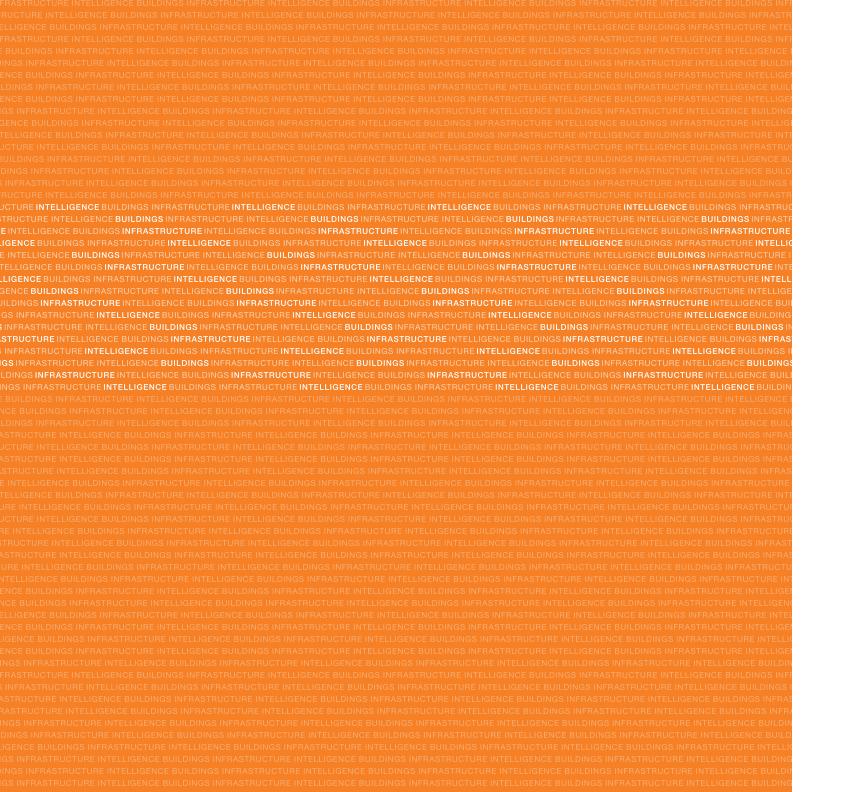
PRESENTING IBI GROUP'S GLOBAL PRACTICE

Transportation





Transportation



Defining the cities of tomorrow ibigroup.com



Our Firm

Defining the cities of tomorrow.

We are a global team of dedicated and experienced architects, engineers, planners, designers, and technology professionals who share a common desire – to help our clients create livable, sustainable, and advanced urban environments.

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I B I

From high-rises to industrial buildings, schools to state-ofthe-art hospitals, transit stations to highways, airports to toll systems, bike lanes to parks, we design every aspect of a truly integrated city for people to live, work, and play.

Our collaborative and combined approach focuses not only on creating the best solutions today, but also determining the right solutions for tomorrow.

We believe cities in the future must be designed with intelligent systems, sustainable buildings, efficient infrastructure, and a human touch.

IBI – Defining the cities of tomorrow.

TRANSPORTATION EXPERTISE	. 5
REPRESENTATIVE PROJECTS	. 7

INTEGRATED DESIGN



FAST-TRACK DELIVERY

Our global office presence

INNOVATION



Transportation Expertise

IBI Group provides a full range of services related to the movement of people, goods, and information. The firm's transportation planners, architects, and engineers are involved in all facets of transportation projects including urban and inter-urban road, rail, air, and marine public and private modes; EMS, fire, and emergency services; and parking.



TECHNOLOGY

IBI Group uses the latest technology to operate as a global firm and to take advantage of recent developments. Our designs reflect our

B

IBI Group participates in all aspects of transportation development from policy and planning through to detailed design. In many of these projects we integrate the skills and expertise of our transportation planners, urban planners, architects, and engineers to produce an integrated project.

IBI Group has developed transportation projects on all the inhabited continents of the world. We have built high-speed rail systems in Southern California, transit stations in Tel Aviv, bus rapid transit systems and subway stations in Toronto, and created transportation and transit master plans worldwide.

IBI Group is a leader in the application of technology and information to transportation, offering intelligent transportation systems (ITS) and advanced public transportation solutions to more effectively manage and operate transportation systems. This expertise also extends into revenue collection systems. We have an extensive practice in civil design of roads, bridges, ports, and transit facilities. The firm works comprehensively on international projects, from the planning and project development stages through to implementation and operations including participation in Public-Private Partnerships.

Clients include public and private agencies responsible for the design, construction, operation, and management of transportation infrastructure, transit agencies and other service providers, truck, rail, air, and marine operators, port authorities, intermodal terminal operators, and private developers.



TRANSPORTATION

Representative Projects

IBI Group's transportation project portfolio spans the globe and reflects the many ways



- 1 ARRIYADH ROAD DEVELOPMENT STRATEGY, ARRIYADH, SA IBI GROUP
- 2 FIRST & LAST MILE STRATEGIC PLAN, LOS ANGELES, CALIFORNIA, USA -IBI GROUP

ANGLED REPRICE

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URBAN AND REGIONAL TRANSPORTATION PLANNING

IBI Group is a worldwide leader in transportation planning, providing a full range of services related to the movement of people and goods for public and private sector clients.

