



City of Martensville Highway 12

Report for Presentation to:

**Ministry of Highways and Infrastructure
Special Committee on Traffic Safety**

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1.0 BACKGROUND INFORMATION

1.1 Martensville

The City of Martensville is located approximately 15 km north of the City of Saskatoon on Highway 12. The City of Martensville has a population of approximately 7,716 according to Statistic Canada 2011 and quickly expanding. The City has been recognized as the second fastest growing community in Canada between 2006 and 2011 (2011 Census Population, Statistics Canada).

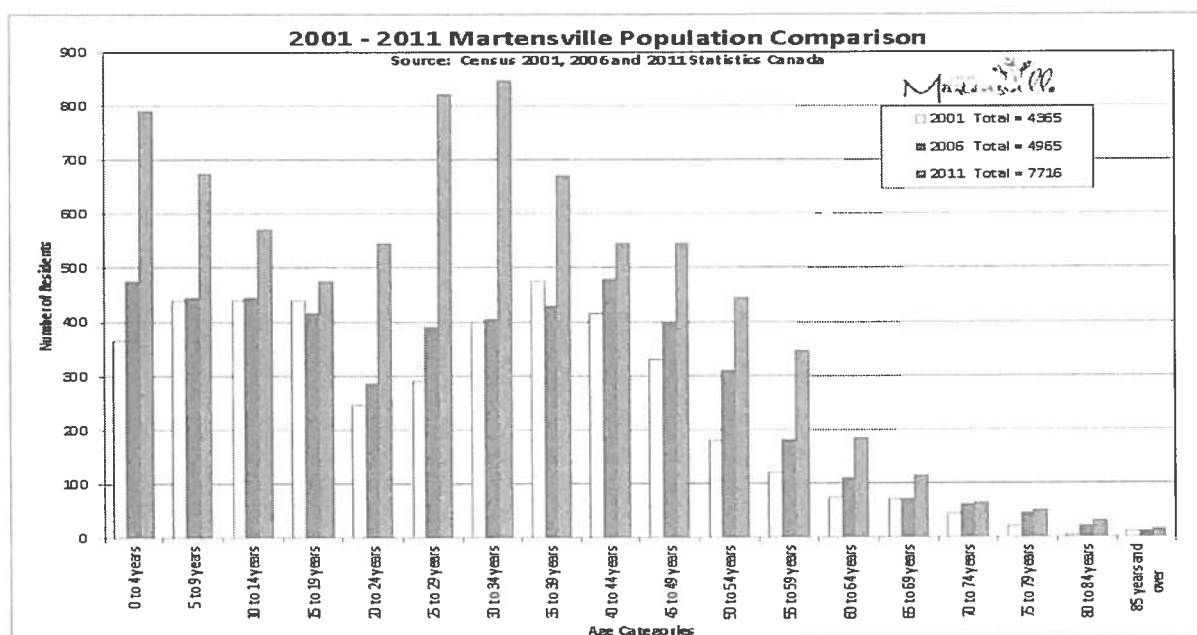
As a bedroom community to the City of Saskatoon, just 8 km north, the community maintains a small town feel, with quick access to the Saskatoon International Airport (less than 20 KM), and a large employment base within Saskatoon, specifically the northern Industrial/commercial area.

Martensville is a vibrant and fast growing community and the goal of this report is to help identify the importance of improving safety for traveling to and from the community, the level of service provided to the community utilizing the Main St and Highway 12 access point. Additionally ensuring adequate considerations are taken to address short and medium term demands, assuring a safe and cost effective transportation solution is reached between the City and the province, as expected by the residence and visitors of this community.

2.0 Summary of Population and Growth

2.1 Population and Demographics

The City of Martensville has a population of approximately 7,716 according to Statistic Canada 2011, a survey conducted as part of an Official Community Plan report identified that 86% of respondents had someone in their household commuting to another community for employment. The current demographics in Martensville consist of a younger population, 67% of the community under the age of 40 according to a Saskatchewan Health 2009 publication. Along with a large portion of the population commuting daily for work, an increase in potential young driver's population is also identified in the 14 years of age and younger categories.

