

Rapid City Area
Metropolitan Planning Organization

2011 TRAFFIC VOLUME COUNTS REPORT



In cooperation with:

City of Rapid City
Engineering Services Division
Public Works Department

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INTRODUCTION/PURPOSE

Traffic volume studies are conducted to obtain accurate information about the number and movement of vehicles within or through an area or at selected points within an area. Current and historical volume counts provide vital information that is used in operational evaluations, traffic modeling and in the selection and design of road network improvements. The Traffic Volume Counts Report is designated in the Rapid City Area Metropolitan Planning Organization's (MPO) Operations Plan as one of the transportation products to be presented to the MPO's three transportation process committees. This report is an informational document and as such does not require any formal approval process. Traffic volume information is presented for the years 2009 – 2011.

DATA & METHODOLOGY

The Traffic Volume Counts Report presents the most recent three years of data collected by the City's Engineering Services Division - Public Works Department and the South Dakota Department of Transportation (SDDOT). Note that the identification of regular counting sites is a dynamic process and not every location may have associated with it three years of history. Volume information is also provided for all counts that were conducted in conjunction with other engineering studies.

- All volumes presented in this document have been adjusted to account for seasonal variations. Seasonal adjustment factors for each year are developed using data from the South Dakota Department of Transportation's permanent count stations.
- Data provided by the City's Engineering Services Division - Public Works Department has been collected using portable traffic counters while the data provided by the SDDOT has been collected at permanent counting stations. The permanent stations count traffic volumes daily and provide a basis for determining the variation of traffic volumes throughout the year.
- In accordance with accepted traffic engineering protocol, volume counts were only conducted on Tuesdays, Wednesdays, or Thursdays. Mondays and Fridays do not generally represent typical weekdays due to the influence of higher numbers of people being absent from the workplace and a higher percentage of recreational travel.
- Volumes have not been factored to account for vehicles with more than two axles, i.e. trucks, certain recreational vehicles, vehicle/trailer combinations, etc. The actual vehicular volumes are generally lower than the published counts and can be determined if the percentage of vehicles with more than two axles is known. The correction factor is given by the formula,

$$1.0 - 0.5 * \text{percentage of truck traffic.}$$

COMPARISON OF ANNUAL VOLUMES

The count summary includes the percent change between successive year's counts. A weighted average percent change is also calculated taking into consideration all of the counts. Extreme caution should be exercised when interpreting annual changes in volumes for the following reasons:

- Traffic volumes will vary on a particular section of roadway depending on the month the count was conducted or the day of the week of the count. Additionally, there is an inherent variability in traffic volumes due to factors that are not easily explained or quantified.
- Construction projects, on or adjacent to a section of road, can significantly alter traffic volumes.
- Traffic count reliability is directly related to the amount of data collected. The more counts taken at a particular location, the higher the accuracy of conclusions drawn from the data. A single volume provides a "snapshot" of traffic that traveled that roadway on that specific day. Trend analyses should most accurately be limited to using permanent count station data.

PERMANENT COUNT STATIONS

Data from the following five SDDOT permanent count stations are included in this report:

- 5th Street, north of St. Cloud Street
- Anamosa Street, east of Haines Avenue
- West Main Street, east of Jackson Boulevard
- I-90, east of the Elk Vale Road interchange
- I-90, east of I-190

