





Asociación Mexicana de Ingeniería de Vías Terrestres, A. C.

10 al 13 de octubre 2022 From October 10th to 13th, 2022 Hotel Royal Pedregal - Ciudad de México



-Implementación de BIM en la gestión de activos viales:

Retos y oportunidades.



- Implementation of BIM in Road Asset Management: Challenges and opportunities.



Los idiomas oficiales serán el español e inglés con traducción simultánea The official languages will be English and Spanish with simultaneus interpretation



:Más información? ¡¡Escríbenos!! More information? **Contact us!!** 







f O AMIVTACmx

Inscripción Registration

**Asistente Participant** 

Registro y pago en línea online registration and payment https://bit.ly/BIMSEMINAR

**Cuota con impuestos Fee(including taxes)** 

\$8,700.00 MXN \$480.00 USD (aprox.)

Informes / (contact us for more information Tels.: +52 55 7678 6760 / +52 55 7678 6761 + 52 55 5528 3706

POR EL MEJORAMIENTO DE LAS VÍAS TERRESTRES / For the improvement of roads











# PIARC Program of International Seminars

PIARC, the World Road Association, is a non-profit organization founded in 1909. During its more than 100-year history, the association's main objective has been the promotion of international cooperation and the exchange of knowledge on issues related to roads and road transport

.

As part of this work, since 1999 PIARC has been conducting a Program of International Seminars to strengthen its presence in the world, to be more responsive to the needs of developing countries and countries with economies in transition, and to achieve a greater dissemination of the results of its work in these countries.

PIARC implements the seminar program through its Technical Committees, which are groups of experts appointed by the member countries to work on topics defined in the association's strategic plan, which includes very diverse areas of expertise such as road design, operation and maintenance or financing and governance of agencies responsible for road infrastructure.



# Technical Committee 3.3 (Road Asset Management) and BIM

Road asset management refers to the coordination of activities carried out by road organizations in the financial, operational, maintenance and risk analysis areas, among others, with the purpose of increasing the social, economic and environmental value associated with road infrastructure. PIARC defines in its Strategic Plan 2020 2023 the following topics to be addressed by Technical Committee 3.3



(Road Asset Management)

:

- a) Innovative approaches for asset management systems.
- b) Measures for improving resilience of road networks.
- Renewal and rejuvenation of aging infrastructure.
- d) Update of the asset management manual.

In terms of addressing the first theme, the strategic plan indicates that the use of BIM (Building







Information Modeling) should be investigated in conjunction with asset management systems implemented by road network owners and operators. It also highlights the fact that the application of BIM goes beyond the asset design phase, as it contemplates the execution of projects and extends to the entire life cycle, which can eventually be extremely useful in road management.

Consequently, it emphasizes the need to investigate the advantages of the coordinated application of BIM and asset management tools.

#### **Motivation**

In 2019, the Mexican government published its Strategy for the Implementation of Building Information Modeling in Mexico, which contemplates the adoption of a BIM-based scheme, over a period of eight years, to "improve public infrastructure development processes" by increasing planning efficiency, reducing delays and cost overruns, and strengthening transparency and accountability. At the same time, the strategy seeks to "improve the quality of projects and their integral

follow-up, as well as to have resilient infrastructure, make the use of public resources more efficiently and stimulate the global competitiveness of the Mexican construction industry"

Taking into account the interest shared by PIARC and Mexico in relation to BIM methodology, the Mexican representation to Technical Committee 3.3 proposed the organization of a seminar on this topic in the country, based on a technical program with contributions from committee members and specialists from other organizations around the world, which would be particularly attractive to Mexican and international professionals involved in road design and road infrastructure management.

In addition to PIARC, the Secretariat of Infrastructure, Communications and Transport of the Government of Mexico, the Mexican Association of Road Engineering and the Mexican Institute of Transport are participating in the organization of this seminar.













#### Seminar objectives

The overall objective of the seminar is to provide a forum for the exchange of knowledge and experiences on the possibilities and mechanisms for the application of BIM in road asset management, under the premise that the integration of both processes occurs throughout the entire life cycle of the assets.

