

## MARKET PROFILE:

#### INTERNATIONAL ROAD FEDERATION – WASHINGTON PROGRAM CENTER

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BRAZIL

#### INTRODUCTION

Whatever the measure of size land area. population or gross domestic product - Brazil one of the world's is largest countries. With a land area of over 8.5 million square kilometers (approximately 22 million square miles), Brazil is about the size of the continental US. Brazil also boasts the 8<sup>th</sup> largest economy in the world, with a gross domestic product

(GDP) of over US\$800 billion. Scattered across the country are over 171 million people with an average income of \$5,000 per year.

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With a relatively prosperous economy and such a large country to explore, it is no surprise that Brazil also has a comparatively large transportation network. Brazil has over 27,000 kilometers of railway lines, over 50,000 kilometers of navigable waterways, nearly 3,000 airports and more than 1.6 million kilometers of highways.

One of the foundations of its transportation system is Brazil's network of roads. At the core are 150 federally administered highways. In addition, there are hundreds of highways run by Brazil's 27 states (including the Federal District) or its municipal governments. According to one estimate. 60% approximately of Brazil's commercial freight is transported across the nation's highway system.

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| General Facts |                       |  |  |
|---------------|-----------------------|--|--|
| Official      | República Federativa  |  |  |
| Name:         | do Brasil             |  |  |
| Capital:      | Brasilia              |  |  |
| Area:         | 8,511,965 sq. km.     |  |  |
|               | (3,286,549 sq. miles) |  |  |
| Population:   | 171,853,126           |  |  |
|               | (July 1999 estimate)  |  |  |
| Official      |                       |  |  |
| Language:     | Portuguese            |  |  |

However, Brazil is still a developing nation. Its economic history has been punctuated with periods of rapid growth and sudden decline. The nation's income distribution is fairly skewed, creating pockets of great wealth – and great poverty.

Not surprisingly, Brazil still needs to build many more highways and improve its existing roads. Although Brazil expanded its network of federal highways by 328% between 1971 and 1997, it still has less than 70,000 kilometers (approximately 43,000 miles) of federal highways scattered across its vast expanse of land. By contrast, the United States had approximately 270,000 kilometers (170,000 miles) of federally supported highways in 1997.

The condition of Brazil's highway system also has room for improvement. Only 9% of Brazil's roads are paved. While 80% of the federal highway network is paved, just over 41% of the state roads are paved and a mere 1% of the municipal roads are paved.

As it enters a new millennium, the Brazilian government is rising to the challenge of building a modern highway system that can service its burgeoning economy. Via the World Bank and the Inter-American Develop-ment Bank (IADB), Brazil has dozens of highway development projects in progress or planned for the near future. Plus, at all levels of government, efforts are being made to improve and enhance the nation's road system.

#### **BASIC INFORMATION**

By several different measures, Brazil is the largest country in South America. Its land area is three times that of Argentina. Its population is more than four times that of Colombia. And, its GDP is more than twice that of Argentina. For these reasons (and many others), Brazil is frequently the first nation companies consider when exploring the emerging market of South America.

The nation of Brazil is divided into 26 states, plus the *Distrito Federal* (Federal District) where the capital of Brasilia is located. These major political entities are commonly divided into five geographical regions – the North, the

North: Acre, Amapá, Amazonas, Pará, Rondônia, Roraima, Tocantins Northeast: Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe Southeast: Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo South: Paraná, Rio Grande do Sul, Santa Catarina Central West: Distrito Federal, Goiás ,Mato Grosso, Mato Grosso do Sul

The Regions of Brazil

Northeast, the Southeast, the South and Central West (see table above).

Brazil is also a young, urban nation. Over 51 million – nearly 30% – of its people are below the age of 15. However, over the last two decades, declining fertility rates and rising life expectancies have combined to a general aging trend for Brazil. The current life expectancy at birth is 67 years.

| Brazil's Major Cities |                   |            |  |  |
|-----------------------|-------------------|------------|--|--|
| City                  | State             | Population |  |  |
| São Paulo             | São Paulo         | 9,811      |  |  |
| Rio de Janeiro        | Rio de Janeiro    | 5,533      |  |  |
| Salvador              | Bahia             | 2,209      |  |  |
| Belo Horizonte        | Minas Gerais      | 2,091      |  |  |
| Fortaleza             | Ceará             | 1,967      |  |  |
| Brasília              | Distrito Federal  | 1,817      |  |  |
| Curitiba              | Paraná            | 1,465      |  |  |
| Recife                | Pernambuco        | 1,342      |  |  |
| Porto Alegre          | Rio Grande do Sul | 1,286      |  |  |
| Belém                 | Pará              | 1,142      |  |  |
| Manaus                | Amazonas          | 1,158      |  |  |

Approximately 80% of <sup>[</sup> Brazilians live in urban areas.

