

► FCC AWARDED  
URBAN SANITATION  
CONTRACT IN OVIEDO



► **The Pajares Tunnels under construction**



PRESIDENT JOSÉ LUIS RODRÍGUEZ ZAPATERO, accompanied by Magdalena Álvarez, the Minister of Development, María José Ramos, Councillor of the Asturias Principality Presidency, and Juan Vicente Herrera, the president of the Government of the Castilla-León Autonomous Region, presided over the ceremony marking the start of operations of the first two tunnelling machines that will be used to drill the Pajares Tunnels, part of the new León-Gijón High-Speed train project.



## Rodríguez Zapatero presides over the start of

Work on the Pajares tunnels, where five tunnelling machines will be used, was divided into four lots, with FCC awarded Lot 1, comprising the execution, from the south end, of the tunnels between La Pola de Gordón and the Follo municipal district. The first 7.9 km, from La Pola de Gordón, will be built using two tunnelling machines while conventional methods will be employed in the remaining 2.5 km

On 13 July, President José Luis Rodríguez Zapatero presided over the ceremony marking the start of drilling operations of the two tunnelling machines that will be used in the construction of the Pajares tunnels, as part of the project for the new León-Gijón high-speed railway line. The president was accompanied by Magdalena Álvarez, the Minister of Development, María José Ramos, the Councillor for the Presidency of the Asturias Principality, and Juan Vicente Herrera, the President of the Castilla-León Autonomous Region.

The official ceremony was held at Pola de Gordón in the province of Leon, site of the southern end of these tunnels that represent the most singular phase of the Pajares project, which will be the sixth longest in Europe and seventh worldwide. Investment in this project totals 524 million euros.

Given the complexity and value of this project, the Ministry awarded the contracts to the leading companies at the vanguard in tunnel construction technology. In this respect



### TECHNICAL TEAM

**JOINT-VENTURE MANAGER:**

Ignacio Muñiz González

**HEAD OF PRODUCTION:**

Juan José Margareto Menéndez

**HEAD OF THE TECHNICAL OFFICE:**

Ángel Luís Navarro Rodríguez

► **THE TUNNELS WILL** comprise two parallel 25 km-long galleries.





## the Pajares tunnel drilling operations

### A GREAT ENGINEERING CHALLENGE

With five tunnelling machines used in drilling the Pajares Tunnels, this project represents a great engineering challenge, similar to the recently drilled Guadarrama Tunnels. Stretching over 25 km, these tunnels will be the sixth longest in Europe and seventh worldwide, and represent the most technically-complex aspect of the high-speed railway line connecting Madrid and the major cities in Castilla-León with the main cities in Asturias. The tunnelling machines will drill two parallel galleries 50 metres apart, covered with 50 cm-thick prefabricated reinforced concrete sections built at the on-site facility featuring all the necessary means and resources.



FCC provides the most modern and advanced production resources and develops its own innovative construction systems, providing its customers with the greatest guarantees in terms of efficiency and safety.

FCC will be in charge of building the tunnels from the southern end, each stretching over 10.5 km. Two different construction methods will be used in building these tunnels: two tunnelling machines will drill the first 7.9 km from La Pola de Gordón, and conventional methods will be implemented in the remaining 2.5 km.

The new stretch replaces the current one which was built in the middle of the nineteenth century, a major engineering feat at that time. The tunnels will comprise two parallel 25 km-long tubes, covered with prefabricated, 50 cm-thick reinforced concrete sections manufactured at an on-site facility.

Transversal communication galleries will be built every 400 ms to ensure the highest level of safety and facilitate maintenance tasks and speedy evacuation if this becomes necessary.

The contract for this Lot calls for more than 5,300,000 m<sup>3</sup> of drilling. Once the project is completed, over 116,000 m<sup>2</sup> will be hydroseeded and more than 43,000 trees and shrubs will be planted.

In addition to the two tunnels, FCC will also build the 2 km-long auxiliary tunnel at Folledo, and a 50 m<sup>2</sup> section for the removal of excavation residue and which can also be used for emergency evacuation.

This project falls within the context of the Ministry of Development's 2005-2020 Strategic Infrastructure and Transport Program.

The European Regional Development Fund (ERDF) will cofinance this project. ■



SIXTEEN STRUCTURES AND FOUR INTERSECTIONS connecting Mañeru, Cirauqui, Alloz, and Lácar were built over the length of this stretch.



## New stretch of the Autovía del Camino opened for traffic

THE 12 KM-LONG STRETCH CONNECTS THE PUENTE DE LA REINA AND THE ESTELLA ROADS

**O**n 27 July, the President of the Navarre Regional Government, Miguel Sanz Sesma, inaugurated Stretch III of the Autovía del Camino, connecting the Puente la Reina and Estella roads. Álvaro Miranda Simavilla, the Councillor of Public Works, and María José Fernández Aguerri, the mayor of Estella, were also present at this event. The Pamplona-Logroño Highway joint venture, in which FCC participates, began work on this 49.94 million euro project on 15 March 2003. The stretch opened for traffic is 12.2 km long, with two carriage

### TECHNICAL TEAM

#### JOINT VENTURE MANAGER AND

#### HEAD OF DEPARTMENT:

Ignacio Poyales

#### HEAD OF PROJECT:

José Antonio Carriles

#### PRODUCTION SUPERVISORS

Álvaro Senador/Oscar Ramos/

Luis Matallana/Miguel Olalla

### FOUR SINGULAR WORKS

- El Perdón Tunnel.
- The Santiago Bridge over the Arga River
- The Estella Road
- The Lazagurría Tunnel.

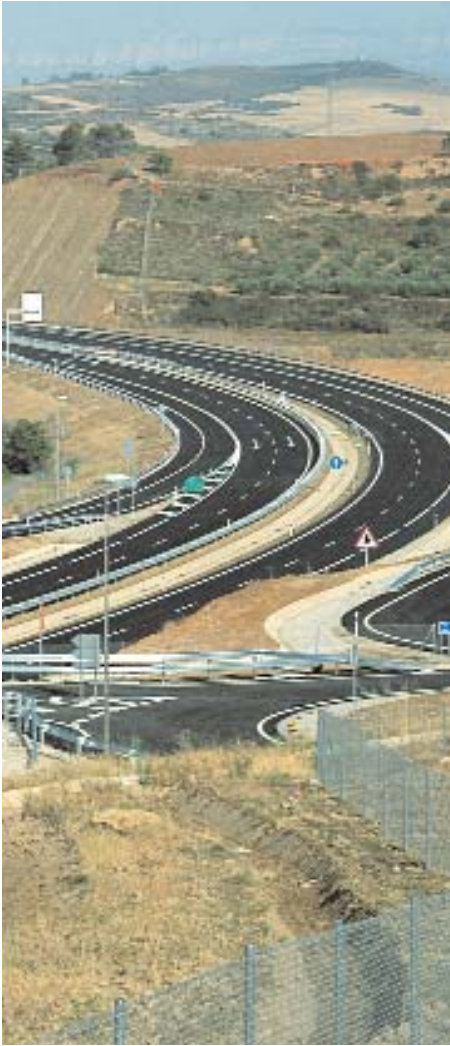
ways, two 3.5m-wide lanes, and 2.5 m and 1 m wide exterior and interior hard shoulders, respectively.

