

Rapid City Area
Metropolitan Planning Organization

2012 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 2010 – 2012.

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	2010 SEASONALLY ADJUSTED COUNT	2011 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2012 SEASONALLY ADJUSTED COUNT	% Change 2011/2012
1ST ST	OMAHA TO MAIN	748	No Count		1,019	
2ND ST	MAIN TO OMAHA	892	No Count		888	
3RD ST	MAIN TO OMAHA	2,023	No Count		2,970	
5TH ST	PARKVIEW TO MINNESOTA	6,397	5,733	-10%	7,196	26%
5TH ST	CATRON TO PARKIEW	5,335	4,586	-14%	6,472	41%
5TH ST	MINNESOTA TO TEXAS	12,172	11,842	-3%	11,514	-3%
5TH ST	TEXAS TO 3RD	13,746	12,054	-12%	15,620	30%
5TH ST	3RD TO FAIRMONT	18,177	16,842	-7%	17,365	3%
5TH ST	FAIRMONT TO ST PATRICK	19,936	17,415	-13%	19,065	9%
5TH ST	ST. PATRICK TO ST. CLOUD	20,446	18,123	-11%	19,448	7%
5TH ST	ST. CLOUD TO COLUMBUS	19,516	18,244	-7%	18,928	4%
5TH ST	COLUMBUS TO ST. JOSEPH	17,809	18,449	4%	21,193	15%
5TH ST	ST JOSEPH TO MAIN	17,431	17,768	2%	19,609	10%
5TH ST	MAIN TO OMAHA	16,364	17,259	5%	19,558	13%
5TH ST	OMAHA TO NEW YORK	18,684	18,179	-3%	20,195	11%
5TH ST	NEW YORK TO NORTH	19,531	18,544	-5%	19,694	6%
32ND ST	JACKSON TO CANYON LAKE	4,695	5,252	12%	5,644	7%
44TH ST	RAIDER TO MAIN	5,153	3,638	-29%	4,583	26%
225TH ST	N ELLSWORTH TO BRIGGS	1,385	1,568	13%	1,564	0%
ANAMOSA ST	WEST BLVD N TO HAINES	3,550	5,585	57%	5,378	-4%
ANAMOSA ST	HAINES TO MAPLE	8,757	8,096	-8%	7,384	-9%
ANAMOSA (E) ST	MAPLE TO LACROSSE	9,403	9,894	5%	10,360	5%
ANAMOSA (E) ST	LACROSSE TO E. NORTH	No Count	No Count		2,472	
CAMBELL ST	CATRON TO MINNESOTA	13,836	12,987	-6%	14,549	12%
CAMBELL ST	MINNESOTA TO FAIRMONT	14,973	15,608	4%	18,572	19%
CAMBELL ST	FAIRMONT TO ST PATRICK	19,304	21,064	9%	23,386	11%
CAMBELL ST	ST PATRICK TO OMAHA	20,173	20,906	4%	22,157	6%
CAMBELL (E) ST	OMAHA TO E NORTH	23,168	21,138	-9%	22,717	7%
CANYON LAKE DR	JACKSON TO CLIFTON	7,778	CONSTRUCTION		6,099	
CANYON LAKE DR	CLIFTON TO SOO SAN	8,059	CONSTRUCTION		7,671	
CANYON LAKE DR	SOO SAN TO SHERIDAN LAKE	12,217	11,350	-7%	10,187	-10%
CANYON LAKE DR	SHERIDAN LAKE TO MTVIEW	13,228	11,718	-11%	10,949	-7%
CATHEDRAL DR	MT RUSHMORE TO TOWER	15,304	13,773	-10%	14,566	6%
CATHEDRAL DR	TOWER TO 5TH	17,005	14,373	-15%	15,872	10%
CATRON BLVD	SHERIDAN LAKE TO US-16	9,538	8,896	-7%	11,019	24%
CATRON BLVD	US-16 TO 5TH	12,905	CONSTRUCTION		10,590	
CATRON (E) BLVD	5TH TO SD-79	12,710	CONSTRUCTION		10,481	
COUNTRY RD	HAINES TO W NIKE	1,514	1,349	-11%	1,537	14%
CREEK (N) DR	ANAMOSA TO EGLIN ST	No Count	4,098		4,398	7%
DEADWOOD AVE	OMAHA TO LIEN	16,733	17,804	6%	No Count	
DEADWOOD AVE	CEMENT PLANT TO LIEN	15,334	16,397	7%	17,168	5%
DEADWOOD AVE	LIEN TO N PLAZA	13,199	12,531	-5%	13,023	4%