As of 1996, Brazil had 11 cities with a population of over 1 million (see table right). São Paulo is the largest city with approximately 10 million residents. Rio de Janeiro is Brazil's second biggest city, with over 5 million inhabitants. The capital, Brasilia, has about 2 million citizens.

Despite its overall economic strength, the people of Brazil are not highly educated. As of 1995, adults in Brazil average only about four years of formal education. In 1997, the literacy rate was only 81.7%. As a result, companies considering hiring employees in Brazil may find it easier to find construction workers for projects than engineers.

However, recent government efforts to improve its educational system are showing results. Virtually every child receives an elementary school education and approximately half receive a secondary school education.

For historical reasons, the official language of Brazil is not Spanish (like most of South America), but

Portuguese. Due to physical proximity and the similarities between the languages, many Brazilians also speak Spanish. However, one should not expect to find many Brazilians who can speak and read English.

Because Brazil is located just south of the equator, the climate is generally quite tropical, with parts of the south being more temperate. Compared to Europe and the U.S., the seasons are reversed, with summer falling during the months of December to February and winter setting in between June and August.

Since most Brazilians are at least nominally Roman Catholic, many of the national holidays are major Christian festivals. One should not expect to do business, nor expect employees to work on national holidays.

Besides the usual Christian holidays of Easter and Christmas, Brazil celebrates official holidays on Good Friday, Corpus Christi, All Souls Day and the Feast of the Immaculate Conception. Even the four days of celebration known as Carnival are Christian holidays, falling just before the onset of Lent. A list of all of Brazil's national holidays is provided in the table to the right.

## BRAZIL'S ECONOMY

Arguably, Brazil dominates the economy of South America. With its large population, abundant natural resources and extensive industrial activities. Brazil is both South America's largest market consumer and producer market.

The last decade was a reasonably good one for Brazil's economy. Brazil's historic problem of accelerating inflation was brought under control by the *Plano Real* (the Real Plan) in 1994. Named after Brazil's new currency, the *Plano Real* implemented tight monetary and fiscal policies, while tying the new currency, the *Real*, to the U.S. dollar at near parity.

Another major source of economic growth in the 90s was the formation of the Southern Common Market. commonly called Mercosur in Spanish or Mercosul in Portuguese. Created in 1991, Mercosul brought together the nations of Argentina, Brazil, Paraguay and Uruguay into a custom's union. Through a process of gradual transition, Mercosul's goal is to create free trade between its members. Since 1994, 95% of goods can be traded between Mercosul members duty-free and guotafree.

#### **Brazil's National Holidays**

New Year's Day (January 1) Carnival (4 days in February or March) Good Friday (Friday before Easter) Easter Tiradentes Day (April 21) International Labor Day (May 1) Corpus Christi Independence Day (September 7) Our Lady Aparecida, or Children's Day (October 12) All Souls Day (November 2) Proclamation of the Republic (November 15) Feast of the Immaculate Conception (December 8) Christmas Eve (December 24; half day) Christmas (December 25) New Year's Eve (December 31; half day)

> The most noticeable impact of Mercosul is the rapid expansion of trade between its members. In particular, there was a dramatic rise in trade between Argentina and Brazil. Between 1990 and 1997, Brazil's exports to Argentina rose by 620%, while Argentina's exports to Brazil jumped by 360%.

The nation experienced positive real gross domestic product (GDP) growth every year from 1991 to 1998, following a sharp decline of 4.4% in 1990. During the 90s, Brazil's economy increased in size by approximately 20%, while its total population rose by only 13%. As a result, national GDP per capita figures rose, implying a general improvement in their standards of living.