Sixteen structures and four intersections providing access to Mañeru, Cirauqui, Alloz, and Lacar were built over the length of this stretch.

#### ► 30-year concession

The Navarre Regional Government decided to put this project, consisting of a large capacity road, out to tender under a 30-year concession period. The Autovía del Camino is the largest public works contract ever put out to tender in





#### THE ROAD IS DIVIDED INTO FIVE STRETCHES

**Stretch I:** Zizur-Puente la Reina, a 12 km-long road. Opened for traffic on 15 April 2005, except for the El Perdón tunnel expected to be completed by the end of the year.

**Stretch II:** The 6 km-long Puente la Reina road which opened for traffic on 4 October 2004.

**Stretch III:** The 12 km-long Puente la Reina-Estella road which was recently inaugurated.

**Stretch IV:** Estella-Los Arcos, a 22 km-long road.

**Stretch V:** the 18 km-long Los Arcos-Viana road.



Navarre, and the largest in Spain to date under the toll-shadow system. With a total budget of 296.73 million euros, the project involves the construction of 70.3 km of roads, including twenty intersections, and upgrading work on 68 km of the 16 existing local roads that provide access to the new highway. The road is divided into five stretches with four singular projects: the El Perdón and the Lazagurría tunnels, the bridge over the Arga river, and the Estella road. Several stretches of this infrastructure, one of the key strategic communication project in Navarre, are still not opened to traffic. These include the 22 km-long Stretch IV between Estella-Los Arcos, and Stretch V, an 18 km-long road connecting Los Arcos and Viana. ■



► **THE AWARDED PROJECT** budget is 49.94 million euros.





# The **Minister** of the **Environment** inaugurates the new **Loiola wastew** **TREATMENT OF WASTEWATER FROM SAN SEBASTIÁN AND ITS DISTRICT**



**O**n 6 July, the Minister of the Environment Cristina Narbona and the mayor of San Sebastián, Odón Elorza, inaugurated the new Loyola plant for the treatment of wastewater generated in San Sebastián and its district, which will significantly improve water flowing to the sea by means of underwater outlet channels. Investment in this project, 33.76 million euros, was financed by the General Water Department with Cohesion Funds. A joint venture, in which FCC Construcción and SPA, an FCC Group company have majority stakes, was in charged of

project management and development. SPA specialises in design, technology, and construction of drinking water, wastewater treatment, and desalination plants. The new facility in San Sebastián will be able to treat urban and industrial wastewater generated by the 360,000 inhabitants of Donostialdea, Cuenca del Urumea, and Bahía de Pasajes, and, in the future, could provide services to a population of up to 628,000. The plant will initially treat a nominal flow of 4,500 litres per second, although it has the capacity for treating up to 6,000

**INVESTMENT IN this project, 33.76 million euros, was financed by the General Water Department with Cohesion Funds.**

## **TECHNICAL TEAM**

### **MANAGERS:**

Eloy Sánchez/Fernando Herrera

### **HEAD OF PROJECT:**

Miguel Ángel Otero

### **HEADS OF PRODUCTION:**

Luis Vizuete, Ignacio Tejedor, Alberto Calero, Isidro García

### **SUPERVISORS:**

Genaro Salazar/Nicasio Álvarez

litres per second. The high-load biological method to be used in wastewater treatment consists of water and sludge lines. After the water is treated, it flows through a new



## Water treatment plant



channel to the underwater channel at Mompás. This comprehensive wastewater treatment system will ensure that water effluents to the sea meet all legally established requisites. After this process is completed, sludge will be broken down through anaerobic fermentation with the resulting biogas used for generating heat and electric power. These facilities meet EU guidelines on water quality, particularly meeting 95% of the 76/160/EEC Community Directive on bathwater that limits faecal coliform concentration to 2,000 units per 100 millilitres. ■



### HIGH-LOAD BIOLOGICAL TREATMENT

Wastewater undergoes a high-load biological treatment as described below:

**Water line:** pre-treatment, grinding, removal of sand, physical-chemical treatment, biological treatment, and decanting.

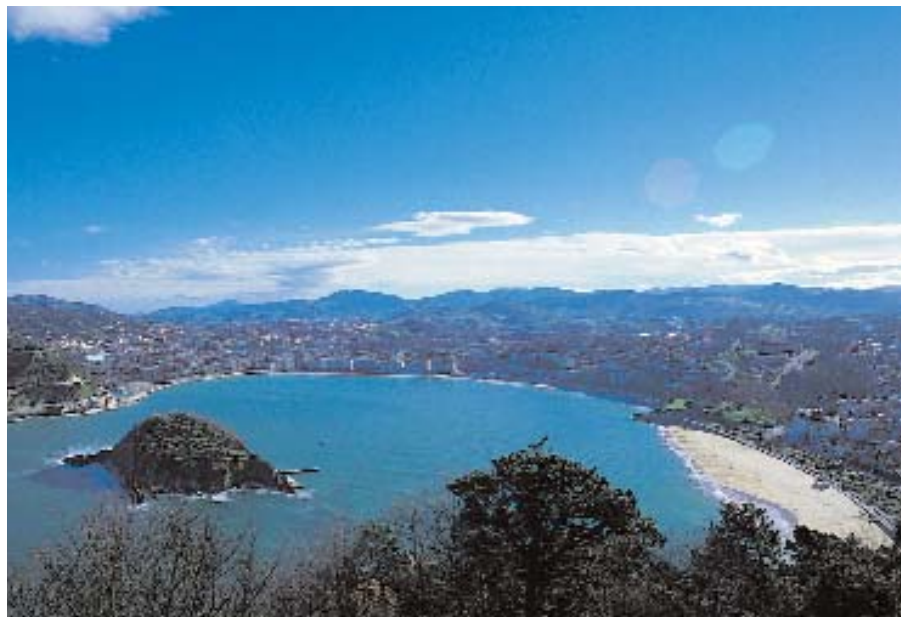
**Sludge line:** thickening, digestion, dehydration, and drying of sludge.