IBI Group has been active in developing regional transportation plans in many parts of the world, examining transportation needs in connection with the future of our societies.

Our services encompass urban and inter-regional infrastructure and cover high-speed rail, rapid transit, light rail transit, bus rapid transit, walk/cycle, road, truck, rail, and marine modes from planning through to design, implementation, and operations. Specialty areas within our transportation planning practice include traffic impact/parking, travel demand forecasting, toll traffic and revenue forecasting, policy, travel demand management, and emergency services.

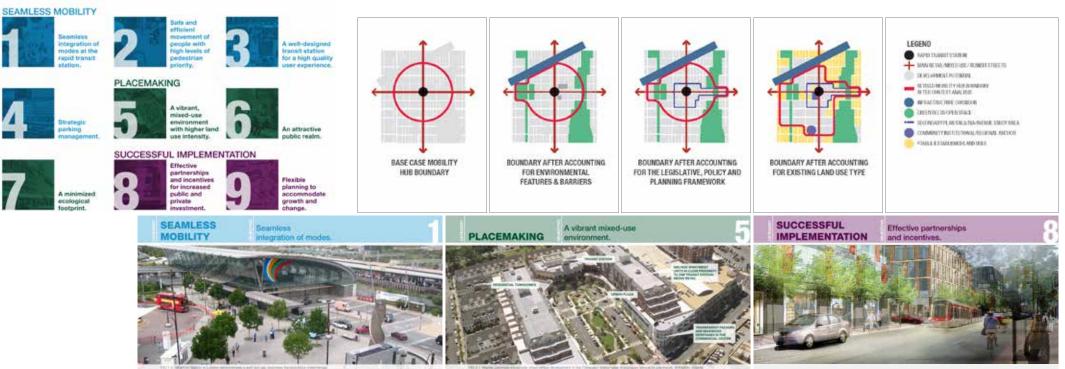
ARRIYADH ROAD DEVELOPMENT STRATEGY ARRIYADH, SA

IBI Group was commissioned by the Arrivadh Development Authority (ADA) to conduct an accessibility study for eight road corridors in Arrivadh, Kingdom of Saudi Arabia. The aim of the study was to enhance the overall traffic performance of the transportation system by focusing on planning and design improvements along these study corridors. Achieving a balance between transport and urban design requirements was of key importance.

CLIENT ARRIVADH DEVELOPMENT AUTHORITY ROLE TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING; GEOMETRIC DESIGN SCOPE/SIZE 135 KM; EIGHT MAJOR CORRIDORS STATUS ONGOING

FIRM(S) IBI GROUP

MOBILITY HUB OBJECTIVES



Seamless integration of modes at the rapid transit station.

One of the essential functions of mobility hubs will be to foster seamless integration between transit modes, systems, and noutes, while accommodating efficient connections to all modes of access to and from the station.

THENE ONE DEAMLEDE TRANSFERS RETWEEN TRANSIT MODEL	THEME TWO BALANCED ACCESS TO AND FROM TRANSCE STATIONS	
 Create clear, direct, and short transfers between transit models and notes by interneting working dotances and removing upysical and persived literature. 	1.3 Create prioritized, safe and direct pedestrian and cycling routes to report livered stations from major destinations and majorial Lycling and pedestrian restouchs.	1.5 Adopt transit priority measures to ensure the efficient movement of surface transit to end town the station area, including measures such area input priority and deducated transit larves.
within transit plations. 1.2 Coordinate tood leader transit service schedules and model to provide searches commonly between local, regional, and report transit services by inducing waiting times.	 Provide secure and piertiful bicycle (pr/up) at station enhances with additional priorities at high volume locations. 	1.0 Provide clearly rearried and protected access for poductions and occlears at station research mismore conflicts, particularly of preserving conflicts, particularly of preserving collect, particular, and particip collects, conflip

A vibrant, mixed-use environment with higher land use intensity.

Critical to the success of the mobility hub as an efficient and attractive destination, is the combination of basic employment opportunities and a mix of housing typologies. supported with major retail, civic, cultural, entertainment, and community facilities. Clustering of population and employment encourages more efficient travel behaviour, reduces the need for travel, increases accessibility (e.g., proximity to employment, shops and schools), and offers travel choice (better transit, ridesharing, and better pedestrian facilities). Beroby making the transportation system more efficient.

The challenge lies in determining a mix of uses based upon the nature and character of the mobility hub and establishing the developer supportive municipal framework.

THENE ONE A DYNAMIC VERANT AND COMPATIBLE MIX OF USES WITHIN WALKING DISTANCE OF TRANSIT

5.1 Provide a deverse mix of uses, including housing, employment, inglores athractions and public scalars to create a high-quality urban environment incides, proximity to the tampt status.

5.2 Pocus and etergram increased and hantal-supportive densities at, and amund hantal stations to protein a concept to pair from and a critical mass of activity while emporing appropriate transition to the summunder prominently.

Effective partnerships and incentives for increased public and private investment.

