

# Race Day

The Race Day Guidebook contains all information essential to operating race day in a safe, efficient and professional manner. The OC reserves the right to change or ignore any section of this guidebook, in accordance with any last-minute changes that may come up during Race Day.

Should you have any questions regarding Race Day *ahead* of the competition, please contact [raceday@gnctr2025.ca](mailto:raceday@gnctr2025.ca). If you have questions regarding Race Day at any point *during the competition*, feel free to tag Gregory “Henry V” (@henry\_the\_fifth) on Discord.

## When

Time	Event
6:00 AM	Breakfast in rooms, picked up by Team Captains - 6:00am
6:30 AM	First wave of buses leave hotel for hill at 6:30am. Each team should have 6-8 members on this wave.
7:00 AM	Second and third bus waves leave at 7:00 AM and 7:30 AM
7:30 AM	Teams arrive at the hill and set up their toboggans - 7:00-9:00am
8:00 AM	
8:30 AM	Start of Safety Inspections for first 6 racing teams
9:00 AM	
10:00 AM	<b>RACE DAY Part 1 - Drag Race &amp; Slalom Events</b>
11:00 AM	9:00am - 12:00pm
11:30 AM	
12:00 PM	Lunch and Alumni toboggan racing
12:30 PM	12:00am - 1:00pm
1:00 PM	
2:00 PM	<b>RACE DAY Part 2 - Reine de la montagne (King of the hill)</b>
3:00 PM	1:00pm - 4:00pm
3:30 PM	
4:00 PM	Pack up crates - 4:00pm-5:00pm
4:30 PM	First wave of buses back to the hotel - 4:30pm
5:00 PM	Last wave of buses back to the hotel - 5:00pm
6:00 PM	Captain's Meeting - 6:00pm
7:00 PM	<b>CLOSING CEREMONIES</b> at the Hotel
8:00 PM	7:00pm - 2:00am
9:00 PM	
10:00 PM	
11:00 PM	