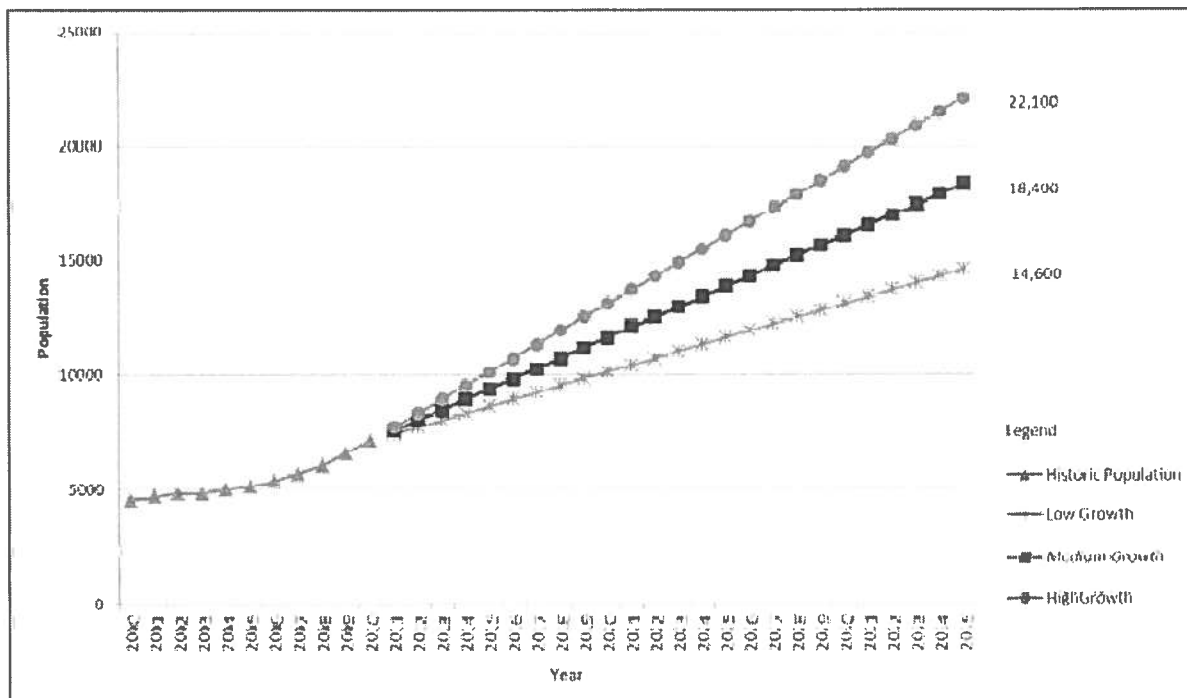


(Figure and Data Source: Statistic Canada 2011)

2.2 Growth Projections:

The City of Martensville population growth projections, according to Saskatoon North Regional Partners report, identified low, medium and high growth scenarios. The projection for milestone years (2015, 2020, 2035) are listed below.

Year	low	Medium	High
2015	8,600	9,350	10,100
2020	10,100	12,050	14,300
2035	14,600	18,350	22,100



(Figure and Data Source: Saskatoon North Regional Partners 2011)

As Identified in the Saskatoon North Regional Partners report 2011, Martensville along with Warman and Osler are expected to double in size in the next 10 to 15 years. Collectively the three are growing to a population of 47,000 within 25 years. This is comparable to a medium size city and will require more capacity and resources for infrastructure investments. The population forecasted in the 2011 report also identified a potential for accelerate growth (Saskatoon North Regional Partners report 2011).

