

# Memorandum



CITY OF DALLAS

DATE January 28, 2022

TO Honorable Mayor and Members of the City Council

SUBJECT **Vision Zero City Council Briefing on January 25, 2022: Responses to Questions**

The following are responses to questions posed by City Council members during the January 5, 2022, City Council briefing on the Vision Zero Action Plan:

**1. Councilmember West: At how many locations are we currently installing speed humps/cushions per year? What would it take to install speed humps/cushions at 28 locations each year (two per City Council District)?**

Response: In 2021, the Department of Transportation implemented four speed hump and speed cushion projects across the City. However, on September 22, 2021, the City Council authorized a three-year cooperative purchasing agreement with Parking Logix, Inc. for the purchase and installation of speed cushions, which has increased the City's capacity to undergo a substantially higher number of installation projects.

Staff is still evaluating the cost of installing speed cushions at 28 locations across the City each year; however, the preliminary estimate is that it would require hiring an additional technician to aid in the collection of speed and volume data and inspect field work, and in excess of \$800,000.00 for material and installation costs each year.

**2. Councilmember Atkins: Provide the list of streets on the High Injury Network. Where did the data come from that was used to create the High Injury Network?**

Response: The map of the High Injury Network and the list of streets on the network are included as attachments.

The data that was used to create the High Injury Network is derived from crash reports filed by the Dallas Police Department (DPD), Dallas County Sheriff's Office, and Texas State Troopers when they respond to crash sites. Law enforcement agencies across the state send the crash reports to the Texas Department of Transportation (TxDOT), who makes this data available to cities through its Crash Records Information System. The crash reports that were used were from incidents that occurred between 2015 and 2019, in which one or more persons suffered a fatality or severe injury. Using five years of crash data is consistent with industry best practices.

Currently, the management of the data and its source is handled by the Office of Data Analytics & Business Intelligence. The methodology used to create the High Injury Network has been utilized by many Vision Zero cities across the country to identify the fewest number of streets that account for the greatest number of fatal and severe injury crashes. For the City of Dallas, the data indicated that 8 percent of streets that account for 60 percent of fatal and severe injury crashes.

**3. Councilmember Mendelsohn: How are the High Injury Network enforcement priorities going to be communicated, or filtered down the chain of command in the DPD?**

Response: Per DPD, the Department is in the process of developing internal procedures and a work plan for how Vision Zero recommendations will be integrated into the Traffic Unit's and Patrol's priorities. After the Vision Zero Action Plan is adopted, DPD leadership will continue to participate in the Vision Zero Task Force's quarterly meetings, where it will report on progress with implementing the recommendations in the Action Plan and relevant evaluation metrics in the Plan.

**4. Councilmember Mendelsohn: What might have been some of the reasons the number of fatalities was so high in 2020 but so low in 2021?**

Response: Since the January 5, 2022, briefing, there are new figures available for traffic fatalities in 2020 and 2021. According to law enforcement crash reports and records retrieved from the Texas Crash Records Information System as of January 12, 2022, there were 228 reported traffic fatalities in 2020 and 226 fatalities in 2021. While there is variation from year to year, the data shows a general trend toward more fatal crashes occurring on both limited and non-limited access roadways between 2015-2021. However, there was a reduction in fatalities on non-limited access roads from 2020-2021.

		2015	2016	2017	2018	2019	2020	2021
<b>Fatalities</b>	Non-Limited Access Roads	112	131	130	115	126	157	136
	Limited Access Roads	64	62	68	88	60	71	90
	Total	176	193	198	203	186	228	226

For accurate fatality numbers, it is generally recommended to wait six months after the end of a calendar year before reporting fatality figures. For example, NCTCOG's typical approach is to wait six months before the end of the calendar year to evaluate crash data from the year prior. U.S. Department of Transportation does not release its annual traffic fatality report until two years after the year being reported on. The reason for this is that not every person that suffers a fatal injury is declared deceased at the scene of the crash as some people may remain on life support for several months. Additionally, it can take more time for insurance companies to report that the person has died to the state. TxDOT conducts extensive data cleaning on the crash data during the spring of each year to update information, correct errors and fill in missing information in police reports.

**5. Councilmember Narvaez: What is the research on automated enforcement (e.g., red light cameras, speed cameras)? What is Denver doing related to automated enforcement?**

Response: Speed safety cameras are one of the Federal Highway Administration's 28 Proven Safety Countermeasures. There is a body of evidence that speed enforcement cameras can reduce speeding, which can lead to reductions in speeding-related crashes and crashes involving serious injuries or fatalities. Fixed units have been shown to reduce crashes on urban principal

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arterials by up to 54 percent for all crashes and 47 percent for injury crashes (Shin et al., 2009). Mobile speed enforcement camera units have been shown to reduce crashes on principal urban arterials up to 20 percent for fatal and injury crashes (Li et al., 2015).

In 2007, Montgomery County, Maryland began to implement an automated speed enforcement program on residential streets with speed limits of 35 mph or lower and in school zones. When data was evaluated seven years after the program began, the speed cameras were associated with a 10 percent reduction in average travel speeds and a 62 percent reduction in the likelihood that a vehicle was traveling more than 10 mph above the speed limit at camera sites. Speed cameras alone were associated with a 19 percent reduction in the likelihood that a crash resulted in an incapacitating or fatal injury (Hu & McCartt, 2016).