ROAD	LIMITS	2009 SEASONALLY ADJUSTED COUNT	% Change 2009/2010	2010 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2011 SEASONALLY ADJUSTED COUNT
1ST ST	OMAHA TO MAIN	780	-4%	748		No Count
2ND ST	MAIN TO OMAHA	1,020	-13%	892		No Count
3RD ST	MAIN TO OMAHA	2,245	-10%	2,023		No Count
5TH ST	PARKVIEW TO MINNESOTA	5,959	7%	6,397	-10%	5733
5TH ST	CATRON TO PARKIEW	5,134	4%	5,335	-14%	4586
5TH ST	MINNESOTA TO TEXAS	10,716	14%	12,172	-3%	11842
5TH ST	TEXAS TO 3RD	12,364	11%	13,746	-12%	12054
5TH ST	3RD TO FAIRMONT	17,039	7%	18,177	-7%	16842
5TH ST	FAIRMONT TO ST PATRICK	17,964	11%	19,936	-13%	17415
5TH ST	ST. PATRICK TO ST. CLOUD	18,587	10%	20,446	-11%	18123
5TH ST	ST. CLOUD TO COLUMBUS	17,565	11%	19,516	-7%	18244
5TH ST	COLUMBUS TO ST. JOSEPH	21,691	-18%	17,809	4%	18449
5TH ST	ST JOSEPH TO MAIN	20,964	-17%	17,431	2%	17768
5TH ST	MAIN TO OMAHA	19,427	-16%	16,364	5%	17259
5TH ST	OMAHA TO NEW YORK	19,931	-6%	18,684	-3%	18179
5TH ST	NEW YORK TO NORTH	20,223	-3%	19,531	-5%	18544
32ND ST	JACKSON TO CANYON LAKE	4,892	-4%	4,695	12%	5252
44TH ST	RAIDER TO MAIN	No Count		5,153	-29%	3638
225TH ST	N ELLSWORTH TO BRIGGS	1,602	-14%	1,385	13%	1568
ANAMOSA ST	WEST BLVD N TO HAINES	4,204	-16%	3,550	57%	5585
ANAMOSA ST	HAINES TO MAPLE	8,141	8%	8,757	-8%	8096
ANAMOSA (E) ST	MAPLE TO LACROSSE	7,645	23%	9,403	5%	9894
CAMBELL ST	CATRON TO MINNESOTA	11,624	19%	13,836	-6%	12987
CAMBELL ST	MINNESOTA TO FAIRMONT	15,405	-3%	14,973	4%	15608
CAMBELL ST	FAIRMONT TO ST PATRICK	20,175	-4%	19,304	9%	21064
CAMBELL ST	ST PATRICK TO OMAHA	18,936	7%	20,173	4%	20906
CAMBELL (E) ST	OMAHA TO E NORTH	21,447	8%	23,168	-9%	21138
CANYON LAKE DR	JACKSON TO CLIFTON	6,344	23%	7,778		CONSTRUCTION
CANYON LAKE DR	CLIFTON TO SOO SAN	6,955	16%	8,059		CONSTRUCTION
CANYON LAKE DR	SOO SAN TO SHERIDAN LAKE	11,446	7%	12,217	-7%	11350
CANYON LAKE DR	SHERIDAN LAKE TO MTVIEW	12,807	3%	13,228	-11%	11718
CATHEDRAL DR	MT RUSHMORE TO TOWER	12,606	21%	15,304	-10%	13773
CATHEDRAL DR	TOWER TO 5TH	12,748	33%	17,005	-15%	14373
CATRON BLVD	SHERIDAN LAKE TO US-16	10,099	-6%	9,538	-7%	8896
CATRON BLVD	US-16 TO 5TH	12,522	3%	12,905		CONSTRUCTION
CATRON (E) BLVD	5TH TO SD-79	12,567	1%	12,710		CONSTRUCTION
COUNTRY RD	HAINES TO W NIKE	1,227	23%	1,514	-11%	1349
CREEK (N) DR	ANAMOSA TO EGLIN ST	No Count		No Count		4098
DEADWOOD AVE	OMAHA TO LIEN	18,576	-10%	16,733	6%	17804
DEADWOOD AVE	CEMENT PLANT TO LIEN	No Count		15,334	7%	16397
DEADWOOD AVE	LIEN TO N PLAZA	13,845	-5%	13,199	-5%	12531
DEADWOOD AVE	N PLAZA TO I-90	14,873	-7%	13,822	4%	14419
DEADWOOD AVE	I-90 TO CITY LIMIT	2,368	17%	2,776	21%	3369
DISK DR	HAINES TO MAPLE	7,344	-21%	5,771	11%	6403
DISK (E) DR	MAPLE TO LACROSSE	7,397	-17%	6,132	11%	6812
DYESS AVE	MALL TO SEGER	3,000	14%	3,406	1%	3449
E NORTH ST	MILWAUKEE TO LACROSSE	16,452	-6%	15,407	7%	16562
E NORTH ST	LACROSSE TO CAMBELL	17,440	10%	19,101	-8%	17640
E NORTH ST	CAMBELL TO ANAMOSA	18,796	4%	19,506	-1%	19277
E NORTH ST	ANAMOSA TO I-90	14,638	10%	16,058	-12%	14055
EAST BLVD	KANSAS CITY TO ST JOSEPH	6,082	-6%	5,687		No Count
EAST BLVD	ST JOSEPH TO MAIN	8,752	-2%	8,619	-6%	8096
EAST BLVD	MAIN TO OMAHA	12,241	-7%	11,352	-4%	10919
EAST BLVD	OMAHA TO E NORTH	16,245	-12%	14,347	-30%	10066
EGLIN ST	LACROSSE TO LUNA	4,146	25%	5,168	46%	7567
EGLIN ST	LUNA TO E. NORTH	4,192	32%	5,528	53%	8481
EGLIN ST	ANAMOSA TO BEALE	2,994	109%	6,246	-46%	3353
EGLIN ST	DYESS TO ELK VALE	No Count		1,965	50%	2945
ELK VALE RD	SD-79 TO SD-44	12,648	7%	13,516	-12%	11908
ELK VALE RD	SD-44 TO I-90	18,199	6%	19,371	-2%	19019
ELK VALE RD	I-90 TO SEGER	2,415	-5%	2,288	8%	2471
FAIRMONT BLVD	5TH TO WISCONSIN	8,971	64%	14,693	-21%	11593
FAIRMONT (E) BLVD	WISCONSIN TO ELM	8,445	25%	10,522	-13%	9181
FAIRMONT(E) BLVD	ELM TO CAMBELL	7,385	23%	9,101	-8%	8333
HAINES AVE	NORTH TO ANAMOSA	19,091	4%	19,888	-2%	19442
HAINES AVE	ANAMOSA TO I-90	18,753	2%	19,130	-2%	18721