DEADWOOD AVE	N PLAZA TO I-90	13,822	14,419	4%	15,084	5%
DEADWOOD AVE	I-90 TO CITY LIMIT	2,776	3,369	21%	3,658	9%
DISK DR	HAINES TO MAPLE	5,771	6,403	11%	6,662	4%
DISK (E) DR	MAPLE TO LACROSSE	6,132	6,812	11%	6,489	-5%
DYESS AVE	MALL TO SEGER	3,406	3,449	1%	3,865	12%
E NORTH ST	MILWAUKEE TO LACROSSE	15,407	16,562	7%	11,794	-29%
E NORTH ST	LACROSSE TO CAMBELL	19,101	17,640	-8%	13,072	-26%
E NORTH ST	CAMBELL TO ANAMOSA	19,506	19,277	-1%	17,993	-7%
E NORTH ST	ANAMOSA TO I-90	16,058	14,055	-12%	16,820	20%
EAST BLVD	KANSAS CITY TO ST JOSEPH	5,687	No Count		4,604	
EAST BLVD	ST JOSEPH TO MAIN	8,619	8,096	-6%	8,847	9%
EAST BLVD	MAIN TO OMAHA	11,352	10,919	-4%	11,161	2%
EAST BLVD	OMAHA TO E NORTH	14,347	10,066	-30%	13,805	37%
EGLIN ST	LACROSSE TO LUNA	5,168	7,567	46%	9,639	27%
EGLIN ST	LUNA TO E. NORTH	5,528	8,481	53%	11,355	34%
EGLIN ST	ANAMOSA TO BEALE	6,246	3,353	-46%	4,413	32%
EGLIN ST	DYESS TO ELK VALE	1,965	2,945	50%	4,298	46%
ELK VALE RD	SD-79 TO SD-44	13,516	11,908	-12%	12,978	9%
ELK VALE RD	SD-44 TO I-90	19,371	19,019	-2%	14,366	-24%
ELK VALE RD	I-90 TO SEGER	2,288	2,471	8%	2,551	3%
FAIRMONT BLVD	5TH TO WISCONSIN	14,693	11,593	-21%	12,647	9%
FAIRMONT (E) BLVD	WISCONSIN TO ELM	10,522	9,181	-13%	9,883	8%
FAIRMONT(E) BLVD	ELM TO CAMBELL	9,101	8,333	-8%	8,340	0%

ROAD	LIMITS	2010 SEASONALLY ADJUSTED COUNT	2011 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2012 SEASONALLY ADJUSTED COUNT	% Change 2011/2012
HAINES AVE	NORTH TO ANAMOSA	19,888	19,442	-2%	21,207	9%
HAINES AVE	ANAMOSA TO I-90	19,130	18,721	-2%	19,541	4%
HAINES AVE	I-90 TO DISK	24,085	24,746	3%	26,792	8%
HAINES AVE	DISK TO MALL	17,213	16,005	-7%	18,126	13%
HAINES AVE	MALL TO COUNTRY	13,457	10,348	-23%	12,309	19%
HAINES AVE	COUNTRY TO COBALT	4,762	6,022	26%	5,448	-10%
HAINES AVE	COBALT TO CITY LIMIT	2,211	1,902	-14%	2,184	15%
HILLSVIEW DR	ST PATRICK TO RAIDER	3,446	3,025	-12%	3,896	29%
I-190	OMAHA TO SILVER	24,802	22,358	-10%	24,075	8%
I-190	SILVER TO I-90	19,975	22,420	12%	21,347	-5%
I-90	I-190 TO HAINES	34,561	33,353	-3%	35,880	8%
I-90	ELK VALE TO EAST CITY LIMIT	24,494	22,989	-6%	24,648	7%
JACKSON BLVD	CITY LIMIT TO CHAPEL LN	No Count	3,624		5,140	42%
JACKSON BLVD	CHAPEL LN TO CANYON LAKE	10,027	9,848	-2%	8,538	-13%
JACKSON BLVD	CANYON LAKE TO 32ND	13,463	12,165	-10%	13,296	9%
JACKSON BLVD	32ND TO SHERIDAN LAKE	16,322	15,932	-2%	15,226	-4%
JACKSON BLVD	SHERIDAN LK TO MT VIEW (N)	22,967	23,830	4%	26,629	12%
JACKSON BLVD	MT VIEW (N) TO MAIN (W)	18,856	19,283	2%	18,755	-3%
LACROSSE (N) ST	OMAHA TO E NORTH	10,342	10,154	-2%	13,179	30%
LACROSSE (N) ST	E NORTH TO ANAMOSA	22,156	21,513	-3%	22,298	4%
LACROSSE (N) ST	ANAMOSA TO I-90	20,244	20,603	2%	20,477	-1%
