

SIGNALGUARD

TL-1 & TL-2 LEVELS ACCORDING TO NCHRP 350



SECURE

GUIDE

OPTIMIZE



A SAFETY GUARDRAIL EASILY CONFIGURED ACCORDING TO YOUR NEEDS

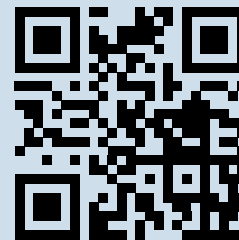
Cities around the world, including greater Montreal, use this temporary system for securing work areas and roadways, for pedestrians and drivers.

Signal Services follows trends, improves its products, creates added value: the Signal Guard is perfect proof of this.

Designed and prototyped here in St-Mathieu-de-Laprairie by our team of engineers, the Signal Guard has grown over the past 3 years. It has evolved and has been tested in several configurations across Quebec. As a result of this work, in 2021, **the Signal Guard was certified NCHRP350 TL1 and TL2***.

Do you want to know more? Follow the guide!

LIGHT. SAFE. CERTIFIED.



You Tube

Signal Guard on impact of a vehicle traveling at 70 km / h

* on Signal Guard configuration without fences.

SIGNAL GUARD IN A FEW WORDS



SECURE

Tested and NCRHP350 approved in TL1 or TL2 configurations, the **Signal Guard** is designed so that road users cannot cross it.

Its flat and contoured base delivers **great stability** should a collision occur. As a vehicle mounts on the base, the vehicle's weight itself adds to the stability while the barrier slides it back to the road.

The safety of workers, pedestrians and drivers is assured as effectively as the widely used concrete barriers.

GUIDE

THE SIGNAL GUARD GUIDES MOTORISTS.

Drivers often receive confusing and even contradictory messages in work areas. Unfamiliar detours, narrowing lanes, close cross-traffic create stressful situations that may cause disorientation. Unfortunate contacts may result with other vehicles, or the more vulnerable pedestrians, cyclists and workers.

Day or night, the **Signal Guard** visually **shows the path to follow through** the work area and gives the driver an actual physical corridor. High intensity reflectors may also be added for the clearest guidance.



THE SIGNAL GUARD GUIDES PEDESTRIANS.

By creating **specific corridors**, pedestrians are assured safe passage. Access to crossings, shops and homes can be separated from work areas and traffic lanes. The **Signal Guard also minimizes the risk of falls** for people with disabilities, thanks to its flat base and continuous lines.



OPTIMIZE

Its design makes the **Signal Guard the most practical and easy to use guardrail** in restricted areas such as urban construction or roads with little shoulder clearance.

Facilitated traffic flow, separated pedestrian corridors and protected work areas can be achieved. The **compact and clean Signal Guard** makes it possible.

Your budget will be reduced. Their lightness and size reduce transport and installation costs in comparison to concrete barriers: fewer trucks by installation length and smaller work teams for mobilizing, reconfiguring and demobilizing.

SECURE

CERTIFIED NCHRP350

GUIDE

WORK AREAS

CARS / PEDESTRIANS / CYCLISTS

OPTIMIZE

LIGHTER GUARDRAILS, LIGHTER BUDGET

SIGNALGUARD

IN A FEW PROJECTS



MONTREAL

Various small projects from 1 week to 1 month in various boroughs 2021

Ste-Catherine west Project, 2021 (5) (7)

TL1 and TL0 configuration (see TL0 information page 9)

PIE IX Project, 2020

TL0 configuration (see TL0 information page 9)

Montreal Heart Institute Project, 2021 (3) (12)

TL1 Configuration

Mont-Royal Metro Project, 2021 (9) (11)

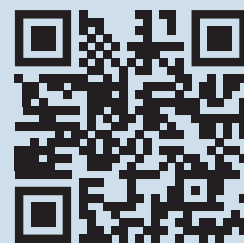
TL1 Configuration

ELSEWHERE IN QUEBEC

Various small projects from 1 week to 1 month in various cities around Montreal, 2021

Granby, 2020

| St-Lazare, 2019



Signal Guard installation 2021 projects in Montreal



MOBILIZATION, DEMOBILIZATION & ADJUSTMENTS

The **Signal Guard** is the lightest temporary guardrail system to transport and the easiest to install and uninstall. The impact on traffic during installation or removal is therefore minimized.

