

Appendix I
BNSF/7th Street Traffic Data

Study Purpose

Background

The Wichita Falls Community Action Network (WeCAN) has been active to bring resolutions to problems faced by those within the Community. One of those issues is the 7th Street Railroad crossing, located just east of Ohio Street in the Downtown area. WeCAN has documented many concerns in regards to the 7th Street Railroad crossing. WeCAN has also been an advocate of creating awareness about longstanding quality of life issues affecting residents on the east side of Wichita Falls in regards to this crossing. WeCAN asserts that while the railroad tracks running through downtown Wichita Falls contributes to the economic growth of Wichita Falls, the crossing also segregates citizens and serves as a physical and psychological barrier to Eastside residents. WeCAN claims that this barrier prevents local residents from accessing important resources essential for an acceptable quality of life. In effect, the 7th Street crossing separates the City of Wichita Falls into two sections. WeCAN states that 7th Street is the primary route used to facilitate movement of people, goods, and services between Eastside and Downtown Wichita Falls. If 7th Street is blocked by a train, those accessing needed services not located within the Eastside neighborhood are at a disadvantage.

Committee members have observed impediments to both vehicular and pedestrian traffic due to the operations of the Burlington Northern & Santa Fe Railroad Company (BNSF). WeCAN notes that the traffic obstruction has existed for decades, and that trains blocking the crossing present a serious safety and access risk. WeCAN members have done an excellent job of documenting pedestrian attempts to illegally cross between and under train cars parked along the track. WeCAN observed individuals carrying bicycles or other items while trying to make this dangerous crossing in an effort to get to the other side of the tracks. This activity is further compounded if multiple trains are parked along the track. Committee members observed that pedestrians and vehicles often wait extended period of time for trains to pass, regardless of weather conditions. There are no shelters for pedestrians waiting to cross, and emergency vehicles experience delays when responding to calls because of the blocked tracks. WeCAN has also noted that indigent individuals cannot easily cross the tracks to meals at the local Salvation Army location, as well as medical services at the neighborhood Healthcare Center.

Per request from WeCAN, the Department of Aviation, Traffic, and Transportation conducted a study to review vehicle and pedestrian traffic at the 7th Street and Ohio Avenue at-grade railroad crossing (USDOT – ID 274983N). This study occurred from July 9, 2019 to August 13, 2019. Data was collected for nine days during this period, with the focus on the hours of 6 AM to 6 PM.

Wichita Falls Thoroughfare Plan

The City of Wichita Falls develops and maintains its own Thoroughfare Plan through the Department of Community Development. In the Thoroughfare Plan, the Community Development identifies 7th Street as a major collector of vehicular traffic for this area. As noted in the Plan, the major collector class circulates traffic in a neighborhood and moves it into a high street class. 7th Street will continue to function as a major collector of vehicular traffic until, and unless, the City reaches an agreement with BNSF to implement changes to the intersection.

Traffic Engineering – Data Gathering and Analysis

Beginning July 9, 2019, Traffic Engineering utilized two of their employees to begin the data gathering process. Traffic personnel performed all of their observations between the hours of 6:00 a.m. and 6:00 p.m., generally between one and two days per week, for six weeks. Traffic personnel gathered data on six activities occurring at the crossing:

- (1) Pedestrians Crossing While Train Parked
- (2) The Number of Times the Trains Blocked the Crossing
- (3) The Length of Time a Train Blocked the Crossing
- (4) Vehicles Making U-Turns when the Crossing Was Blocked
- (5) Pedestrian Count
- (6) Vehicle Count

Traffic Engineering's observations also help identify hazardous behaviors by pedestrians too impatient to wait for the trains to clear the tracks and drivers committing U-turns. These actions could potentially lead to accidents, injuries, or even death.

Pedestrians Crossing While Train Parked

This category of activity intends to sample the number of pedestrians – including those in wheelchairs – trying to cross the railroad tracks when a train, or multiple trains, occupy the tracks. In some instances, pedestrians crawled through or under the train cars. It was also observed that pedestrians even tried crossing the tracks while the train was moving.

Traffic Engineering personnel made the following observations:

Pedestrians Crossing While Train Parked			
	Eastbound	Westbound	Total Per Day
9-Jul-19	3	1	4
11-Jul-19	2	4	6
17-Jul-19	0	0	0
18-Jul-19	11	13	24
23-Jul-19	3	9	12
24-Jul-19	0	0	0
31-Jul-19	9	5	14
8-Aug-19	3	1	4
13-Aug-19	0	0	0
Totals:	31	33	64

Nine Day
Average

3.4

3.7

7.1

On average, 7.1 people per day tried crossing the tracks while a train was present, and/or possibly moving on the tracks. This statistic represents a high potential for bodily harm, or death, to those individuals willing to risk life and limb simply because they do not want to wait until the path is safe and clear. The number of pedestrians crossing tapers off toward the end of the study. It should be noted that on July 31, 2019, pedestrian signs were posted prohibiting citizens from crawling under or through parked train cars. This signage was posted in conjunction with laws passed on the local and state level. Further studies will need to be conducted to determine the adherence and effectiveness of these posted signs.