New York City launched the nation's first red light camera program in 1994, after enabling legislation was passed by the New York State Legislature in 1988. That program continues to prove successful at preventing serious red light-related crashes. T-bone collisions resulting in injury decreased by 61 percent compared to before installation, and serious rear-end crashes decreased by 19 percent (New York City, 2020). In 2013 the State Legislature granted New York City the authority to pilot an automated speed enforcement program in a small number of school zones with high incidences of crashes. The City reported that the number of people killed or severe injured in crashes in school speed zones with speed cameras declined by over 21 percent in the 1-to-2-year period after the cameras were activated. The daily rate of violations issued for excessive speeding declined by over 63 to 83 percent after 18 months (New York City, 2018).

In Denver, in compliance with the State Legislature's restrictions on where automated enforcement devices may be used, four photo speed vans are deployed on residential streets with a posted speed limit of 35 mph or less, on streets bordering parks with any posted speed limit, and in safety zones (e.g., school zones, work zones). Denver also has four intersections with red light cameras. At the four locations where red light cameras operate, incidents of red light running have decreased and accidents have gone down. The presence of a photo speed van for five consecutive days results in a 21% reduction in excessive speeding (vehicles traveling 10+ MPH over the speed limit).

In Dallas, in 2019 the Texas State Legislature's ban on red light cameras (or photographic traffic signal enforcement) ended the City's 13-year red-light enforcement program. Regarding automated speed enforcement, Section 542.2035 of the Texas Transportation Code also prohibits a municipality from implementing or operating "an automated traffic control system with respect to a highway or street under its jurisdiction for the purpose of enforcing compliance with posted speed limits."

Sources:

- Shin, K., Washington, S. P., & Schalkwyk, I. V. (2009). Evaluation of the Scottsdale Loop 101 automated speed enforcement demonstration program. *Accident Analysis and Prevention*, 41(3), p. 393-403.
- Li, R., El-Basyouny, K., & Kim, A. Before-and-after empirical bayes evaluation of automated mobile speed enforcement on urban arterial roads. *Transportation Research Record*. 2015; 2516(1): 44-52.
- Li et al. A Before-and-After Empirical Bayes Evaluation of Automated Mobile Speed Enforcement on Urban Arterial Roads." Presented at the 94th Annual Meeting of the Transportation Research Board, Paper No. 15-1563, Washington, D.C., (2015). Note that this is an international study.

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- Hu, W. & McCart, A. T. (2016). Effects of automated speed enforcement in Montgomery County, Maryland, on vehicle speeds, public opinion, and crashes. *Traffic Injury Prevention*, 2016, September;17 Suppl 1:53-8.
- New York City. (2020). *New York City Red Light Camera Program Review, 2020 Report*. Retrieved from <http://www.nyc.gov/html/dot/downloads/pdf/nyc-red-light-camera-program.pdf>.
- New York City. (2018, June). *Automated Speed Enforcement Program Report, 2014-2017*. Retrieved from <https://www.nyc.gov/html/dot/downloads/pdf/speed-camera-report-june2018.pdf>.
- City and County of Denver. Phot Radar Enforcement. Retrieved 1/7/2022 from <https://denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Police-Department/Traffic-Enforcement-and-Safety/Photo-Radar-Enforcement>

**6. Councilmember Narvaez: A) How many people were killed or severely injured in the past two years or five years? B) How many were killed or severely injured in speed-related crashes?**

Response:

- A) Number of people that were killed or severely injured in the past two years or five years: 2015-2019 data was used in the Vision Zero crash data analysis, with a focus on only those crashes that occurred on non-limited access roads (i.e., non-freeways; those roads which the City has total or partial control over from an engineering or enforcement perspective). That data is summarized in the table below, as well as data for the most recent two years (2020-2021). From 2015-2019 6,351 people were killed or severely injured in a traffic crash in Dallas. From 2020-2021, that number was 2,715.

*Total Number of Fatalities and Severe Injuries from Traffic Crashes*

		2015	2016	2017	2018	2019	2020	2021
<b>Fatalities</b>	Non-Limited Access Roads	112	131	130	115	126	157	136
	Limited Access Roads	64	62	68	88	60	71	90
	Total	176	193	198	203	186	228	226
<b>Severe Injuries</b>	Non-Limited Access Roads	718	849	854	818	883	755	922
	Limited Access Roads	192	310	274	238	259	225	359
	Total	910	1,159	1,128	1,056	1,142	980	1,281
<b>Grand Total</b>		1,087	1,352	1,326	1,259	1,328	1,208	1,507

- B) How many people were killed or severely injured in speed-related crashes?

Between 2015 and 2019 on non-limited access roads, 1,089 out of the 4,001 fatal and severe injury crashes were speed-related (27.2%). Those 1,089 crashes resulted in the death or severe injury of 2,014 people.

*Speed-Related Crashes: Number of Fatal or Severe Injury Crashes (Number of Fatalities or Severe Injuries)*

		2015	2016	2017	2018	2019	2020	2021
<b>Fatalities</b>	Non-Limited Access Roads	34 (44)	54 (61)	49 (57)	52 (58)	52 (55)	66 (73)	52 (57)
	Limited Access Roads	20 (22)	18 (18)	24 (24)	31 (31)	20 (22)	24 (28)	33 (40)
	Total	54 (66)	72 (79)	73 (81)	83 (89)	72 (77)	90 (101)	85 (97)
<b>Severe Injuries</b>	Non-Limited Access Roads	135 (167)	199 (263)	186 (256)	161 (216)	167 (229)	178 (248)	197 (252)
	Limited Access Roads	65 (73)	98 (121)	83 (99)	82 (99)	84 (99)	79 (93)	133 (176)
	Total	200 (240)	297 (384)	269 (355)	432 (315)	251 (328)	257 (341)	330 (428)

<b>Grand Total</b>	254 (306)	369 (463)	342 (436)	326 (404)	323 (405)	347 (442)	415 (525)
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**7. Councilmember Moreno: What are we doing with one-way conversions? Why was this not on the list?**

Response: The literature on the safety impacts of one-way to two-way street conversions is mixed. Some of the safest and most walkable cities in the country, like New York City and Portland, have extensive networks of one-way streets.

