

REHABILITATION OF THE GENERAL HUMBERTO DELGADO AVENUE

2006

Location

Bragança, Portugal

Client

Municipality of Bragança

Estimated Cost

7.2 million EUR

Stage

Detailed Design

Extension

3,5 km

The General Humberto Delgado Avenue is an important route in the city of Bragança. Given its status as a major distributor road that provides support to various lateral public infrastructures—schools, fire station, GNR police station and social security facilities—this road features a high volume of traffic in Bragança's urban network. As such, its rehabilitation aimed to address with particular emphasis the issues of vehicle and pedestrian safety.

Taking these facts into account, there was a concern to implement traffic-calming measures for vehicle and pedestrian traffic. Layouts were developed that minimize intersections—roundabouts, a grade separation and a junction with refuges—while properly oriented pedestrian crossings were added, to discourage pedestrians from crossing in a disorderly way.

The proposed grade separation between the Dr Manuel Bento Street and the General Humberto

Delgado Avenue, with the first crossing under the latter as an underpass, was based on the following premises:

- the maintenance of traffic flow in the avenue, given that its flow rate is greater, decreasing the number of stops and intersections: the typical cross-section of the avenue allowed for the inclusion of collector roads that facilitate the direct entrance and exit into the avenue without disturbing those already circulating in it;
- the broadening of the line of sight of all users of the road, allowing them to perceive all movements in both directions by preserving the current profile of the avenue, promoting greater road safety;
- the cost-effectiveness of the solution.

LOCATION MAP





VIEW OF THE DR MANUEL BENTO STREET

In the vicinity of the GNR police station, the ISLA institute and the Paulo Quintela Secondary School, an elongated roundabout was introduced, to minimize interference to circulation in the General Humberto Delgado Avenue, as well as those entering it, effectively channelling incoming traffic from the numerous streets in the

immediate area.

This was a featureless zone: the introduction of the roundabout and the associated green spaces contributed to the creation of a different and improved perception of it, both in traffic-calming and in aesthetic terms.

VIEW OF THE ROAD UNDERPASS



BEGINNING OF THE GRADE SEPARATION



UNDERPASS

