

A period of profound change

EXPANSION Roma Metropolitana is masterminding an ambitious programme to enhance mobility in the ancient city by expanding the existing metro network and building two new lines.

Roma is changing in depth, literally. About 30 m below ground, unseen and unnoticed by the city's inhabitants, mechanical moles are excavating kilometres of railway tunnels. As they move forward, without disturbing the surrounding soil, the machines also line the tunnels with reinforced concrete prefabricated segments. In the meantime, some 40 open-air sites are in full swing, busy constructing stations and air shafts whilst trying to minimise the negative impact of the works on daily life.



specific programme to safeguard and enhance the archaeological heritage and monuments along the line, most of the archaeological heritage found during the excavations will be displayed within the station areas.

Malatesta station is one of about 40 above-ground sites where construction is underway.



Federico Bortoli
CEO, Roma Metropolitana

Line C project

With an estimated investment of around €3bn — about 70% of which will be subsidised by the state, 18% by the City of Roma and 12% by the Regional Council of Lazio — Line C represents one of the biggest public works ever undertaken in Italy and will run across the city like a spine (MR05 p5). It will be the first fully automated underground metro line in Roma, with driverless trains and platform screen doors.

Following an international tender, Roma Metropolitana assigned the task of planning and building Line C to a consortium led by the Astaldi Group (Table II). With over 80 years experience of planning and implementing major civil engineering works in Italy and abroad, transport represents over 60% of its €7bn order book. The Astaldi joint venture and CMB have set up a new company, Metro C SCPA, to

fulfil their role as general contractor for the project. Roma Metropolitana is responsible for overall technical and administrative supervision.

Civil works started in the spring of 2007. The stations and air shafts on the underground section between San Giovanni and Giardinetti are under construction, and existing surface stations on the former Roma - Pantano railway are being revamped. Work is progressing quickly, except in those areas where archaeological surveys had already revealed the existence of historically significant structures. For example San Giovanni station had to be redesigned to avoid interference with Roman artefacts. Given the need to protect Roma's archaeological heritage, the project designers are still studying the best possible location for access paths to Venezia station, at the heart of the ancient city.

At the same time, below the

Table II. Roma Line C suppliers

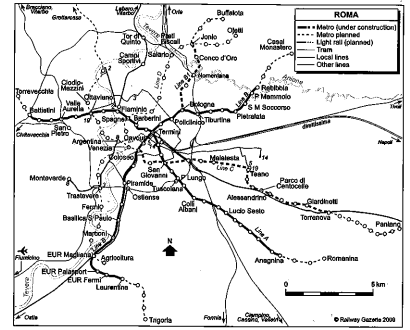
Metro C SCPA consortium:	
CMB Società Co-operativa Muratorie Braccianti di Carpi	Civil works
IV between:	
Astaldi Group	Civil works
Vianini Lavori	Civil works
CCC Consorzio Co-operative Costruzioni	Civil works
Ansaldo STS	Systems engineering; UTO equipment; signalling; train control & communications; Rolling stock (AnsaldoBreda)
Sub contractors:	
Balfour Beatty	Power supply & electrification
Falveley	PSDs

archaeological layer, two earth pressure balance TBMs are currently excavating from Giardinetti, the last underground station to the east, in the direction of the city centre. At an average speed of 12 m a day, some 2500 m of tunnels have been cut, thanks to the efforts of four teams of 13 crew working around the clock, six days a week. Two more TBMs are being assembled in the Malatesta well, and they will soon start excavating eastwards.

The first section between Monte Compatri-Pantano and Parco di Centocelle is due to enter service in 2011, followed by Parco di Centocelle - Lodi in 2012. Once the entire line is completed, in 2015, the fleet of 30 driverless AnsaldoBreda trains will be able to carry 24000 passengers/h in each direction, operating at a peak headway of 180 sec.

At the same time, provided that the necessary approvals and financing are

Archeological examination is an important element of construction work in the centre of Roma. This site is part of preparatory works close to Venezia station.



obtained, the proposed 9 km northern extension of Line C will also enter service. This stretch from Clodio-Mazzini to Grottarossa, via Auditorium and the Stadio Olimpico, will ease traffic along via Cassia, one of the most congested roads in the city.

Line D launched

Roma Metropolitana has already launched a project financing procedure for Line D. Within the next few weeks, a tender process will be used to select a concessionaire to construct and run the line on behalf of the municipality. The tender will be based on proposals drawn up by Società Italiana per Condotte d'Acqua and Impresa Pizzarotti, the project financing promoters. The concessionaire will be

responsible for conducting exploratory archaeological and geological investigations, preparing the definitive programme, constructing and ultimately operating the line throughout the contracted period.

The cost of Line D is put at about €3bn, 65% of which will be required for the Fermo - Prati Fiscali section alone. Work is scheduled to begin in 2009, with the aim of completing the priority section between Fermo and Salario by 2015. Depending on whether financial resources are forthcoming, the entire line from Agricoltura to Ojetti could be completed by 2019.

When the 20-year concession expires, the City of Roma will then take possession of the infrastructure and become responsible for operating Line D, either through one of its own companies or through an external company, selected by competitive tender, which would run the service on its behalf.

Ambitious expansion

Our goal is an ambitious one: to expand the underground network to almost 100 km by 2015. This task is the responsibility of Roma Metropolitana. On behalf of the Comune di Roma, its sole shareholder, our company is managing the expansion and modernisation of the metro network as well as the future creation of a 'mobility corridor', reserved for public transport, and the Magliana cableway. The next decade will be a period of profound change in Rome. □

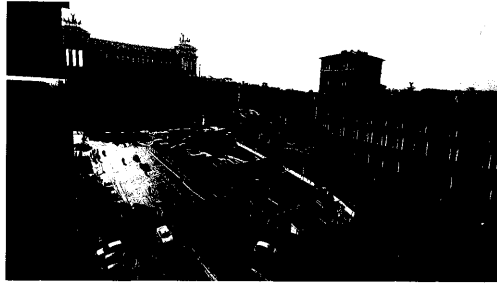


Table I. Roma metro network extensions

Line	Section	Length km	Stations	Start of work	In service	Cost €m
A	Battistini - Torvevecchia	2	2	proposed		
A	Anagnina - Romanina	3	3	proposed		
B	Rebibbia - Casal Monastero	3.5	3	proposed		
B	Laurentina - Trigatoria	6	4	proposed		
B1	Bologna - Jonio	5	4	Oct 2005	2011	620
B1	Jonio - Bufalotta		3	proposed		
C	Pantano - Parco di Centocelle	15	15	2007	2011	
C	Parco di Centocelle - Lodi	25.5	6	2007	2012	3000
C	Lodi - Clodio-Mazzini		9		2015	
C	Clodio-Mazzini - Grottarossa	9	7	n/a	2015	
D	Fermo - Salario	11.5	12	2009	2015	3000
D	Agricoltura - Ojetti	8.9	10		2019	