

10, there are several gaps in the current sidewalk system that create discontinuities in pedestrian accessibility between subareas within the larger Watertown study area.

The current trail and sidewalk networks are supported by local and collector street system that provides a relatively high level of continuity throughout much of the city on relatively low volume streets (which provide acceptable opportunities for bicycling across a large portion of the city). The established roadway grid that lies between 9th Avenue South, 14th Avenue North, 10th Street West and 19th Street East is effective in dispersing vehicular traffic volumes and maintaining relatively low vehicular travel speeds on non-arterial streets. Thus, much of the city is accessible by bicycle.

The Master Sidewalk Plan (2001), Master Trail Plan (2002) and Comprehensive Plan (2004) all document recommended sidewalk and trail improvements that would provide connections through current gaps in the existing non-motorized network. The plans include recommendations for approximately 35 miles of new trail, including design standards and implementation policies for the new trails.

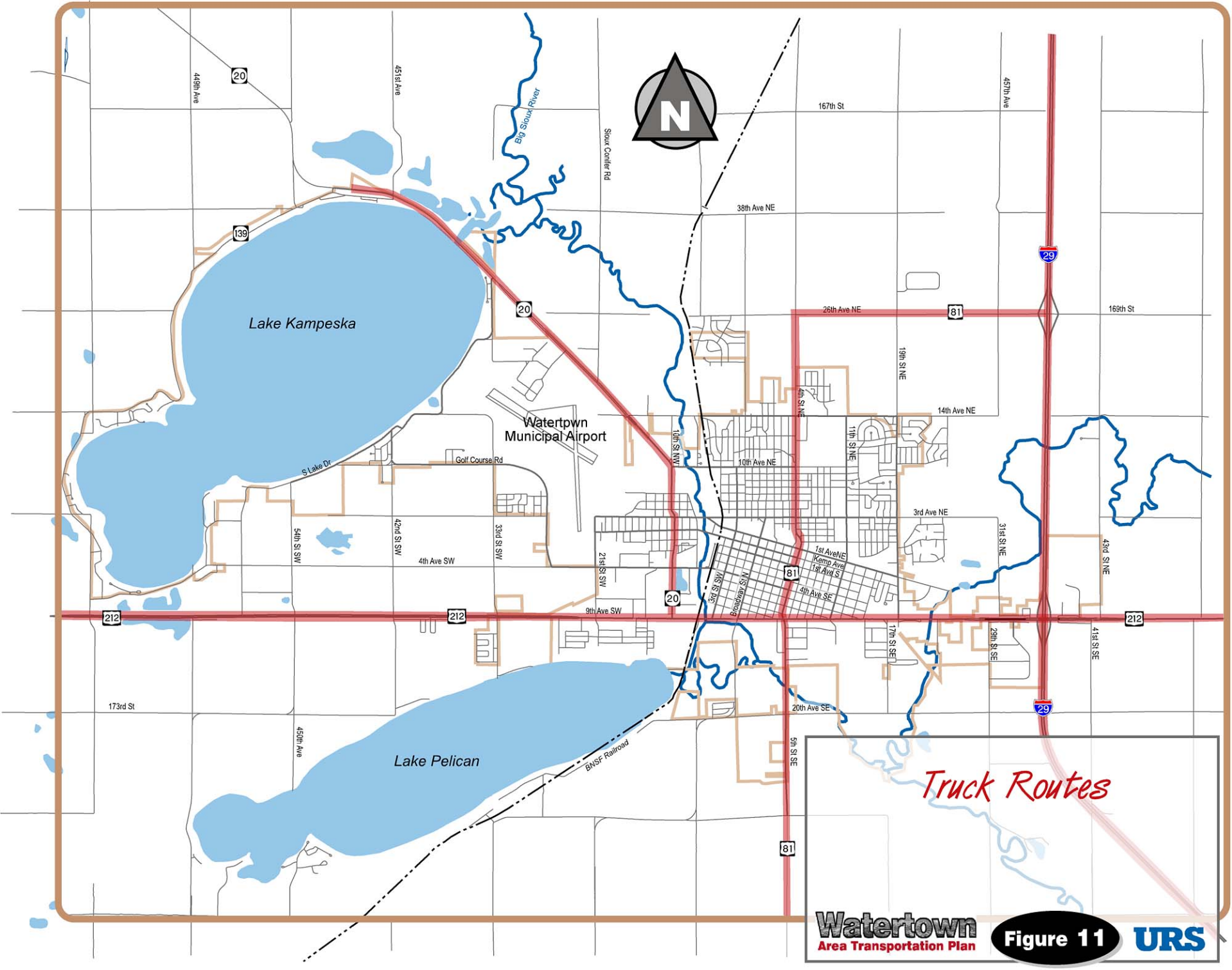
FREIGHT MOVEMENT

TRUCKS

There are approximately 10 commercial trucking companies, six moving companies and five trucking services companies within the study area. The majority of the trucking companies are adjacent to a designated truck route or are located within an industrial park. In addition to the trucking companies, there are also several manufacturing and agricultural sector establishments in the Watertown area that generate high levels of truck freight movement. The current truck routes in and around Watertown are illustrated on Figure 11.