A mobility hub is successful when it attracts sufficient jobs and residents to create a vibrant, transit supportive place. In order to ensure the success of a mobility hub, strategies should be flexible, designed to respond to the doverse nature of the station areas, their sumounding community contexts, and the dynamic nature of GTM4/s development market. This will require considerable understanding of development, tophistication in inter-government and agency relations, skill at relating to sumounding communities, as well as an appetite for risk and 'deal-making'.

THEME ONE	THEME TWO	THEME PAREE	
ENHANCING DEVELOPMENT	ESTABLISHING PARTNERSHIPS	INCENTIVES FOR DESIGN	
POTENTIAL AND ATTRACTING	BETWEEN STAKEHOLDERS	INNOVICTION & EXCELLENCE	
providing such as exchange debenhu Snoosov mobility 8.2 Plan put infrastruk	AS ge developers incertible begit and density is plattic constrainty is that is constrained in the second second (TF), to triance tub development, is investment and class to create anothe development potential.	8.3 Encourage positiv agencies and version Patter Photo Perturning models to capiture the territ of weight from transit orbitrary sensitivents.	 Hammon a construction of the sector and the sector and provide the sector and the sector activation of the sector and the sector and the sector activa- tion of the sector activation of the sector activation of the sector activation of the sector activation of the sector activation of the sector activation of the sector activation of the sector activation activation of the sector activation activatio

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URBAN AND REGIONAL TRANSPORTATION PLANNING

METROLINX MOBILITY HUB GUIDELINES

TORONTO AND HAMILTON AREA, ONTARIO, CANADA

IBI Group was retained by Metrolinx in October 2009 to further "The BIG Move" initiative and to develop a planning framework to shape the development of 51 mobility hubs identified in the Greater Toronto and Hamilton Area Regional Transportation Plan.

The Big Move, Metrolinx's 25-year transportation plan, imagines a future in which key transit stations become mobility hubs, where transportation modes, including rapid transit, specialized transit, cycling, and accessible pedestrian networks come together seamlessly. Mobility hubs are locations for major destinations such as offices, hospitals, educational facilities, and government services. They offer amenities to travellers such as heated waiting areas, traveller information centres, cafes or restaurants, and services such as day cares, grocery stores, and post offices.

The goal of this study was to develop a document that would clearly communicate the mobility hub concept including objectives, components and the value and role of hubs. In addition, the guidelines provide detailed guidance on how to develop mobility hub master plans and incorporate mobility hub objectives into other planning activities such as official plans, secondary plans, station plans, and environmental assessments.

 2013 CSLA National Merit Award
 2012 ITE Planning Council Award for Best Project
 2012 Canadian Institute of Planners Awards for Planning Excellence
 Honourable Mention in the category of Sustainable Mobility, Transportation and Infrastructure

CLIENT METROLINX ROLE LEAD CONSULTANT SCOPE/SIZE GUIDELINES FOR 51 MOBILITY HUBS STATUS COMPLETED 2011 FIRM(S) IBI GROUP







В

TRAFFIC ENGINEERING

IBI Group provides innovative, comprehensive solutions that improve the safety and efficiency of road networks, intersections, roadways, site accesses, and parking facilities. These solutions address social, environmental, and fiscal responsibilities as well as improving mobility for all citizens.

Starting from one of our predecessor firms which developed the first computer-controlled traffic control system in the world, IBI Group has continued to innovate as leaders in traffic engineering and to apply new technology to traffic control.

The area of practice includes design of intersections and roundabouts, operations support, signals systems design, transit signal priority, impact studies, and road safety services.

JEDDAH WATERFRONT TRAFFIC IMPACT STUDY JEDDAH, SA

As part of the project "Development of Waterfront areas in North Corniche and Faisal Bin Fahd Street at Jeddah" of Jeddah Municipality, IBI Group conducted a traffic impact study that involved two zones of the waterfront in northern Jeddah.

CLIENT SUADCONSALUT ROLE TRAVEL DEMAND MODELING; TRAFFIC IMPACT ASSESSSMENT SCOPE/SIZE 12 KM; TWO ZONES OF WATERFRONT IN NORTHERN JEDDAH STATUS COMPLETED 2011 FIRM(S) IBI GROUP









CRENSHAW LRT LOS ANGELES, CALIFORNIA, USA

IBI Group is a lead member of the Crenshaw Light Rail Transit (LRT) preliminary engineering team for Metro in Los Angeles. The project will provide a connection from the Exposition Line to the Green Line at LAX. The 8.5 mile line includes both on-street median running and separated railway with gated crossing operations. The one-mile section of median running will be on one of the most heavily used arterials to ever implement on-street LRT running, with traffic volumes over 55,000 vehicles per day and trains with six minute headways in both directions.

IBI Group provided the traffic analysis, preliminary roadway design, traffic engineering, and the design of the park and ride lots for the entire corridor. We also provided the traffic engineering design for the CPUC grade crossing applications. The traffic analysis provided both traditional levels of service and delay information for intersections along the corridor and adjacent intersections, as well as microsimulation of vehicle and LRT operations using VISSIM.