### TREATMENT OF WASTEWATER GENERATED BY A POPULATION OF 360,000

The new San Sebastián plant will treat urban and industrial wastewater produced by the inhabitants of the Donostialdea, Cuenca del Urumea and Bahía de Pasajes districts comprising the towns of: Oriartzun, Rentería, Lezo, Pasajes, San Sebastián, Astigarraga, Hernani, Urnieta, Lasarte, and Usurbil.

### QUALITY CONTROL

This facility will significantly improve the quality of effluents to the sea thereby protecting sea life and the natural surroundings.





# Implementation of a system for integrating project-related environmental information

In preparing its Environmental Program, FCC Construcción

implemented an IT application in all its projects.

One of FCC Construcción's key strategic targets since 2000 is the implementation of environment-friendly practices that are more



stringent than the legally established requisites. To this end, the Company implemented the Good Practices systems to ensure optimal environmental results in all its construction activities. Data obtained from monitoring these Good Practices, represent a valuable set of indicators reflecting the company's

environmental performance in the most salient aspects, and, in fact, serve as the basis for the environmental information detailed in its Sustainability Report, as well as in other Communications on the Environment published by FCC. At the beginning of 2005, FCC started to implement a new

FCC IMPLEMENTED A new environmental module aimed at standardising and facilitating the preparation of the Environmental Program for projects and company facilities, and designed to enhance data reliability and availability.

module of the environmental IT application in order to standardise and facilitate the work involved in preparing the Environmental Program for its projects and to enhance data reliability and availability, with the possibility of maintaining this information constantly updated.

The new environmental module makes it possible to:

Easily identify project-related environmental aspects.

Select the applicable environmental laws and have knowledge of all legally established requisites.

Prepare an action program to meet legal and other requisites.

Control management of waste produced in these projects by keeping a log on this waste as well as the origin and destination of earth and rubble from these projects.

Help in planning, monitoring, and controlling the environmental Good Practices implemented in all projects.

## ► Correct management

All information generated at each project used for optimal environmental management, will be included in a large database that will enable the company to keep track of these aspects, take improvement-aimed actions, and inform all stakeholders.

Furthermore, the demanding internal audit system in place as well as data control in all integration processes, validate the accuracy of this database. The new software application is definitely an essential tool for the company's environmental management and for substantially enhancing transparency, thereby bolstering FCC Construcción's efforts in this respect. ■

## "IN ACCORDANCE" SUSTAINABILITY REPORT

FCC Construcción, aware of the need to inform citizens and of the need for management transparency, voluntarily decided to publish a Sustainability Report which was deemed to be in accordance with Global Reporting Initiative (GRI) criteria, the first construction company worldwide that has succeeded in this respect. This was accomplished thanks to the efforts in gathering, managing, and interpreting data from different sources in order to report on social, environmental, and financial aspects.







## Inauguration of the Las Azucenas dock at the Motril (Granada) harbour

**T**he Andalusian Regional Government's Councillor for Public Works, Concepción Gutiérrez del Castillo, presided over the inauguration ceremony for the first phase of the Motril Harbour (Granada) enlargement project. This project consisted of the construction of the new 295 metre-long Las Azucenas dock built with nine 30.10 metre long and 15.1 metre wide reinforced concrete blocks and a new 78,000

### TECHNICAL TEAM

#### HEAD OF PROJECT:

Pedro Carlos Vega Jorge

#### HEAD OF PRODUCTION:

Antonio González Mejías

#### TOPOGRAPHY:

José Francisco Montoro Aguilar

#### ADMINISTRATION:

Juan Manuel Vargas Villena

m<sup>2</sup> harbour platform for general and bulk merchandise.

This project will provide access to large vessels and will also increase docking capacity and enhance merchandise-handling operations at the harbour. Thirteen rubber protective structures were placed along the parameter, as well as access ramps for vessels, and fifteen 100 Mt bollards anchored along its length.

These harbour facilities are part of the general logistics project developed at the north end of the harbour. ■

## New bridge over the Ricobayo reservoir in Zamora



**O**n 28 July, the first stone was placed for the construction of Manzanal bridge over the Ricobayo reservoir and the gateway to this bridge from the ZAP-P-1405 road in Zamora

between the Manzanal del Barco and Palacios del Pan municipal districts. Fernando Martínez Maíllo, the President of the Zamora Regional Council, and Antonio Silván Rodríguez, the Councillor for Development of the Castilla-León

Autonomous Region, were present at this event.

FCC will be in charge of building this 479 metre-long structure, with five 61, 25, 114, 190, and 114 metre spans; 11 metre wide with two 3.5 metre-wide lanes, 0.75 metre wide hard shoulders, and 1.25 metre wide water conduits.

Access to the bridge will be provided by a 720.75 metre-long road. ■



THE PRESIDENT OF THE GENERALITAT VALENCIANA, **Francisco Camps Ortíz**, accompanied by the Councillor for Infrastructures and Transport, **José Ramón García Antón y Chiva**, inaugurated the highway, worth an investment of 52 million euros, that connects the southern beltway with the A-7.



## The highway connecting the southern road network with the A-7 in Valencia opens to traffic

**F**rancisco Camps Ortíz, the president of the Generalitat Valenciana, accompanied by the councillor for Infrastructures and Transport, José Ramón García Antón y Chiva, inaugurated the highway connecting the southern part of the beltway with the A-7 in Valencia. This project, executed by FCC, represents an investment of 52 million euros.

As part of the road network in Valencia's southern metropolitan area, this new road will relieve traffic on Highway A-3 by providing direct access through the A-7 to Valencia and the city's most important industrial parks.

