

Universidad Tecnológica Nacional

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Improving Infrastructure Towards Traffic Accident Prevention: Roundabout Using Expanded Polystyrene In Loose Soil



Problems derived
from increasing
urbanization



Challenge of restoring
and improving urban
infrastructure

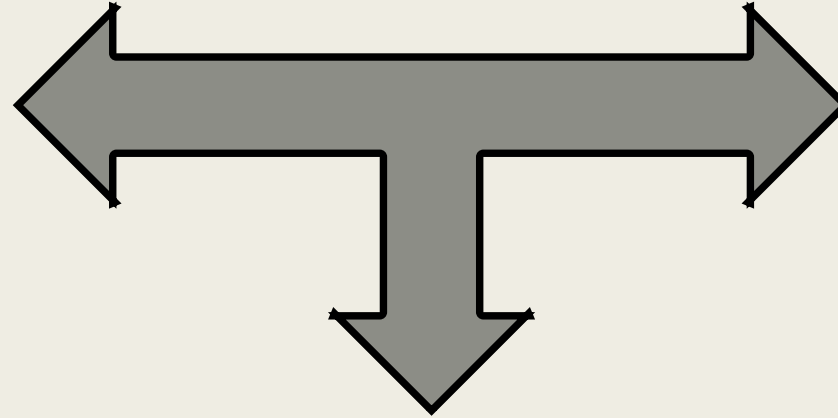
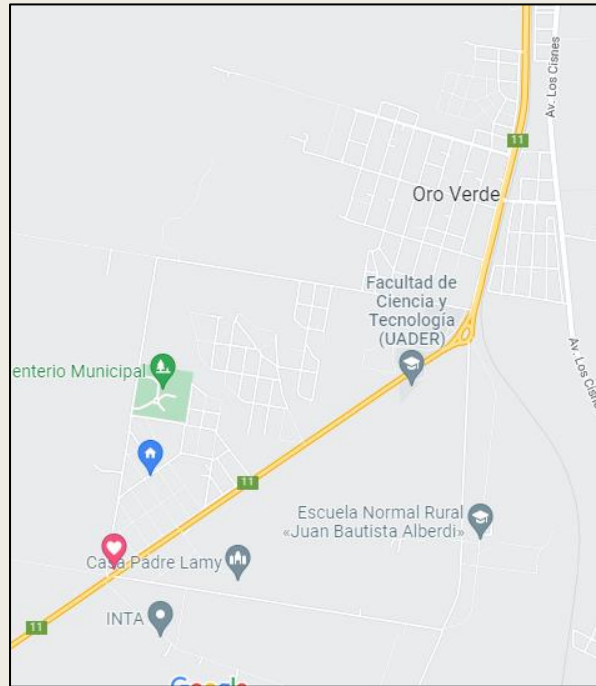


Map of the presentation

- Oro Verde location and characteristics.
- Characteristics of roundabouts on the route.
- EPS Method and features.
- Examples of the use of EPS.



Oro Verde Location and Characteristics



Characteristics of Roundabouts on the Route

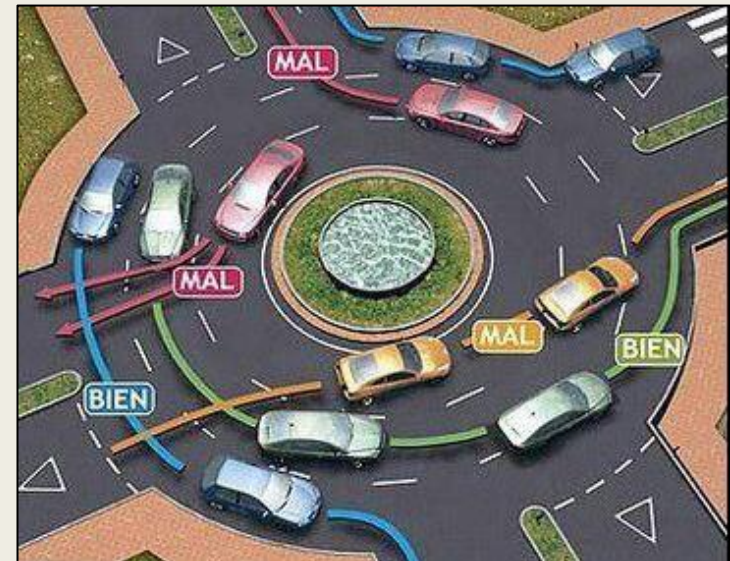
What is a Roundabout?