We developed preliminary roadway design plans for the corridor, design of three park and ride lots, striping plans, traffic signal layouts for 22 intersections, and the stage construction plans for the entire project. IBI Group also provided support for planning and communitybased design by providing information on bus transfer operations, analysis of parking impacts and replacement, and coordination with the proposed LAX automated people mover system.

CLIENT HATCH MOTT MACDONALD; METRO LOS ANGELES ROLE TRANSPORTATION PLANNING, TRAFFIC ENGINEERING, FUNCTIONAL DESIGN SCOPE/SIZE 8.5 MILE LINE (ONE MILE MEDIAN SECTION 55,000 VEHICLES/DAY) STATUS UNDER CONSTRUCTION FIRM(S) IBI GROUP



C CIVIL DESIGN

IBI Group has a full range of skills to develop and design major transportation infrastructure projects, from transit facilities to major urban and inter-urban freeways. We provide these services to all levels of governments and to the private sector.

IBI Group expertise covers every aspect of the rehabilitation, expansion, and development of new roads, urban freeways, complex interchanges, toll roads, bridges, and support infrastructure providing clients with functional and smart design solutions.

HURONTARIO STREET/QEW INTERCHANGE MISSISSAUGA, ONTARIO, CANADA

This Ministry of Transportation Ontario (MTO) project required the reconstruction of all existing interchange facilities while safely maintaining traffic and pedestrian movement through the site with minimal disruption. To achieve this, IBI Group developed and utilized a complex construction staging sequence, including delay and queuing analysis.

CLIENT ONTARIO MINISTRY OF TRANSPORTATION ROLE CIVIL DESIGN AND PROJECT LEAD SCOPE/SIZE \$36M RECONSTRUCTION; 170,000 VEHICLES/DAY STATUS COMPLETED 2009 FIRM(S) IBI GROUP





STAGE 1

- · Erect permanent and temporary construction area signs
 - Perform Temporary lane and ramp closures and install Temporary railing Type K, Temporary Crash Cushions and Channelizers
 - Re-stripe existing lanes and install temporary striping and pavement markings
 - · Construct the Tie-Back walls, retaining walls and nonconflicting portions of the Jamboree Road widening
 - · Dig out and replace the existing pavement on the eastbound lane adjacent to the existing curb and gutter
 - · Construct non-conflicting portions of the freeway ramps

STAGE 2

- Perform Temporary lane and ramp closures and move Temporary railing Type K, Temporary Crash cushions and channelizers to new locations
- · Re-stripe and install temporary striping and pavement markings
- · Construct remaining portions of Jamboree Road, and freeway ramp widening
- · Re-stripe and install temporary striping and pavement markings.
- · Construct remaining portions of Jamboree Road, and freeway ramp widening

STAGE 3

- Re-stripe lanes to provide adequate lane configurations around the over excavation (dig out) areas along Jamboree Road
- · Perform the remaining necessary dig outs and replace the pavements
- · Dig out areas not completed during normal working hours will be covered with steel plates
- · Perform cold plane and place Asphalt Concrete overlay
- · Re-stripe to final lane configurations

JAMBOREE ROAD WIDENING AT **I-5 INTERCHANGE**

IRVINE, CALIFORNIA, USA

IBI Group led a multidisciplinary consultant team in the preparation of final design documents for the Jamboree Road widening and I-5 interchange modification project within the City of Irvine. In addition to providing project management services, IBI Group is completing the roadway/civil and staged construction design, and is preparing the specifications and Engineer's Estimate.

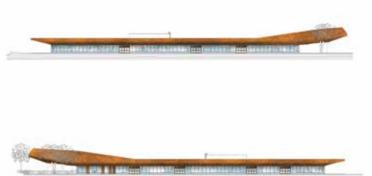
Caltrans is serving as lead oversight agency for this multi-jurisdictional project, and the design and associated bid package are being completed per Caltrans standards. The project schedule required that the construction contract be awarded by April, 2011 to qualify for Federal funding, which dictated a nine-month PS&E schedule. IBI Group successfully met this aggressive schedule, and the bid package was approved by Caltrans on December 17, 2010.

- 1 STEELES WEST STATION, TORONTO ONTARIO, CANADA SGA/IBI GROUP ARCHITECTS TSGA JOINT VENTURE, IN ASSOCIATION WITH WILL ALSOP ARCHITECTS (UK)
- 2 FINCH WEST STATION, TORONTO ONTARIO, CANADA SGA/IBI GROUP ARCHITECTS TSGA JOINT VENTURE, IN ASSOCIATION WITH WILL ALSOP ARCHITECTS (UK)
- Note artist Bruce Maclean has been fully engaged with the design team to create a concept that is at one with the architecture and engineering.

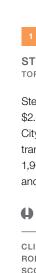












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URBAN AND INTERCITY TRANSIT

IBI Group has a comprehensive and high-profile portfolio of rapid transit experience in Canada, the United States, and abroad, including BRT, LRT, heavy rail transit, commuter rail, and intercity rail systems.

IBI Group's particular strength is the extensive knowledge base and experience of its staff with respect to transit planning, transit operations, and associated issues. IBI Group's transit practice utilizes transit planners, transportation engineers, market researchers, equipment, and systems specialists who have practical experience and current knowledge of the latest technology.