### TECHNICAL TEAM

**PROJECT MANAGEMENT:**  
Adolfo Roca Lorente/  
Miguel Martínez Asensio

**HEAD OF THE DEPARTMENT:**  
Vicente Montoliu Ferrer

**HEAD OF PROJECT:**  
Javier Benito Casado



Stretching over 6.8 km with four intersections, two overhead passes, and a viaduct over the A-7, the highway connects Alaquàs, Aldaia, Torrent, Paiporta, and Picanya with the Valencia beltway, benefiting more than one million people in the metropolitan area. ■

## Laying the first stone for the new ONCE headquarters in Toledo

**O**n 16 June, the mayor of Toledo, José Manuel Molina, and ONCE's chairman, Miguel Carballada, together with Francisco García, the General Manager of FCC Construcción, placed the first stone for the new regional ONCE



THE MAYOR OF TOLEDO, **José Manuel Molina**, the ONCE chairman, **Miguel Carballada**, and the General Manager of FCC Construcción, **Francisco García**, presided the official event.

headquarters. The 8,834 m2 building will have five floors and two basement levels, all of which will be easily accessible, with a similar distribution of each floor to meet the needs of the visually impaired. ■



# Two tunnelling machines start work on the Madrid Metro project connecting Legazpi with Villaverde



## FCC PROJECTS

- Line 3. Integration of this line after revamping the Moncloa station, making it possible to extend this line to the Cuatro Caminos subway station.
- Line 3. The 2.8 km Cristóbal de los Ángeles-Villaverde Alto stretch of the subway line
- Line 3. The Legazpi-San Cristóbal de los Ángeles stretch. A 5.7 km extension: five new stations, revamping of the Legazpi station, and improved connection with Line 6.
- Enlargement of the Sol metro station, Line 3 platform. New access and vestibule, and enlargement of station cave from 60 to 90 metres.

**E**speranza Aguirre, the President of the Madrid Autonomous Region Government, presided the start of operations of the second tunnelling machine involved in drilling the new tunnel extending Line 3 of the Madrid underground system to Villaverde Alto. A few days ago, the first tunnelling machine, known as the "Adelantada", started drilling at the south end of the tunnel. This is the first time in the history of the Madrid underground system that two tunnelling machines start work at the same point. The line, expected to be completed by the spring of 2007, will provide service to more than 160,000 people who will be able to reach the city's midtown area in 22 minutes, as well as the main healthcare centres in Madrid's southern districts, such as the Hospital Universitario 12 de Octubre.

During her visit, the president confirmed the progress made by



**THE PRESIDENT of the Madrid Autonomous Regional government, Esperanza Aguirre, and Jesús Trabada, General Director for Infrastructures, were present when the new tunnelling machine began operations in the project for extending Line 3 of the underground network to Villaverde Alto.**

the tunnelling machine, which is able to drill an average of six metres per day, with this speed increasing as the machine becomes used to the ground conditions.

FCC is in charge of executing the work involved in the project connecting Legazpi and Villaverde. The first project awarded was the Legazpi-San Cristóbal de los Ángeles stretch, as well the project to improve connection with Line 6. FCC was later awarded the extension up to Villaverde Alto, a 2.8 km stretch connecting with the RENFE suburban railway network. The extension of Line 3 will benefit those living in Villaverde, Parla, Humanes, and Fuenlabrada, who will be able to connect with the Madrid Metro system from the suburban trains thanks to the station to be built in Villaverde Alto. The Madrid regional government will be investing nearly 620 million in this project. ■

► **THE NEW STRETCH, TO BE completed by the spring of 2007, will provide service to more than 160,000 people.**

## FCC organizes seminar on occupational hazards in Las Palmas de Gran Canaria

**F**CC Construcción organized a seminar on occupational hazards in Las Palmas de Gran Canaria for heads of projects, production, departments, customers, project supervisors, safety coordinators,

inspections. During the seminar, collaborating companies described their products designed for the prevention of occupational hazards. Following the implementation of



risk prevention technicians, subcontractors, and suppliers. Antonio Castro Cordobez, the Canary Island Councillor for Infrastructures, Transport, and Housing, gave the opening speech, a practical vision of the current situation in the construction industry, describing some of the resources available in the market for improving safety and project execution. Among other topics, he analysed risk prevention at FCC Construcción, the use of scaffolding, and the safe use of mobile platforms, accidents at project sites, companies involved in safe practices implementation, and criteria applied at work

the Law for the Prevention of Occupational Hazards, companies have had to implement safety and quality regulations in their organizational systems to ensure that their risk prevention policies are efficient instruments that, through training, can significantly reduce the rate of accidents in the construction industry. ■



► **APPLIED SAFETY AND quality standards in organizational systems.**



## FCC Construcción participates in the Laboralia competition in Valencia

**T**he Generalitat Valenciana organised the European Job Safety and Health Seminar that coincided with the Laboralia Competition on Occupational Safety and Health celebrated in the Valencia Fair. The objective of this seminar is to discuss, from a European perspective, innovations in matters relating to on-the-job risk prevention in order to make headway in the fight against accidents at the work place and improve working conditions. FCC Construcción participated in this event with a stand where it provided information on its prevention related services and instruments. The company was also involved in a technical session on safety and health in tunnel construction activities. The Generalitat Valenciana representatives, José Vicente Dómine Redondo, Director General de Transport, Harbours, and Coasts; Román Ceballos Sancho, Director General of Work and Job Safety, and Teodoro Velázquez Rodríguez, President of the Chamber of Contractors and FCC Construcción Zone Director, gave the opening speeches. Juan Carlos Velázquez Palacios of FCC acted as the moderator. ■





THE SPORTS PALACE and view of one of the areas comprising Plaza del Mar, projects integrated in the Almería 2005 15th Mediterranean Games.



## FCC executed three of the key projects for the Almería 2005 Mediterranean Games

**A**s part of the sports facilities and ancillary projects for the Almería 2005 15th Edition of the Mediterranean Games, FCC executed the Sports Palace Project, the headquarters for the gymnastics and volley ball competition and Villa Mediterránea, the accommodations for all players participating in these games. The Company was also involved in the Plaza del Mar urban and residential development project, which is integrated in the Olympic Village and is part of the project known as El Toyo.

### ► Sports Palace

The 14,158 m<sup>2</sup> Sports Palace can accommodate up to 5,000 spectators. The interior of this facility comprises the entrance, VIP areas, pressroom, and organization halls, grandstands, dressing rooms, administrative areas, warehouses, maintenance areas, and the central and complementary sports areas. The building rests on simple concrete portico structure built on site that supports all the other horizontal prefabricated systems such as the top slabs, grandstand, or the spatial cover. Prefabricated reinforced concrete sections were also used for the façade.



### ► Villa Mediterránea

Villa Mediterránea de El Toyo, located between Almería and the Cabo de Gata National Park, is the site for the future development of 5,000 homes, several hotels, leisure areas, and a large golf course. FCC has built 351 housing units in this area spread over 19 two-floor blocks with 1, 2, and 3 bedroom homes, all of which have a garage and storage room. This housing complex also features paddle courts and several swimming pools.

