent/price per square foot					
Number of units reserved for affordable housing* (enter zero if none)					

* For the purpose of this survey, "affordable housing" is defined as housing that is subsidized or rent-regulated and that is occupied by a household that is "low-income". A "low-income" household is a household earning less than 80% Area Median Income (AMI). Source: Fort Worth Comprehensive Plan Chapter 5: Housing, US Department of Housing and Urban Development (HUD).

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Data Collection

Step 2 – Parking Utilization Counts

NCTCOG and others on-site to count parking space occupancy

Step 3 – Analysis of Site Context factors and data

e.g., Utilization rates for transit vs. non-transit neighborhoods

Data and reports available in 2023



How to Help

We need commercial real estate property **contacts**

Property representatives to fill out the survey or be contacted by NCTCOG

Share the project with relevant city departments and related contacts

Visit our website for survey and communications materials

www.NCTCOG.org/Parking



Contact Us



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Statewide MPO Safety Focus

Not One-Size-Fits-All: Short Term and Long Term

Law Enforcement and Education (Broad Sense)

Early Actions of Success on 3 E's

Leverage Partners Work

Track Lessons Learned

Opportunity for Multi-Year Partnership and Approach

More Comprehensive Safety Planning

What is the data and plans telling us?



MPO Safety Focus: Short Term and Long Term

Safety Commitment

Allocation \$ TBD: 23 MPO's * \$50,000 (\$1.2M)

Products: Safety Action Plan or Comprehensive Safety Plan

Use It or Lose It

Sent to DFW: Process Annual Report (September 30)

Texas Transportation Institute (TTI)



Anticipated Transportation Alternatives Call for Projects (North Central Texas Region)

Regional Safety Advisory Committee

March 25, 2022



**North Central Texas
Council of Governments**

Project Development Considerations

- Construction-implementation focus
- All right-of-way and easements must be secured before application
- Coordinate with stakeholders such as TxDOT, railroads, neighborhoods, adjacent property owners, etc.
- Well-defined project scope of work
- Opinions of Probable Construction Costs
- Schematics (recommended)





Questions?