During mobilization and demobilization, fewer trips are required to transport them to the site thanks to their lightness and small footprint. With a flatbed trailer you can transport more than a hundred units, or up to sixty in a 16 foot cube truck.

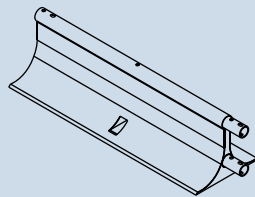
Once there, installation is done by hand, with no need for special tools. The **Signal Guard** guardrails are linked one to the next and locked securely using tubes. Anchoring to the ground at the start and end is enough to give it its TL1 and TL2 rating. Our teams are trained and can install your small project in a few hours or more for your larger projects.

MAINTENANCE & STORAGE





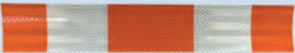

Signal Guard is sturdy, made of steel and rarely destroyed. For on-site maintenance, the guardrails may need repositioning after an impact. When returning from a job, inspection is recommended before re-use. Dent removal may be necessary after scrapes with a vehicle or construction equipment.

Storage is done easily and stacking saves space. Their light weight allows manual handling.

SIGNAL GUARD TO COMPARE



SPECIFICATIONS	SIGNAL GUARD	NEW-JERSEY BARRIER
DIMENSIONS SECTION LENGTH WITH INSERTION TUBE	1500 mm x 500 mm x 425 mm 1630mm	4000 mm x 615 mm x 823 mm
WEIGHT	59 kg	2360 kg
MATERIAL	Galvanized steel	Concrete
ANCHORING	250 mm anchor rods at the beginning and end	Non required

+ AVANTAGES & - DISADVANTAGES	SIGNAL GUARD	NEW-JERSEY BARRIER
ENCLOSURE / FENCE	<p>+ Yes 3 dimensions</p> <ul style="list-style-type: none"> - 1070 mm (H) x 3000 mm (L) - 1580 mm (H) x 3000 mm (L) - 2000 mm (H) x 3000 mm (L) 	<p>+ Yes</p> <ul style="list-style-type: none"> - 1580 mm (H) x 1870 mm (L)
MOBILIZATION	<p>+ Installed manually</p> 	<p>- Specialized equipment</p> 
STORAGE	<p>+ </p>	<p>- </p>
REFLECTORS	<p>+ </p> <p>Hight intensity reflective stripes to increase visibility applied directly on the guardrail</p>	

TEMPORARY MODULAR SECURITY GUARDRAIL

Separate your yards, demarcate your parking or plot of land, secure your construction machinery, determine a route, the « TLO » Signal Guard is the barrier you need.

Request the brochure or visit the www.signal.ca/signal-guard/



PERSONALIZATION POSSIBILITIES FOR INFORMATIONAL, ADVERTISING OR OTHER PURPOSES.

We can affix your logo, phone number or company name to positively identify your material.

Add reflective strips to increase nighttime visibility.



EVALUATION FACTORS	EVALUATION CRITERIA	TEST RESULTS			
		1-10	1-11	2-10	2-11
STRUCTURAL ADEQUACY	A. Test article contain and redirect the vehicle; the vehicle should not penetrate, underide, or override the installation although controlled lateral deflection of the test article acceptable.	PASS	PASS	PASS	PASS
OCCUPANT RISK	D. Detached elements, fragments or other debris from the test article should not penetrate or show potential for penetrating the occupant compartment, or present an undue hazard to other traffic, pedestrians, or personnel in a work zone. Deformations of, or intrusions into, the occupant compartment that could cause serious injuries should not be permitted.	PASS	PASS	PASS	PASS
	F. The vehicle should remain upright during and after collision although moderate roll, pitching and yawing are acceptable.	PASS	PASS	PASS	PASS
	H. Occupant impact velocities should satisfy the following: Longitudinal and Lateral: Preferred 9 m/s Max. 12 m/s	PASS	N/A	PASS	N/A
	I. Occupant ridedown accelerations should satisfy the following: Longitudinal and Lateral: Preferred 15 g's Max. 20 g's	PASS	N/A	PASS	N/A
VEHICLE TRAJECTORY	K. After collision, it is preferable that the vehicle's trajectory not intrude into adjacent traffic lanes.	PASS	PASS	PASS	PASS
	L. The occupant impact velocity in the longitudinal direction should not exceed 12 m/s and the occupant ridedown acceleration in the longitudinal direction should not exceed 20 g's.	N/A	PASS	N/A	PASS
	M. The exit angle from the test article preferably should be less < 60% of the test impact angle, measured at time of vehicle loss of contact with the test device.	PASS	PASS	PASS	PASS

