



Bimmers Across the Border XII – Day of Event Information

Friday through Sunday, August 6-8, 2010

High Performance Driver's Education course at Le Circuit Mont Tremblant

Boston Chapter, BMW Car Club of America, Inc. with special thanks to the BMW Club of Canada

Welcome! To get the most from this school, please study this information. It contains information on flagging, car preparation, and clothing. It also reiterates some but not all the information provided with the on-line registration form.

You have affirmed on the registration form that you are 18 years old or older and that you hold a valid full driver's license. At the event, you may be required to show your driver's license. You and your guests (if any) must sign waivers from the National Car Club and Boston Chapter. This document contains copies of these waivers for your review prior to the event, perhaps with your spouse.

Important Insurance Information. Under Massachusetts' insurance regulations, you may not be covered by your insurance while on the track, even though this is neither a speed event nor practice for any racing or speed contest. Should this possibility make you uncertain about attending this event you may cancel your participation, provided you notify the registrar by July 26, 2010.

This is *not a racing driver's school*. It's a high performance driving school, conducted on a race track under close supervision by experienced instructors. These instructors have been approved by the Chief Instructor. If you wish to bring someone to the track to instruct you, that person must be approved by the Chief Instructor. No race instructors will be allowed.

With the guidance of your instructor, you'll explore your own capabilities and those of your car. This will help prepare you for emergencies. You won't be pushed or encouraged to go any faster than you feel comfortable. If you have any condition or limitation which we may be better able to accommodate by advance planning, please contact us as soon as possible so that we can make your experience educational, safe and fun.

The driver's school chair reserves the right to expel any individual from the event at any time and for any reason. Students who are signed off to solo will be required to have an instructor with them for at least one run session.

Questions and Contacts. Contact Joe Marko with general questions about this school or Simon Cooper with registration questions. For contact information, visit this event's description page at www.boston-bmwcca.org, then choose "The Ultimate Calendar" from the Events menu.

Directions to Le Circuit Mont Tremblant. LCMT is about 90 minutes Northwest of Montreal. From Montreal, take Route 15 Nord, becoming 117 Nord to exit 119, Montée Ryan. Turn right and go through a 4-way rotary. At the 3-way rotary at the end by the lake, go left on Chemin du Village through a 3-way stop sign to another 3-way stop sign at the top of a hill. Turn left on Chemin Séguin, which turns to dirt.

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Schedule. This schedule is *very tight*, and must be adhered to very closely to allow everyone a full share of driving time. Arrive at the track by 7:00am to allow time for Registration, Car Preparation, Tech Inspection, and the Driver's Meeting all before 9:00am. **Drivers who do not register by 7:30 may lose their spot and forfeit all fees.** Drivers who don't promptly arrive for Tech Inspection, the Driver's Meeting, and/or the Ground School will *forfeit driving time* and may be expelled.

7:00am	Track opens & you arrive
7:00 – 8:00	Registration
7:00 – 8:20	Tech Inspection
8:30 – 8:45	Drivers' Meeting
9:00	First cars on track

Arrival. Upon turning at the 3-way stop sign onto Chemin Séguin, proceed slowly down to road to the LCMT gate:

- ★ Go through the main gate, signing the track waiver. Following the counter-clockwise traffic flow and parking map in this package, locate a parking place.
- ★ Bring your *driver's license* to the registration table in the café by the gate to pick up your registration packet and sign the club's waivers (see included samples). All guests must sign these waivers too. The packet includes an Event Schedule (Driving and Ground School), your Run Group, and three sets of the coded Car Numbers.
- ★ Empty your vehicle of all loose items (glove box contents, map pocket contents, floor mats, trunk mat, jack and lug wrench). Attach your Car Numbers (outsides of both rear side windows, as well as the top, driver's-side rear window). Clean the glass surface first, work out all the bubbles, and press to seal around the edges, otherwise the numbers will blow off. Fill up your tires by over-inflating and then bleeding down to save time at the air chuck. Remove wheel trim rings and cosmetic center caps. Torque lug bolts to specification.
- ★ Slide your Pre-Event Safety Inspection Report under your windshield wiper (on the dash if it's raining), and drive your vehicle to the Tech Line on the road to Pit-In/Out. Leave the keys in your vehicle while it is in the Tech Line. If your car isn't in the *Tech Line by 8:15am*, you'll *miss your first run session*.
- ★ At 8:30am, report to the Driver's Meeting held in the paddock outside the tower. Listen to the event's procedures and announcements and ask any questions that you may have. Please refrain from side conversations so that all can hear.
- ★ Report to the Tower for the mandatory Ground School and follow-up classroom sessions as scheduled during the day.
- ★ All Run Groups will have about three 30 minute sessions on the track between 9:00am and 5:00pm. A flag station just before the carousel (Turn 8) will wave the Checker Flag to end each run session. Since LCMT has some corners that will require very heavy braking, drive this cool-down lap slowly enough to avoid using the brakes (about 40 MPH). You and your instructor should use this lap to discuss your driving during the session. A slow cool-down lap will also cool your engine and your head. Don't use the hand/parking brake after parking in the paddock.

Run Group assignments: Your Run Group is the first digit of your Car Number. The registrar places drivers in Run Groups based upon their experience, the event's attendance, and the constraints of any co-driven cars. For multi-day events, Run Groups may differ on each day. Usually there are three or four student Run Groups, an instructor Run Group and possibly a Club Racer Run Group. (Some events contain a separate Club Race).

Rules

- ★ No one under 18 years old may enter the Pit Road or be on the track.
- ★ Drivers may be required to have an instructor with them on track throughout the day.
- ★ Use prudence and reduced speed on Pit Road. Control or the Event Chair may institute a specific speed limit. When pitting-in, check your mirrors before braking. The track speed limit of 15 MPH applies to the paddock.

Requirements

- ★ **Helmet.** *Snell* or *SFI 31.1 2000* or newer. It is your responsibility to make arrangements to have an approved helmet at the event. If you do not have an approved helmet, you will *not* be allowed to drive on the track. Your helmet is part of your on-track Tech Inspection. Beyond the Pit Road wall you must wear a helmet.
- ★ **Clothing.** The event will run rain or shine; come prepared to participate in the pouring *rain*. You must wear lace shoes with socks, long pants, and a long-sleeved shirt. No nylon clothing is allowed. This also applies to anyone in the pit area.

★ **Windows and Sunroofs.** The driver's side window must be completely down while on the track. If there is an instructor in the car, then the passenger's side window must also be open, otherwise it may be either completely opened or closed, but not partially open. Sunroofs must be completely closed.

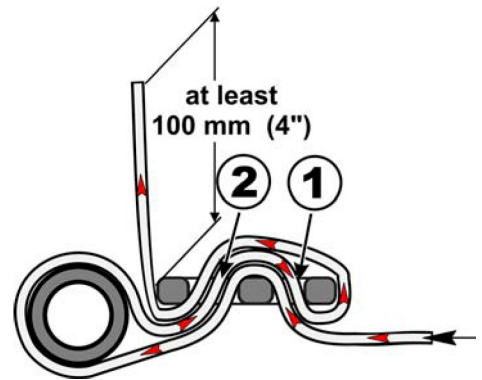
★ **Active Restraint Requirements.** Seat belts (same type for both driver and passenger) must be securely anchored to the floor and/or stock mountings. If your vehicle is equipped with racing harness/belts both driver and passenger harness/belts must be within the *valid SFI or FIA dating*. SFI dating is 2 years from date of manufacture and FIA indicates the year of expiration. Stock and "Schroth type" street legal belts must be installed according to manufacturer's specifications without modification and must *not* be faded, frayed, damaged, or significantly worn.