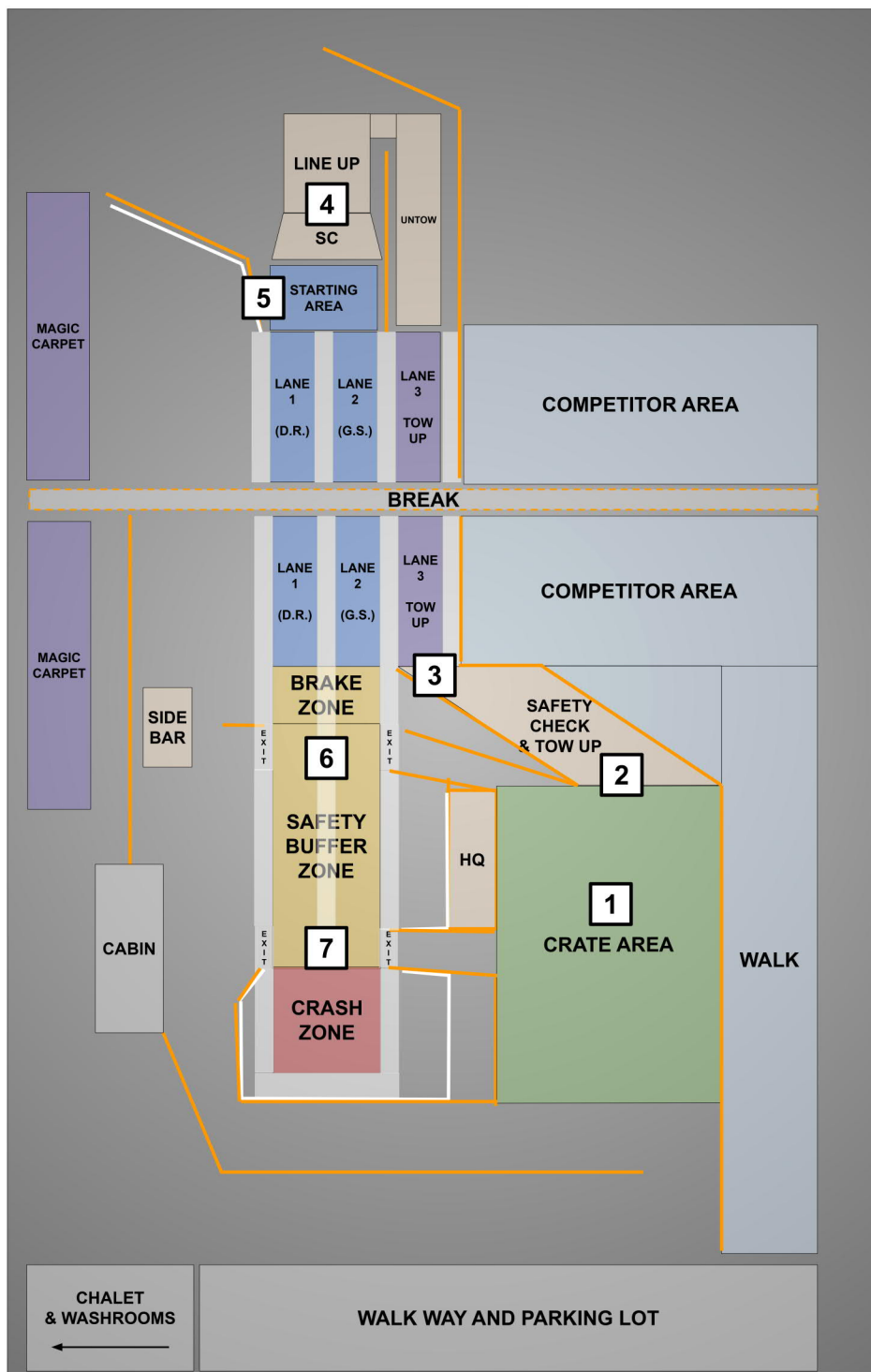
## Where

In preparation for Race Day, each university will select 6-8 members of their team to set up their Toboggan the morning of Race Day. These members will be expected on the first wave of buses which will leave the hotel at 6:30 AM and will arrive at GPAT by 7:30 AM. For universities transporting their toboggan by trailer, they are expected to arrive at GPAT by 7:30 AM and are responsible for their commute. Arriving late will be at your own detriment.

Race day will be held at Groupe Plein Air Terrebonne, located at 1150 Rue Côte Boisée, Terrebonne, QC J6X 4R8. It is roughly a 1 hour bus ride from the hotel. Parking is available at the venue. Those driving their own toboggans can park their trailers on the parking lot side of the 'Crate Area'.

The race will take place on the lower half of the hill. Regular use of the hill will continue to take place on the upper half. Please respect the skiers who will be occupying the same common spaces at the bottom of the hill such as the washrooms and parking lot.

# Race Day Layout



- |   |                   |   |                             |
|---|-------------------|---|-----------------------------|
| 1 | Crate Area        | 5 | Starting Line               |
| 2 | Safety Inspection | 6 | Finish Line & Braking Zone  |
| 3 | Tow Up            | 7 | Returning to the Crate Area |
| 4 | Staging Area      |   |                             |

## Racing Process

The process for each toboggan will include the 7 following stations (see labeled diagram above). Each station will be clearly marked on site. It is imperative that teams follow the order of the stations in a timely manner to ensure that the day passes smoothly and everyone gets an equal chance to ride their toboggan down the hill.

### STATION 1: Crate Area

This station is for opening your crate and assembling your toboggan. Teams with crates will find them already placed on the GPAT lawn and will set up their toboggans in their team's designated spot. Teams with trailers will unload their crates in the GPAT parking lot and must transport their toboggan to their designated spot within the Crate Area.

### STATION 2: Safety Inspection

Every toboggan will undergo a safety inspection before every single run. Inspections begin at 8:30 AM. Teams are expected to be in line for inspection **at least 30 minutes before their first run**. If a previous team is delayed, inspections may be conducted on a first-come first-serve basis allowing other teams to race earlier than scheduled.

Inspections will be conducted by the Safety Judges. Inspections will include but are not limited to:

- Confirming Racers and Pushers.
- Confirming Racers have the proper equipment and meet all safety requirements.
- Validate that the team's Braking System is functioning.

### STATION 3: Tow Up

Once a team has passed inspection, they will push their toboggan towards the tow up zone. The snowmobile operator will hook onto the toboggan and one Racer will enter the Toboggan to operate the Steering System. The remaining Racers and Pushers will exit the Tow Up Zone and walk to the Magic Carpet on the opposite side of the hill and ascend the hill.

### STATION 4: Staging Area

Once at the top of the hill, volunteers will push the Toboggan towards the Staging Area where Teams will regroup, wait in line, and prepare for racing. While in line, competitors will wait for instructions from the Organizing Committee.