In terms of pedestrian safety, there are benefits of both one-way and two-way streets, so the decision to convert a two-way street to one-way (or vice versa) is context sensitive. Studies have shown that converting two-way streets to one-way generally results in fewer crashes involving pedestrians because there are fewer turning movements. However, one-way streets tend to encourage higher motor vehicle speeds, and intersections involving one-way streets may be more confusing for some roadway users, especially non-local residents and child pedestrians (Zegeer et al., 2013). Riggs and Gilderbloom (2017) in their study of comparing one-way and two-way streets in Louisville, Kentucky neighborhoods revealed a higher rate of collisions and injuries on one-way streets for motorists, pedestrians, and bikes. From the perspective of motorist safety, one-way streets also reduce head-on collisions, since there is no opposing traffic (Dumbaugh & Rae, 2009).

Therefore, researchers argue that “context matters” for conversions, with a review of not only safety impacts but also considering what is important to the community between accessibility and mobility (Riggs & Appleyard 2017). One-way streets can be just as safe, or even safer than two-way streets if speeds are managed through treatments like reducing the number of lanes, reducing turning radius, and signal timing that discourages high speeds.

Because one-way conversions are not a proven safety countermeasure, they were not included in the list of Vision Zero recommendations. However, one-way conversions may be able to advance other city priorities, and should therefore be carefully evaluated on a street-by-street basis.

Sources:

- Zegeer, C. V., Nabors, D. & Lagerwey, P. (2013, August). *PEDSAFE 2013: Pedestrian Safety Guide and Countermeasure Selection System*. Federal Highway Administration.
- Riggs, W. & Gilderbloom, J. I. (2017). How multi-lane, one-way street design shapes neighbourhood life: Collisions, crime and community. *LOCAL ENVIRONMENT*, 2017: 917-933.
- Dumbaugh, E. & Rae, R. (2009). Safe urban form: Revisiting the relationship between community design and traffic safety. *Journal of the American Planning Association*, 75:3, 2009: 309-329.
- Riggs, W. & Appleyard, B. (2018). The economic impact of one to two-way street conversion: Advancing a context sensitive framework." *Journal of Urbanism*, 2018: 129- 148.

**8. Councilmember Ridley: What is the data to support lowering speed limits to 25 mph in residential neighborhoods?**

Response: A driver traveling at 30 miles per hour who hits a pedestrian has a 45 percent chance of killing or seriously injuring them; at 20 miles per hour, that percentage drops to 5 percent

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(Pilkinton, 2020). A growing body of research shows that speed limit changes alone can lead to measurable declines in speeds and crashes.

A number of cities across the United States, including New York, Washington, Seattle, Charlotte, Boston, Portland, Austin, and Minneapolis, have reduced their local speed limits in recent years in an effort to reduce fatalities and serious injuries, with most having to secure State legislative authorization to do so.

A study of speed limit reductions in Boston found that lowering speed limits from 30 mph to 25 mph resulted in a 0.3 percent reduction in average speeds, but a 2.9 percent, 8.5 percent, and 29.3 percent reduction in the odds of vehicles exceeding 25 mph, 30 mph, and 35 mph, respectively (Hu & Cicchino, 2020).

Traffic fatalities in the City of Seattle decreased 26 percent after the city implemented comprehensive, city-wide speed management strategies and countermeasures inspired by Vision Zero. This included setting speed limits on all non-arterial streets at 20 mph and 200 miles of arterial streets at 25 mph (Baruchman, 2019).

Sources:

- Pilkinton, P. Reducing the speed limit to 20 mph in urban areas: Child deaths and injuries would be decreased. BMJ, Published April 29, 2000.
- Hu, W., & Cicchino, J. B. (2020). Lowering the speed limit from 30 mph to 25 mph in Boston: Effects on vehicle speeds. *Injury Prevention*, 26(2), 99-102.
- Baruchman, Michelle. "Seattle traffic deaths and injuries down slightly last year; most of the fatalities were pedestrians." The Seattle Times. March 11, 2019. [www.seattletimes.com/seattle-news/transportation/seattle-traffic-deaths-and-injuries-down-slightly-last-year-most-of-the-fatalities-were-pedestrians/](http://www.seattletimes.com/seattle-news/transportation/seattle-traffic-deaths-and-injuries-down-slightly-last-year-most-of-the-fatalities-were-pedestrians/)

Additional information on the Dallas Vision Zero effort can be found online at <https://dallascityhall.com/visionzero>. It is anticipated that the Action Plan will be brought to City Council for adoption in April.

If you have any questions or concerns, please contact Ghassan 'Gus' Khankarli, P.E., Director of the Department of Transportation, at [ghassan.khankarli@dallascityhall.com](mailto:ghassan.khankarli@dallascityhall.com).