### ► Plaza del Mar

Spreading over a 9,000 m<sup>2</sup>-area, Plaza del Mar lies near the Villa Mediterránea complex. A boardwalk stretching over 1 km, interspersed with platforms for commercial premises, a square for leisure activities, a salt water

lake covering an area of more than 10,000 m<sup>2</sup>, an amphitheatre, and a 2,300 m<sup>2</sup> pergola, define this space which became the meeting point of Villa Mediterránea in 2005. The complex also includes three parking lots for 600 vehicles for visitors who go to the beach, as well as landscaping of more than 25,000m<sup>2</sup> of land, planted with 1,100 palm trees brought directly from Egypt, plus 18,000 native shrubs. ■

### TECHNICAL TEAM

#### HEAD OF PROJECT:

Antonio Balón Villar (Sports Palace)

#### HEAD OF PROJECT:

Antonio García Molina (Villa Mediterránea)

#### HEAD OF PROJECT:

Pedro C. Vega Jorge (Plaza del Mar Development)

# Oviedo City Hall awards FCC an

FCC began to provide street cleaning and waste collection services in Oviedo in 1967. The current contract dates back to 1982. FCC was again awarded a 10-year contract by Oviedo's local authorities for urban cleaning services

**T**he Oviedo City Hall decided to select Fomento de Construcciones y Contratas as the Company in charge of providing urban cleaning services during the next 10 years. The contract could be extended for an additional 10 years. Estimated turnover is 339 million euros.

The contract put out to tender by Oviedo local authorities includes the following:

- Street cleaning services
- Solid urban waste collection and removal services.
- Management of the solid urban waste transfer station.
- Management of vehicle towing services
- Management of technical documentation services and those

involving the execution of subsidiary projects.

**▶ 12 million euro investment**

FCC will have 370 employees in charge of providing these services and will invest nearly 12 million euros, most of which will be spent on waste collection vehicles running on compressed natural gas, which are more environmentally-friendly, with low levels of air and noise pollution. The service calls for the collection of the 89,220 tons of solid waste per year generated by a population of 210,000. To provide these services, the company purchased 30 collection-compacting vehicles with different capacities, as well as other open container vehicles with a platform.



**▶ THE ESTIMATED turnover of the 10 year contract is 330 million euros.**

### CLEAN CITY

Three key aspects contribute to the success of these types of services in Oviedo:

- The enormous interest shown by municipal authorities in maintaining a clean image of the city.
- Citizens' great awareness in this respect.
- The great professionalism of each and every FCC employee in their job performance.



# urban sanitation contract



This fleet of vehicles includes a collection-compacting 4-wheel drive truck with a 3.5m<sup>3</sup> capacity to be used in difficult to reach areas, an isothermal vehicle for the collection of dead animals, and a

van for the collection of used household vegetable oil. An electric tricycle will also be used for street cleaning services to support mechanical street cleaning operations. The company

will also use 10 auto-flushers, seven flushers, 70 container carriers, and 42 soundproof bucket carriers. FCC also placed over 700 different sized containers in the streets of Oviedo.

## PRIZES AWARDED TO OVIEDO BY ATEGRUS

The Asociación Técnica para la Gestión de Residuos y Medio Ambiente, ATEGRUS (the Technical Association for Waste Management and the Environment) has selected Oviedo as one of the cleanest cities in Spain on several occasions. This recognition also reflects FCC's performance.

This association rewards excellence in waste management and urban cleaning as well as technological projects and developments that contribute to environmental sustainability.

To date, the city of Oviedo has won the following awards:

### Cleanest city awards

- 1994 Silver Broom.
- 1996 Gold Broom.
- 1998 Special Mention.
- 2000 Honours Diploma
- 2002 Platinum Broom

### Selective waste collection award

- 2004 Platinum Broom.

### ► In Oviedo since 1967

FCC has been providing street cleaning and waste collection services in Oviedo since 1967. The contract recently extended, dating back to 1967, had been previously extended in 1985, 1987, 1987, 1989, 1991, 1992, 1994, 1999, and 2003. In 2004, FCC's turnover generated in urban sanitation services totalled 1,251 million euros. The Company provides services to over 24.5 million inhabitants in 3,299 towns and cities. It collects 7.5 million tons of waste per year and treats 6.5 million tons. ■

# Cemusa wins another contract in San Sebastián

**S**an Sebastián awarded Cemusa contract for a duration of at least 15 years that contemplates the installation, maintenance, and exploitation of advertising in canopies and information panels at the Arquitectos Cortazar Street bus station as well for clocks-thermometers in public carriageways. Thanks to this contract, Cemusa will now be in charge of management of advertising in clock-thermometer supports in this city. The company plans to replace 29 of the elements that were formerly operated by Planigrama, a JC Decaux group company, and will add other supports to bring the total up to 40 units.

## ▶ Hour-temperature supports

This contract is in addition to those that were previously awarded to the company for exploitation of hour-temperature supports in cities such as Madrid (400 units), Vitoria-Gasteiz (20 units), and Valladolid (24 units), confirming Cemusa's leadership in the urban fixture segment. It also consolidates its positioning as the leader in outdoor



CANOPIES AND clocks-thermometers designed for the streets of San Sebastian.

advertising on street furniture in the three Basque capitals and in San Sebastian, where it had previously been awarded a contract for bus shelters. Estimated turnover generated by this contract over the 15-year concession period is 5 million euros. This Spanish company creates jobs and wealth in the Basque Autonomous Region since a large part of the components for urban fittings and fixtures is manufactured in factories located in the province of Alava. ■

## COMMITMENT

Cemusa operates in the Hondarribia, Leioa, Bilbao, Basauri, San Sebastián, and Vitoria-Gasteiz municipalities in the province of Alava.

A city's image is closely linked to that of its inhabitants. This is why Cemusa's success is due to its commitment with the citizens when it designs fixtures for their cities.

Cemusa's designs respect the aesthetics of each location, with furniture and fittings integrated as part of the city's landscape.