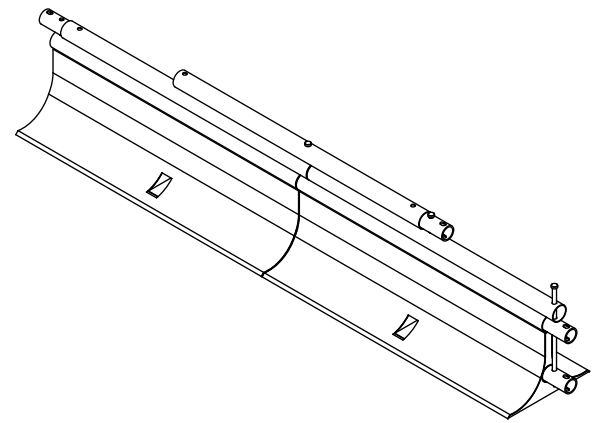
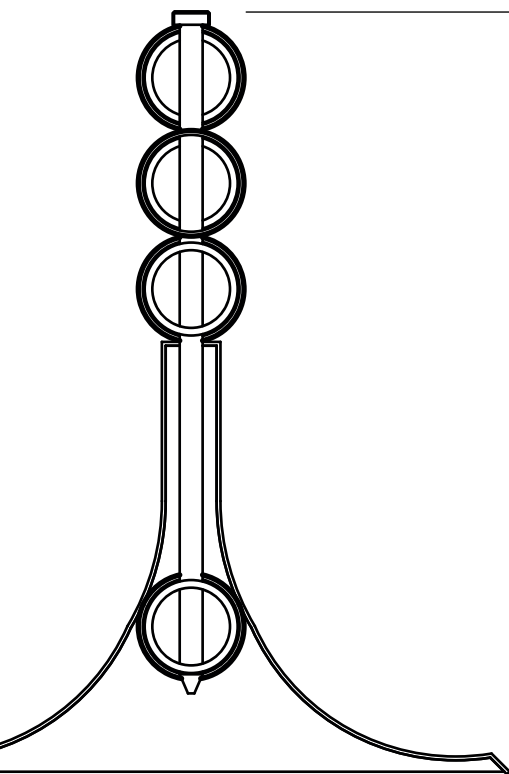
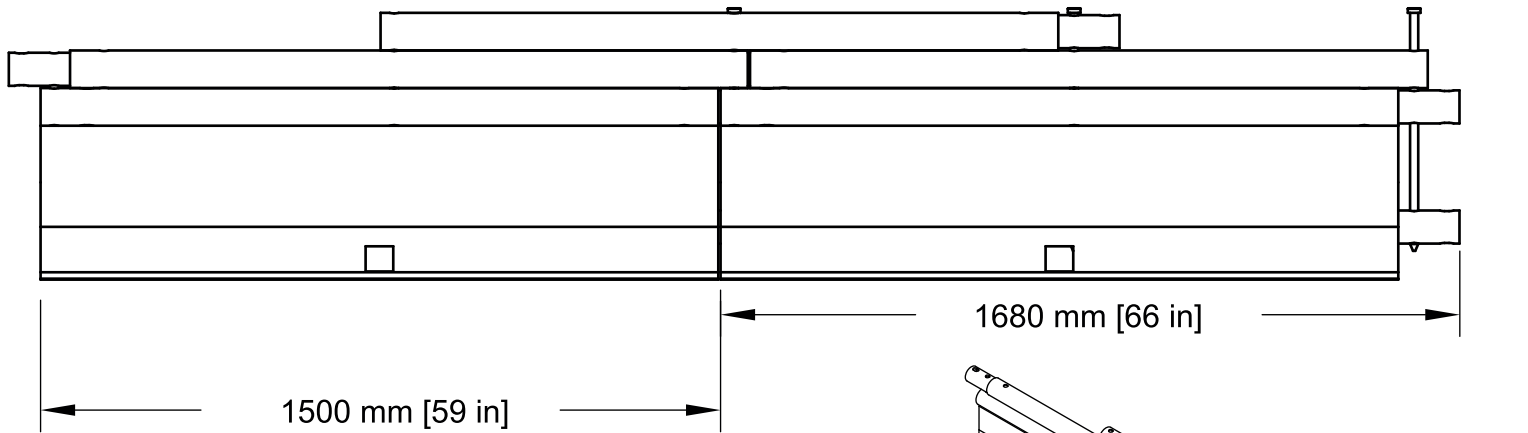
TEST REPORT

