ABSTRACT

More than 200 km long, this new line linking Lyon and Turin is broken up into three sections: the Italian section, the international section and the French section. The latter, which extends between Lyon and Saint-Jean-de-Maurienne, has been put in the hands of Réseau Ferré de France (RFF, French Rail Network).

The following work is to be carried out before the international tunnel comes into service, concerning 80 km lines, from Lyon to the Alpine valley, and alone includes tunnels totalling more than 45 km:

- a first sub-section about 55 km long, with mixed freight and passenger traffic, crossing the Bas Dauphiné region and including four tunnels whose length varies from 1.5 km to 8 km.
- a second sub-section of about 25 km, for freight, is almost exclusively made up by the Chartreuse tunnel spanning the Dullin, Epine, Outheran and Mont Joigny mountains.

The following main constraints as layout, topography, town-planning insertion, safety in operation phase, geology and time-cost scheduling, lead to conception choices, as detailed in this paper.