A roundabout is defined as “an intersection that has a central island that is unidirectional, and the cars drive around the central island”

Benefits:

- Reduce contamination.
- Give great visibility.
- Reduce traffic speed.
- Increase security of the drivers.



EPS Method and features

The EPS is a plastic/polymeric material with a chemical composition of C₈H₈.



Blocks of EPS:

- Dimensions: 0,6m x 1,2m x 1,4m.
- Weight: 35kg.
- Density: 20 kg/m³.

Advantages:

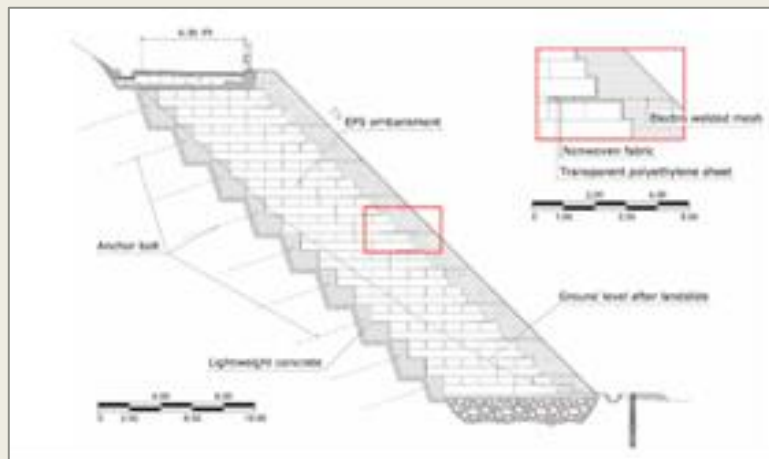
- Recyclable Material.
- Non-biodegradable.
- Chemically inert material.

Examples of the use of EPS

Experimental road embankment at Passo del Brattello.

Problems:

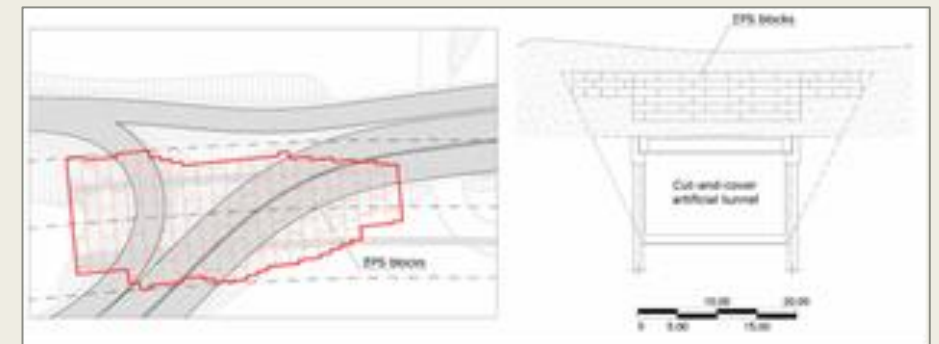
- Lightness on unstable slopes.
- Accessibility for the workers and machines.



Works along the Grande Raccordo Anulare of Rome

Problem:

- Permanent static loads.



CONCLUSION

SINGLE LINE ROUNDABOUT:

- Safety for the neighbourhood.
- Speed reduction for drivers.

EPS BLOCKS:

- Stability to the filling.
- Care for the environment

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