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Assistant City Manager  
[Attachments]

c: T.C. Broadnax, City Manager  
Chris Caso, City Attorney  
Mark Swann, City Auditor  
Billierae Johnson, City Secretary  
Preston Robinson, Administrative Judge  
Kimberly Bizzor Tolbert, Chief of Staff to the City Manager

Jon Fortune, Assistant City Manager  
Joey Zapata, Assistant City Manager  
Dr. Eric A. Johnson, Chief of Economic Development and Neighborhood Services  
M. Elizabeth Reich, Chief Financial Officer  
M. Elizabeth (Liz) Cedillo-Pereira, Chief of Equity and Inclusion  
Directors and Assistant Directors

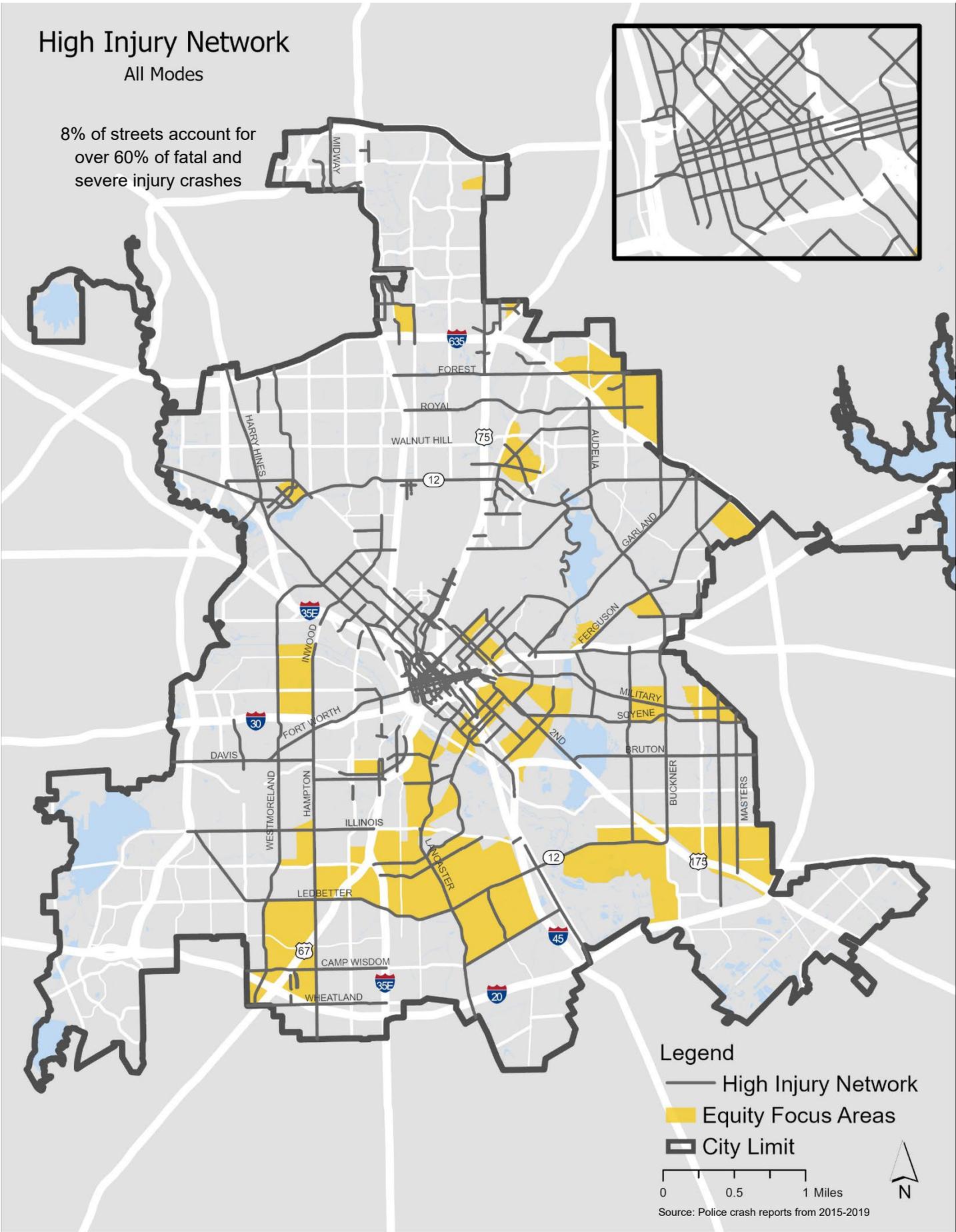
Attachment #1

Vision Zero High Injury Network

# High Injury Network

All Modes

8% of streets account for over 60% of fatal and severe injury crashes



Legend

- High Injury Network
- Equity Focus Areas
- ▭ City Limit

0 0.5 1 Miles



Source: Police crash reports from 2015-2019

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
1	12TH	HAMPTON	IH-35E	2.1
1	8TH	PATTON	IH-35E	0.7
1	BECKLEY	COLORADO	GREENBRIAR	0.3
1	BECKLEY	IH-30	W MAIN	0.5
1	BECKLEY	IH-35E	DAVIS	0.6
1	COLORADO	BISHOP	ZANG	0.3
1	DAVIS	FORT WORTH	HAMPTON	1.4
1	FORT WORTH	DAVIS	W COMMERCE	3.3
1	HAMPTON	TRINITY RIVER	DANIELDALE	11.4
1	ILLINOIS	SPUR 408	IH-35E	5.4
1	JEFFERSON	EDGEFIELD	COLORADO	2.7
1	MARSALIS	JEFFERSON/HOUSTON VIADUCT	JEFFERSON	1.3
1	TYLER	PEMBROKE	VERNON	0.4
1	WESTMORELAND	TRINITY RIVER	WHEATLAND	10.6
1	ZANG	CLARENDON	DAVIS	1.0
2	1ST	CBD FAIR PARK LINK	IH-30	0.2
2	2ND	CANTON	ROBERT B CULLUM	0.5
2	AKARD	IH-30	WOOD	0.4
2	BARRY	PHILIP	CROSSTOWN	0.5
2	BEACON	COLUMBIA	SAMUELL	0.8
2	BELLEVIEW	AUSTIN	ERVAY	0.5
2	CANTON	GRIFFIN	MARILLA	0.5
2	CANTON/YOUNG	PEARL	CBD FAIR PARK LINK	1.1
2	CEDAR SPRINGS	MOCKINGBIRD	TURTLE CREEK	2.8
2	CESAR CHAVEZ	ELM	GOOD LATIMER	1.5
2	COLUMBIA	ABRAMS	MAIN	1.0
2	COMMERCE	STEMMONS	HOUSTON	0.3
2	COMMERCE	CESAR CHAVEZ	EXPOSITION	1.0
2	COMMUNITY	DENTON	LARGA	0.8
2	CONTINENTAL	IH-35E	HOUSTON	0.2
2	CORINTH	CESAR CHAVEZ	ILLINOIS	4.0
2	CROSSTOWN	BARRY	FITZHUGH	0.3
2	EAST GRAND	GARLAND	IH-30	2.7
2	ELM	IH-35E	EXPOSITION	2.2
2	ERVAY	IH-30	WOOD	0.4