LACROSSE (N) ST	I-90 TO DISK	10,568	11,362	8%	10,825	-5%
LACROSSE (N) ST	DISK TO MALL	4,513	5,528	22%	5,065	-8%
LIBERTY BLVD	N ELLSWORTH TO I-90	3,083	2,940	-5%	2,760	-6%
MAIN (W) ST	BERRY PINE TO 44TH	1,878	2,247	20%	2,377	6%
MAIN (W) ST	44TH TO SOO SAN	4,608	5,124	11%	5,629	10%
MAIN (W) ST	SOO SAN TO STURGIS	10,564	10,874	3%	12,085	11%
MAIN (W) ST	STURGIS TO SHERIDAN LAKE	16,913	17,515	4%	16,551	-6%
MAIN (W) ST	SHERIDAN LAKE TO MTVIEW	21,520	21,091	-2%	21,837	4%
MAIN (W) ST	MTVIEW TO JACKSON	No Count	23,796		21,534	-10%
MAIN (W) ST	JACKSON TO CROSS	39,934	37,034	-7%	35,908	-3%
MAIN (W) ST	WEST TO CROSS	18,143	17,980	-1%	36,457	103%
MAIN ST	WEST BLVD TO MT RUSHMORE	15,346	14,114	-8%	16,121	14%
MAIN ST	MT RUSHMORE TO 5TH	11,713	11,867	1%	12,370	4%
MAIN ST	5TH TO EAST BLVD	10,877	9,469	-13%	10,171	7%
MAIN ST	EAST BLVD TO STEELE	9,596	8,911	-7%	9,798	10%
MALL DR	HAINES TO MAPLE	3,864	3,734	-3%	1,812	-51%
MALL DR	MAPLE TO LACROSSE	3,022	3,055	1%	3,259	7%
MALL DR	LACROSSE TO E. NORTH	1,692	2,290	35%	1,847	-19%
MALL (E) DR	E NORTH TO DYESS	6,080	4,615	-24%	5,671	23%
MALL (E) DR	DYESS TO ELK VALE	4,802	2,571	-46%	4,067	58%
MAPLE (N) AVE	DISK (W) TO DISK (E)	2,261	2,378	5%	2,185	-8%
MINNESOTA (E) ST	5TH TO ELM	5,341	5,148	-4%	5,293	3%
MINNESOTA (E) ST	ELM TO CABBELL	5,184	5,462	5%	5,198	-5%
MOUNTAINVIEW RD	JACKSON TO CANYON LAKE	9,345	8,964	-4%	10,476	17%
MOUNTAINVIEW RD	CANYON LAKE TO MAIN	16,806	19,267	15%	18,054	-6%
MOUNTAINVIEW RD	MAIN TO OMAHA	18,575	21,095	14%	20,372	-3%
MT RUSHMORE RD	CATHEDRAL TO ST PATRICK	24,345	24,963	3%	23,740	-5%
MT RUSHMORE RD	ST PATRICK TO ST JOSEPH	24,046	25,308	5%	24,568	-3%
MT RUSHMORE RD	ST JOSEPH TO MAIN	19,340	17,983	-7%	18,580	3%
MT RUSHMORE RD	MAIN TO OMAHA	14,798	15,747	6%	15,463	-2%
MT RUSHMORE RD	OMAHA TO NORTH	7,545	8,294	10%	9,381	13%
N ELLSWORTH RD	US-14/16 TO LIBERTY	7,618	6,700	-12%	6,716	0%
NEMO RD	WESTBERRY TRAILS TO BERRY PINE	3,567	3,644	2%	4,113	13%
OMAHA (W) ST	DEADWOOD TO MTVIEW	23,629	23,607	0%	23,317	-1%
OMAHA (W) ST	MTVIEW TO WEST BLVD	33,939	32,284	-5%	32,643	1%
OMAHA ST	WEST BLVD TO MT RUSHMORE	29,194	31,432	8%	29,024	-8%
OMAHA ST	MT RUSHMORE TO 5TH	29,801	31,198	5%	29,681	-5%
OMAHA ST	5TH TO EAST BLVD	25,248	28,022	11%	26,746	-5%
OMAHA ST	EAST BLVD TO LACROSSE	21,605	21,535	0%	22,521	5%
OMAHA (E) ST	LACROSSE TO CABBELL	17,190	22,159	29%	22,382	1%
RADAR HILL RD	MULE DEER TO US-14/16	3,705	3,537	-5%	3,496	-1%
SD-44 (E)	CABBELL TO ST PATRICK	18,598	19,865	7%	17,803	-10%
SD-44 (E)	ST PATRICK TO TWILIGHT	23,770	25,086	6%	24,232	-3%
SD-44 (E)	TWILIGHT TO JOLLY	CONSTRUCTION	18,441		16,711	-9%

ROAD	LIMITS	2010 SEASONALLY ADJUSTED COUNT	2011 SEASONALLY ADJUSTED COUNT	% Change 2010/2011	2012 SEASONALLY ADJUSTED COUNT	% Change 2011/2012