Watertown is positioned at the junction of three National Highway System (NHS) corridors that carry freight to and through the region: Interstate 29, US Highway 212 and US Highway 81. All three roadways are also identified as part of South Dakota's Preferential Truck Network, defined as roadways that are the best routes for truck traffic². In addition to the highways through Watertown, the area also has two intermodal freight facilities served by trucks: a truck terminal connection to the Williams pipeline and grain elevator terminal served by rail and trucks. Both facilities are located adjacent to designated truck routes.

² SDDOT, *Statewide Intermodal Long Range Plan*, 1999.



Truck Routes

TRAIN SERVICE

The Burlington Northern-Santa Fe (BNSF) railroad serves the Watertown Area on a line that runs from Yale, SD to Appleton, MN. The segment between Watertown and Yale connects directly to the Dakota, Minnesota and Eastern Railroad (DM&E) rail line between Yale and Huron. The rail line through Watertown offers direct access to several regional markets including Minneapolis and Rapid City.

Rail freight on the BNSF line from Watertown to Appleton was estimated at 1.5 Million tons of freight in 1997³. Figure 12 shows the BNSF railroad line through Watertown. According to the US DOT, on average this rail line carries one train per day⁴.

AIR SERVICE

The Watertown Municipal Airport is located on the northwest side of the city. The airport has 33 aircraft based in Watertown, which include:

- 26 single-engine airplanes
- 4 multi-engine airplanes
- 1 jet airplane
- 2 gliders

There is an average of 45 operations a day, which are composed of:

- 46% local general aviation
- 20% commercial aviation
- 18% transient general aviation
- 16% air taxi service⁵