### STATION 5: Starting Line

Each team will approach the starting line only if the track is clear and the Organizing Committee has indicated that they may advance. Once the toboggan is positioned at the starting line, Racers will enter and secure themselves in their Toboggan. Pushers will position themselves at the back of the toboggan.

*Once racing is cleared to commence, the VP Race Day will **blow his whistle** to signal the beginning of a race and Pushers will push the toboggan **without themselves passing the Starting Line**.*

### STATION 6: Finish line and Braking Zone

Teams are expected to activate their brakes once their Toboggan has passed the Finish Line and they are in the Braking Zone.

#### *Exiting the Toboggan:*

Once the Toboggan has come to a stop, two volunteers will come to the Toboggan and let the Racers out. Two other volunteers will be in charge of measuring the braking distance for calculating the Braking Performance.

#### *Exiting the Track:*

Once the braking distance has been recorded, teams may disengage their brakes and must push their Toboggan off the track as fast as possible to not delay the next race.

- **CAUTION:** When exiting Track 1 and returning to the Crate Area, Teams will pass in front of the Toboggan tracks. Teams are not allowed to pass in front of tracks while racing is ongoing and must wait to be directed by an official.

### STATION 7: Returning to the Crate Area

Each toboggan may return to their designated spot in the Crate Area to complete any repairs as necessary after their first run. Teams must then re-enter the Safety Check line at least 15 minutes before their next run of the day.

- **EXCEPTION:** Teams have 10 minutes to return to Safety Check between Reine de la Montagne runs as per 9.8.7 of the Rulebook. Any team in excess of 10 minutes will be disqualified.

## Drag Race and Giant Slalom

Drag Race		Giant Slalom	
Time	Team	Time	Team
9:00 AM	UBCO	9:05 AM	Western
9:10 AM	McMaster	9:15 AM	U of T
9:20 AM	TMU	9:25 AM	U of C
9:30 AM	U of A	9:35 AM	U of M
9:40 AM	Waterloo	9:45 AM	MUN
9:50 AM	NAIT	9:55 AM	U of O
10:00 AM	Guelph	10:05 AM	Concordia
10:10 AM	UBC Van	10:15 AM	Queens
10:20 AM	York	10:25 AM	Lakehead
10:30 AM	Western	10:35 AM	UBCO
10:40 AM	U of T	10:45 AM	McMaster
10:50 AM	U of C	10:55 AM	TMU
11:00 AM	U of M	11:05 AM	U of A
11:10 AM	MUN	11:15 AM	Waterloo
11:20 AM	U of O	11:25 AM	NAIT
11:30 AM	Concordia	11:35 AM	Guelph
11:40 AM	Queens	11:45 AM	UBC Van
11:50 AM	Lakehead	11:55 AM	York

Race Day consists of three main events: Drag Race, Giant Slalom, and the Reine de la Montagne (King of the Hill: Special Edition). All teams who have passed the safety inspections will participate in the drag race and giant slalom events. Only those who qualify will participate in the Reine de la Montagne in the afternoon. Qualification will be based on Drag Race and Slalom performance.

Teams are expected to be at Safety Inspection **10 minutes** before they are expected to race. Teams should be in line for inspection at least 30 minutes before their first run.

## Reine de la Montagne

The order will be determined based on Fastest Run, Braking Performance, and Steering Performance scores. In the event that more than 16 teams qualify for Reine de la Montagne, the bracket will be extended.

Reine de la Montagne			
Time (Tentative)	Bracket	Left Track	Right Track
1:00 PM	A	Team 1	Team 16
1:10 PM	B	Team 2	Team 15
1:20 PM	C	Team 3	Team 14
1:30 PM	D	Team 4	Team 13
1:40 PM	E	Team 5	Team 12
1:50 PM	F	Team 6	Team 11
2:00 PM	G	Team 7	Team 10
2:10 PM	H	Team 8	Team 9
2:20 PM	AH	Winner of A	Winner of H
2:30 PM	BG	Winner of B	Winner of G
2:40 PM	CF	Winner of C	Winner of F
2:50 PM	DE	Winner of D	Winner of E
3:00 PM	AHDE	Winner of AH	Winner of DE
3:10 PM	BGCF	Winner of BG	Winner of CF
3:20 PM	Bronze	Loser of AHDE	Loser of BGCF
3:30 PM	Gold and Silver	Winner of AHDE	Winner of BGCF

## Evaluating Performance

The following table breaks down how performance will be evaluated. Each performance will be scored only if a team is able to achieve a Complete Run (9.6).