Unfortunately, the twin problems of inflation and unemployment reemerged to haunt Brazil in 1999 (see table below). Brazil's unemployment rate hovered above 7%, while annual consumers' price index (CPI) exceeded 8%. Meanwhile, Brazil's currency, the *Real*, was forced to devalue from near

| Major Economic Statistics - 1999  |  |  |  |  |
|---|--|--|--|--|
| GDP (US\$ billion, 1998):<br>Real GDP Growth:<br>Inflation Rate:<br>Unemployment Rate:<br>Exchange Rate (R/\$):<br>Total Exports (\$ billion):<br>Total Imports (\$ billion): | <u>Brazil</u><br>750.8<br>0.8%<br>8.7%<br>8.2%<br>1.79<br>48.014<br>49.210 | <u>U.S.A.</u><br>8,759<br>4.0%<br>2.7%<br>4.1%<br>874.652<br>1,043.2 |  |  |
|   |  |  |  |  |

parity to the U.S. dollar in 1996 to 1.85 Reals = US\$1 at the end of 1999.

In some ways, the structure of Brazil's economy is reminiscent of the U. S. economy during its developing years. Approximately 14% of the nation's GDP comes from agricultural production, with industry providing another 36%. The remaining 50% of GDP is generated by Brazil's expanding services sector.

Brazil has one of the world's largest manufacturing sectors. In 1997, its manufacturers produced over US\$170 billion of products, constituting 21.7% of the nation's total GDP. Brazil's leading industries include textiles, footwear, steel, aircraft, and motor vehicles and parts.

Despite the size of its overall economy, a rather skewed income distribution keeps Brazil's consumer goods market relatively small. In 1996, Brazil's wealthiest 20% received over 70% of the national income, while the poorest 30% received just over 2%. According to one international estimate, half of Brazil's population live in poverty.

One consequence of its uneven income distribution is the bifurcation of Brazil's consumer market. For Brazil's rich, high incomes translate into strong demand for expensive luxury goods and high quality products. Consumer tastes among Brazil's well-to-do are strongly influenced by the U.S. and European fashions, with significant demand for imported goods. Meanwhile, Brazil's poorer consumers generally restrict their spending on basic necessities domestically and made products.

#### **BRAZIL'S ROAD SYSTEM**

As mentioned above, Brazil has more than 1.6 million kilometers of roads crisscrossing it, but only 9% are paved (see table on next page). Most of its roads are located in the nation's southeastern region (where the two leading economic cities of São Paulo and Rio de Janeiro are located) and southern region. Brazil's north region, which includes Amazonas, has the fewest kilometers of roads (about 6%), despite representing more than 19% of the country's landmass.

The administration of Brazil's highway system is divided among three different levels of government – the federal government, the state governments and the municipal governments.

At the top are Brazil's federal highways (rodovias federais) which are planned, built and maintained by the Department of Road Transportation (*Departamento de Transportes Rodoviários*) of the Ministry of Transportation (*Ministerio dos Transportes*). There are 68,439 kilometers of federal highways in Brazil, constituting only about 4% of the nation's road system. However, nearly 80% of Brazil's federal highways are paved, which amounts to over a third of the total paved roads in the nation.

Most of the federal highways are undivided two lane roads. However, along the major transportation corridors, there are some divided four-lane highways. By contrast, further inland in the North, many of the federal highways remain unpaved.

| BRAZIL'S ROADS                          | Paved   | Unpaved   | Total     |  |
|---|---------|-----------|-----------|--|
| NORTH                                   | 9,475   | 87,248    | 96,723    |  |
| Rondônia                                | 1,417   | 21,016    | 22,433    |  |
| Acre                                    | 480     | 1,787     | 2,267     |  |
| Amazonas                                | 1,702   | 4,332     | 6,034     |  |
| Roraima                                 | 746     | 4,122     | 4,868     |  |
| Pará                                    | 3,417   | 30,926    | 34,343    |  |
| Amapá                                   | 223     | 1,789     | 2,012     |  |
| Tocantins                               | 1,490   | 23,276    | 24,766    |  |
| NORTHEAST                               | 41,763  | 355,095   | 396,858   |  |
| Maranhão                                | 4,210   | 48,476    | 52,686    |  |
| Piauí                                   | 3,578   | 49,156    | 52,734    |  |
| Ceará                                   | 6,270   | 41,814    | 48,084    |  |
| Rio Grande do Norte                     | 3,753   | 23,167    | 26,920    |  |
| Paraíba                                 | 2,978   | 30,211    | 33,189    |  |
| Pernambuco                              | 5,405   | 35,859    | 41,264    |  |
| Alagoas                                 | 2,230   | 10,759    | 12,989    |  |
| Sergipe                                 | 1,719   | 7,791     | 9,510     |  |
| Bahia                                   | 11,620  | 107,862   | 119,482   |  |
| SOUTHEAST                               | 52,574  | 427,011   | 479,585   |  |
| Minas Gerais                            | 19,075  | 213,457   | 232,532   |  |
| Espírito Santo                          | 3,015   | 26,941    | 29,956    |  |
| Rio de Janeiro                          | 5,178   | 16,892    | 22,070    |  |
| São Paulo                               | 25,306  | 169,721   | 195,027   |  |
| SOUTH                                   | 29,820  | 430,738   | 460,558   |  |
| Paraná                                  | 15,166  | 245,668   | 260,834   |  |
| Santa Catarina                          | 5,397   | 55,967    | 61,364    |  |
| Rio Grande do Sul                       | 9,257   | 129,103   | 138,360   |  |
| WEST CENTRAL                            | 17,204  | 207,749   | 224,953   |  |
| Mato Grosso do Sul                      | 4,651   | 49,265    | 53,916    |  |
| Mato Grosso                             | 3,995   | 78,881    | 82,876    |  |
| Goiás                                   | 7,822   | 78,877    | 86,699    |  |
| Distrito Federal                        | 736     | 726       | 1,462     |  |
| TOTAL                                   | 150,836 | 1,507,841 | 1,658,677 |  |
| All figures in kilometers; 1997 figures |         |           |           |  |

