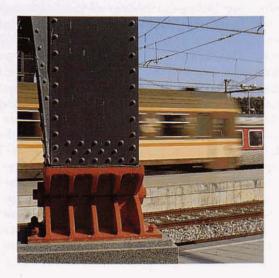
## IMPROVEMENTS TO THE CATALAN RAILWAY NETWORK



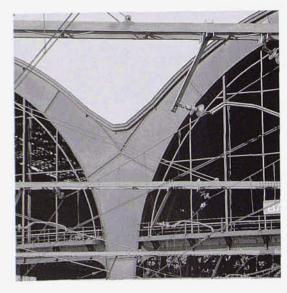
VESTIBULE, ESTACIÓ DE FRANÇA



THE PRINCIPAL ATTRACTION OF THE OLYMPIC REFORMS IN RAILWAY INSTALLATIONS HAS BEEN THE REMODELLING OF MANY STATIONS. IN BARCELONA, THE FLAGSHIP OF RESTORATION HAS BEEN THE ESTACIÓ DE FRANÇA.

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ESTACIÓ DE FRANÇA

he elimination of the railway line along the shore at Poblenou has brought a lot of changes to the Renfe (state railways) network in Catalonia. First of all, the lines leaving the Estació de França had to be buried, at the same time as they were reduced to three and room left for a possible future branch of the high-speed train. The existence of two metro lines between the Estació de França and the Plaça de les Glòries called for a complicated operation of covering and uncovering the railway lines. That is, in some places the train goes beneath street level and in others just above, rather like a switchback contained in concrete boxes that create aradients in the streets above.

At the same time, it was necessary to reroute the Maresme railway line from Sant Adrià de Besòs to La Sagrera, running parallel to the river, on its right bank. Then a series of works were needed to connect up the lines towards the centre of the city, avoiding underground crossings at the same level. In this way it has been possible for all the Renfe lines entering Barcelona—except for the ones that go to the Estació de França— to cross the city underground as far as the Estació de Sants.

Once this link-up had been completed, the local train routes were redesigned so that there are four lines that end outside Barcelona: the C-1, from the airport or l'Hospitalet de Llobregat to Barcelona and Mataró, Arenys de Mar, Calella, Blanes and Maçanet; the C-2, from Sant Vicenç de Calders to Vilanova i la Geltrú, Barcelona, Granollers Centre and Maçanet; the C-3, from l'Hospitalet de Llobregat to Barcelona and Vic, and the C-4, from Vilafranca del Penedès to Martorell, Barcelona, Sabadell, Terrassa and Manresa. With the four stops these trains make at Barcelona stations, they have become the embryo of the future "regional metro" the directors of Renfe envisage.

The biggest drawback to this network of local trains is that trains on three different lines have to follow the same route through Placa de Catalunya, which has become the busiest stretch of railway line in Europe. If there is a delay or a breakdown, every other line is affected too. This was seen during the Olympic Games, when the frequency of the local train services was massively increased and delays built up in a chain reaction. The principal attraction of the Olympic reforms in railway installations has been the remodelling of many stations. In the city of Barcelona, the flagship of restoration has been the Estació de França, From 31 May 1988 to 20 April 1992 work there went ahead to rebuild the curved, barrel-vaulted canopy. The

56,000 square metres of supporting metallic structures were repainted and the roof itself is now partly transparent, while all the tracks have been replaced. The paving on the platforms has also been changed and the whole of the station building has been restored so that it looks its best for travellers arriving there, because this "luxury" station is reserved for trains arriving from abroad or for long-distance routes. Originally inaugurated in 1929, the station has also been equipped with new restaurants, shops and leisure services for passengers or casual visitors, in an attempt to get as much as possible out of the site. Without counting the covering over of the lines, the restoration of the Estació de França has cost more than 3,000 million pe-

The Estació de Sants has been subjected to a less extensive remodelling, which has cost Renfe 600 million pesetas. It will now become a rail interchange for passengers connecting with trains on a variety of routes and with other means of transport within the city, such as metro, bus or taxi. Under separate funding, Renfe has built a large luxury hotel with ten floors, above the station, so that travellers can find accommodation without having to leave the building. And in the vestibule there





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THE RACK-RAILWAY AT NÚRIA

are a whole series of shops, restaurants and other facilities for travellers' convenience.

The Plaça de Catalunya station has also been reformed to improve services, in the face of the intensified rail traffic and the 55,000 passengers using the station every day. 1,400 million pesetas have been invested in doubling the length of the platforms and installing mechanical escalators and lifts for passengers. The underground vestibule has been considerably enlarged beneath the whole length of the square. The Passeig de Gràcia station had been renovated some months earlier. In addition, the ten kilometres of track between Sants, Passeig de Gràcia and Sant Andreu have been entirely renewed.

The Generalitat's railways, with narrow-gauge lines to Igualada and Manresa, in one direction, and to Sabadell and Terrassa, in the other, have undergone several improvements over the last few years. Almost all the level crossings on the Sabadell and Terrassa lines have been eliminated, as well as most of the level crossings on the other lines. Much of the track and a large part of the rolling stock has also been renewed. Substantial reforms have been carried out on several stations, such as the underground installations now being completed at Rubí and those already

inaugurated at Terrassa and Can Ros. As regards the Barcelona metro, in recent years it has become truly metropolitan with its prolongation to surrounding towns: l'Hospitalet de Llobregat, Cornellà de Llobregat, Santa Coloma de Gramenet and Badalona. One of the latest stations to be inaugurated, that of El Fondo, in Santa Coloma, has been designed without architectonic barriers for the blind and the physically handicapped, with lifts from the platforms to the surface and other details. From now on, all new stations will be like this.

Precisely so as to adapt them to the anti-barrier rules, the stations already built, but not yet in use, on the future Line 2, between Sant Antoni and Sagrada Família, have had to be reformed. In the case of Sagrada Família, what has been done is to build a new station, because the one that was built some seventeen years ago was on the present Line 5 and could not be used. Thus the old station will be one that has never been used and never will be. Of the remaining tunnels along Line 2, the ones between Sagrada Família and Clot are being built underground, while those between El Clot and La Pau, following the course of the Carrer Guipúscoa, are being built using an opencast system.

The next section to be built will be from Sant Antoni to Poble-sec and the Palau Nacional on Montjuïc, where it is expected it will arrive in 1955.

As Line 2 could not reach the Olympic Ring before the 1992 Games, other means had to be found for transporting large numbers of people to the top of the hill. As well as the series of mechanical escalators leading from the Trade Fair to the stadium, the funicular railway that goes from Paral·lel to the Avinguda de l'Estadi, between the Miró Foundation and the Funfair, has also been renovated. With this new funicular railway it has been possible to make the journey every three minutes, with a maximum of 8,000 people an hour being carried in each direction. It has become one of the fastest funicular railways in Europe.

The rack-railway at Núria has also been radically reformed, with new technology rolling-stock that makes the journey shorter. On the other hand, the plan to build a new rack-railway at Montserrat, following the same route as the other one, has been frozen. This project had been announced for 1992 and was to cost 9,000 million pesetas. The projected high-speed train from Madrid to Barcelona and from Barcelona to the French border has also been frozen sine die.