- 3-point factory Minimum requirement
- 4-point fixed DOT spec 2" lap with 2" shoulder (Schroth type) or FIA spec with 2" or 3" lap with shoulder (all considered equivalent)
- 5/6/7-point fixed SFI/FIA spec 2" or 3" lap belt with 3" shoulder and 1 or 2 point anti-sub belt (all combinations equivalent) *Not to be installed in factory seats.*

The equal restraint requirement between driver and passenger must be made by upgrading, *not by downgrading*. Existing restraint systems may not be left unused to meet the standard. For example, a driver's side factory 3-point belt cannot be used instead of an existing 5-point system to meet the requirement when carrying a passenger; instead, the passenger's side system must be upgraded to a 5-point system.

Safe harness installation is complex and detailed; follow the harness manufacturer's instructions carefully. If in doubt, have your installation inspected by the Boston Chapter *before* the event.

- Harnesses using 3-bar buckles *must be doubled back* as shown. Ensure that slot #2 has *three* thicknesses of webbing. Otherwise it *will* fail.
- Install the 3-bar buckle as close as possible to the roll bar tube.
- Fixing points must be either stock or backed by a steel plate on the *outside* of the car.
- Shoulder harness should be horizontal, or no more than 20° below horizontal, unless otherwise approved by the manufacturer.
- Do not mount any anti-submarine belt around the front of the seat, but rather down through an approved opening in the seat bottom.



★ **Convertibles & Removable Roof Sections.** *All convertibles must be approved in advance by the Event Chair.* 'Convertibles' are defined as cars with retractable tops, whether soft-tops or folding hard-tops. 'Removable roof sections' include targa tops and T-tops, , are characterized by both the A and B pillars being above the passenger compartment and part of the vehicle chassis.

- Convertibles are not allowed to participate in sessions driven at speed unless the car is equipped with the following minimum requirements:
 - a. An approved roll bar or roll cage. The driver's and instructor's helmets must be below the top of the roll bar when sitting upright.
 - b. Five (5) or six (6) point harnesses with properly routed belts for both driver and instructor.
 - c. Arm restraints.
- Cars equipped with removable roof sections are allowed provided that both the driver's and instructor's helmets are below the top of the roll bar or roofline when sitting upright.
- Exclusions – cars equipped with only factory pop-up posts or similar activated rollover protection are not allowed.

Please contact the registrar *before the event* to discuss your vehicle or equipment configuration. If the vehicle does not pass the on-site Tech Inspection with regard to the rules above, you will not be allowed to participate and no refund will be given. If you have an open convertible with an approved roll bar and we are not able to find an instructor who is willing to accompany you on the track, your entry fee will be refunded.

Flags. Flag stations are located at specific corners and elsewhere around the track. At these stations, corner workers watch the cars and monitor the track's condition. When problems arise, the workers display or wave signal flags to warn the drivers of danger ahead before they encounter it. The flag and *how* it's displayed communicate specific situations and command specific responses from the driver. In order to make this event safe for you and other drivers, you must know where the flag stations are, watch for the signal flags, and know what the flags mean. The flags will be also be demonstrated at the Driver's Meeting or first novice Ground School session.

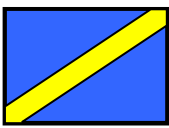


Caution!
Slow down.
No passing.

The **YELLOW FLAG** indicates trouble on the track, either on-track incidents or other conditions that threaten the safety of the event. **No passing and slow down** in the area displaying the yellow flag.

A **WAVING YELLOW FLAG** indicates immediate danger – the more vigorously waved, the greater the danger. **No passing. Be prepared to stop.** The waving yellow flag is the first and immediate response by corner workers to any incident.

A **STANDING YELLOW FLAG** may also used to indicate no passing on the warm-up and cool-down laps.