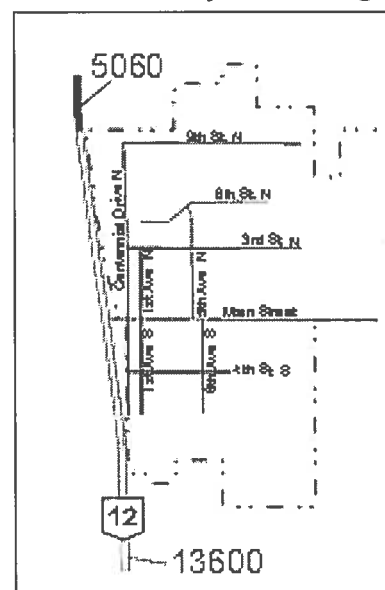
Martensville – Average Annual Daily Traffic Diagram

3.0 Summary of Local Traffic Statistic

3.1 Traffic Counts

The City of Martensville *Average Annual Daily Traffic Diagram* counts as per the Saskatchewan Ministry of Highways and Infrastructure – 2011 Traffic Volume Map, identifies a 63% difference or increase from North to South through Martensville, contributing over 8,500 vehicles to the daily count. The 2011 Traffic Volume Map Average Annual Daily Traffic shows Highway 12 North of Saskatoon as the second highest volume with the expectation of a few locations inside Regina and Highway 1 to White City. The traffic counts north of Saskatoon and north of Highway 11, South of Martensville have an average daily traffic count of 15,260 and 13,600 respectively

The City of Martensville installed new traffic lights at the intersection of Main St and Centennial Dr. to help reduce traffic congestion at the City's main intersection entering and exiting Highway 12. The city saw a significant improvement in travel times during peak hours of the day. The table below summarizes the findings.



(source: MOH 2011)

City of Martensville Main St. and Centennial										
Date	Method	Time		EB _{LT}	EB _T	EB _{RT}	WB _T	SB _{RT}	NB _{RT}	Comments
05/12/2012	Manual count	6:30am	8:30am	153	97	18	544	730	45	
05/12/2012	Manual count	3:30pm	5:30am	785	321	47	198	236	49	
		Post Traffic Lights Installation								
09/10/2012	Manual count	3:30pm	5:30am	696	336	91	202	163	57	
		Travel Time Calculations Pre-Traffic Lights								Travel Time
08/28/2012	Manual	7:30am	-----	WB	1 block east to Intersection			Approx. 104m		Travel Time = 3:00min
08/28/2012	Manual	7:30am	-----	WB	Traffic stop to Hwy 12			Approx. 178m		Travel Time = 4:30min
										Total Time 7:30min
08/28/2012	Manual	7:30am	-----	SB _{RT}	SB Cent. RT turn to Hwy 12			Approx. 165m		Travel Time = 1:30min
08/28/2012	Manual	7:30am	-----	SB _{RT}	Traffic stop to Hwy 12			Approx. 162m		Travel Time = 4:30min
										Total Time 6:00min
		Travel Time Calculations Post-Traffic Lights								
09/10/2012	Manual	7:30am	-----	WB	1 block east to Intersection			Approx. 104m		Travel Time = 1:20min
09/10/2012	Manual	7:30am	-----	WB	Traffic stop to Hwy 12			Approx. 178m		Travel Time = 2:20min
										Total Time 3:40min
09/10/2012	Manual	7:30am	-----	SB _{RT}	SB Cent. RT turn to Hwy 12			Approx. 104m		Travel Time = 1:05min
09/10/2012	Manual	7:30am	-----	SB _{RT}	Traffic stop to Hwy 12			Approx. 162m		Travel Time = 2:20min
										Total Time 3:25min
Traffic Traveling: EB _{LT} = East Bound Left Turn, EB _T = East Bound Through, EB _{RT} = East Bound Right Turn, WB _T = West Bound Through, SB _{RT} = South Bound Right Turn, NB _{RT} = North Bound Right Turn.										

