

# CRASH TALK

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## Calgary Office is on the Move

**Martin Davidson, P.Eng., Partner**

On October 1, 2007, the Calgary office moved into its new home. Still located in the Douglasdale Business Park, we now have 1,200 sq ft of office space and an 1,800 sq ft shop. Space is available for several vehicles, allowing collision examinations and evidence gathering in a controlled and secure environment. A 5-ton hoist aids in comprehensive examinations and mechanical inspections.

Our Edmonton and Calgary offices continue to offer the same complete collision investigation services with office and shop facilities, covering the entire Province of Alberta.

A growing trend in the insurance industry is the ability to transport damaged vehicles from any location in the province directly to either our Calgary or Edmonton shop for a comprehensive inspection in a clean, dry environment. Once completed, the vehicle can be moved locally to an appropriate salvage disposal facility. A direct client benefit is the reduction in travel costs, if a scene investigation is not required.

Our New Calgary Address is:

**#34, 11410 – 27<sup>th</sup> Street SE**  
**Calgary, AB T2Z 3R6**

Our telephone and fax numbers remain the same:

**(403) 290-1150 (Phone)      (403) 290-0659 (Fax)**



## Partnership Announcement

Jim Graham and Patrick Ryan are pleased to announce that Don Pohl and Martin Davidson have become partners in Graham Ryan Consulting Ltd. Don and Martin both joined GRC in 1999.

Don earned a degree in Mechanical Engineering from the University of Alberta in 1995. After graduation, Don worked as a design engineer for an oilfield equipment manufacturer. In addition to design engineering, he also analyzed drilling tool failures.

Martin has a degree in Civil Engineering from the University of Calgary and, prior to joining GRC, 10 years of loss prevention experience with the largest bulk commodity trucking company in North America.

Both Don and Martin are active members of the Canadian Association of Technical Accident Investigators and Reconstructionists (CATAIR) and the Society of Automotive Engineers (SAE).

## GRC Calgary Celebrates 10 Years

In 2007 Graham Ryan Consulting Ltd. reached the milestone of 10 years in the Calgary marketplace. Patrick Ryan started the Calgary operation on March 17, 1997 with a single office in downtown Calgary. Very soon after, the office grew to a staff of three. More than 2,500 collision investigations later, the office has expanded to an all-inclusive office and shop facility that allows for vehicle examinations and crash testing in a controlled environment, plus safe and secure storage for collision investigation evidence.




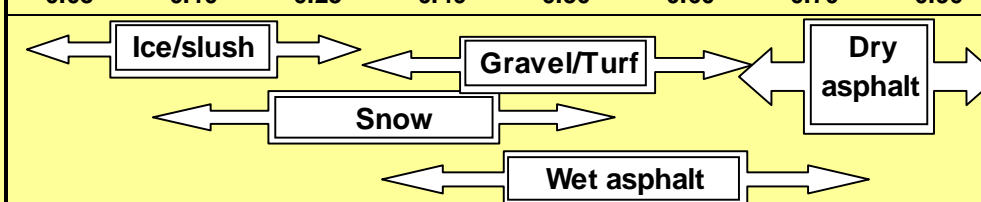
## Speed from Skid

### James W. Graham, P.Eng., Principal Engineer

Tire marks may include acceleration scuffs, skid marks, swerve marks, impact scuffs and tire imprints. It is important to interpret the tire mark correctly so that the appropriate formula is applied. If the tire marks are identified as **skid marks**, then the following chart provides a guide for the speed associated with those tire brake marks.

For example, a set of tire brake marks measures 10 meters long on dry asphalt. A typical coefficient of friction value for this condition is 0.7 and a speed of 42 km/h is calculated (under the 0.7 column where it meets 10 meters skid distance).

There are typically 3 phases to an accident: pre-crash, crash and post-crash. Usually, tire skid marks are part of the pre-crash events and accordingly, the speed calculated from the pre-crash skids will obviously under-report the speed when there is collision and post-impact events that followed. The above chart does not consider the effects of variations in the surface material, elevation changes, individual wheel lockup effects due to collision damage, or other possible variables. For more details, go to our web site under "TOOLS" then "Slide-to-Stop" or contact one of our engineers to discuss the specific circumstances in your investigation. 

Skid Distance (meters)	Skid Distance (feet)	Friction Coefficient							
		0.05	0.10	0.25	0.40	0.50	0.60	0.70	0.90
									
Speed of Vehicle in km/h									
1	3.3	3.6	5.0	8.0	10	11	12	13	15
2	6.6	5.0	7.1	11	14	16	17	19	21
3	9.8	6.2	8.7	14	17	20	21	23	26
4	13	7.1	10	16	20	23	25	27	30
5	16	8.0	11	18	23	25	28	30	34
10	33	11	16	25	32	36	39	42	48
20	66	16	23	36	45	50	55	60	68
30	98	20	28	44	55	62	68	73	83
40	131	23	32	50	64	71	78	84	96
50	164	25	36	56	71	80	87	94	107

"GRC CRASHTALK" is produced by  
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## Recalls



2006/2007 Dodge Durango: Right front steering knuckle may break causing loss of control and result in a crash.



2007 Honda Civic: A rear wheel bearing (on ABS equipped models) may fail causing wheel to fall off.

## Crash Corner



A turbo system works by using exhaust gas to drive an air turbine. The air added to the engine by the turbine can give a 30% increase in horsepower.



The first tubeless tire was invented in 1948.