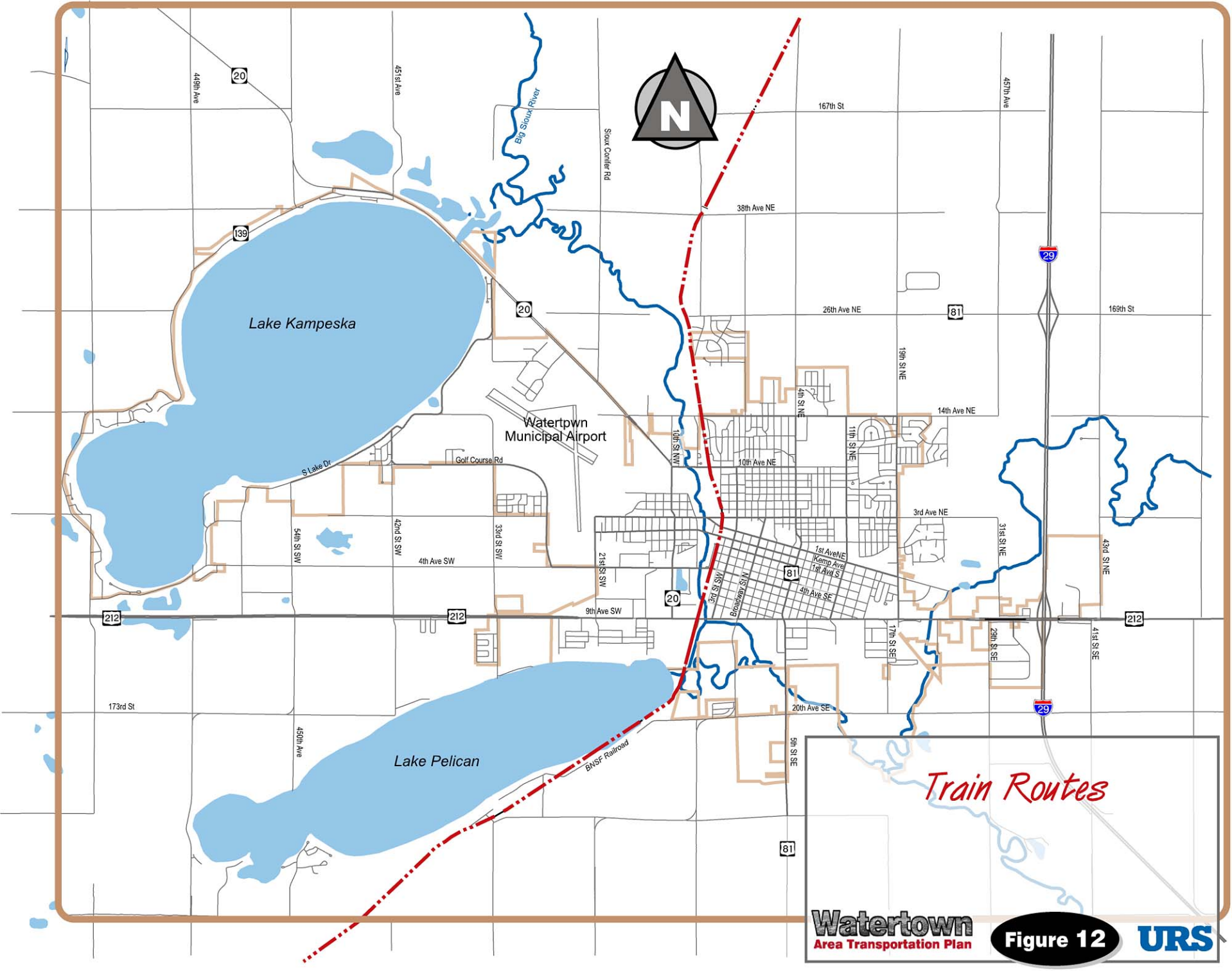
The airport has two runways, each approximately 6,900 feet long and 150 feet wide. Commercial aviation service is offered to Minneapolis-St. Paul through Northwest Airlines' partner Mesaba Airlines. As shown in Table 14, the Watertown Municipal Airport had approximately 15,800 riders (one-way trips) in 2003, to rank fifth in the state in passenger volume. The typical number of daily commercial flights is three departures and three arrivals.

The airport also ranked fifth in air freight transportation for South Dakota airports by weight, with significantly smaller shares of statewide totals compared to Sioux Falls and Rapid City.

³ SDDOT, *Statewide Intermodal Long Range Plan*, 1999.

⁴ US Department of Transportation, *Rail Crossing Inventory*, Dec 2004

⁵ Federal Aviation Administration (FAA), *Airport Data (5010) Reports*, November 2004.