ROAD	LIMITS	2009 SEASONALLY ADJUSTED COUNT	% Change 2009/2010	2010 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2011 SEASONALLY ADJUSTED COUNT
HAINES AVE	I-90 TO DISK	23,188	4%	24,085	3%	24746
HAINES AVE	DISK TO MALL	17,653	-2%	17,213	-7%	16005
HAINES AVE	MALL TO COUNTRY	10,342	30%	13,457	-23%	10348
HAINES AVE	COUNTRY TO COBALT	4,189	14%	4,762	26%	6022
HAINES AVE	COBALT TO CITY LIMIT	2,336	-5%	2,211	-14%	1902
HILLSVIEW DR	ST PATRICK TO RAIDER	3,133	10%	3,446	-12%	3025
I-190	OMAHA TO SILVER	26,122	-5%	24,802	-10%	22358
I-190	SILVER TO I-90	22,890	-13%	19,975	12%	22420
I-90	I-190 TO HAINES	25,798	34%	34,561	-3%	33353
I-90	ELK VALE TO EAST CITY LIMIT	21,376	15%	24,494	-6%	22989
JACKSON BLVD	CITY LIMIT TO CHAPEL LN	No Count		No Count		3624
JACKSON BLVD	CHAPEL LN TO CANYON LAKE	9,462	6%	10,027	-2%	9848
JACKSON BLVD	CANYON LAKE TO 32ND	12,329	9%	13,463	-10%	12165
JACKSON BLVD	32ND TO SHERIDAN LAKE	16,589	-2%	16,322	-2%	15932
JACKSON BLVD	SHERIDAN LK TO MT VIEW (N)	29,246	-21%	22,967	4%	23830
JACKSON BLVD	MT VIEW (N) TO MAIN (W)	21,412	-12%	18,856	2%	19283
LACROSSE (N) ST	OMAHA TO E NORTH	12,248	-16%	10,342	-2%	10154
LACROSSE (N) ST	E NORTH TO ANAMOSA	24,726	-10%	22,156	-3%	21513
LACROSSE (N) ST	ANAMOSA TO I-90	23,004	-12%	20,244	2%	20603
LACROSSE (N) ST	I-90 TO DISK	14,169	-25%	10,568	8%	11362
LACROSSE (N) ST	DISK TO MALL	3,402	33%	4,513	22%	5528
LIBERTY BLVD	N ELLSWORTH TO I-90	3,184	-3%	3,083	-5%	2940
MAIN (W) ST	BERRY PINE TO 44TH	No Count		1,878	20%	2247
MAIN (W) ST	44TH TO SOO SAN	No Count		4,608	11%	5124
MAIN (W) ST	SOO SAN TO STURGIS	9,205	15%	10,564	3%	10874
MAIN (W) ST	STURGIS TO SHERIDAN LAKE	16,414	3%	16,913	4%	17515
MAIN (W) ST	SHERIDAN LAKE TO MTVIEW	21,589	0%	21,520	-2%	21091
MAIN (W) ST	MTVIEW TO JACKSON	No Count		No Count		23796
MAIN (W) ST	JACKSON TO CROSS	37,098	8%	39,934	-7%	37034
MAIN (W) ST	WEST TO CROSS	No Count		18,143	-1%	17980
MAIN ST	WEST BLVD TO MT RUSHMORE	15,440	-1%	15,346	-8%	14114
MAIN ST	MT RUSHMORE TO 5TH	13,173	-11%	11,713	1%	11867