Brazil's federal highways are designated by the letters, "BR," followed by three digits. Highways that start with "0" are so-called "radial" (radias) highways that begin in Brasilia and radiate out across the nation. The nation's north-south called highways are "longitudinal" (longitudinais) highways and are indicated by an initial numeral of 1. Eastwest (transversais) federal highways

start with the number 2. Highways that start with numeral 3 are *diagonais* roads, indicating that they run either northeast to southwest or northwest to southeast. Finally, Brazil had federal highways called, *Rodovias Federais de Ligação*, that are connectors between other highways. These are indicated by the initial number 4.

The second tier of Brazil's road transportation system is provided by the 26 states and the Federal District. Out of the more than 1.6 million kilometers of roads in Brazil, nearly 200,000 kilometers are state roads. Of that total, about 40% is paved.

Within the state roads, there is a further division between roads administered by a single state and those jointly maintained by two or more states. Approximately 25,000 kilometers are jointly administered, of which about 14,000 kilometers are paved.

The vast majority – about 84% -- of Brazil's roads are municipal roads. Out of the nearly 1.4 million kilometers of municipal roads, a mere 15,000 kilometers – or just over 1% – are paved. Curiously, even in the urbanized states of São Paulo and Rio de Janeiro, paved roads constitute only 4.3% and 7.4% respectively of the total. Surprisingly, it is the state of Amazonia that has the highest percentage of paved municipal roads: 28.5%.

Brazil's network of roads expanded very little between 1992 and 1997 (see table below). In 1992, Brazil had over 1.5 million kilometers of roads, of which just over 143,000 kilometers were paved. By 1997, the total had increased by just 9% and paved roads expanded by only 5%.

| Growth in Brazil's Roadways |       |       |  |  |
|-----------------------------|-------|-------|--|--|
| Туре                        | 1992  | 1997  |  |  |
| Paved                       | 143,2 | 150,8 |  |  |
| Unpaved                     | 1,3   | 1,5   |  |  |
| Total                       | 1,5   | 1,6   |  |  |
| L                           | , ,   | ,     |  |  |

There is also concern about the quality and safety of Brazil's roads. A 1997 study by Brazil's National Confederation of Transport (CNT) reported that 92% of Brazil's federal roads were in inadequate condition and required serious Meanwhile, repair work. according to the latest Ministry of Transportation report, there were 120,422 accidents on Brazil's federal roads in 1998, of which 5,305 resulted in a fatality.

However, over the same five years, the number of vehicles on Brazil's roads rose by 22% from 740,228 in 1992 to 1,640,683 in 1997. Most of that growth came from the rapid expansion in the number of cars. Between 1992 and 1997, the number of cars in Brazil more than doubled to nearly 1.2 million. The Brazilian government is responding to its nation's needs for more, higher quality roads. With the support of the World Bank and the Inter-American Development Bank, Brazil has about 20 different active or proposed highway According to U.S. projects. а federal study, Brazil's government government projects government and private spending of approximately \$5 billion on highway construction between the years 2000 and 2003.

The expansion of Brazil's road system is also being encouraged by Mercosul. Rising trade flows with other Mercosul members is creating a need for more reliable highways to transport goods across the border. Meanwhile, improved cooperation between the Mercosul member's governments is making it easier to coordinate highway projects.