2	ERVAY	BELLVIEW	PENNSYLVANIA	1.2
2	EXPOSITION	CBD FAIR PARK LINK	PARRY	0.4
2	FIELD	YOUNG	WOOD	0.1
2	FIELD	MOODY	WOODALL RODGERS	0.3
2	GASTON	CBD FAIR PARK LINK	GARLAND	4.1
2	GOOD LATIMER	BRYAN	EUREKA	0.7
2	GOOD LATIMER	IH-30	S CENTRAL EXPRESSWAY	1.0
2	GREENVILLE	ROSS	MUNGER	0.3
2	GRIFFIN	CADIZ	WOOD	0.5
2	HALL	LIVE OAK	MALCOLM X	1.0
2	HARRY HINES	NORTHWEST HIGHWAY	N HOUSTON	5.8
2	HARRY HINES	DALLAS NORTH TOLLWAY	MOODY	0.6

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
2	HARWOOD	IH-30	WOOD	0.4
2	HASKELL	LEMMON	MAIN	1.4
2	HASKELL	IH-30	DOLPHIN	1.8
2	HI LINE	VICTORY	IH-35E	0.1
2	HOUSTON	PACIFIC	MCKINNEY	0.2
2	N HOUSTON	MCKINNEY	HI LINE	0.8
2	HOUSTON	HOUSTON VIADUCT	WOOD	0.2
2	INWOOD	LOVERS	CONVEYOR	3.8
2	LAMAR	JACKSON	IH-45	2.8
2	LAMAR	N HOUSTON	IH-35E	0.2
2	LARGA	COMMUNITY	WEBB CHAPEL EXT	0.4
2	LIVE OAK	SKILLMAN	HALL	1.9
2	LOMBARDY	HARRY HINES	WEBB CHAPEL	1.0
2	MAIN ST	IH-345	CANTON/MAIN	0.9
2	MALCOLM X	GASTON	ELSIE FAYE HEGGINS	2.9
2	MAPLE	MOCKINGBIRD	MCKINNEY	3.4
2	MARKET	JEFFERSON VIADUCT	WOOD	0.3
2	MARKET CENTER	HARRY HINES	OAK LAWN	1.0
2	MEDICAL DISTRICT	IRVING	CASS	1.1
2	MOCKINGBIRD	IH-35E	DALLAS NORTH TOLLWAY	3.6
2	MOODY	CEDAR SPRINGS	FIELD	0.3
2	MUNGER	BRYAN	PHILIP	1.5
2	NORTHWEST HIGHWAY	IRVING CITY LIMIT	DALLAS NORTH TOLLWAY	7.5
2	NOWITZKI WAY	FIELD	VICTORY	0.2
2	OAK LAWN	BLACKBURN	HARRY HINES	1.3
2	PACIFIC	CESAR CHAVEZ	IH-345	0.0
2	PEAK	LEMMON	STONEWALL	2.0
2	PEARL	MARILLA	JACKSON	0.2
2	ROSS	HOUSTON	RECORD	0.1
2	ROSS	GREENVILLE	IH-345	1.9
2	SAMUELL	WINSLOW	IH-30	1.2
2	TIMBERLINE	STOREY	NORTHWEST HIGHWAY	0.7
2	UNIVERSITY	LEMMON	INWOOD	0.8
2	VICTORY	CONTINENTAL	N HOUSTON	0.1
2	WEBB CHAPEL	IH-635	SHORECREST	4.2
2	WEBB CHAPEL EXT	LOMBARDY	NORTHWEST HIGHWAY	0.9
2	WINSLOW	EAST GRAND	IH-30	0.2
2	WYCLIFF	MAPLE	HARRY HINES	0.4
2	WYCLIFF	IH-35E	IRVING	0.5
2	YOUNG	HOUSTON	PEARL	1.0
3	CAMP WISDOM	COCKRELL HILL	IH-35E	4.0
3	COCKRELL HILL	IH-30	COCKRELL HILL CITY LIMIT	1.5
3	DAVIS	GRAND PRAIRIE CITY LIMIT	WESTMORELAND	3.0
3	FORT WORTH	DAVIS	WESTMORELAND	0.5
3	HAMPTON	TRINITY RIVER	DANIELDALE	11.4
3	ILLINOIS	SPUR 408	IH-35E	5.4
3	LANCASTER	CORINTH	CEDARDALE/LANCASTER C	5.8