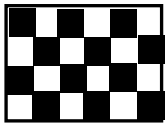
A car wants to
Pass

The **PASSING FLAG** (Blue with Diagonal Yellow Stripe) indicates that perhaps a car behind you wishes to pass. You should consider *if* it is safe and appropriate to give that driver a point-by. This is not a mandate to let the car behind you pass, as the ultimate decision regarding safety rests with you. If you decide to let the car behind you pass, begin to execute a safe passing maneuver, including appropriate point-by, at the next safe opportunity in a designated passing zone. Use a distinct point-by for each individual car you want to let pass. Stay on line and lift if necessary to help faster vehicles pass safely.



Slow cars.

The **WHITE FLAG** indicates that a slower vehicle is entering or is already on the track. At some tracks, the white flag is used whenever a car re-enters the track from Pit Road. It may also indicate the presence of slow-moving emergency vehicles on the track.



End of Session

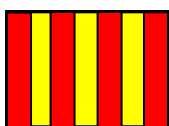
The **CHECKERED FLAG** will be displayed at designated flagging stations at the conclusion of the Run Group's track session. After receiving the checkered flag, you may see a standing yellow flag at every flag station you reach. Do not pass other cars and do not try to squeeze in an extra lap. Proceed around the track at reduced speed to cool your brakes and debrief with your instructor.



Return to Pit Road

The **BLACK FLAG** is used as a warning to a particular driver. Upon direction from Control, certain designated flagging stations will display the black flag and point it at the offending car. If you receive the black flag, acknowledge with a hand wave, proceed to Pit Road and report directly to Control. The black flag may indicate either mechanical trouble or incorrect driving. Extremely careless, unsafe behavior or failure to respond to a black flag may result in ejection from the event. Flag stations must report all safety problems to Control.

A **STANDING BLACK FLAG** is also used to indicate that all cars must smoothly and safely exit the track, usually to clear an incident.



Slippery!

The **DEBRIS FLAG** (Red and Yellow Vertical Stripes) indicates that there is an obstacle on the track you should avoid, such as slippery fluids, a cone, car parts, dirt, or an animal. **No Passing. Slow Down.** Reduce speed until you understand the obstacle. This flag may be pulled in after you've seen it, yet the obstacle remains. If you see the debris flag again, it may be a different obstacle.



Stop

The **RED FLAG** is waved to indicate serious trouble on the track. **All cars must promptly come to a controlled stop.** It is displayed only when Control determines that an on-track incident or condition requires that the event be stopped. It will be displayed at all flag stations simultaneously. *Do not slam on the brakes*, but rather first check your mirrors for cars following closely behind you and bring your car smoothly to a stop off-line and within sight of a flagging station.



Broken Car

Rarely used, the **MEATBALL** (Black with Orange Circle) is a special version of the black flag specifically indicating a mechanical problem. Slow down and drive off line because you might be trailing a slippery fluid. Just as for the regular black flag, return to Pit Road and report directly to Control.

Glossary of Driving Terms and Jargon. You and your instructor need a common vocabulary to communicate fluently. Please read and understand these terms. Terms in **bold** must be memorized; they are used in-car and must be instantly understood.