We provide services from operational planning to design of facilities.

STEELES WEST STATION TORONTO, ONTARIO, CANADA

Steeles West Station, is one of six new subway stations on the \$2.6 billion extension of the Spadina subway line from Toronto into the City of Vaughan. This station will serve as an integrated regional transport hub serving up to 20,000 subway passenger trips daily with 1,900 commuter parking spaces, two separate regional bus terminals, and a future LRT stop connected directly to the station.

Intended to become a new civic landmark with unique and world-class architecture.

CLIENT TORONTO TRANSIT COMMISSION ROLE PROJECT MANAGEMENT, ARCHITECTURAL DESIGN LEAD SCOPE/SIZE STATION 15,255 SQ M, SITE AREA WITH PARKING LOT 157,569 SQ M STATUS CURRENT PHASE (MONTH, YEAR OR COMPLETION DATE) FIRM(S) SGA/IBI GROUP ARCHITECTS TSGA JOINT VENTURE, IN ASSOCIATION WITH WILL ALSOP ARCHITECTS (UK)





rool extends up and over Viva vehicles

to keep show and rain off while

extended platform length can accommodate multiple Viva

disembarking efficiency

handy bicycle racks for guick and easy transit connections

minimize heat loss

vehicles, enhancing embarking/

of Viva vehicles, eliminating the need to climb steps or lift objects

embarking/disembarking

roof and side panels made of

reflective tinted glass for greater



URBAN AND INTERCITY TRANSIT

YORK REGION VIVA BRT PHASE I AND PHASE II YORK REGION, ONTARIO, CANADA

IBI Group is the founding member of a consortium of nine companies that have entered into a Public-Private Partnership with the Regional Municipality of York to build rapid transit in the region. York Region comprises the suburban municipalities situated to the north of the City of Toronto. The York Consortium is responsible for planning, financing, designing, constructing and operating rapid transit in York Region, a process that is will take over 10 years and in the order of \$2 billion to complete.

IBI Group is responsible for all aspects of transit and transportation planning for the project, including ridership forecasts, corridor definition, technology specifications, facilities design, transit network integration, service planning, fare policy, fare collection, traffic optimization, ITS, and implementation staging. The team designed and procured systems for the "Quick Start" Phase implementation of a BRT service operating mostly in mixed traffic with signal priority and queue jump lanes. The second phase, which includes the development of exclusive lanes, is now under construction.

2006 American Public Transportation Association Innovation Award

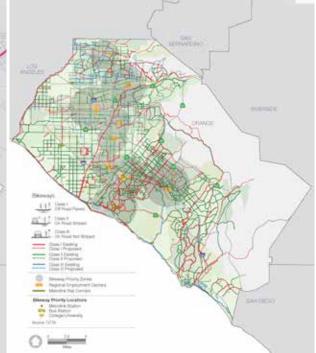
CLIENT PUBLIC-PRIVATE PARTNERSHIP WITH THE REGIONAL MUNICIPALITY OF YORK **ROLE** TRANSIT AND TRANSPORTATION PLANNING SCOPE/SIZE 100 KM (PLANNED ROUTE) STATUS SECOND PHASE IS NOW UNDER CONSTRUCTION, FIRST STAGE **OPERATIONAL 2013** FIRM(S) IBI GROUP

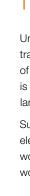
- 1 NAYA RAIPUR TOD STUDY, NAYA RAIPUR, CHHATTISGARH, IN IBI GROUP
- 2 OCTA LONG RANGE TRANSPORTATION PLAN, ORANGE COUNTY, CALIFORNIA, USA IBI GROUP















TRANSPORTATION AND LAND USE

Understanding the close relationship between the development of transportation networks and land use has been a guiding principle of IBI Group since our founding in 1974. Our transportation planning is always keenly aware of the potential impact of transportation on land use.

Successful land-use planning must include the transportation elements required to accomplish the plan and complete the survey work effectively. Our land-use planners and transportation planners work collaboratively to ensure that their work is integrated.

NAYA RAIPUR TOD STUDY NAYA RAIPUR, CHHATTISGARH, IN

The Naya Raipur Development Authority, with support from the World Bank, has commissioned IBI Group to develop a transit-oriented development strategy for Naya Raipur to better integrate land development, transportation, and infrastructure investment within the overall city development plan. The Naya Raipur TOD Study will create the framework for future development in the new capital city and outline a preferred scenario for sustainable growth within the city.

The project is being funded under the Global Environmental Facility (GEF)/ World Bank assisted Sustainable Urban Transport Project (SUTP)

CLIENT NAYA RAIPUR DEVELOPMENT AUTHORITY ROLE PRIME CONSULTANT; MASTER PLAN FOR NEW CAPITAL CITY SCOPE/SIZE OVER 80 SQ KM STATUS ONGOING FIRM(S) IBI GROUP



WEST VILLAGE AREA REDEVELOPMENT PLAN calgary, alberta, canada

A major site became available for redevelopment to the west of Central Calgary. Following the city's decision to not bid for an EXPO and instead proceed with redevelopment of the site, an Area Redevelopment Plan (ARP) was prepared to provide the vision through which the site will be transformed into an attractive, vibrant riverfront community.