In addition, the Brazilian government has begun the process of the selective privatization of highways through its concession program. By the end of 1999, the Brazilian government awarded concessions to over 15,000 kilometers of roads, with plans to concede another 15,000 kilometers in the near future.

#### DOING BUSINESS IN BRAZIL

Before departing for Brazil, one should check to see if a visa is required. For example, while visitors from Western Europe generally will be issued a visa upon arrival, U.S. travelers must obtain their visas in advance. It is generally recommended that one apply for a tourist, rather than a business visa, regardless of the nature of one's visit.

Most businesses, shops and offices in Brazil are open Monday through Friday

from 9 AM to 6 PM; many are also open Saturdays from 9 AM to 2 PM. Banks, however, are only open from 10 AM to 4PM, Monday to Friday. ATMs generally operate 24 hours a day, seven days a week.

In general, the business culture in Brazil may seem more formal, more personal and more measured than in the U.S. or Western Europe. The focus of business relations is on forming trusting, longterm bonds, rather than fast, short-term agreements.

Before departing for Brazil, confirm all appointments either by phone, fax or email. Do not rely on the mail; Brazil's postal system is frequently slow and at times, unreliable. In is advisable to reconfirm appointments after one arrives in Brazil.

While Brazilians are generally quite friendly, they expect business contacts to be comparatively formal – at least, at first. One should refer to people by their surname and offer to shake hands. Business conversations typically start with polite conversations about one's health, trip or impressions of Brazil, followed by a gradual transition to the business at hand.

It is helpful to provide information about the overall structure of one's company and one's position in the organization. Brazilian executives can be somewhat title conscious, so it can be useful to apprise them of one's overall status in one's company.

The pace of conversations and negotiations may seem relatively slow. Brazilian executives are as much concerned about the personalities of their prospective business partners as they are about the technical terms of the proposal. "Strong arm" tactics and "hard sells" will usually be politely declined and effectively terminate the business relationship.

As Brazilian а result, companies generally prefer to do business in person. "Cold calls" and unsolicited faxes will rarely receive a response, particularly if they appear too aggressive. Instead, one should try to arrange a formal introduction by a mutual acquaintance.

Once a solid business relationship has been established, Brazilian executives will often treat one like a good friend. One should be prepared to be invited to visit the family home for dinner – and in some cases, be expected to stay overnight at the home of one's business partner.

If invited to someone's home, there is no need to bring a gift. Instead, send flowers or some other token of appreciation after the visit. Avoid sending personal items (such as ties or perfume) or purple gifts (the color is associated with death).

Companies interested in helping to modernize Brazil's road transportation system should be aware of a strong international concern about the deforestation of the nation's rainforests and potential harm caused to Brazil's indiaenous population. Various organizations maintain that the construction of highways into the Amazon have promoted the destructive deforestation of vast stretches of Brazil, causing irreparable harm to its flora, fauna and native Indian population.

From time to time, road construction projects have been blocked by protests organized by international organizations and Indians from the Amazon.

#### **TRADE POLICIES & REGULATIONS**

A major component of Brazil's economic reforms during the 90s was the removal of many of its high trade barriers. As a member of Mercosul, as well as a party to the negotiations to form the Free Trade Association of the Americas (FTAA), Brazil is committed to opening its domestic economy to more foreign participation – including both easier import of goods and services, and greater foreign direct investment.

Despite governmental efforts to promote greater international trade relations, it can still be difficult for foreign companies successfully compete to in Brazil. Lingering red tape and the local business culture can form serious overseas companies obstacles to entering the Brazilian market. As a result, it is generally recommended that overseas companies form an alliance with a Brazilian agent or company.

For companies considering shipping goods to Brazil, it is advisable to use a registered Brazilian customs agent, trading company or broker. If planning on selling goods in Brazil, it is often contract with helpful to а local representative or agent. Such contracts can be exclusive or not, and can be of fixed duration or open ended. However, Brazilian law limits the remuneration of the agent to 10% of the total sales value of industrial goods and 3% of the total sales value for non-industrial goods.

Also, there are strict conditions under which a foreign company can unilaterally terminate the agreement. The foreign company must demonstrate that there is "just cause." According to Brazil's laws, "just cause" is defined as: 1) negligence by the agent; 2) breach of contract by the agent; 3) acts by the agent that damage the company's reputation or business; 4) force majeure; or 5) the conviction of the agent of a serious criminal offense. In addition, there are established procedures to be followed when terminating a contract with an agent that specify the amount of notice that must be given and the level of compensation that must be provided.