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
3	LEDBETTER	WALTON WALKER	GREAT TRINITY FOREST	7.2
3	WALTON WALKER	ILLINOIS	LEDBETTER	2.7
3	WESTMORELAND	TRINITY RIVER	WHEATLAND	10.6
4	11TH	CORINTH	BONNIE VIEW	0.2
4	8TH	PATTON	CORINTH	1.3
4	BONNIE VIEW	LEDBETTER	SIMPSON STUART	1.6
4	CEDAR CREST	11TH	KIEST	0.5
4	CORINTH	RIVERFRONT	LANCASTER	3.0
4	GREAT TRINITY FOREST	LEDBETTER	BUCKNER	5.3
4	HAMPTON	TRINITY RIVER	DANIELDALE	11.4
4	KIEST	IH-35E	CEDAR CREST	4.4
4	LANCASTER	CORINTH	LEDBETTER	2.5
4	LEDBETTER	WALTON WALKER	GREAT TRINITY FOREST	7.2
4	LINFIELD	ILLINOIS	S CENTRAL EXPRESSWAY	0.3
4	MARTIN L KING	ROBERT B CULLUM	11TH	2.5
4	MORRELL	EWING	CEDAR CREST	1.4
4	OVERTON	IH-35E	ILLINOIS	3.3
5	BRUTON	2ND	BALCH SPRINGS CITY LIMIT	5.3
5	BUCKNER	IH-30	GREAT TRINITY FOREST	6.0
5	GREAT TRINITY FOREST	LEDBETTER	BUCKNER	5.3
5	JIM MILLER	IH-30	GREAT TRINITY FOREST	5.7
5	LAWNVIEW	SAMUELL	SCYENE	2.0
5	MASTERS	MESQUITE CITY LIMIT	US 175	4.6
5	MILITARY	DOLPHIN	MESQUITE CITY LIMIT	5.3
5	SCYENE	ROBERT B CULLUM	MESQUITE CITY LIMIT	6.4
5	ST AUGUSTINE	SCYENE	PRAIRIE CREEK	5.3
6	BECKLEY	IH-30	SINGLETON	0.7
6	COCKRELL HILL	IH-30	DAVIS	1.2
6	COMMERCE	BECKLEY	HOUSTON	0.9
6	W COMMERCE	FORT WORTH	BECKLEY	0.5
6	COMMUNITY	DENTON	LARGA	0.8
6	CONTINENTAL	IH-35E	HOUSTON	0.2
6	DAVIS	GRAND PRAIRIE CITY LIMIT	FORT WORTH	2.7
6	DENNIS	FOREST	NORTHAVEN	1.0
6	FORT WORTH	WESTMORELAND	W COMMERCE	2.9
6	HAMPTON	TRINITY RIVER	DANIELDALE	11.4
6	HARRY HINES	IH-635	MARKET CENTER	8.7
6	HI LINE	VICTORY	IH-35E	0.1
6	INWOOD	LOVERS	CONVEYOR	3.8
6	LAMAR	225' E OF IH-35E	IH-35E	0.1
6	LARGA	COMMUNITY	WEBB CHAPEL EXT	0.4
6	LOMBARDY	NORTHWEST HIGHWAY	WEBB CHAPEL	2.1
6	MARKET CENTER	HARRY HINES	RIVERFRONT	1.2
6	MEDICAL DISTRICT	IRVING	IH-35E	0.4
6	MOCKINGBIRD	TRINITY RIVER	INWOOD	4.8
6	NORTHWEST HWY	IRVING CITY LIMIT	DALLAS NORTH TOLLWAY	7.5
6	SINGLETON	SYLVAN	CANADA	0.6

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
6	STOREY	IRVING CITY LIMIT	NORTHWEST HIGHWAY	1.1
6	TIMBERLINE	STOREY	NORTHWEST HIGHWAY	0.7
6	WEBB CHAPEL	IH-635	NORTHWEST HIGHWAY	4.1
6	WEBB CHAPEL EXT	LOMBARDY	HARRY HINES	1.5
6	WESTMORELAND	TRINITY RIVER	WHEATLAND	10.6
6	WYCLIFF	IH-35E	IRVING	0.5
7	2ND	IH-30	ROBERT B CULLUM	0.2
7	2ND	FITZHUGH	US 175	2.7
7	AL LIPSCOMB WAY	ROBERT B CULLUM	LAMAR	1.6
7	BRUTON	2ND	BALCH SPRINGS CITY LIMIT	5.3
7	BUCKNER	NORTHWEST HIGHWAY	GREAT TRINITY FOREST	10.9
7	CESAR CHAVEZ	IH-30	GOOD LATIMER	0.9
7	COLONIAL	MARTIN L KING	PENNSYLVANIA	0.2
7	CROSTOWN	BARRY	FITZHUGH	0.3
7	ELSIE FAYE HEGGINS	100' north of PACIFIC	LAMAR	2.8
7	ERVAY	BELLVIEW	PENNSYLVANIA	1.2
7	EXPOSITION	CBD FAIR PARK LINK	PARRY	0.4
7	FERGUSON	IH-635	IH-30	6.2
7	FITZHUGH	CROSTOWN	ROBERT B CULLUM	0.9
7	GOOD LATIMER	IH-30	S CENTRAL EXPRESSWAY	1.0
7	GREAT TRINITY FOREST	LEDBETTER	BUCKNER	5.3
7	HASKELL	IH-30	DOLPHIN	1.8
7	JIM MILLER	IH-30	GREAT TRINITY FOREST	5.7
7	JOHN WEST	LAKELAND	LA PRADA	1.6
7	LA PRADA	OATES	JOHN WEST	1.1
7	LAMAR	CORINTH	S CENTRAL EXPRESSWAY	3.1
7	LAWNVIEW	SAMUELL	SCYENE	2.0
7	LINFIELD	ILLINOIS	S CENTRAL EXPRESSWAY	0.3
7	MALCOM X	IH-30	ELSIE FAYE HEGGINS	2.3
7	MARTIN L KING	ROBERT B CULLUM	11TH	2.5
7	MASTERS	MESQUITE CITY LIMIT	CF HAWN FREEWAY	4.6
7	METROPOLITAN	IH-45	MALCOLM X	0.8
7	MILITARY	DOLPHIN	MESQUITE CITY LIMIT	5.3
7	PENNSYLVANIA	SOUTH LAMAR	MALCOLM X	1.1
7	ROBERT B CULLUM	PARRY	SCYENE	1.4
7	S CENTRAL EXPRESSWAY	ILLINOIS	HUTCHINS CITY LIMIT	3.9
7	SAMUELL	WINSLOW	MESQUITE CITY LIMIT	3.6
7	SCYENE	ROBERT B CULLUM	MESQUITE CITY LIMIT	6.4
7	ST AUGUSTINE	SAM HOUSTON	PRAIRIE CREEK	6.1
8	APPALOOSA	BRONCO DR	KIRNWOOD DR	0.4
8	BONNIE VIEW	LEDBETTER	SIMPSON STUART	1.6
8	CAMP WISDOM	COCKRELL HILL	IH-35E	4.0
8	CHAUCER	ST GEORGE DR	KIRNWOOD DR	0.5
8	CHESTERFIELD	ST GEORGE DR	KIRNWOOD DR	0.4
8	GREAT TRINITY FOREST	LEDBETTER	BUCKNER	5.3
8	HAMPTON	TRINITY RIVER	DANIELDALE	11.4
8	JIM MILLER	IH-30	GREAT TRINITY FOREST	5.7