Train Routes

TABLE 14. ESTIMATED 2003 COMMERCIAL AIR PASSENGER TRAFFIC, SOUTH DAKOTA CITIES

City	Commercial Passengers	Share of Statewide Passengers
Aberdeen	52,100	4.6%
Brookings	1,300	0.1%
Huron	2,600	0.2%
Pierre	31,200	2.8%
Rapid City	437,200	38.8%
Sioux Falls	585,600	52.0%
Watertown	15,800	1.4%
Statewide Total	1,125,800	100%

Source: US DOT, Bureau of Transportation Statistics, *T-100 Domestic Market Database*

INTERCITY BUS

Interstate bus service is provided to the Watertown area by Jefferson Bus Lines. The route that serves Watertown runs along I-29 between Sioux Falls and Fargo, and in addition to Watertown the route includes stops at Sisseton and Summit. The Watertown bus stop, located at Stones Truck Stop adjacent to the I-29 / US 212 interchange, is the only full-service stop between Sioux Falls and Fargo, offering on-location ticketing between 8:00 AM and 5:00 PM Monday through Friday. Typical daily bus service to Watertown includes two northbound buses and two southbound buses.

APPENDIX

TABLE. Crash Analysis Summary for Intersections

Intersection Description	3-Year Crash Total	Estimated Daily Entering Vehicles	Rate per Million Entering Vehicles	Average Intersection Crash Rate	Critical Rate	Exceeds Critical Rate?
SD 20 at 3rd Avenue North	7	18,263	0.35	0.46	1.05	NO
SD 20 at Kemp Avenue	7	15,383	0.42	0.46	1.10	NO
SD 20 at 4th Avenue South	6	15,829	0.35	0.46	1.09	NO
SD 20 at US 212	1	23,166	0.04	0.46	1.00	NO
US 212 at SD 20	11	23,166	0.43	0.46	1.00	NO
US 212 at Broadway	29	24,875	1.06	0.46	0.98	YES
US 212 at US 81	30	36,958	0.74	0.46	0.89	NO
US 81 at US 212	2	36,958	0.05	0.46	0.89	NO
US 212 at 11th Street East	11	23,840	0.42	0.46	0.99	NO
US 212 at 13th Street East	24	21,958	1.00	0.46	1.01	NO
US 212 at 19th Street East	15	18,170	0.75	0.46	1.06	NO
US 212 at 29th Street East	-	12,786	-	0.46	1.15	NO
US 212 at I-29 Interchange Area	-	13,440	-	0.46	1.14	NO
US 81 at 4th Avenue South	4	17,700	0.21	0.46	1.06	NO
US 81 at 1st Avenue South	7	19,590	0.33	0.46	1.04	NO
US 81 at Kemp Avenue	14	16,427	0.78	0.46	1.08	NO
US 81 at 1st Avenue North	15	17,294	0.79	0.46	1.07	NO
US 81 at 6th Avenue North	1	13,000	0.07	0.46	1.15	NO
US 81 at 7th Avenue North	7	13,000	0.49	0.46	1.15	NO
US 81 at 14th Avenue North	4	8,767	0.42	0.46	1.27	NO