MAIN ST	5TH TO EAST BLVD	9,976	9%	10,877	-13%	9469
MAIN ST	EAST BLVD TO STEELE	7,235	33%	9,596	-7%	8911
MALL DR	HAINES TO MAPLE	3,302	17%	3,864	-3%	3734
MALL DR	MAPLE TO LACROSSE	3,373	-10%	3,022	1%	3055
MALL DR	LACROSSE TO E. NORTH	No Count		1,692	35%	2290
MALL (E) DR	E NORTH TO DYESS	4,266	43%	6,080	-24%	4615
MALL (E) DR	DYESS TO ELK VALE	2,653	81%	4,802	-46%	2571
MAPLE (N) AVE	DISK (W) TO DISK (E)	2,743	-18%	2,261	5%	2378
MINNESOTA (E) ST	5TH TO ELM	4,356	23%	5,341	-4%	5148
MINNESOTA (E) ST	ELM TO CABBELL	4,147	25%	5,184	5%	5462
MOUNTAINVIEW RD	JACKSON TO CANYON LAKE	10,758	-13%	9,345	-4%	8964
MOUNTAINVIEW RD	CANYON LAKE TO MAIN	18,419	-9%	16,806	15%	19267
MOUNTAINVIEW RD	MAIN TO OMAHA	20,825	-11%	18,575	14%	21095
MT RUSHMORE RD	CATHEDRAL TO ST PATRICK	25,009	-3%	24,345	3%	24963
MT RUSHMORE RD	ST PATRICK TO ST JOSEPH	25,651	-6%	24,046	5%	25308
MT RUSHMORE RD	ST JOSEPH TO MAIN	21,120	-8%	19,340	-7%	17983
MT RUSHMORE RD	MAIN TO OMAHA	17,143	-14%	14,798	6%	15747
MT RUSHMORE RD	OMAHA TO NORTH	4,732	59%	7,545	10%	8294
N ELLSWORTH RD	US-14/16 TO LIBERTY	8,543	-11%	7,618	-12%	6700
NEMO RD	WESTBERRY TRAILS TO BERRY PINE	3,014	18%	3,567	2%	3644
OMAHA (W) ST	DEADWOOD TO MTVIEW	27,490	-14%	23,629	0%	23607
OMAHA (W) ST	MTVIEW TO WEST BLVD	35,097	-3%	33,939	-5%	32284
OMAHA ST	WEST BLVD TO MT RUSHMORE	32,237	-9%	29,194	8%	31432
OMAHA ST	MT RUSHMORE TO 5TH	31,579	-6%	29,801	5%	31198
OMAHA ST	5TH TO EAST BLVD	29,021	-13%	25,248	11%	28022
OMAHA ST	EAST BLVD TO LACROSSE	25,374	-15%	21,605	0%	21535
OMAHA (E) ST	LACROSSE TO CABBELL	22,811	-25%	17,190	29%	22159
RADAR HILL RD	MULE DEER TO US-14/16	3,536	5%	3,705	-5%	3537
SD-44 (E)	CABBELL TO ST PATRICK	19,270	-3%	18,598	7%	19865
SD-44 (E)	ST PATRICK TO TWILIGHT	27,108	-12%	23,770	6%	25086
SD-44 (E)	TWILIGHT TO JOLLY	17,957		CONSTRUCTION		18441
SD-44 (E)	JOLLY TO RESERVOIR	15,595		CONSTRUCTION		17184
SD-44 (E)	RESERVOIR TO AIRPORT	6,042	24%	7,504	-8%	6868
SD-79	CITY LIMIT TO ELK VALE	9,409	11%	10,412	5%	10925