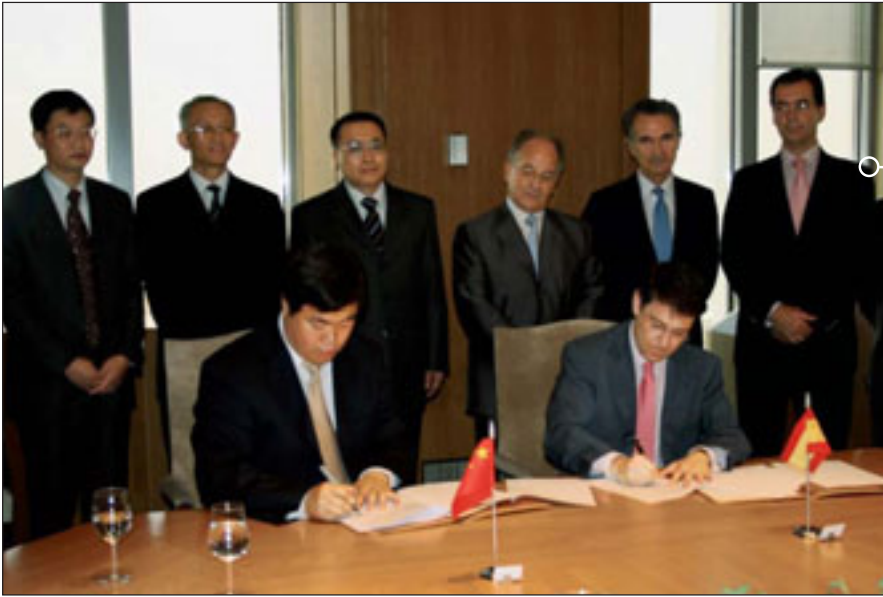
## MORE THAN 104,000 CITY FURNITURE ELEMENTS

Cemusa, a wholly-owned FCC subsidiary, has been operating in the urban furniture and outdoor advertising segment since 1984. It currently manages the design, manufacturing, installation, and maintenance of more than 104,000 city furniture elements in 120 cities worldwide. In 2004, the Company's turnover totalled 81 million euros.

Cemusa, the established leader in its sector in Spain, launched its international diversification drive 10 years ago. Thanks to this strategy, the Company is currently operating in 11 countries:

- Spain: 72 municipalities nationwide, including the major cities (Barcelona, Bilbao, Madrid, Malaga, Seville, Valencia, Vitoria, and Zaragoza). Over 51,000 elements installed.
- Portugal: 20 towns and cities, including Lisbon. Over 9,000 elements installed.
- Italy: Genoa and Parma, with 3,900 elements; Fiumicino Airport (Rome) and Bologna.
- The United States: Miami (Florida) and San Antonio (Texas): 6,000 elements; and Boston.
- Brazil: 7 cities, including Río de Janeiro and Brasilia: 10,700 elements installed.





THE PRESIDENT OF THE PUBLIC COMPANY, BCCA, LI Rongjie; the governor of the Anhui Province, Wang Jinshan; and FCC Managing Director Rafael Montes, were present at the signing ceremony as well as Fernando Moreno, Miguel Jurado, and Santiago Nistal, Aqualia and SPA senior managers.

## FCC executes an agreement for water management in China

Grupo FCC, through the Aqualia subsidiary SPA, recently entered into an agreement with BCCA, a Chinese public company, for the construction and 20-year concession of two wastewater treatment plants in China. Estimated investment for this project is 49 million euros, with turnover expected to reach 500 million euros.

**G** rupo FCC, through its subsidiary, Aqualia, executed an agreement with the Chinese BCCA Group for the management of a wastewater treatment plant in Bengbu, in the Anhui province in China's south-eastern region. Estimated investment in this project is 49 million euros, with total turnover expected to reach 500 million euros.

The governor of the province, Wang Xinshan, Li Rongxie, the president of the public company BCCA that currently has the wastewater treatment contract for Bengbu, and FCC Managing Director, Rafael Montes attended the event in Madrid when the contract was executed.

This agreement contemplates the creation of a 50-50% FCC-BCCA joint venture which will be in charge of managing the 100,000

### PURPOSE OF THE AGREEMENT

- 25-year concession for the management of the 1st wastewater plant in Bengbu with a 100,000 m<sup>3</sup>/day treatment capacity.
- Construction and 25-year management contract for enlarging the capacity of this plant to 200,000 m<sup>3</sup>/day treatment capacity.
- Design, construction, and 25-year management contract for the two phases contemplated for the Yantaizi plant Bengbu (No. 2) with a total treatment capacity of 200,000 m<sup>3</sup>/day.

m<sup>3</sup>/day capacity first wastewater treatment plant in Bengbu during a 25-year period as well as construction and 25-year

management concession for increasing the capacity of this facility to 200,000 m<sup>3</sup>/day; and the design, construction and 25-year management concession of the two phases planned for the Yantaizi plant, the second one in Bengbu with a 200,000 m<sup>3</sup>/day treatment capacity.

### ► Population of 2 million

Work on this project, which will provide services to a population of 2,000,000, is scheduled to start at the beginning of next year. In addition to the projects contemplated in this agreement, the Anhui province, home of 63 million inhabitants, and Aqualia plan to undertake other joint projects in the future.

This agreement marks another milestone in the excellent relations between the FCC Group and the Anhui province, following the first agreement reached in 2000 for the provision of engineering services and supply of electro-mechanical and control equipment for the construction of the first phase of the Bengbu plant, with a capacity of 100,000 m<sup>3</sup>/day.

FCC, through the Aqualia subsidiary SPA, has been operating in the Popular Republic of China since 1999, the year in which the company entered into the first agreement in Tieling, a city in the northern Liaoning province in this country.

Five agreements have been signed to date for the execution of six plants, including the plant for the treatment of residential wastewater, drinking water, and industrial wastewater. Since last year, FCC has an office in Peking that is involved in analysing possible new investments in China. ■



# The Madrid Autonomous Region awards FCC a 40-year contract for the Parla streetcar system

**AN ESTIMATED 93.5 MILLION EUROS TO BE INVESTED IN LAUNCHING THIS PROJECT**

FCC will build the circular line, with stops at every 500 metres, connecting new outlying districts with the midtown area, and with different services, infrastructures, cultural and sports facilities and shopping centres.

Approximately 15,000 travellers are expected to use this means of transport on a daily basis, up to four million users per year.



CC will be in charge of building the streetcar system running through Parla and connecting this town with other districts covered by the Renfe local train network. The contract for this streetcar system contemplates the drafting and execution of the project, work on the rail system, the supply of streetcars, as well as a 40-year maintenance and operations concession.

The project was put out to tender by the Madrid Transport Consortium and Parla City Hall. Initial investment for this project is estimated at 93.5 million euros, with nearly 18.6 million of this amount to be spent on purchasing nine new streetcars and the remaining 74.9 million earmarked for the execution of the necessary infrastructures and systems.

## ► 14 stops

This new circular local two-way train line will stretch over 8 kilometres and will include 14 stops with double platforms and four with a single platform.