TABLE. Crash Analysis Summary for Segments

Intersection Description		3-Year Crash Total	Segment Length	Weighted ADT	3-Year VMT	Crash Rate per Million VMT	Average Segment Crash Rate	Critical Rate	Exceeds Critical Rate?
State Route Segments									
	SD 20 from SD 139 to Divided Road	3	1.9	3,000	6,241,500	0.48	1.68	3.75	NO
	SD 20 Divided Section	18	2.11	5,124	11,838,746	1.52	1.68	3.23	NO
	SD 20 Divided Section to 3rd Avenue North	18	0.95	11,800	12,274,950	1.47	1.68	3.20	NO
	SD 20 Between 3rd and Kemp	-	0.06	11,959	785,706	0.00	1.68	6.28	NO
	SD 20 Between Kemp and 4th Avenue South	2	0.32	13,000	4,555,200	0.44	1.68	4.05	NO
	SD 20 Between 4th Avenue South and US 212	7	0.45	11,480	5,656,770	1.24	1.68	3.84	NO
	US 212 SD 139 to SD 20	44	5.75	5,200	32,740,500	1.34	1.68	2.64	NO
	US 212 Between SD 20 and Broadway	27	0.69	19,507	14,738,514	1.83	1.68	3.08	NO
	US 212 Between Broadway and US 81	10	0.31	21,862	7,421,056	1.35	1.68	3.59	NO
	US 212 Between US 81 and 11th Street East	36	0.42	22,973	10,565,283	3.41	1.68	3.31	YES
	US 212 Between 11th and 13th Street East	7	0.12	20,943	2,751,910	2.54	1.68	4.61	NO
	US 212 Between 13th and 19th Street East	19	0.57	18,024	11,249,680	1.69	1.68	3.26	NO
	US 212 Between 19th Street and Divided	5	0.28	13,560	4,157,496	1.20	1.68	4.15	NO
	US 212 Between Divided and 29th Street East	-	0.26	13,560	3,860,532	0.00	1.68	4.23	NO
	US 212 Between 29th Street East and I-29	19	0.48	13,264	6,971,558	2.73	1.68	3.65	NO
	US 212 I-29 to East End Divided	7	0.87	5,002	4,765,155	1.47	1.68	4.01	NO
	US 81 South City Limits to US 212	12	1.05	7,904	9,087,624	1.32	1.68	3.43	NO
	US 81 Between US 212 and 4th Avenue South	10	0.25	15,701	4,298,149	2.33	1.68	4.11	NO
	US 81 Between 4th South and 1st South	4	0.19	16,097	3,348,981	1.19	1.68	4.38	NO
	US 81 Between 1st South and Kemp	-	0.03	13,660	448,731	0.00	1.68	6.95	NO
	US 81 Between Kemp and 1st Avenue North	-	0.04	12,851	562,874	0.00	1.68	6.71	NO
	US 81 Between 1st N and 6th North	25	0.51	11,500	6,422,175	3.89	1.68	3.72	YES
	US 81 Between 6th N and 7th N	-	0.01	11,285	123,571	0.00	1.68	5.96	NO
	US 81 Between 7th N and 14th N	8	0.66	5,942	4,294,283	1.86	1.68	4.11	NO
	US 81 Between 14th N to N City Limit	10	0.98	4,253	4,563,894	2.19	1.68	4.05	NO