Vehicles Making U Turns (Tracks Blocked)

The data gathered under this observation identifies the number of eastbound and westbound vehicles making U-turns at the intersection. Drivers trapped at the railroad crossing because of trains sitting on the tracks become impatient after a short period of time. They want to continue on to their destination but cannot because the intersection is completely shut down. Depending on the direction they want to travel, some drivers will make U-turns and travel south to use the Emmanuel Davis Overpass (TX-447 Spur) or north to use the Ohio Ave./Front St. underpass going under the BNSF railroad trestle.

Vehicles Making U Turns (Tracks Blocked)			
	Eastbound	Westbound	Total Per Day
9-Jul-19	10	7	17
11-Jul-19	11	3	14
17-Jul-19	13	2	15
18-Jul-19	24	16	40
23-Jul-19	11	14	25
24-Jul-19	10	3	13
31-Jul-19	8	3	11
8-Aug-19	5	13	18
13-Aug-19	1	1	2
Totals:	93	62	155

Nine Day
Average 10.3 6.9 17.2

The number of drivers making U-turns during the study period was 155. On a typical day, eastbound U-turns averaged 10.3 while westbound U-turns averaged 6.9 for a daily average of 17.2 U-turns. The average number of drivers making U-turns ranged from 2 per day to 40 per day.

Pedestrian Count

Traffic Engineering personnel counted the number of pedestrians crossing the railroad tracks when no trains were present. The eastbound and westbound counts were relatively even with the number of pedestrians averaging 30.8 and 32.9 per study day, respectively. The total number of pedestrians walking over the BNSF railroad crossing during the study period was 573. The number of pedestrians ranged from 18 per day to 92 per study day. Approximately 48.2% of the pedestrians cross between 10 AM and 1 PM.

Pedestrian Count			
	Eastbound	Westbound	Total Per Day
9-Jul-19	43	32	75
11-Jul-19	35	26	61
17-Jul-19	35	31	66
18-Jul-19	28	32	60
23-Jul-19	26	54	80
24-Jul-19	38	43	81
31-Jul-19	23	17	40
8-Aug-19	8	10	18
13-Aug-19	41	51	92
Totals:	277	296	573

Nine Day			
Average	30.8	32.9	63.7

Vehicle Count

The final count made by Traffic Engineering was the number of actual vehicles driving across the railroad tracks. Eastbound traffic was slightly higher than vehicles traveling West. The total number of vehicles utilizing the intersection during the nine-day count was 7,324. The crossing averages approximately 813.8 vehicles per study day.

Vehicle Count			
	Eastbound	Westbound	Total Per Day
9-Jul-19	515	490	1005
11-Jul-19	433	382	815
17-Jul-19	534	484	1018
18-Jul-19	396	383	779
23-Jul-19	490	492	982
24-Jul-19	459	425	884
31-Jul-19	190	184	374
8-Aug-19	153	125	278
13-Aug-19	583	606	1189
Totals:	3753	3571	7324

Nine Day			
Average	417	396.8	813.8

Accident Analysis

Accident data was reviewed from January 1, 2007 to December 1, 2019 in the 400 and 500 blocks of 7th Street. Of the 13 accidents that occurred along this stretch of roadway, three happened on or near the railroad tracks. One of the three accidents involved a bus making a U-Turn, and the unit backed into the railroad crossing arm base. The second accident on the tracks occurred when a vehicle sideswiped a parked train on the tracks. The driver in the second collision abandoned the vehicle after crossing the tracks, and he ran from the scene. The third accident involved a DWI. The driver had passed out at the crossing, and his car rolled onto the tracks hitting the parked train.

Of the remaining ten accidents, the scenarios fall into five categories of collisions:

- Accidents that occurred at the intersection of 7th/Ohio: 3
- Accidents that occurred at the intersection of 7th/Lee: 3
- Accidents that occurred in private parking lots: 4
- Hit and run accidents involving parked vehicles: 1
- Accidents that occurred at the intersection of 7th/LaSalle: 1

Year	Number of Accidents	Accidents at Railroad Tracks	Accidents per Million Vehicles
2007	2	1	7.159
2008	1	0	3.579
2009	2	0	7.159
2010	0	0	0.000
2011	1	0	3.579
2012	2	1	7.159
2013	0	0	0.000
2014	2	0	7.159
2015	0	0	0.000
2016	1	0	3.579
2017	0	0	0.000
2018	1	1	3.579
2019	1	0	3.579
Totals:	13	3	3.579 (13 Year Average)

Removing the four accidents that occurred on private parking lots, the accidents per million vehicles, which is a standard calculation to determine the prioritization of capital improvements and enforcement, drops from 3.579 accidents per million vehicles to 2.478 per million vehicles. Statistically, this is a very low number. If one only considers the train track related accidents, the collision rate per million vehicles falls to 0.826.