Focused on the new Sunalta LRT Station, the plan for West Village provides the basis for a pedestrian-oriented, sustainable urban community, comprised of mixed-use residential, retail, office, and light industry. The vision for West Village is that of a "complete community" one where residents can live, work, learn, meet, play, and move within walking distance of efficient public transit and, importantly, where the private automobile becomes an option, as opposed to a necessity. This notion is consistent with the city's efforts in Transit-Oriented Development (TOD) at specified LRT stations within existing and future transit corridors, as well as the larger goals and objectives of Plan-It Calgary.

CLIENT CITY OF CALGARY ROLE AREA REDEVELOPMENT PLAN SCOPE/SIZE 874,000 SQ FT STATUS COMPLETED 2010 FIRM(S) IBI GROUP



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INTELLIGENT TRANSPORTATION SYSTEMS

IBI Group is a recognised leader in planning, design, deployment, and operation of Intelligent Transportation Systems (ITS), including traffic management, traveller information, commercial vehicle operations, transit management centres, tolling, and transit fare collection.

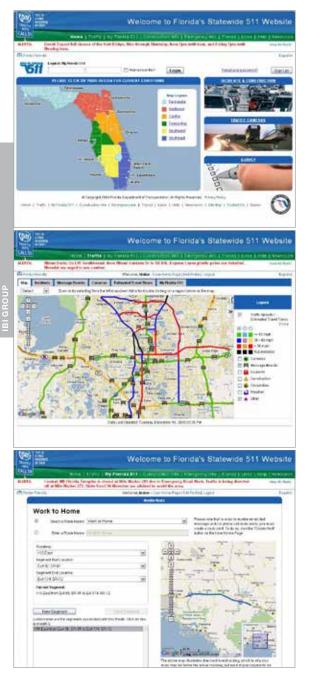
The ITS practice incorporates all user service areas, and provides full project life-cycle services including research and development, preliminary engineering and analysis, detail design, equipment procurement, system development and installation, integration, testing, operations, and maintenance.

EKPPT MOTORWAY TOLL COLLECTION SYSTEM PELOPONNESE, GR

The Elifsina Korinthos Patra Pyrgos Tsakona (EKPPT) Motorway has a total length of 365 km with 46 Interchanges. It includes 48 tunnels and cut and covers with a linear tunnel length of 32 km. IBI Group is responsible for the Turnkey Provision of the EKPPT Motorway Toll Collection System.

The EKPPT Toll System supports interoperability with all ETC Operators in Greece.

CLIENT ALPON KLEOS CJV ROLE SYSTEM'S AQUISITION AND INTEGRATION SCOPE/SIZE 365 KM WITH 46 INTERCHANGES; 9 MAINLINE + 28 RAMP TOLL STATIONS STATUS ONGOING FIRM(S) IBI GROUP



CLIENT FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT IV LOGICTREE CORPORATION ROLE FL 511.COM WEBSITE SCOPE/SIZE FL STATEWIDE STATUS ONGOING FIRM(S) IBI GROUP

FLORIDA 511 ADVANCED TRAVELER INFORMATION SYSTEM FLORIDA, USA

IBI Group, in partnership with LogicTree Incorporated, has been assigned to deliver the Florida state-wide 511 traveler information system (FLATIS). IBI Group leads the technical design, construction, and delivery of the Information Dissemination Subsystem which includes: centre-to-centre integration with local districts' ATMS systems; integration with weather information; CCTV image and video aggregation; public 511 IVR (multi-lingual); public 511 map-centric web portal (multi-lingual); and "My Florida 511" personalization for both IVR and website visitors. This new 511 service improves the current service by increasing the coverage area and integrating existing individual regional traveler information systems. In addition, there is a Quality Assurance Subsystem that performs real-time system health monitoring and alerts.

CLIENT SOUTH	AFRICAN NATIONAL ROADS AGENCY
LIMITED (SANRA	AL)
ROLE SYSTEM S	SOFTWARE PROVIDE AND MEMBER OF JV
SCOPE/SIZE TH	HREE TRAFFIC MANAGEMENT SYSTEMS; ONE NATIONAL
TRAVELLER INF	ORMATION SYSTEM
STATUS PHASE	A AND B DELIVERED 2012; PHASE C TO BE COMPLETED
BY END OF 2013	3; PHASE D TO BE COMPLETED BY END OF 2014
FIRM(S) IBI GRO	OUP IS PART OF JV/TETI CONSORTIUM JOINT VENTURE



32

INTELLIGENT TRANSPORTATION SYSTEMS

NATIONAL INTELLIGENT TRANSPORT SYSTEM SOUTH AFRICA

GAUTENG, WESTERN CAPE AND KWAZULU-NATAL, ZA

IBI Group is the System Software Provider responsible for the development, deployment, integration, and testing of three regional Advanced Traffic Management Systems (ATMS) and a national Advanced Traveller Information System (ATIS), www.i-traffic.co.za. This includes interfaces with a number of existing systems and agencies in South Africa such as the Emergency Service Providers, Open Road Tolling Project in Gauteng, the Johannesburg Roads Agency TCC, and the eThekwini TMC in Durban.