Any company importing goods into Brazil must register with DECEX [www.mdic.gov.br/secex/scxindex.htm], a department under Brazil's Secretaria de Comércio Exterior (Secretary of Foreign Trade) in the Ministério do Desenvolvimento, Indústria e Comércio (Ministry of Public Works and the Economy, Industry and Commerce). Each import requires a separate license.

The documentation requirements for shipments to Brazil are fairly standard. Shipments should be accompanied by a copy of the invoice, a bill of lading (or air waybill) and any required additional documentation (such as phytosanitary documents).

To help facilitate international trade, in 1997 the Brazilian government created a computerized import-registration system called "Siscomex" [www.receita.fazenda.gov.br]. The new system helps to reduce paperwork and improve tariff collection. Brazil utilizes its own domestic version of the international harmonized tariff system. Over the last decade, Brazil has lowered its average tariff rate to approximately 12%. However, under the terms of the WTO and Mercosul, Brazil continues to maintain high tariff barriers on selected products. In particular, Brazil imposes prohibitively high tariffs on imported automobiles in an effort to protect its domestic automobile industry.

Besides tariffs, imports are also subject to several domestic taxes in Brazil, including an industrial product tax (IPI) and a merchandise circulation tax (ICM). The IPI rate ranges from 0% to 15% of the c.i.f. value plus import duties; the ICM rate varies from state to state, but is generally 18%.

At present, Brazil is not a signatory to the WTO's Government Procurement Code, nor to the Plurilateral Agreement on Government Procurement, However, most public work contracts are publicly tendered. Awards are usually based on the principle of the lowest bid, assuming company meets the the tender specifications. However, there are some indications that there is an institutional bias to domestic companies (especially in telecommunications).

Investing in Brazil can also be fairly complex. For example, all foreign capital entering Brazil must be registered with the Central Bank. Also, there are bans foreign investments in on certain sectors, such as petroleum production, telecommunications services. minina and most public utilities. Plus, Brazil does not have dual taxation agreements with the United States and many other nations, so investors should be careful about how they repatriate profits.

However. the barriers are not insurmountable; last year over \$20 billion in foreign investment flowed into Brazil. Information about current and future road investment opportunities be found Website: can at the www.dpr.mre.gov.br/e/default-e.htm.

Much of the foreign investment was attracted by Brazil's continuing privatization program, which is gradually selling off a number of state-owned companies. In addition, Brazil plans to privatize 15,500 kilometers of highways under a concession program. To find out more about investing in Brazil and its privatization program, contact the Ministry of Foreign Relations' Trade Promotion Department (Departamento de Promoção Comercial) or the Ministry of Transportation's National Department of Roads (Departamento Nacional de Estradas de Rodagem, or DNER).

#### **USEFUL CONTACTS**

#### Government

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## **ROAD TRANSPORTATION PROJECTS IN BRAZIL<sup>\*</sup>**

## Program to Strengthen Urban Transportation (Identification Stage)

A \$170 million IDB project. The components of the program have not yet been determined.

## **Curitiba Metropolitan Transportation Project (Identification Stage)**

A \$225 million IDB project. The project aims to consolidate the mass transportation system, undertake works to expand the bus system to the city limits, and improve roads and terminals used by buses.

## Federal Highway Rehabilitation Program, Stage II (Identification Stage)

A \$200 million IDB project. The project would include operational improvements, traffic safety measures, and environmental protection activities.

#### Mercosur II Highway Project (Preparation Stage)

A \$870 million IDB project. The project involves the Florianopolis-Osorio Highway and includes construction of a new road, rehabilitation of the existing road, construction and improvement of exit and urban intersections, and equipment.

## São Paulo Roads Program (Identification Stage)

A \$150 million IDB project. The project would finance the rehabilitation of 2,600 km of state roads, provide training and equipment for truck-weighing system, and promote road safety.

#### Rio de Janeiro Private Toll Road Expansion

A \$20 million IDB project. The financing will enable a private company to expand a toll road project in the city of Rio de Janeiro that eases traffic congestion in the urban area and provides motorists with faster, safer routes. The six-lane toll road is operated by Linha Amarela, S.A., on a concession from the municipality. The financing will enable the firm to rehabilitate an additional 3.2 miles of road, building access facilities and other works, and integrate it into to the existing 10-mile system that links the southwestern area of the city with northwestern and northeastern areas as well as downtown.