Finally, while no pedestrian accidents were identified in the last 13-year period, staff is casually aware of accidents that have occurred involving pedestrians and trains over the last 30+ years. Given the likelihood of severe injury or death if such an accident were to occur, as well as the lack of pedestrian crossing gates/alarms at this location, consideration should be given to addressing future safety improvements as it relates to pedestrians. A recent example, while it did not occur in Wichita Falls, is the young bicyclists killed in a train collision in Iowa Park, Texas on December 14, 2019.

Summary of Analysis

In summation, Traffic Engineering made the following observations:

- The 7th Street/BNSF railroad crossing continues to present a challenge to the City of Wichita in terms of safety for pedestrians and inconvenience to drivers that use the at-grade crossing in their travels.
- On average, 7.1 people per day try to illegally cross the intersection while trains sit parked or moving on the tracks.
- The average number of trains using the tracks during a typical study day was 10.6, which includes trains stopped on the track and those passing through the crossing.
- The average amount of time that trains block the intersection is 15 minutes and 59 seconds, ranging from a daily total impact of 29 minutes to 6 hours and 29 minutes.
- On average, 17.2 vehicles per day make U-turns because of trains blocking the intersection.
- The average number of persons walking, riding bicycles, or using a wheelchair to cross the intersection is 63.7.
- The adjusted collisions per million vehicles, excluding accidents that occurred on private property, is 2.478.
- Finally, the average number of vehicles crossing this intersection is 813.8.

Conclusions

- Traffic Engineering staff will conduct some additional counts in the spring months in preparation for grant applications. One observation that may be relevant is that the signs prohibiting illegal pedestrian crossings between and under train cars appear to be working. For example, no illegal crossings were made on August 13th even though 92 pedestrian movements were recorded. While it is the responsibility of pedestrians to adhere to the law, those individuals that continue to illegally cross are doing so at risk to themselves. Future counts may either validate that the signs are working. Similarly, these future counts may validate that pedestrians return to their behavior of illegally crossing under and between trains, thus ignoring the signs.
- Vehicle traffic counts should be conducted at Emanuel Davis Overpass and the Front Street crossings to determine the use of those roadways crossing the track.
- Staff should explore installing shelters on either side of the tracks for those to sit and wait for parked trains to move. These shelters may mitigate weather hazards, but will be prone to vandalism.
- Staff should explore using FallsRide to provide free transportation to those crossing the tracks between 10 AM and 1 PM. This time frame is when approximately 50% of the pedestrian crossings occur. There is currently a stop at 7th/Scott and MLK near 7th. No deviations would be provided under this free service, and all passengers would be required to adhere to FallsRide regulations.
- Once the crossing is rebuilt, staff will conduct additional data collection to see if a pedestrian bridge is warranted. If more cost effective solutions can be found, then a pedestrian bridge may not be warranted. Funding for a pedestrian bridge will hinge on the City's ability to obtain grants.

and funding for local match dollars. As it currently stands, the City will require a 100% grant to fund the project.

- The data does not support the construction of a vehicle/bridge. With only 814 vehicles using the crossing per day, the City of Wichita Falls would not receive grant support for a project like this. Furthermore, the Front Street crossing is located .6 miles to the north for westbound traffic and .71 miles for eastbound traffic. Similarly, the Emanuel Davis Overpass is located .7 miles to the south for westbound traffic and .78 miles for eastbound traffic. To travel from Ohio Street at 7th Street to MLK (and MLK at 7th Street to Ohio) with the train blocking the tracks is only 1.33 miles via the north access and 1.7 miles via the south access. While one could argue that more than 814 vehicles would use a dedicated bridge in the 7th Street area if there were unobstructed access across the tracks, objective data would be difficult to obtain.
- The City of Wichita Falls and BNSF has limited liability in regards to vehicle and/or pedestrian accidents involving trains. All signage and markings meets Texas MUTCD standards and laws, while BNSF right-of-way provides the railroad with protection under the law if the crossing gates are in operating order. It is BNSF's responsibility to ensure that the railroad crossing gates are in proper operating order.
- Unless funds can be found to build a vehicle/pedestrian overpass (it is not recommended), then the 7th crossing should remain open as it is. While the train may block the intersection for hours, vehicle traffic can adjust without difficulty to other routes to travel east and west. A dedicated pedestrian bridge at the 7th crossing would make it safer for pedestrians to cross at that location, as well as supplement the continued use of vehicles at this location.