Stations will be located at an approximate distance of 400 metres from each other, with service scheduled every 7 minutes at rush hour to make it easy to catch the Renfe trains.

The Parla streetcar system is designed for speeding up communications within each municipality as well as with

Madrid. Connecting the centre of the city with new urban developments, this new transport system will provide easier access to hospitals, public centres, sport facilities, and commercial districts. Connection with the local train network will be made at two connecting stations; the current



station, and another one in the future Parla East station.

The project will transform midtown Parla's Real Street into an area reserved for the streetcar and pedestrians, thereby increasing the value of this area.

Approximately 15,000 travellers are expected to use this means of transport on a daily basis. With

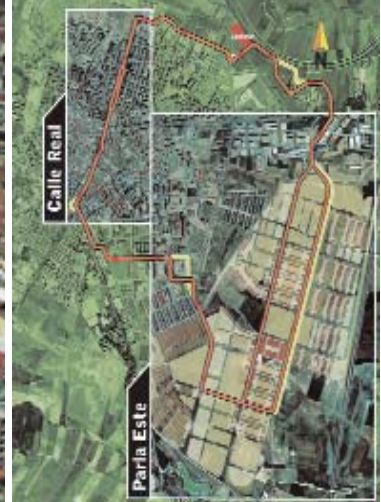
## ► APPROXIMATELY 15,000

**travellers will use this means of transport on a daily basis, with demand in the first year expected to reach four million users.**





► **STRETCHING OVER MORE** than 8-kilometres, this circular line will connect the centre of Parla with its outlying districts.



The project will transform Real Street, in midtown Parla, into an area reserved for the streetcar and pedestrians, thereby increasing the value of this area.



Parla's population expected to double by 2015, the number of users is expected to rise sharply. Work on the project will begin immediately and is scheduled for completion in December 2006. Commercial operations will start in March 2005, with Detren, the FCC railway transport subsidiary, in charge of operations. The design of this streetcar system is specifically for Parla, with customised colours as well as interior and exterior design. The nine streetcars comprising the fleet are Citadis type,

manufactured by Alstom, 32 metres long, 2.40 metres wide, and weighting 30 tons. The cars, featuring a muffler and soundproof insulation system, will be centrally controlled for correct operations and close surveillance.

Each convoy can accommodate up to 220 passengers.

The characteristics of the streetcar model to be implemented in Parla are similar to the one currently operating in Barcelona, which is also managed by FCC. ■

#### FCC WAS ALSO IN CHARGE OF BUILDING BARCELONA'S STREETCAR SYSTEM

The consortium, which includes FCC Construcción and FCC-Connex, the Group's subsidiary engaging in railway services, built the Trambaix and Trambèsos streetcar system for the Barcelona Port Authority. The contract also included project drafting and execution, and 25 and 27-year concessions for maintenance and operations, respectively.

# The Sant Antoni water desalination plant, which will improve water supply in Ibiza, starts operations

17,500 m<sup>3</sup>/DAY WATER TREATMENT CAPACITY

Last July, the councillor for the Environment of the Balearic Island regional government, Jaume Font, inaugurated the enlargement of the Sant Antoni water desalination facility, where production capacity was increased to 17,500 m<sup>3</sup> per day. The councillor of Ibiza and Formentera, Pere Palau, and the mayors from several municipalities in the island of Ibiza, were also present in this event. The Sant Antoni de Portmany water desalination, able to treat 8,000 m<sup>3</sup> per day, was built in 1996 in order to improve drinking water supply in Ibiza. Capacity was subsequently increased to 12,000 m<sup>3</sup>/day thanks to several modifications implemented in this facility. Since its construction and up to

now, the reverse osmosis technology used in this treatment plant has improved significantly, with latest generation membranes making it possible to increase production and improve water quality. Thanks to these improvements, it was possible to increase production by maintaining the existing frames and installing a new one comprising 90 seven-element pressure tubes with a 7,500 m<sup>3</sup>/day treatment capacity. A pump system, that uses the latest technology and is able to recycle energy, made it possible to slash desalination related costs by 30%. The existing desalination facility was increased by adding two new seawater tanks with a 500 mm diameter and 50 metres deep,

equipped with two vertical pumps, each of which is able to pump 650 m<sup>3</sup> of water per hour. Water is pumped to sand filters to remove solid particles. An additional horizontal sand filter,







**AERIAL VIEW OF the Sant Antoni seawater desalination plant and several details of the phases is drinking water production.**

identical to the existing ones, was installed as well as an additional cartridge filter.

Before the desalination process, seawater undergoes disinfections, flocculation, and clotting processes, as well as treatments involving precipitation inhibitors, pH adjusting agents, sand-bed filtering, oxidant reduction, and security filtering.

This desalination plant ensures excellent water quality, meeting RD140/2003 health standards. Thanks to the increased treatment capacity, the plant can guarantee quality drinking water supply for most of the cities and towns in Ibiza, including Sant Antoni, Sant Josep, Sant Joan, Ibiza capital, and Santa Eulària des Rius. ■

### AQUALIA IN THE BALEARIC ISLANDS

Aqualia has a proven expertise in the Balearic Islands. Its objective is not only to ensure quality supply and distribution to all the population, but also to provide services within its customer care excellence program while respecting the environment.

In Mallorca, Aqualia engages in comprehensive management of the entire water cycle, including: supply, sanitation, treatment, and recycling in Lluçmajor; seawater desalination in Camp de Mar (Andratx); and wastewater treatment in the Tramuntana region. Furthermore, the Company was recently awarded a concession for drinking water supply and sewage system maintenance in Sóller.

In Ibiza, besides the capital, Aqualia operates in Santa Eulària, Sant Joan, Sant Josep, and Sant Antoni.

In addition to these concessions, the company was recently awarded a 25-year service contract, which may be extended to 25 years, contemplating the supply of drinking water to households, as well as maintenance of the sewage system.

Aqualia also has proven experience in the operation and maintenance of wastewater and drinking water treatment plants.

In fact, in the Balearic Islands, Aqualia is involved in recycling wastewater that is subsequently used for watering the Son Antem golf courses.

► **30% COST SAVINGS IN WATER desalination processes achieved thanks to a new energy recycling system.**



## FCC cleans the Cataluña and the Balearic Islands shores

**F**or the past five years, FCC has been cleaning the shores of southern

Cataluña during the summer months as part of the Catalan Water Agency's risk prevention and shore and beach-cleaning program.