#### Bahia Road Improvement Project

A \$146 million IDB project. The project seeks to improve the road network through multiple works, including paving, rehabilitation, maintenance, and administrative modernization. Approximately 840 kilometers of roads in the state system will be paved and another 1,420 kilometers will be improved, through either rehabilitation, stabilization, maintenance, or reconstruction.

<sup>&</sup>lt;sup>\*</sup> For more details about road construction projects in Brazil – and other nations – subscribe to EXPRO, a Web-based service provided by the American Road & Transportation Builders Association (ARTBA). For more information about EXPRO and other ARTBA services, please contact Brian Tew (202-371-5544).

## Brazil Expansion and Upgrading the Toll Road in São Paulo State

A \$95.5 million IDB Project. The project, whose total cost is \$514.3 million, is an essential contribution to the roadway rehabilitation and upgrading plan of São Paulo State. It will reduce travel time, enhance safety, and reduce fuel consumption on the Anhangüera-Bandeirantes highway system. Coincessionária do Sistema Anhangüera-Bandeirantes S.A., the project company, is to build a 76.7 kilometer extension of the Bandeirantes highway from Campinas to Limeira with three lanes in each direction in the stretch between Campinas and Americana (36.7 km) and two lanes in either direction for the segment between Americana and Limeira (40 km).

## Brazil-Minas Gerais State Highway (added January 1999)

A \$330 million World Bank project. The project will consist of a physical component and an institutional building component. The physical component will include studies, works and supervision services for: (i) rehabilitation and maintenance of highways, including rehabilitation of 1,250 km of highways, a maintenance pilot program on 1,000 km of highways, and rehabilitation of 18 sites of environmental degradation; and (ii) upgrading and paving of 1,000 km of secondary and rural roads. The policy and institutional development component will include technical assistance and staff training for : (i) concessioning of high-traffic highway sections; (ii) contracting of the maintenance of the non-concessioned network to private contractors, experimenting with performance-based maintenance management contracts; (iii) strengthening of environmental management in the road sub-sector; (iv) restructuring of DER activities; and (v) project management.

## Yellow Line Toll Road (916/OC-BR) (Added July 98)

A \$160 million IDB project. The Yellow Line Toll Road entails the construction of 15 km of a six-lane urban highway to be built in three sections: Section I (2.1 km), Section II (6.9 km) and Section III (6 km). The construction of Section II includes two parallel tunnels of 2.2 km, one in each direction. The 15 km toll road is part of the Yellow Line expressway (23.7 km) of which 8.7 km are in operation.

## Federal Highway Decentralization Project (BRPA6532)

A \$750 million World Bank project. The project includes a component to prepare and implement priority rehabilitation, maintenance and upgrading subprojects on the 35,000 km of highways which will remain under federal jurisdiction and are not part of the concession program which turns part of the current federal highway network over to state control.

# Program to Modernize and Widen the Fernao Dias Federal Highway, Stage I (767/OC-BR)

A \$534 million IDB project. The project will finance the first stage of a program to widen and modernize the Fernao Dias Federal Highway between the states of São Paulo and Minas Gerais. The projects components include (a) recovery and upgrading of approximately 269 km of existing highway; (b) construction of approximately 269 km of roadway parallel to the existing highway; (c) widening of existing bridges and drainage facilities; (d) construction of two parallel tunnels near São Paulo; (e) construction,

upgrading and widening of access ramps and urban through roads; (f) distribution and installation of road safety devices, including lateral barriers, horizontal and vertical traffic signs and supplementary landscaping and environmental protection works; and (g) construction and installation of three toll stations, six highway police checkpoints and an additional station for weighing and measuring cargo vehicles.

## Highway Corridor Program for the State of Bahia (772/OC-BR)

A \$294 million IDB project. The project consists of the following components: (a) upgrading and paving of approximately 750 km of existing dirt and gravel road; (b) rehabilitation of approximately 600 km of asphalt-coated road; (c) road maintenance on about 6,150 km of roads, to include periodic maintenance and reconditioning of paved and unpaved roads within the DER/BA's jurisdiction. The rehabilitation subprogram will include: (a) upgrading of roads constructed with low-cost paving to meet new traffic requirements; (b) construction of new drainage works and expansion of existing ones; (c) reinforcement and modification of some existing structures; (d) laying of new pavement; and (e) placement of markings and traffic signs. The following supplies and equipment will be procured for the program: markings, related supplies and accessories (including installation) for road-user safety; road maintenance equipment consisting of machinery and vehicles; and equipment and instruments to assist with assessments of weight control and paving management.

## Curitiba Urban Transport System (873/OC-BR)

A \$231 million IDB project. The project consists of the following components: (a) increasing capacity on the North-South corridor by paving roads on bus routes along the corridor, building new tube stations to speed up the boarding and off-loading of passengers, and procuring additional buses and units; (b) improving feeder roads; (c) improving facilities for public transport users, including user support centers and terminals; (d) increasing traffic markings and road safety; and (e) planning and monitoring public transport.

#### Improvement of the São Paulo-Curitiba-Florianopolis Highway (904/OC-BR)

A \$1.282 billion IDB project. The physical components of the project are to build a second roadway for and/or rehabilitate about 617 km of the highway between the exit from the city of São Paulo and the entry into Palhoa, close to Florianopolis, and to construct a 43-km divided highway to bypass Curitiba on the east. It also includes construction of tollbooths, stationary weighscale stations and acquisition of mobile platform scales. The project includes (a) rehabilitation of pavement on approximately 516 km of undivided roadway, as well as 88 km of existing dual carriage way, with two traffic lanes on regular stretches and three lanes on uphill stretches; (b) construction of a second roadway running some 459 km, of which 419 km are parallel to existing roads and 40 km follow a separate route in mountainous regions, including concrete structures such as 2,500 m of tunnels; (c) construction of a 43- km dual carriage way section to partially bypass the urban core of the city of Curitiba, including special masonry structures; and (d) earthwork for the preparation for construction of eight toll stations.

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#### Upgrading of the Fernao Dias Highway (975/OC-BR)

A \$550 million IDB project. The components include (a) rehabiliation and upgrading of pavement over 287.8 km on existing two-lane roadway; (b) construction of a second roadway parallel to and the full length of the current one, with similar roadway conditions, within the existing right of way, and with the required bridges, viaducts, and other structures; (c) construction of 4.7 km of divided highway (two lanes in each direction) as a belt road around the city of Carea in Minas Gerais; (d) expansion of existing bridges and drainage structures, as necessary; (e) construction, upgrading, and widening of accesses and crossings in built-up areas through which the highway passes, with partial access control through safety devices, service roads, and pedestrian walkways where necessary; (f) highway safety features, including improvements in alignment and turnabouts every 5 km, grade separation at intersections, roadside barriers, signs, signals, and markings, and complementary landscaping and measures to protect the environment or undo environmental damage; (g) building and equipping of two toll booths in Minas Gerais; and (h) setup of three Federal Highway Police posts and reactivation of one weigh station for commercial vehicles in Minas Gerais.

## Rio Grande Do Sul State Road Program (998/OC-BR)

A \$30-0 million IDB project. The program aims to improve all-weather driving conditions on state roads, especially those used for hauling the state's agricultural output, with an eye to linking producer regions to the corridors of the national intermodal transportation system for the domestic and international markets. The five-year program will pave approximately 800 kilometers of state roadways that are connected to paved sections of federal or state highways and are included in the government's action plan.

#### Federal Highway Rehabilitation (1046/OC-BR)

A \$750 million IDB project. The proposed operation is a global, multiple-works program the main component of which is the rehabilitation of approximately 6,800 kilometers of paved roads in poor condition, including additional works to reduce the risks of traffic accidents and to repair critical environmental damage already existing on the road segments to be repaired. Specific studies will be conducted on pavement management, bridge maintenance, traffic safety, and environmental management. In addition, equipment will be procured for laboratory testing and quality control of asphalt and other materials, along with scales for vehicle weigh stations.

## Region Dos Lagos Toll Road (1071/OC-BR)

A \$80 million IDB project. The project consists of a 60 km road system which includes: (a) the rehabilitation and duplication of the existing RJ-124 road section, with two lanes in each direction (Rio Bonito - Araruama Section, with 30 km) as well as the construction of the project's only toll plaza, after which the Concessionaire is allowed to begin perceiving toll revenues; (b) the construction of a four-lane parallel route to the existing RJ-106, in the Araruama-São Pedro da Aldeia Section, with 26 km, allowing the road to bypass Araruama and Iguaba; and (c) the rehabilitation of the last 4 km section of the existing RJ-106, from km 105 (where the parallel route meets the present RJ-106) to the junction of São Pedro da Aldeia.