EVENT	EVALUATION
Drag Race	Fastest Run Braking Performance
Giant Slalom	Fastest Run Braking Performance Steering Performance
Reine de la Montagne	Reine de la Montagne Performance

Fastest Run: The time it takes for your toboggan to cross the finish line. The best score from the Drag Race and Giant Slalom events will be used in your evaluation.

$$P_i = 0.5 + 6.5 \left( \frac{\max(t) - t_i}{\max(t) - \min(t)} \right)$$

Steering Performance: The ability of your toboggan to steer between gates. The score from the Giant Slalom event will be used in your evaluation.

$$P_i = 7.0 - F_i$$

Braking Performance: The ability of your toboggan to stop within the Braking Zone. The best score from the Drag Race and Giant Slalom events will be used in your evaluation.

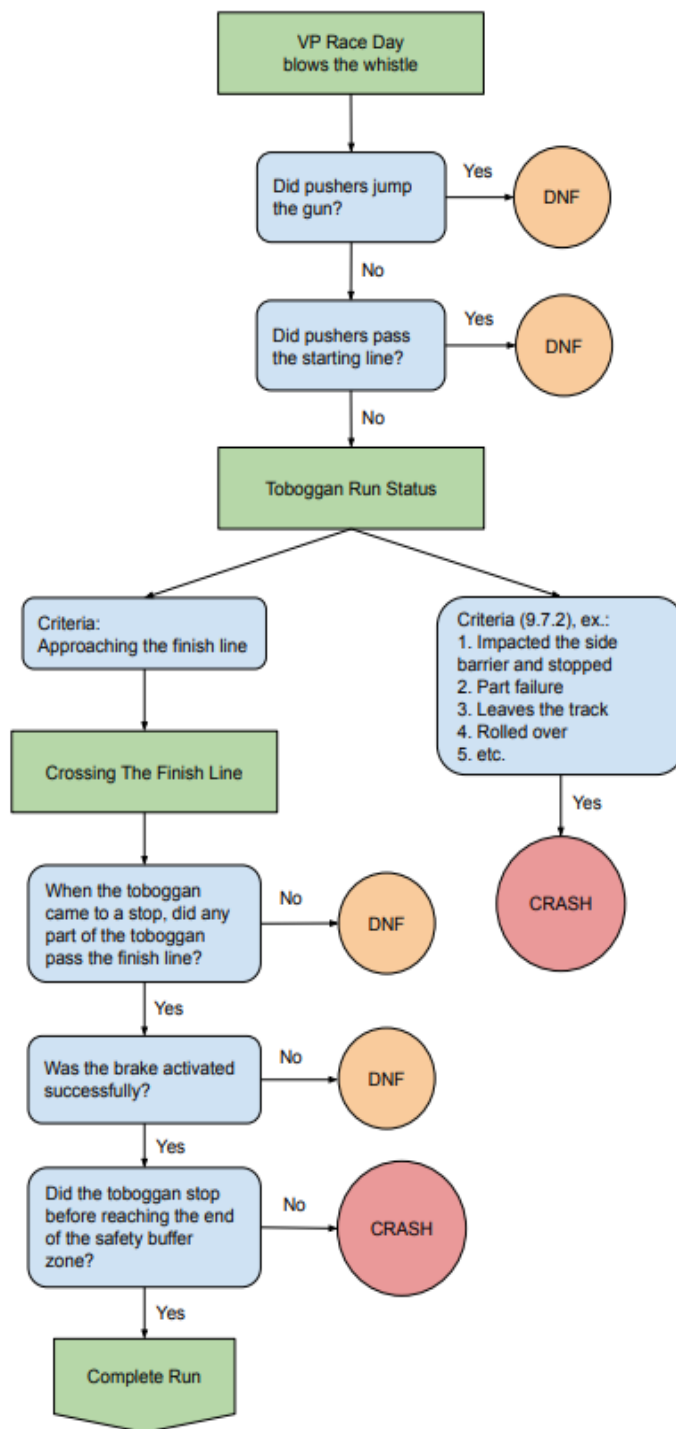
$$P_i = 0.5 + 6.5 \left( \frac{A_i - \min(a)}{\max(a) - \min(a)} \right)$$

Reine de la Montagne Performance: In order to continue to the next bracket of the Reine de la Montagne event, your toboggan must cross the finish line and demonstrate the ability to brake within the Braking Zone or Safety Buffer Zone. If both teams complete these objectives, the first team to cross the finish line will continue to the next bracket.