The traffic data collected by the City of Martensville is intended to depict flows at the intersection of Main St. and Centennial Drive that are directly influenced by traffic flow, coming from or going to highway 12. The traffic counts baseline the data showing conditions of traffic congestion as seen during regular peak times, weekday mornings and evening commutes. The travel time calculations gives an indication of the improvements seen as traveling through the intersection after traffic controls were added. Two samples were examined, first for traffic traveling westbound on Main St. across Centennial Drive to reach highway 12; this improved from 7 minutes 30 seconds to 3 minutes 40 seconds. This is a 49% improvement for through traffic on Main St. The second travel time sample was traffic traveling southbound on Centennial Drive, taking a right turn to reach highway 12, this improved from 6 minutes to 3 minutes 25 seconds. This is a 60% improvement.

3.2 Safety and Collision Statistics

As identified in the Highway 11/12 Planning Study, mitigation of safety issues and alleviating public concern is essential. Because of the increase in population, a growing youthful demographic (less experienced or new drivers), an increase of traffic volume, it is expected a higher collision frequency will occur. Below is 2011 and 2012 Martensville Fire Department response to highway 12 related collisions.

Date	Source	Location	
14 Feb 2011	Fire Depart.	South access Highway 12	**
17 Jun 2011	Fire Depart.	Hwy 12 and Hwy 375	
15 Jul 2011	Fire Depart.	Hwy 12 – South Entrance	**
8 Aug 2011	Fire Depart.	1 km North of Caron Transport on Hwy 12	
12 Aug 2011	Fire Depart.	South access Highway 12	**
27 Aug 2011	Fire Depart.	Intersection of Highway 12 and Main St.	*
4 Sep 2011	Fire Depart.	15 km North of Martensville Hwy 12	
11 Sep 2011	Fire Depart.	Highway 12 - 1 km south of Martensville Highway 12 (car fire)	
4 Oct 2011	Fire Depart.	Intersection of Main Street and Centennial	*
12 Oct 2011	Fire Depart.	Highway 12 and Range Rd 384 (Main St.)	*
2012			
11 Jan 2012	Fire Depart.	10 km North of Martensville on Hwy 12	
28 Jan 2012	Fire Depart.	Hwy 12 north of Township Rd 400	
22 Feb 2012	Fire Depart.	Hwy 12 at Lutheran Road	**
16 Mar 2012	Fire Depart.	Highway 12 and Main St.	*
30 Mar 2012	Fire Depart.	1 km South of Martensville on Highway 12	***
30 May 2012	Fire Depart.	87th St. and Hwy 12	
18 Jun 2012	Fire Depart.	Centennial Drive and Main St.	*
23 Apr 2012	Fire Depart.	Highway 12 South Entrance into Martensville	*
20 Sep 2012	Fire Depart.	Highway 12 - 500m south of South Entrance into Martensville	***
21 Sep 2012	Fire Depart.	Highway 12 - 2 km South of Martensville	***
23 Sep 2012	Fire Depart.	Intersection Hwy 12 and 305	**
27 Sep 2012	Fire Depart.	HWY 12 and Township Rd 384 (Main St.)	**
11 Oct 2012	Fire Depart.	HWY 12 and Township Rd 380 (Penner Rd collision with Deer)	
29 Nov 2012	Fire Depart.	3km south of Martensville on Hwy 12	**
11 Dec 2012	Fire Depart.	HWY 12	
14 Dec 2012	Fire Depart.	5 km south of Martensville on Hwy 12	
29 Dec 2012	Fire Depart.	HWY 12 and Township Rd 384 (Main St.)	*

Notes:

*** Includes vehicle collisions (VC) on Highway 12 Between Highway 305 and Lutheran Road

** Includes VC's related to entering access on Highway 12 at Highway 305, Main St, South Access, and Lutheran Rd.

* Includes vehicle collision at Highway 12 and Main St. (main access point into and out of Martensville).

The Martensville Fire Department responded to 10 and 17 collision calls in 2011 and 2012 respectively. The Fire Department responds to an area of approximately 200 square Kilometers in a mixed urban and rural setting comprising the City of Martensville and the RM of Corman Park. The number of vehicle collisions that occurred between Highway 305 and Lutheran Road on Highway 12 (includes all events with indicator (**)) was 6 out of 10 in 2011, this is 60% of vehicle accidents in 2011; in 2012 this accounted for 11 out of 17, or 64% of vehicle accidents. A total of 7 vehicle accidents that occurred over the 2 years were directly related to entering the highway at Highway 305, Main St, the South Entrance, or Lutheran Road. This accounted for 50% of the total

accidences over the two year period. Of that 50% half occurred at one intersection, the intersection of Main St. and Highway 12, the main entrance/exit to Martensville.

3.3 Level of Service

The Highway 11/12 Planning Study used a Level of Service (LOS) definition(s) ranking and identified the City of Martensville main access, the report recognizes that the westbound movement already operates at a service level of E and F, there was no definition provided for level of service F, level of service E is defined as unstable flow, continuous backup and delays, specifically speaking to peak times.

Also as identified in the Highway 11/12 Planning Study to warrant an interchange particular items and considerations need to be assessed and if interchanges should be constructed, have other methods of improving the intersection capacity been constructed or considered (ie. traffic signals and turning lanes). Currently no plans have been communicated to the City to instal traffic control lights at the Highway 12 and Main St. access point.

4.0 Conclusion and Recommendations

The City of Martensville recognizes that a need to ensure the safety of commuters is of the utmost importance to the Ministry of Highways and Infrastructure.

A number of the short term recommendations in the highway 11/12 study are part of 305 realignment that is currently under construction, and do not help to address the safety concerns with providing adequate traffic solutions for the peak congestion the community travelers are currently faced with.

The short term modifications recommended had no further at grade improvements identified for the highway 12 and Martensville Main St. Intersection, with indication that next phase is to include a study, which will determine the functional layout of the interchanges along Highway 12.

The long term recommendation identifies the need to address the congestion at highway 12 and Martensville Main Street Intersection, with concerning limitations of space to construct due to development. Additionally, section 5.3 "Anticipated Timing of Interchange Construction" provides no goal or indication of when expected time of construction, but provides a list of what stage an existing intersection should be at before consideration is given to warrant the investment of an interchange. The access point at Main Street Martensville meets all listed criteria with the exception of additional methods of improvement, that being, controlled traffic lights at the intersection.

The City is concerned that while time used to consider and to conduct additional phased studies; improvements can be implemented in the short term to reduce collisions and increase safety, are not being acted on. This will only delay what is already identified as being required and the opportunities loss to benefit from by not committing to these safety improvements in a timely fashion.

The City would like to propose two recommendations:

- A short term recommendation, where the City collaborates with the Ministry of Highways and Infrastructure to design and install traffic control signals, designing to allow for a safe functioning intersection in conjunction with the city's existing traffic controls at Main Street and Centennial Dr. intersection. This will help relieve the potential collision rates, reduce commuter time during peak traffic, and ideally funnel commuters to a safer access point onto highway 12 for this localized area. This will also allow time to be taken to complete the next phase(s) of study, identification of interchange locations and function, prior to design and construction phases identified in the long-term network planning.

- A second medium term recommendation, if the traffic signals cannot be a short term option, then expedite the interchange functioning and location identification phase, compressing project phases to reach design and construction so that timely action is taken to invest in the infrastructure to support the regional growth and needed safety considerations.

The City would like to present this report as supporting documentation to the presentation to the Special Committee on Traffic Safety, June 3, 2013. Thank you for your consideration, our contact information is below.

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5.0 Appendix

- 5.1 Highway 11/12 Planning Study – Final Report – Feb. 2013
- 5.2 Planning For Growth Corridor – June 2011
- 5.3 Ministry of Highways and Infrastructure - 2011 Traffic Volume Maps