Client:
SIGNEL SERVICES INC.

Test specimen:
SIGNEL GUARD

Date obtained:
January 2021

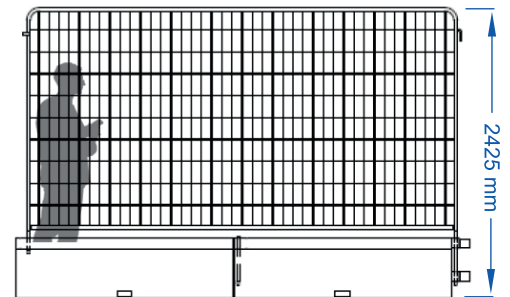
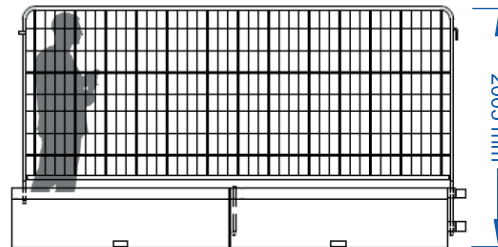
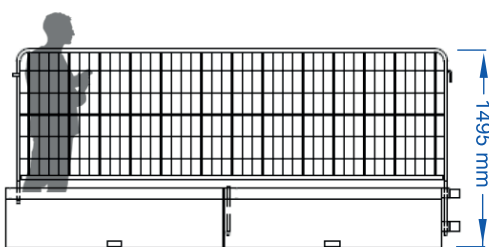
Tests were conducted to obtain vehicle crashworthiness data to evaluate the performance of the SIGNEL GUARD, relative to the longitudinal barrier and longitudinal channelizing barricade requirements of the Federal Highway Administration's **National Cooperative Highway Research Program Report 350 (NCHRP 350)** Recommended Procedures for the Safety Performance Evaluation of Highway Features. Testing was based on **NCHRP 350 (1993)**.



DIMENSIONS

	Dimensions (mm)	Weight (kg)
MAIN GUARDRAIL	1,630 LO X 500 LA X 423 H	59
LATCH TUBE	Ø83 X 1640	13
ANCHORING	Ø16 X 254	0.5
45° CORNER UNIT (LEFT/RIGHT)	515 LO X 565 LA X 423 H	22
CORNER FENCE	1,580 H X 310 LA	7
STARTING UNIT (MALE)	1,630 LO X 500 LA X 423 H	30
ENDING UNIT (FEMALE)	1,630 LO X 500 LA X 423 H	30

COMPATIBLE FENCES



AB1022 • GALVANIZED
10' x 42" (3 m x 1.06 m)

AB1027 • GALVANIZED
10' x 63" (3 m x 1.6 m)

AB1025 • GALVANIZED
10' x 6' 6" (3 m x 2 m)



MANUFACTURING • SALE • RENTAL
ROAD SAFETY AND SIGNALING EQUIPMENT



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