- APEX** The point in the middle of the turn where the car comes closest to the inside edge of the track.
- BREATHE** To *slightly* relieve pressure on throttle.
- BOTH FEET IN** To depress both the clutch and the brake *hard* to stop a spinning car. “If you spin, both feet in.” (Automatic transmission: press brake only.)
- CAMBER The lateral grade (*i.e.* tilt) of the roadway.
- CONTACT PATCH The portion of a tire coming in contact with the road.
- COOL-DOWN LAP The final lap before entering the pits at the end of the driving session.
- CRAB/CHEAT** To gradually leave the outside edge of the track before reaching the turn-in point. Wastes road width, tightening the corner. May lead to an early apex. *Bad.*
- EARLY APEX Apex in which the car reaches the inside edge of the track too soon in the corner. Usually caused by early turn-in, the car may run out of track at the track-out point. *Very bad.*
- EASE ON/EASE OFF** To smoothly add or remove throttle input.
- FRICITION CIRCLE A graph on which the cornering, braking and acceleration forces of a car are plotted.
- HEEL & TOE A method of simultaneously downshifting and braking.
- LATE APEX Apex in which the car reaches the inside edge of the track too late in the corner. Usually caused by late turn-in, the car will not need all the track width at exit. Slow but safe.
- LIFT** To remove throttle input partially or completely.
- THE LINE** The optimized path around the track.
- OVERSTEER** A condition where the rear tires are sliding more than the front tires in a turn.
- PASSING ZONE A portion of the track designated for over-taking (passing).
- PINCH** To add steering input while turning (such as when making up for an early apex) or alternatively to not allow the car to drift out to the track-out point. Invites a spin.
- PIT-IN SIGNAL** A hand signal given by the driver of a vehicle warning that he or she is traveling slowly, whether about to enter the pits or not.
- POINT-BY** A hand signal given by the driver to indicate on which side another car should pass.
- POWER OVERSTEER Oversteer caused by applying too much throttle too soon.

REFERENCE POINT	A landmark used by the driver to initiate braking, turn-in, apex, or track-out. Also known as mark as in “hitting your marks.”
RED MIST	Over-aggressive judgment caused by the excitement and fatigue of track driving. Also known as Helmet Fire.
ROTATION	The turning of a car by using brakes and/or throttle. See trailing throttle oversteer, trail brake, and weight transfer.
SKID PAD	A circular training course that provides a driver with a perpetual corner
SPIN	A condition where the tires have lost traction and the vehicle is spinning around its vertical axis.
SQUEEZE	To smoothly add more throttle.
STAY IN/STAY OUT	A command given by an instructor asking the driver to either keep the car closer to the inside of the corner (STAY IN), or position the car closer to the outside of the corner (STAY OUT).
STRING RULE	Rule that as you increase one input, another must be decreased, as if connected by a string. Examples include unwinding as you squeeze on power or coming off the brake as you turn-in.
THRESHOLD BRAKE	To use 100% of the car’s braking ability in a straight line. Just shy of wheel lock-up (skid) or ABS (Antilock Brake System) activation.
TRACK-OUT	The exit point of a corner where the car passes close to the outside edge of the track
TRAIL BRAKE	To intentionally use some brakes, in diminishing amounts, from the turn-in point toward the apex, often to induce rotation.
BRAKE OVERSTEER	Oversteer caused by excessive trail braking or by applying the brakes while turning.
TRAILING-THROTTLE OVERSTEER	Oversteer caused by abruptly lifting off the throttle as the car is turning.
TURN-IN	The entry point of a corner where the driver first turns the steering wheel.
TYPE I TURN	A turn that leads directly onto a straight. Considered the most important type.
TYPE II TURN	A turn at the end of a straight. Considered less important.
TYPE III TURN	A turn that connects two other turns (does not lead onto or end a straight), considered the least important. Often a “throwaway turn,” implying that the fastest line doesn’t follow the classic turn-in / apex / track-out line.
UNDERSTEER	A condition where the front tires are sliding more than the rear tires in a turn.
UNWIND	To return the steering wheel to the center position.
WEIGHT TRANSFER	Change in the car’s distribution of weight on each of the four tires as a result of lateral (sideways) or longitudinal (front/back) acceleration.

ATTENTION E30 & E36 M3 Owners

A special caution regarding ball joint failures on E30 and E36 M3 cars

Worn E30 M3 ball joints are prone to *fail* under load. Prior to the Boston Chapter issuing this warning, several cars were lost, at least one with a minor injury to the driver.