TABLE. Crash Analysis Summary for Segments

Intersection Description		3-Year Crash Total	Segment Length	Weighted ADT	3-Year VMT	Crash Rate per Million VMT	Average Segment Crash Rate	Critical Rate	Exceeds Critical Rate?
Local Route Segments									
	14th Ave North Between Hwy 20 and 19th St East	11	2.55	3,570	9,969,066	1.10	3.20	5.58	NO
	10th Ave North Between Hwy 20 and 11th St East	14	1.67	4,455	8,147,457	1.72	3.20	5.81	NO
	3rd Ave North Between 21st St West and 19th St East	55	2.98	5,597	18,262,673	3.01	3.20	4.99	NO
	Arrow Ave Between 5th St East and 11th St East	13	0.47	2,657	1,367,425	9.51	3.20	8.93	YES
	1st Ave North Between 3rd Ave North and 4th St West	2	0.23	5,209	1,311,887	1.52	3.20	9.03	NO
	1st Ave North Between 4th St West and 3rd St West	5	0.09	5,209	513,347	9.74	3.20	11.42	NO
	1st Ave North Between 3rd St West and 2nd St West	0	0.09	5,209	513,347	0.00	3.20	11.42	NO
	1st Ave North Between 2nd St West and Maple	4	0.25	4,888	1,338,090	2.99	3.20	8.98	NO
	1st Ave North Between Maple and 3rd St East	7	0.16	9,664	1,693,133	4.13	3.20	8.45	NO
	1st Ave North Between 3rd St East and 6th St East	23	0.28	9,664	2,962,982	7.76	3.20	7.33	YES
	1st Ave North Between 6th St East and 9th St East	4	0.28	2,367	725,722	5.51	3.20	10.51	NO
	1st Ave North Between 9th St East and 11th St East	3	0.16	2,367	414,698	7.23	3.20	11.98	NO
	1st Ave North Between 11th St East and 13th St East	0	0.2	2,367	518,373	0.00	3.20	11.40	NO
	1st Ave North Between 13th St East and 19th St East	1	0.32	2,367	829,397	1.21	3.20	10.16	NO
	Kemp Ave Between 10th St West and Kapeska Blvd	7	0.23	3,065	771,920	9.07	3.20	10.34	NO
	Kemp Ave Between Kapeska Blvd and 3rd/2nd St West	5	0.25	4,734	1,295,933	3.86	3.20	9.06	NO
	Kemp Ave Between 3rd/2nd St West and Broadway	1	0.2	2,290	501,510	1.99	3.20	11.48	NO
	Kemp Ave Between Broadway and 2nd St East	7	0.16	4,556	798,211	8.77	3.20	10.26	NO
	Kemp Ave Between 2nd St East and 5th St East	4	0.24	3,739	982,609	4.07	3.20	9.73	NO
	Kemp Ave Between 5th St East and 7th/8th St East	12	0.19	3,257	677,619	17.71	3.20	10.69	YES
	Kemp Ave Between 7th/8th St East and 10th/11th St East	0	0.21	3,257	748,947	0.00	3.20	10.42	NO
	Kemp Ave Between 10th/11th St East and 12th/13th St East	3	0.21	1,880	432,306	6.94	3.20	11.87	NO
	Kemp Ave Between 12th/13th St East and 15th St East	2	0.22	1,880	452,892	4.42	3.20	11.75	NO
	Kemp Ave Between 15th St East and 19th St East	0	0.19	1,880	391,134	0.00	3.20	12.13	NO
	1st Ave South Between 3rd St West and 1st St West	2	0.16	1,547	271,034	7.38	3.20	13.00	NO
	1st Ave South Between 1st St West and Maple/2nd St East	3	0.19	1,547	321,853	9.32	3.20	12.61	NO
	1st Ave South Between Maple/2nd St East and 4th St East	3	0.21	4,359	1,002,352	2.99	3.20	9.68	NO

TABLE. Crash Analysis Summary for Segments

Intersection Description	3-Year Crash Total	Segment Length	Weighted ADT	3-Year VMT	Crash Rate per Million VMT	Average Segment Crash Rate	Critical Rate	Exceeds Critical Rate?
1st Ave South Between 4th St East and 5th St East	6	0.08	4,110	360,036	16.67	3.20	12.34	YES
1st Ave South Between End Hwy 139 and South Lake Dr	3	1.23	524	705,749	4.25	3.20	10.58	NO
1st Ave South Between South Lake Dr and 3rd St West	35	4.95	1,576	8,540,201	4.10	3.20	5.76	NO
1st Ave South Between 3rd St West and Broadway	4	0.24	3,094	813,103	4.92	3.20	10.21	NO
1st Ave South Between Broadway and 2nd St East	5	0.16	3,094	542,069	9.22	3.20	11.28	NO
1st Ave South Between 2nd St East and 4th/5th St East	0	0.2	3,094	677,586	0.00	3.20	10.69	NO
1st Ave South Between 4th/5th St East and 7th/8th St East	3	0.22	3,094	745,345	4.02	3.20	10.44	NO
1st Ave South Between 7th/8th St East and 11th St East	1	0.27	3,094	914,741	1.09	3.20	9.91	NO
North Lake Dr Between NO COORDINATES AVAILABLE and	17	6.7	1,000	7,336,500	2.32	3.20	5.94	NO
South Lake Dr Between Intersection Hwy 139 and Hidden Valley Dr	1	0.42	1,500	689,850	1.45	3.20	10.64	NO
South Lake Dr Between Hidden Valley Dr and T-intersection	0	0.32	1,500	525,600	0.00	3.20	11.36	NO
South Lake Dr Between T-intersection and Dora Ave	0	0.34	1,500	558,450	0.00	3.20	11.20	NO
South Lake Dr Between Dora Ave and 43rd St W.	2	1.42	1,500	2,332,350	0.86	3.20	7.79	NO
South Lake Dr Between 43rd St W. and 32nd St W.	1	0.64	1,500	1,051,200	0.95	3.20	9.56	NO
South Lake Dr Between 32nd St W. and Hwy 20	4	1.52	1,500	2,496,600	1.60	3.20	7.65	NO
Golf Course Rd Between South Lake Dr and 7th Ave North	2	2.08	2,361	5,377,414	0.37	3.20	6.37	NO
Golf Course Rd Between 7th Ave North and 4th Ave South	1	0.77	2,361	1,990,677	0.50	3.20	8.11	NO
21st St West Between 3rd Ave North and Hwy 212	20	0.95	2,300	2,392,575	8.36	3.20	7.74	YES
3rd St West Between 10th Ave North and 1st Ave North	2	0.625	2,087	1,428,291	1.40	3.20	8.83	NO
3rd St West Between 1st Ave North and 1st Ave South	0	0.17	3,814	709,976	0.00	3.20	10.56	NO
3rd St West Between 1st Ave South and 3rd Ave South	1	0.15	3,814	626,450	1.60	3.20	10.89	NO
3rd St West Between 3rd Ave South and 5th Ave South	4	0.15	3,814	626,450	6.39	3.20	10.89	NO
3rd St West Between 5th Ave South and 7th Ave South	0	0.16	3,814	668,213	0.00	3.20	10.72	NO
3rd St West Between 7th Ave South and 9th Ave South (212)	12	0.23	3,814	960,556	12.49	3.20	9.79	YES
Broadway Between 9th Ave South (212) and 20th Ave South	22	1	2,603	2,850,285	7.72	3.20	7.40	YES
Broadway Between 6th/7th Ave South and 9th Ave South (212)	4	0.2	4,749	1,040,031	3.85	3.20	9.59	NO
Broadway Between 4th Ave South and 6th/7th Ave South	3	0.21	4,749	1,092,033	2.75	3.20	9.47	NO
Broadway Between 1st/2nd Ave South and 4th Ave South	0	0.2	4,184	916,296	0.00	3.20	9.90	NO

TABLE. Crash Analysis Summary for Segments

Intersection Description		3-Year Crash Total	Segment Length	Weighted ADT	3-Year VMT	Crash Rate per Million VMT	Average Segment Crash Rate	Critical Rate	Exceeds Critical Rate?
	Broadway Between 1st Ave North and 1st/2nd Ave South	10	0.198	4,464	967,871	10.33	3.20	9.77	YES
	Broadway Between 3rd Ave North and 1st Ave North	3	0.2	4,150	908,850	3.30	3.20	9.92	NO
	Broadway Between 10th Ave North and 3rd Ave North	1	0.49	2,697	1,447,075	0.69	3.20	8.80	NO
	11th St East Between 3rd/4th Ave South and 9th Ave South (212)	13	0.2	3,763	824,097	15.77	3.20	10.18	YES
	11th St East Between 1st Ave South and 3rd/4th Ave South	2	0.2	3,763	824,097	2.43	3.20	10.18	NO
	11th St East Between Railroad Crossing and 1st Ave South	6	0.21	4,856	1,116,637	5.37	3.20	9.41	NO
	11th St East Between 14th Ave North and Railroad Crossing	7	1.36	2,980	4,437,597	1.58	3.20	6.65	NO
	19th St East Between 14th Ave North and 9th Ave South (212)	25	1.97	5,410	11,670,411	2.14	3.20	5.41	NO