Thanks to FCC's excellent performance in providing these services, initially awarded in 2002, the Catalan Water Agency decided to select the company again for undertaking cleaning tasks throughout the entire coast of Cataluña, thereby increasing the number of equipment as well as the budget, and renewing the contract on a yearly basis.

### ► Over 350 m<sup>3</sup> of waste

The success of annual campaigns, with over 350 m<sup>3</sup> of waste collected each year, equivalent to more than 90 Mt/year, and the Company's involvement in critical events such as the oil spill in the Costa Dorada at the end July



### TYPE OF COLLECTED MATERIAL

	Cataluña	Balearic Islands
Plastic	44%	72%
Wood	22%	12%
Algae	24%	4%
Organic matter	4%	8%
Oil	0.5%	1%
Other	5%	3%

2003 and cleaning up tasks after the Maresme flooding in August 2002, have prompted the Balearic Island government to consider implementing a new service for cleaning the shores of Mallorca, Menorca, Ibiza, and Formentera in 2004, and awarding FCC a management contract put out to tender.

These services, provided from June to September, include taking care of the 365 beaches on the Catalan coast, from Portbou in Girona to Casas de Alcanar in Tarragona, as well as all the shores in the Balearic Islands. In its tasks involving the collection of all type of floating waste and cleaning coastal waters, FCC uses vessels, specially designed for coastal areas that can remain afloat despite Level 4 strength winds and 1.5 metre high waves. The vessels, Marnett Solid 650 model, were leased from SVAT, an FCC Group company. These are moored at several harbours in order to make it easy to access different points along the coast: with 40 of these vessels docked on the Catalan shore, 10 in Mallorca, 5 in Menorca, 4 in Ibiza, and 2 in Formentera.

Besides general navigation tasks, the captains in charge of these vessels are also responsible for operating the waste collection system mechanisms.

Two containers at the bow for waste collection are activated by means of a hydraulic devise, making easier to shut these down while the vessels travel along the beaches or sail from the corresponding base harbour.

The vessels are specially designed for the collection of floating and semi-floating waste matter algae, medusas in bathing areas, as well as for cleaning up oil spills on the beach or harbours.

Since the start of operations, 1,480 m<sup>3</sup> of waste has been collected, equivalent to more than 1,300 containers of urban solid waste. ■



# Inauguration of the Jirafa Élite building in Oviedo



**R**ealia Business, an 50-50% FCC and Caja Madrid joint venture, fulfilled its commitment to the city of Oviedo, inaugurating one of the city's most ambitious projects; the Jirafa Élite Building. Located at the heart of the capital of Asturias, next to the Campoamor Theatre, home of the Prince of Asturias awards ceremony, the Jirafa Élite is 60 metres high, making it Oviedo's tallest building and one of the city's landmarks. Several personalities attended the inauguration ceremony. Gabino Lorenzo, mayor of Oviedo, accompanied by Iganacio Bayón, Realia's CEO, was in charge of uncovering the commemorative plaque.

## ► 42 luxury apartments

This fully renovated landmark building consists of 42 luxury apartments, offices, and commercial premises. All the original architectural details were preserved as part of this refurbishment project. The building combines a sense of history with state-of-the-art technology. The latest in technology and domotics were incorporated, such as automatic control of installations. Because of the building's layout

► **THE 20-FLOOR BUILDING STANDS 60 METRES high, the tallest building in Oviedo and one of this city's landmarks.**



and height, the reconstruction project marks a milestone in Spanish architecture. The original façade was maintained while the entire structure was gutted. Innovative construction and engineering techniques were applied in this painstaking process. The project, which began in early 2002, paid special attention to the surrounding areas, particularly with respect to physical

**GABINO DE LORENZO, MAYOR OF OVIEDO, and Iganacio Bayón, Realia's CEO, after uncovering the commemorative plaque marking the inauguration of the Jirafa Élite building.**

cleanliness and sound pollution. Total investment was more than 45 million euros, reflecting the importance and magnitude of this project. The development company, Fomento Inmobiliario Asturiano (FIA), a Mall Group company, and Realia Business were in charge of the project, reflecting the real estate company's commitment to Asturias, where it has a vocation of leadership and continuance. ■



## Cementos Portland Valderrivas will sponsor the San Antonio team for another three seasons

**C**ementos Portland Valderrivas decided to sponsor Pamplona's San Antonio handball team in the ASOBAL Division for another three years. The company will spend three million euros in this sponsorship. By sponsoring this team, Cementos Portland Valderrivas, with headquarters in Pamplona, aims to express its support for sports in Navarre in general, and handball in particular. Esther Koplowitz, the main FCC shareholder and Vice-Chairman of the Cementos Portland Valderrivas Board of Directors, is the San Antonio team's patroness of honour. At the beginning of September, the Navarre team obtained its first title this season: the Spanish Super Bowl. As the reigning champions of the Asobal League, the team beat BM Valladolid, the winner of the King's Cup. ■

### THE TEAM HAS WON THE FOLLOWING NATIONAL TITLES IN RECENT YEARS

#### National titles:

- Spanish Super Bowl (2002/2003/2005)
- The King's Cup (1999/2001)
- ASOBAL League (2002/2005)

#### International titles:

- European Super Bowl (2001)
- European "Recopa" (2000/2004)
- European Cup (2001)

## New President of the European association of concrete manufacturers

**I**n their last meeting, the representatives of the European Ready Mixed Concrete Organization (ERMCO) elected José Ramón Bujanda Sáenz, the Spanish representative at this organization, as its new president. Representatives from twenty European countries have joined ERMCO. José Ramón Bujanda, born in Pamplona, holds a Civil Works Engineering degree from the IESE Business School. He is the manager of Cementos Portland Valderrivas' Concrete Division and Vice-Chairman of the Spanish National Association of Ready-Mixed Concrete Manufacturers. ERMCO member companies operate 7,000 production centres manufacturing 330 million m<sup>3</sup> of concrete per year. With an annual production of 80 million tons, Spain has been the leading concrete manufacturer in Europe over the last few years. ■



## Road Medals of Honour

**O**n 8 June, in a ceremony held at the Madrid Association of Civil Engineers headquarters, the Spanish Road Association awarded its Road Medal of Honour to professionals responsible for outstanding projects. In this edition, the Association handed out a Gold Medal, an International Merit medal, eight Special Mention medals, and 32 Honours Medals as a special recognition to those who, through their work and dedication, stand out among their peers. Alejandro Fernández Álvarez, General Manager of FCC Construcción, won one of these medals for his work on large highways throughout Spain as well as for several state and regional roads. ■



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