IBI Group will also be providing consulting services in other areas of ITS such as field device procurement and TMC operations to assist the delivery of the overall project.



G

AIRPORT/AVIATION

IBI Group's airport practice covers three major areas of operation: airside, terminal, and landside. We provide consulting services requiring cross-discipline expertise in these areas as well as act as designers, integrators, or turnkey providers of airport systems.

Master planning is one of the foundations of our practice. Services include planning, operational analysis, engineering, and architecture.

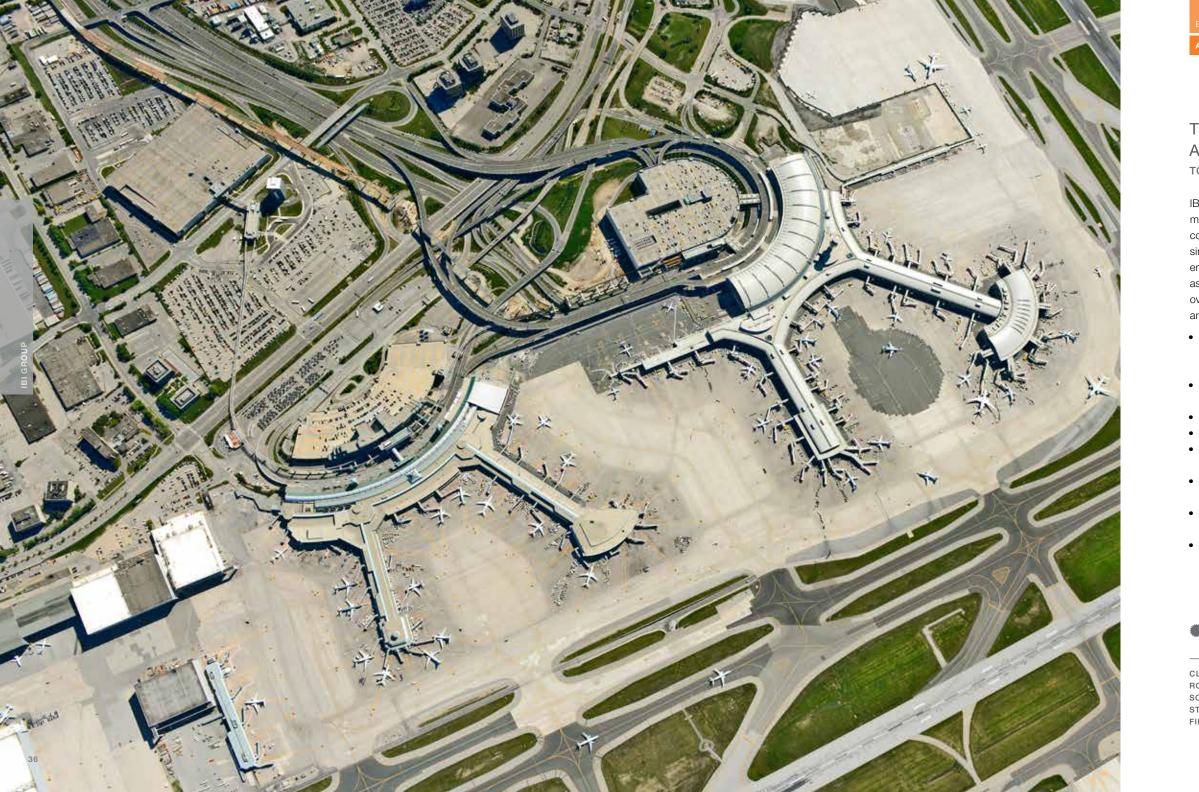
Transportation to and from airports is an important part of our practice, including road access, transit, and for-hire vehicle services. IBI Group designs systems to track public vehicles and to collect tolls on these operations.

In addition, IBI Group works in more specialized areas such as airfield lighting, baggage handling, aircraft de-icing, terminal design, air cargo areas, and the design of ancillary facilities such as hotels and hangars.

SOUTH CARGO APRON EXTENSION HONG KONG HONG KONG, CN

IBI Group designed, supplied, installed, and commissioned airfield lighting components (inset and elevated taxiway lights) for the South Apron Expansion works. All software modifications to the Airfield Ground Lighting (AGL) System were developed, tested, and implemented by IBI Group. The new lighting circuits and modified software was commissioned to full operation by IBI Group.