ROAD	LIMITS	2009 SEASONALLY ADJUSTED COUNT	% Change 2009/2010	2010 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2011 SEASONALLY ADJUSTED COUNT
SEGER DR	LACROSSE TO DYESS	2,849	-6%	2,674	-5%	2539
SHERIDAN LAKE RD	DUNSMORE TO S WILDWOOD	7,030	6%	7,456	10%	8176
SHERIDAN LAKE RD	S WILDWOOD TO CATRON	8,513	3%	8,782	-3%	8483
SHERIDAN LAKE RD	CATRON TO CORRAL	14,233	-6%	13,359	-20%	10663
SHERIDAN LAKE RD	CORRAL TO FLORMANN	14,067	-9%	12,836	10%	14172
SHERIDAN LAKE RD	FLORMANN TO JACKSON	14,705	6%	15,563	-4%	14973
SHERIDAN LAKE RD	JACKSON TO CANYON LAKE	8,907	-10%	8,023	13%	9099
SHERIDAN LAKE RD	CANYON LAKE TO W MAIN	9,485	-13%	8,271	11%	9194
SOO SAN DR	CANYON LAKE TO RANGE	8,714	-20%	6,975	-3%	6793
SOUTH CANYON RD	BERRY PINE TO 44TH	5,235	36%	7,128	-12%	6248
SOUTH CANYON RD	W MAIN TO 44TH	No Count		902	17%	1059
ST JOSEPH (W) ST	WEST BLVD TO WEST ST	No Count		19,475	0%	19390
ST JOSEPH ST	WEST BLVD TO MT RUSHMORE	14,581	2%	14,807	1%	14961
ST JOSEPH ST	MT RUSHMORE TO 5TH	13,080	-8%	12,022	7%	12903
ST JOSEPH ST	5TH TO EAST BLVD	10,694	2%	10,877	0%	10895
ST JOSEPH ST	EAST BLVD TO STEELE	8,377	18%	9,854	-4%	9417
ST JOSEPH (E) ST	STEELE TO ST PATRICK	11,583	-20%	9,314	57%	14589
ST JOSEPH (E) ST	ST PATRICK TO CAMBELL	6,379	-17%	5,277	36%	7192
ST PATRICK ST	WEST BLVD TO MT RUSHMORE	3,167	21%	3,842	-7%	3571
ST PATRICK ST	MT RUSHMORE TO 5TH	6,107	30%	7,938	-2%	7773
ST PATRICK ST	5TH TO ELM	10,784	15%	12,362	0%	12347
ST PATRICK (E) ST	ELM TO ST JOSEPH	11,552	16%	13,348	10%	14671
ST PATRICK (E) ST	ST JOSEPH TO CAMBELL	13,171	25%	16,412	-6%	15413
ST PATRICK (E) ST	CAMBELL TO CREEK	14,918	15%	17,211	-7%	16075
ST PATRICK (E) ST	CREEK TO SD-44	11,770	-5%	11,148	-7%	10358
STURGIS RD	MAIN TO W CHICAGO	12,733	-5%	12,054	-8%	11120
STURGIS RD	W CHICAGO TO ST MARTINS	9,567	0%	9,528	-11%	8508
TWILIGHT DR	SD-44 TO JOLLY LN	7,815		CONSTRUCTION		6645
TWILIGHT DR	JOLLY LN TO RESERVOIR	4,212		CONSTRUCTION		8404
US-14/16	I-90 TO WESTGATE	15,758	-8%	14,456	0%	14450
US-14/16	S ELLSWORTH TO OAK	1,854	-8%	1,707	13%	1931
US-16	CITY LIMIT TO CATRON	14,863		CONSTRUCTION		8755
US-16	CATRON TO CATHEDRAL	15,018	-21%	11,898	-4%	11481
W CHICAGO ST	44TH TO STURGIS	11,531	12%	12,878	-16%	10771
W CHICAGO ST	STURGIS TO DEADWOOD	13,430	-5%	12,746	31%	16679
WEST BLVD	FLORMANN TO ST PATRICK	1,586	-1%	1,562	-8%	1442
WEST BLVD	ST PATRICK TO ST CLOUD	4,821	20%	5,768	2%	5892
WEST BLVD	ST CLOUD TO ST JOSEPH	9,891	-1%	9,824	-11%	8760
WEST BLVD	ST. JOSEPH TO MAIN	13,290	7%	14,222	-2%	13889
WEST BLVD	MAIN ST TO OMAHA ST	12,822	18%	15,150	0%	15108
WEST GATE RD	US-14/16 TO BLUEBIRD	3,591	5%	3,766	-9%	3443