## Fault Trees

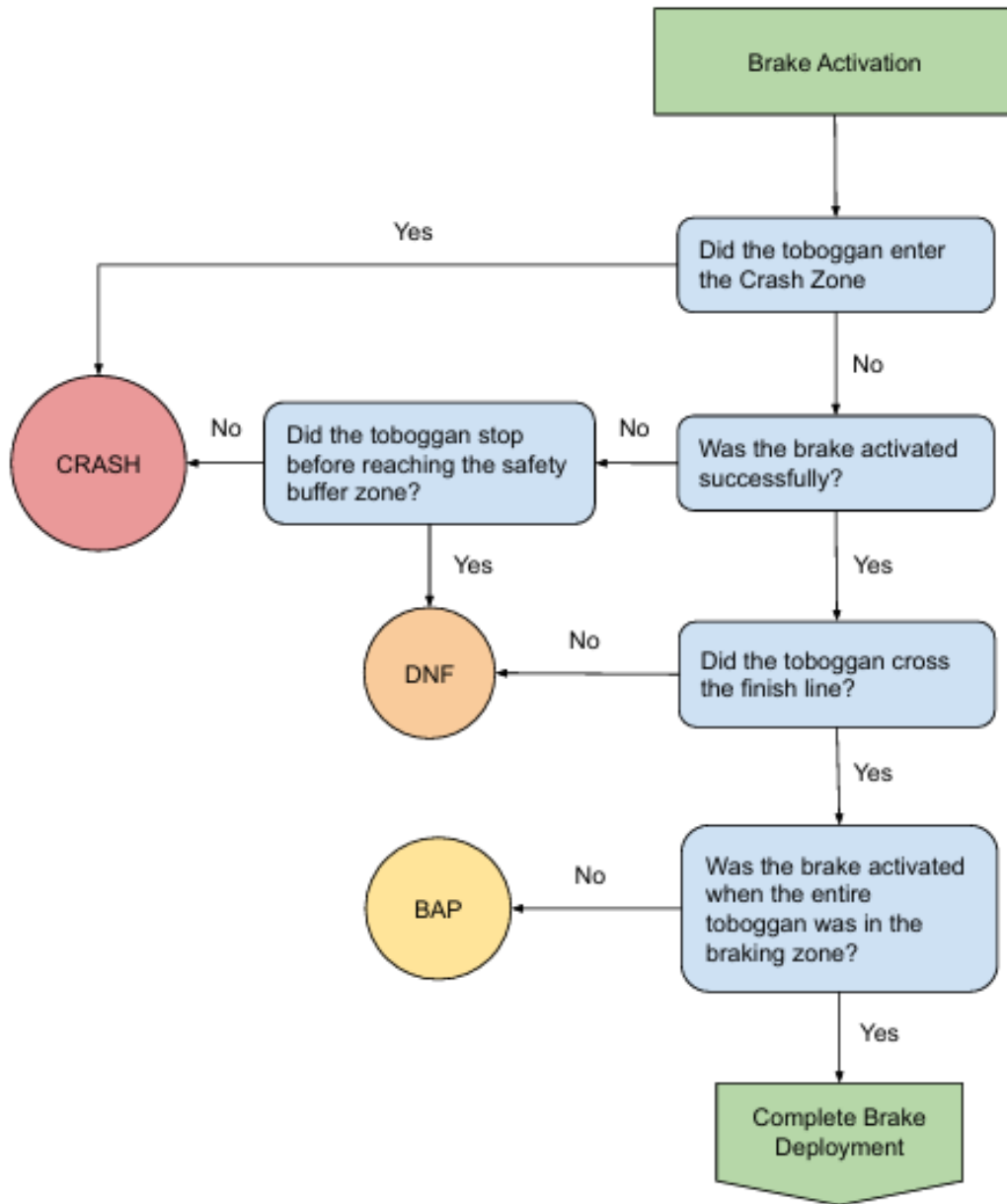
To limit confusion around Racing Performance, the following fault trees will be used to determine whether teams have achieved a Complete Run (9.6).

### Fastest Run and Steering Performance Fault Tree:





Braking Performance Fault Tree:



### Reine de la Montagne Fault Tree:

