



**We make
highways
talk™**

- **MANAGEMENT**
- **SAFETY**
- **PRESERVATION**

International Road Dynamics Inc. develops and maintains traffic management products and systems technology that make highways talk. What are they saying? They are providing information that roadway administrators need to manage traffic, preserve infrastructure and provide safety warnings to drivers.

IRD's multi-discipline, innovative and customer-focused team is expert in advanced technologies, advanced traffic solutions and custom-designed systems.



**CUSTOMER
DRIVEN**

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INTERNATIONAL ROAD DYNAMICS INC.
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TOLL SYSTEMS Project Experience

IRD has provided a wide range of engineering design, equipment and turnkey systems for toll applications around the world. Major toll projects completed by IRD include:

VIAL DEL VALLE, COLOMBIA (2002)

IRD has been awarded a contract to install a 50 lane, 10 plaza post classification toll collection and auditing system, including an Operations Control Centre (CCO). The system includes digital video audit discrepancy recording and special classification of over-length "sugar train" vehicles.



Typical "Sugar Train" Vehicle, Colombia

COIMBATORE AND ATHUPALAM BRIDGE TOLL SYSTEM, INDIA (2001)

IRD installed and commissioned all TCCs (Traffic Counter Classifiers), road sensors, and associated hardware for a 28-lane toll audit system. The system is designed to collect traffic count and classification data to allow the authorities to monitor the traffic information. The data collected can also be used for a number of purposes such as resource management and future planning.

NARMADA BRIDGE TOLL SYSTEM, INDIA (2000)

IRD supplied, integrated and provided installation supervision for a twelve (12) lane post-classification toll audit system. This is a real time toll collection and audit system with flexibility for future upgrades such as smart card payment and video surveillance. The system has high processing speed to ensure fast and smooth flow of traffic at the toll location. IRD supplied and integrated all lane equipment such as classification sensors, fare display, barriers, traffic signals with the lane controller, and plaza computer system. The system also includes software for generation of comprehensive and detailed MIS reports.



Narmada Bridge, India

CARIACO-CUMANA, VENEZUELA (1999)

IRD supplied a post-classification toll collection and auditing system of 8 lanes in 2 plazas for the highway concessionaire, Consorcio Plavin S.A, in the state of Sucre in eastern Venezuela.

*IRD products and components are protected by one or more U.S. and Canadian patents.
IRD reserves the right to change, modify, or improve its products at any time without notice.*

TOLL SYSTEMS

Additional Toll Experience

INDIA

Maharashtra State Road Development Corporation (MSRDC)

Lakhanpur & Jammu Border Toll System

Wada-Bhiwandi - Mumbai Toll Concession

In 1999, IRD supplied, installed, and commissioned a 54 lane, 5 plaza TCC Toll System at entry points to the city of Mumbai. The TCC Toll Audit system allows the concession owner/toll operator to monitor the traffic count and classification information for each lane in a plaza, and to match this information to a set time period, such as the duration of an operator's shift. The system is widely used at national / state highways, border entry points, toll locations and port entry points. The information collected is then used by the operator to cross check the actual revenue collected as compared to what they would expect given the detected traffic.

In 1999, IRD supplied all equipment and provided supervision installation, testing, and commissioning for a 13 lane toll system, consisting of four (4) car/bus lanes and nine (9) truck lanes. The truck lanes are equipped with weigh scales that are integrated to the system to enable customized excise tax collection. IRD supplied the required axle sensors, inductive loops, traffic control signal control equipment, overhead signals, operator console, fare display, electronic barrier gate and lane controller computers.

In 1998, IRD supplied, integrated and installed the first automated toll collection system for India's first BOT project. The system consists of four post-classification toll lanes along with a toll plaza. The system is electronically operated, with the operator entered and sensor information processed by the lane controller and stored in the plaza computer in real time. The system provides complete data security and audit functionality.

ASIA

Bangladesh

Malaysia

Indonesia

In 1997, IRD supplied, integrated and installed 4 pre-classification toll lanes with a toll plaza. The system also provides video surveillance and magnetic card payment functionality.

IRD supplied, integrated, and provided installation supervision for vehicle classification sensors (treadles including single/dual sensors) at approximately 100 toll lanes in Malaysia.

IRD supplied weight enforcement and traffic monitoring systems for the Jasa Marga toll project at Cikampek, Indonesia.

SOUTH AMERICA

Neiva-Girardot, Colombia

Meta National Highways, Colombia

Santa Marta-Paraguachon, Colombia

In 2001, IRD supplied, integrated and installed 20 lanes of post-classification toll collection and auditing in 3 plazas, including an CCO. The system incorporates single-dual tire sensors to enhance classification capability, and a video audit discrepancy recording system.

In 1998, IRD supplied, integrated and installed 12 lanes of post-classification toll collection and auditing in 5 plazas, including a CCO. The system incorporates single-dual tire sensors to enhance classification capability, and a video audit discrepancy recording system.

In 1997, IRD supplied, integrated and installed 10 lanes of post-classification toll collection and auditing in 4 plazas and a CCO. The system incorporates single-dual tire sensors to enhance classification capability.

UNITED STATES

ATCAS, California, USA

Highway E470, Colorado, USA

Beeline Project, Florida, USA

Orlando County Expressway, Florida, USA

TBTA, New York, USA

Oklahoma Turnpike, Oklahoma, USA

Green Light Project, Oregon, USA

Dulles Project, Virginia, USA

Greenway Toll, Virginia, USA

IRD supplied in-road sensors and classification equipment for 90 toll lanes including detection devices for detection of single and dual tires.

IRD supplied in-road sensors and classification equipment for 60 toll lanes.

IRD supplied in-road sensors and classification equipment for 24 toll lanes.

IRD supplied in-road sensors and classification equipment for 150 toll lanes.

IRD supplied in-road sensors and classification equipment for 200 toll lanes.

IRD supplied 160 lanes of in-road sensors and classification equipment.

IRD assisted in the design, supply and installation of 22 turnkey systems involving Automatic Vehicle Identification (AVI) systems on trucks for a state wide weight-distance tax.

IRD supplied in-road sensors and classification equipment for 54 toll lanes.

IRD supplied in-road sensors and classification equipment for 60 toll lanes in phase 1 and 124 in phase 2.

CANADA

Murray MacKay Bridge, Nova Scotia, Canada

Highway 407, Ontario, Canada

IRD supplied and integrated a pre-weighing system with a fare collection system.

IRD supplied and integrated an automatic electronic support system for the first fully electronic toll road in North America. The toll road has 123 ramps, each containing 1 to 3 toll lanes.



International
Road Dynamics Inc.

Corporate Offices

702-43rd Street East
Saskatoon, Saskatchewan
Canada S7K 3T9
Tel: (306) 653-6600
Fax: (306) 242-5599

#305-1006 West 104th Ave.
Northglenn, Colorado
USA 80234
Tel: (303) 355-5998
Fax: (303) 426-8937

Publicly Traded on the TSX (Symbol IRD)
Find out more about IRD on our website: www.irdinc.com

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