SD-44 (E)	JOLLY TO RESERVOIR	CONSTRUCTION	17,184		15,005	-13%
SD-44 (E)	RESERVOIR TO AIRPORT	7,504	6,868	-8%	6,300	-8%
SD-79	CITY LIMIT TO ELK VALE	10,412	10,925	5%	12,793	17%
SEGER DR	LACROSSE TO DYESS	2,674	2,539	-5%	2,676	5%
SHERIDAN LAKE RD	DUNSMORE TO S WILDWOOD	7,456	8,176	10%	7,896	-3%
SHERIDAN LAKE RD	S WILDWOOD TO CATRON	8,782	8,483	-3%	8,003	-6%
SHERIDAN LAKE RD	CATRON TO CORRAL	13,359	10,663	-20%	13,650	28%
SHERIDAN LAKE RD	CORRAL TO FLORMANN	12,836	14,172	10%	13,267	-6%
SHERIDAN LAKE RD	FLORMANN TO JACKSON	15,563	14,973	-4%	17,493	17%
SHERIDAN LAKE RD	JACKSON TO CANYON LAKE	8,023	9,099	13%	10,120	11%
SHERIDAN LAKE RD	CANYON LAKE TO W MAIN	8,271	9,194	11%	9,472	3%
SOO SAN DR	CANYON LAKE TO RANGE	6,975	6,793	-3%	7,096	4%
SOUTH CANYON RD	BERRY PINE TO 44TH	7,128	6,248	-12%	6,997	12%
SOUTH CANYON RD	W MAIN TO 44TH	902	1,059	17%	1,329	25%
ST JOSEPH (W) ST	WEST BLVD TO WEST ST	19,475	19,390	0%	17,890	-8%
ST JOSEPH ST	WEST BLVD TO MT RUSHMORE	14,807	14,961	1%	16,556	11%
ST JOSEPH ST	MT RUSHMORE TO 5TH	12,022	12,903	7%	12,485	-3%
ST JOSEPH ST	5TH TO EAST BLVD	10,877	10,895	0%	11,328	4%
ST JOSEPH ST	EAST BLVD TO STEELE	9,854	9,417	-4%	9,924	5%
ST JOSEPH (E) ST	STEELE TO ST PATRICK	9,314	14,589	57%	15,138	4%
ST JOSEPH (E) ST	ST PATRICK TO CABBELL	5,277	7,192	36%	8,113	13%
ST PATRICK ST	WEST BLVD TO MT RUSHMORE	3,842	3,571	-7%	3,818	7%
ST PATRICK ST	MT RUSHMORE TO 5TH	7,938	7,773	-2%	8,402	8%
ST PATRICK ST	5TH TO ELM	12,362	12,347	0%	13,472	9%
ST PATRICK (E) ST	ELM TO ST JOSEPH	13,348	14,671	10%	15,874	8%
ST PATRICK (E) ST	ST JOSEPH TO CABBELL	16,412	15,413	-6%	16,134	5%
ST PATRICK (E) ST	CABBELL TO CREEK	17,211	16,075	-7%	15,704	-2%
ST PATRICK (E) ST	CREEK TO SD-44	11,148	10,358	-7%	13,295	28%
STURGIS RD	MAIN TO W CHICAGO	12,054	11,120	-8%	11,482	3%
STURGIS RD	W CHICAGO TO ST MARTINS	9,528	8,508	-11%	11,136	31%
TWILIGHT DR	SD-44 TO JOLLY LN	CONSTRUCTION	6,645		7,919	19%
TWILIGHT DR	JOLLY LN TO RESERVOIR	CONSTRUCTION	8,404		8,591	2%
US-14/16	I-90 TO WESTGATE	14,456	14,450	0%	14,536	1%
US-14/16	S ELLSWORTH TO OAK	1,707	1,931	13%	1,840	-5%
US-16	CITY LIMIT TO CATRON	CONSTRUCTION	8,755		14,669	68%
US-16	CATRON TO CATHEDRAL	11,898	11,481	-4%	12,919	13%
W CHICAGO ST	44TH TO STURGIS	12,878	10,771	-16%	11,345	5%
W CHICAGO ST	STURGIS TO DEADWOOD	12,746	16,679	31%	16,741	0%
WEST BLVD	FLORMANN TO ST PATRICK	1,562	1,442	-8%	1,485	3%
WEST BLVD	ST PATRICK TO ST CLOUD	5,768	5,892	2%	5,986	2%
WEST BLVD	ST CLOUD TO ST JOSEPH	9,824	8,760	-11%	9,511	9%
WEST BLVD	ST. JOSEPH TO MAIN	14,222	13,889	-2%	14,036	1%
WEST BLVD	MAIN ST TO OMAHA ST	15,150	15,108	0%	15,471	2%
WEST GATE RD	US-14/16 TO BLUEBIRD	3,766	3,443	-9%	3,404	-1%