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
8	KIRNWOOD	WHEATLAND	IH-20	0.3
8	LANCASTER	LEDBETTER	CEDARDALE/LANCASTER C	3.3
8	S CENTRAL EXPRESSWAY	ILLINOIS	HUTCHINS CITY LIMIT	3.9
8	SIMPSON STUART	LANCASTER	S CENTRAL EXPRESSWAY	3.2
8	ST AUGUSTINE	SCYENE	PRAIRIE CREEK	5.3
8	WESTMORELAND	TRINITY RIVER	WHEATLAND	10.6
8	WHEATLAND	DUNCANVILLE CITY LIMIT	IH-35E	4.0
9	AUDELIA	SKILLMAN	NORTHWEST HIGHWAY	2.6
9	BUCKNER	NORTHWEST HIGHWAY	JOHN WEST	4.4
9	EASTRIDGE	PARK	ABRAMS	0.8
9	FERGUSON	IH-635	IH-30	6.2
9	GARLAND	IH-635	EAST GRAND	5.4
9	GASTON	CBD FAIR PARK LINK	GARLAND	4.1
9	JUPITER	IH-635	GARLAND	1.7
9	LA PRADA	OATES	JOHN WEST	1.1
9	LAWTHER	NORTHWEST HIGHWAY	MOCKINGBIRD	0.3
9	MAYLEE	FERGUSON	MESQUITE CITY LIMIT	0.6
9	MOCKINGBIRD	US 75	BUCKNER	4.0
9	NORTHWEST HIGHWAY	DALLAS NORTH TOLLWAY	IH-635	9.1
9	OATES	PEAVY	FERGUSON	0.3
9	SHILOH	IH-635	FERGUSON	1.7
9	W LAWTHER DR	WHITE ROCK RD	GOFORTH RD	4.6
10	AUDELIA	SKILLMAN	NORTHWEST HIGHWAY	2.6
10	CHARTWELL	PAGEMILL	PLANO	0.5
10	CHURCH	ABRAMS	AUDELIA	1.4
10	FAIR OAKS	ABRAMS	PARK	1.5
10	FOREST	DALLAS NORTH TOLLWAY	GARLAND CITY LIMIT	6.8
10	LANSHIRE	W LAWTHER DR	GOFORTH RD	0.1
10	MARKVILLE	TI BLVD	IH-635	0.9
10	MILLER	IH-635	GARLAND CITY LIMIT	1.2
10	NORTHWEST HIGHWAY	DALLAS NORTH TOLLWAY	IH-635	9.1
10	PLANO	FOREST	IH-635	1.6
10	ROYAL	DALLAS NORTH TOLLWAY	IH-635	5.9
11	ALPHA	DALLAS NORTH TOLLWAY	NOEL	0.2
11	ALPHA	MEANDERING	COIT	0.4
11	BELT LINE	DALLAS NORTH TOLLWAY	PRESTON	1.1
11	CHURCHILL	MERIT	SCHROEDER	0.4
11	COIT	SPRING VALLEY	FOREST	2.1
11	EMILY	COIT	KIT	0.5
11	ESPERANZA	SPRING VALLEY	US 75	0.8
11	FOREST	DALLAS NORTH TOLLWAY	IH-635	4.8
11	GOLDMARK	SPRING VALLEY	MIDPARK	0.3
11	KIT	EMILY	ESPERANZA	0.2
11	MIDPARK	ESPERANZA	US 75	0.6
11	MONTFORT	ALPHA	HARVEST HILL	0.8
11	MONTFORT	VERDE VALLEY	SPRING VALLEY	0.7
11	NOEL	VERDE VALLEY	ALPHA	1.1