1. As part of your required Tech Inspection, the car must be put on a lift, and thoroughly inspected by a qualified mechanic with careful attention given to the integrity of the ball joints and corresponding subframe mounting sockets. While on the lift, ball joints must be compressed with large (*e.g.* 16") slip-lock pliers while the ball joint is felt with the other hand. There should be no movement felt for track use. Worn ball joints must be replaced immediately.
2. In at least one instance, it was reported that there were no prior visible signs of wear on a ball joint that subsequently failed at speed. The lack of obvious signs of wear does not necessarily indicate integrity of the ball joint. A manual inspection may not reveal insidious cracks detectable by sophisticated nondestructive testing such as x-ray or magneflux.
3. Any E30 M3 driven 20 or more dry track days on performance tires should have the lower control arms replaced.
4. This failure appears to be pronounced in cars with significant mileage and/or use on the race track with performance R-compound tires. Cars driven with street tires are probably at significantly lower risk of early ball joint failure due to lower maximum sustainable g forces.
5. Both the inner and outer ball joints are suspect to fail.
6. It appears that the E36 M3 also uses a ball joint with the same physical dimensions and these cars may also be at risk. *E36 M3 owners* should follow the same maintenance recommendation in Item 3.

BMWCCA National Waiver

IN CONSIDERATION of being permitted to compete, officiate, observe, work for or participate in any way in the EVENT(S) or being permitted to enter for any purpose any RESTRICTED AREA (defined as any restricted area requiring special authorization, credentials, or permission to enter or any area which admission by the general public is restricted or prohibited including but not limited to the competition area and any hot pit area), EACH OF THE UNDERSIGNED, for himself, his personal representatives, heirs and next of kin:

1. Acknowledges, agrees, and represents that he has or will immediately upon entering any of such RESTRICTED AREAS, and will continuously thereafter, inspect the RESTRICTED AREAS which he enters and he further agrees and warrants that, if at any time, he is in or about the RESTRICTED AREAS and he feels anything to be unsafe, he will immediately advise the officials of such and will leave the RESTRICTED AREA and/or refuse to participate further in the EVENT(S).
2. HEREBY RELEASES, WAIVES, DISCHARGES AND COVENANTS NOT TO SUE the promoters, participants, racing associations, sanctioning organizations or any subdivision thereof, track operators, track owners, officials, vehicle owners, drivers, pit crews, rescue personnel, and any persons in any RESTRICTED AREA, promoters, sponsors, advertisers, owners and others who give recommendations, directions, or instructions, or engage in risk evaluation or loss control activities regarding the premises or EVENT(S) and each of them, their directors, officers, agents and employees, all for the purposes herein referred to as "Releases", FROM ALL LIABILITY TO THE UNDERSIGNED, his personal representatives, assigns, heirs, and next of kin FOR ANY AND ALL LOSS OR DAMAGE, AND ANY CLAIM OR DEMANDS THEREFORE ON ACCOUNT OF INJURY TO THE PERSON OR PROPERTY OR RESULTING IN DEATH OF THE UNDERSIGNED ARISING OUT OF OR RELATED TO THE EVENT(S), WHETHER CAUSED BY THE NEGLIGENCE OF THE RELEASEES OR OTHERWISE.
3. HEREBY AGREES TO INDEMNIFY AND SAVE AND HOLD HARMLESS the Releasees and each of them FROM ANY LOSS, LIABILITY, DAMAGE, OR COST they may incur arising out of or related to the EVENT(S) WHETHER CAUSED BY THE NEGLIGENCE OF THE RELEASEES OR OTHERWISE.
4. HEREBY ASSUMES FULL RESPONSIBILITY FOR ANY RISK OF BODILY INJURY, DEATH OR PROPERTY DAMAGE arising out of or related to the EVENT(S) whether caused by the NEGLIGENCE OF RELEASEES or otherwise.

5. HEREBY acknowledges that THE ACTIVITIES OF THE EVENT(S) ARE VERY DANGEROUS and involve the risk of serious injury and/or death and/or property damage. Each of THE UNDERSIGNED also expressly acknowledges that INJURIES RECEIVED MAY BE COMPOUNDED OR INCREASED BY NEGLIGENT RESCUE OPERATIONS OR PROCEDURES OF THE REEASEES.