CLIENT AIRPORT AUTHORITY HONG KONG ROLE AGL DESIGN, SOFTWARE DEVELOPMENT, COMMISSIONING SCOPE / SIZE ADD'L TAXIWAY AND PARKING STANDS FOR 12 WIDE BODY CARGO AIRCRAFT STATUS COMPLETED 2008 FIRM(S) IBI GROUP



TORONTO PEARSON INTERNATIONAL AIRPORT TERMINAL DEVELOPMENT TORONTO, ONTARIO, CANADA

IBI Group, a partner of the MGP joint venture, has provided program management, transportation, and architectural/engineering consulting services at Toronto Pearson International Airport (TPIA) since 1997, when the Greater Toronto Airports Authority (GTAA) embarked on a massive development program to re-establish TPIA as a major aviation hub in North America. During that time, we've overseen the design and construction of the new terminal, ground, and airside infrastructure. Project scope includes:

- New terminal with an annual capacity of 36 million passengers and includes major piers with state-of-the-art aircraft docking, passenger information, baggage handling, and security systems
 Extensive advanced security screening systems (travellers and baggage)
- New parking structure with over 12,000 car capacity
- New uni-rail People Mover for efficient inter-terminal traveller flow
 New extensive highway and roadway system to allow easy traffic flow in and out of the airport
- New aprons, taxiways and runway to accommodate the anticipated increase in air traffic
- New traffic control tower with state-of-the-art software, hardware, and telecommunications systems
- Demolition of Terminals 1 and 2

2005 Canada Consulting Engineers Award of Excellence for Project Management 2005 Consulting Engineers of Canada The Willis Chipman Award

- 1 ST LAWRENCE AND GREAT LAKE TRADE CORRIDOR STUDY, ST LAWRENCE AND GREAT LAKES, CANADA – IBI GROUP
- 2 PORT OF LONG BEACH PIER C REDEVELOPMENT, LONG BEACH, CALIFORNIA, USA – TETRA-IBI GROUP











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FREIGHT AND LOGISTICS

IBI Group has performed studies of port requirements for government departments, regional development agencies, port authorities and private sector clients. Our services address all aspects of port planning and operations from marketing of port services to detailed planning of facilities and transportation linkages.

Intermodal operations have been a very important part of our analysis of port operations and needs. IBI Group's systems practice understands port operations and recognizes the increasing needs of today's trade market to use advanced technologies in order for ports to increase density and improve efficiency in operations.

IBI Group has provided services to many different types of rail systems, from mainland railways to metro and light rail transit systems. We have worked on freight and passenger systems for public and private sector clients globally.

ST LAWRENCE AND GREAT LAKES TRADE CORRIDOR STUDY ST LAWRENCE AND GREAT LAKES, CANADA

The St. Lawrence and Great Lakes Trade Corridor Study was a diagnosis of the region's transportation system as well as an analysis of future development needs in the Corridor. The study focused on marine services for international trade using the Great Lakes, the St. Lawrence Seaway, and the river system to the Gulf of St. Lawrence.

(L) IBI Group's scope extended beyond data and policy analysis and included a significant degree of client consultation and stakeholder coordination.

CLIENT ST LAWRENCE AND GREAT LAKES TRADE CORRIDOR LEADERSHIP COUNCIL ROLE RESEARCH; POLICY; PLANNING SCOPE/SIZE STUDY FORECAST 10–20 YEARS STATUS COMPLETED 2008 FIRM(S) IBI GROUP

- 1 ALAMEDA CORRIDOR PORTS OF LOS ANGELES & LONG BEACH, CALIFORNIA, USA – IBI GROUP
- 2 BRITISH COLUMBIA FREIGHT SYSTEM, BRITISH COLUMBIA, CANADA IBI GROUP
- 3 PORT OF MOREHEAD CITY BULK TRANSFER FACILITY, MOOREHEAD CITY, NORTH CAROLINA, USA – IBI GROUP
- 4 STRATEGIC PLAN FOR THE DEVELOPMENT OF INDUSTRIAL PORT SITES ON THE ST LAWRENCE, QUEBEC, CANADA – IBI GROUP









TRANSPORTATION REPRESENTATIVE PROJECTS

REIGHT AND LOGISTICS

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ARRIYADH ROAD DEVELOPMENT STRATEGY9 ARRIYADH, SA Client: Arriyadh Development Authority Firm(s): IBI Group

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CRENSHAW LRT.....

Firm(s): IBI Group

LOS ANGELES, CALIFORNIA, USA Client: Hatch Mott Macdonald; Metro Los Angeles Firm(s): IBI Group

FLORIDA 511 ADVANCED TRAVELER

IRVINE, CALIFORNIA, USA Client: City of irvine Firm(s): IBI Group

JEDDAH WATERFRONT TRAFFIC IMPACT STUDY 13 JEDDAH, SA Client: Suadconsalut Firm(s): IBI Group

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NAYA RAIPUR TOD STUDY NAYA RAIPUR, CHHATTISGARH, IN

Client: Naya Raipur Development Authority Firm(s): IBI Group

NATIONAL INTELLIGENT TRANSPORT SYSTEM

ST LAWRENCE AND GREAT LAKES TRADE CORRIDOR

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TORONTO, ONTARIO, CANADA Client: Toronto Transit Commision Firm(s): SGA / IBI Group Architects TSGA Joint Venture, in association with Will Alsop Architects (UK)

TORONTO PEARSON INTERNATIONAL AIRPORT

YORK REGION, ONTARIO, CANADA Client: Public-Private Partnership with the Regional Municipality of York Firm(s): IBI Group Award(s): 2006 American Public Transportation Association Innovation Award

CALGARY, ALBERTA, CANADA Client: City of Calgary Firm(s): IBI Group

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