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
11	PRESTON	SPRING VALLEY	HARVEST HILL	1.1
11	ROYAL	DALLAS NORTH TOLLWAY	IH-635	5.9
11	SPRING VALLEY	DALLAS NORTH TOLLWAY	PRESTON	1.1
11	VERDE VALLEY	NOEL	MONTFORT	0.1
12	ADDISON	TRINITY MILLS	ADDISON CITY LIMIT	0.2
12	COIT	PRES GEORGE BUSH TURNPIKE	RICHARDSON CITY LIMIT	1.1
12	KELLY	FRANKFORD	OLD MILL	0.5
12	MIDWAY	CARROLLTON CITY LIMIT	TRINITY MILLS	2.0
12	PEAR RIDGE	HAYERWOOD	FRANKFORD	0.6
12	TIMBERGLEN	DALLAS NORTH TOLLWAY	PEAR RIDGE	0.2
12	TRINITY MILLS	MIDWAY	DALLAS NORTH TOLLWAY	0.8
12	VAIL	TIMBERGLEN	TRINITY MILLS	1.1
13	DENNIS	FOREST	ROYAL	1.0
13	DOUGLAS	NORTHWEST HIGHWAY	UNIVERSITY PARK CITY LIM	0.5
13	EASTRIDGE	PARK	ABRAMS	0.8
13	FAIR OAKS	ABRAMS	PARK	1.5
13	FOREST	DALLAS NORTH TOLLWAY	IH-635	4.8
13	INWOOD	LOVERS	CONVEYOR	3.8
13	LUTHER	LOMO ALTO DR	PRESTON RD	0.4
13	MOCKINGBIRD	INWOOD	DALLAS NORTH TOLLWAY	0.4
13	MONTFORT	IH-635	HARVEST HILL	0.3
13	NORTHWEST HIGHWAY	IRVING CITY LIMIT	DALLAS NORTH TOLLWAY	16.6
13	PARK LANE	BOEDEKER	ABRAMS	2.0
13	PINELAND	GREENVILLE	PARK	0.9
13	PRESTON	IH-635	HARVEST HILL	0.2
13	ROYAL	DALLAS NORTH TOLLWAY	IH-635	5.9
13	SHADY BROOK	PARK LANE	SOUTHWESTERN	0.7
13	WEBB CHAPEL	IH-635	LOMBARDY	3.5
13	WESTCHESTER	WELDON HOWELL PKWY	W NORTHWEST HWY	0.3
14	AKARD	YOUNG	WOOD	0.1
14	AKARD	COMMERCE	CEDAR SPRINGS	0.8
14	ALLEN	MCKINNEY	CARLISLE	0.3
14	AMESBURY	SOUTHWESTERN	LOVERS	0.5
14	BEACON	COLUMBIA	SAMUELL	0.8
14	CARLISLE	ALLEN	COLE	0.3
14	CEDAR SPRINGS	MOCKINGBIRD	FIELD	4.0
14	CESAR CHAVEZ	CANTON/YOUNG	PACIFIC	0.3
14	COLE	CARLISLE	HARVARD	1.7
14	COLUMBIA	ABRAMS	MAIN	1.0
14	COMMERCE	IH-35E	GOOD LATIMER	1.6
14	EAST GRAND	GARLAND	PHILIP	2.3
14	ELM	IH-35E	EXPOSITION	2.2
14	ERVAY	IH-30	ROSS	0.9
14	FEDERAL	FIELD	OLIVE	0.4
14	FIELD	YOUNG	WOODALL ROGERS	0.7
14	FIELD	MOODY	WOODALL RODGERS	0.3
14	FITZHUGH	HIGHLAND PARK CITY LIMIT	US 75	0.6

**Attachment #2**

List of Streets on the High Injury Network

DISTRICT	STREET NAME	FROM	TO	LENGTH (MI)
14	GARLAND	IH-635	EAST GRAND	5.4
14	GASTON	CBD FAIR PARK LINK	GARLAND	4.1
14	GOOD LATIMER	BRYAN	ELM	0.5
14	GREENVILLE	ROSS	MUNGER	0.3
14	GRIFFIN	YOUNG	ELM	0.3
14	GRIFFIN	PACIFIC	HORD	0.2
14	GRIFFIN	CORBIN	MUNGER	0.1
14	HALL	LIVE OAK	MALCOLM X	1.0
14	HARRY HINES	DALLAS NORTH TOLLWAY	MOODY	0.6
14	HARWOOD	YOUNG	WOODALL ROGERS	0.9
14	HASKELL	BLACKBURN	MAIN	1.9
14	HOUSTON	YOUNG	300' South of MCKINNEY	0.4
14	KNOX	HIGHLAND PARK CITY LIMIT	US 75	0.4
14	LAMAR	WOOD	225' E OF IH 35E	0.8
14	LEMMON	DALLAS NORTH TOLLWAY	US 75	2.6
14	LIVE OAK	HARWOOD	IH-345	0.3
14	LIVE OAK	SKILLMAN	HALL	1.9
14	LOVERS	GREENVILLE	ABRAMS	1.0
14	MAPLE	OAK LAWN	MCKINNEY	1.0
14	MAPLE/ROUTH CONN	MCKINNEY	WOODALL RODGERS	0.3
14	MARKET	YOUNG	MUNGER	0.5
14	MCKINNEY	AKARD	HARVARD	2.9
14	MOCKINGBIRD	US 75	BUCKNER	4.0
14	MOODY	CEDAR SPRINGS	FIELD	0.3
14	MUNGER	BRYAN	IH-30	1.4
14	N HOUSTON	MCKINNEY	ALL STAR	0.6
14	NOWITZKI WAY	FIELD	VICTORY	0.2
14	OAK LAWN	BLACKBURN	MAPLE	1.0
14	OLIVE	PACIFIC	MCKINNON	0.9
14	PACIFIC	HOUSTON	IH-45/IH-75	1.0
14	PEAK	LEMMON	IH-30	1.9
14	PEARL	YOUNG	CEDAR SPRINGS	1.3
14	ROSS	HOUSTON	GREENVILLE	3.1
14	ROUTH	US 75	WOODALL ROGERS	0.4
14	SAN JACINTO	LAMAR	ROSS	1.0
14	SHADY BROOK	BLACKWELL	SOUTHWESTERN	0.4
14	SMU	US 75	GREENVILLE	0.3
14	SOUTHWESTERN	US 75	SKILLMAN	1.1