6. HEREBY agrees that this Release and Waiver of Liability, Assumption of Risk and Indemnity Agreement extends to all acts of negligence by the Releasees, INCLUDING NEGLIGENT RESCUE OPERATIONS and is intended to be as broad and inclusive as is permitted by the laws or the Province or State in which the Event(s) is/are conducted and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect.

I HAVE READ THIS RELEASE AND WAIVER OF LIABILITY, ASSUMPTION OF RISK AND INDEMNITY AGREEMENT, FULLY UNDERSTAND ITS TERMS, UNDERSTAND THAT I HAVE GIVEN UP SUBSTATNTIAL RIGHTS BY SIGNING IT, AND HAVE SIGNED IT FREELY AND VOLUNTARILY WITHOUT ANY INDUCEMENT, ASSURANCE, OR GUARANTEE BEING MADE TO ME AND INTEND MY SIGNATURE TO BE A COMPLETE AND UNCONDITIONAL RELEASE OF LIABILITY TO THE GREATEST ALLOWED BY LAW.

Optional BMWCCA Driver's School Medical Information Form

Completion of this Form is at the option of the Applicant. Complete this form if you would like rescue personnel at the racetrack to have your medical information readily available should you incur personal injuries or suffer from an illness while participating in the event. If you opt to complete this Form, you must strictly follow the instructions below and your envelope will be delivered to the rescue personnel before driving begins. After conclusion of the event, your envelope and its contents will be shredded.

Instructions.

- Seal form in a business-sized envelope with your name, event location and date printed clearly on the front.
- Submit the labeled envelop at the registration booth/table prior to commencement of the event.

CONTACT INFO	Name _____
	Address _____
	Phone _____ (home) _____ (work) Date of Birth _____
	Your Physician(s) _____
	Physician's Phone _____
	In case of emergency, contact _____ Will this person be at the track? _____
	Emergency contact address _____
	Emergency contact phone _____ Relationship _____

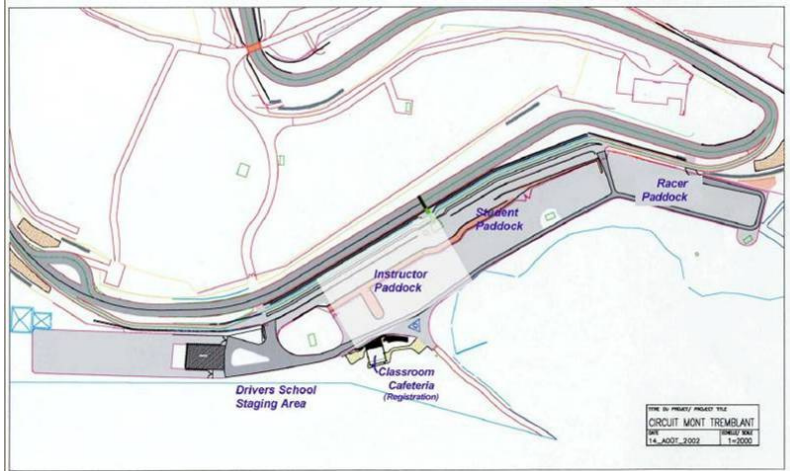
MEDICAL INFO	Blood Type _____
	Medications Now Using _____ _____
	Ailment(s) Medication is for: _____ _____
	Allergies to EMERGENCY Medications _____ _____

I hereby certify that the above information is true and accurate. Also, I hereby grant permission to my physician(s) and any hospital or institution that has treated me to furnish my medical information to rescue personnel and/or other physicians or hospitals providing medical treatment to me as a result of an incident in the driving event referenced above.

Date: _____ Signature: _____

Le Circuit Mont Tremblant Paddock Map

Traffic flows *counter-clockwise* between the cafe and the racer's area. Drive on the left past the cafe to/from the Pit Road entrance.



Le Circuit Mont Tremblant Track Map