The particular objectives of this seminar are the following:

- Identify the main conceptual, normative and organizational elements necessary for the application of BIM in road infrastructure management.
- Describe the road project and management digitalization processes, including those involved in creating the so-called digital twins.
- Compare different options for the application of BIM in project development and road asset management, identifying the advantages and disadvantages of the different options considered.

#### To whom it is addressed

The PIARC International Seminar on Implementing BIM in Road Asset Management: Challenges and Opportunities is aimed at managers of government entities or private companies responsible for road asset management; professionals dedicated to the development, operation and management of road projects; consulting service providers and suppliers of technological tools in the areas of BIM, road management and information technologies applied to road infrastructure management. This seminar may also be of interest to university professors, researchers and students interested in the digitalization processes of project, construction and management of road assets.

#### Place and dates of the seminar: Mexico City, October 10 to 13

Mexico City (CDMX), the capital of the Mexican Republic, has been chosen as the venue for the seminar. It is the ideal place to hold this type of events, due to the available infrastructure and its high level of national and international connectivity. In addition, Mexico City has one of the most important tourist, gastronomic, cultural and commercial offerings in the world. Regarding the specific venue for this event, the Royal Hotel located in the South Zone of Mexico City, very close to the Perisur Shopping Center.







The technical sessions of the PIARC International Seminar on Implementing BIM in Road Asset Management: Challenges and Opportunities will be held from October 10 to 12 of this year. On October 13, the preliminary program includes a technical visit to two locations that each participant may select, according to his or her interests, from the two options presented below:

Mexican Institute of Transport (IMT)

Located in San Fandila, State of Querétaro, 220 km northwest of Mexico City. The IMT conducts research, technological innovation and formulation of technical standards, as well as post-professional training and updating to contribute to the improvement of safety, sustainability and competitiveness of transportation.

This Institute depends on Mexico's Secretariat of Infrastructure, Communications and Transport.

#### Mexico City-Toluca Train

Mexico City-Toluca Train is a Federal Government project that will connect the metropolitan Area of Toluca with Mexico City. It is expected to serve around 230 thousand users per day. It'll have a total length of 57.7 kilometers, 7 stations (2 terminals and 5 intermediate). The section of the project that will pass through Mexico City will have a distance of 17 kilometers. This segment begins at the exit of the eastern portal, of the tunnel that is located on the

Mexico-Toluca federal highway, in the Cuajimalpa mayor's office, and ends at the Observatorio Metro station, located in the Álvaro Obregón mayor's office.

The construction of this rail passenger transport has a positive impact on the environment, the reduction of accidents, travel times for users, and it will also promote greater mobility for people. It will be a source for jobs, as well as a greater interconnectivity, there will be a decrease in CO2 levels per year and by rehabilitating the areas surrounding the train line, will contribute to urban improvement.









#### Format and languages

The seminar will be held in a hybrid format, i.e., it will be based on face-to-face sessions that can be accessed remotely by the interested public. At the same time, some of the speakers are expected to participate virtually. The technical program comprises a total of three thematic sessions, one per day, from 9:30 am to 2:00 pm. Each session will feature a series of presentations by members of the 3.3 Technical Committee and experts from Latin America and other regions of the world, as well as round tables to open the discussion to the public through a series of questions and answers.

The languages of the seminar will be Spanish and English. Simultaneous translation services will be provided both for those attending the seminar in person and for those following the seminar remotely.







#### **Preliminary Program**

The content of the seminar will be organized according to the structure shown below:

Hours	Monday 10		
09:00 - 09:30	Opening ceremony Implementation of the BIM methodology for infrastructure works LIC. JORGE NUÑO LARA Undersecretary of Infrastructure		
	In charge of the Secretary's Office, SICT	Tuesday 11	Wednesday 12
	CONCEPTUAL FRAMEWORK	ROAD DIGITALIZATION	IMPLEMENTATION STRATEGIES
09:30 - 10:00	BIM requirements for operation and maintenance Sergio Álvarez (MX)	Introduction of a Smart Infrastructure Management System: i-DREAMs Hiroshi Dobashi (JP)	BIM for infrastructure operation and maintenance Esteban Aristizábal (CO)
10:00 - 10:30	Asset management as a pre- requisite for applying BIM to road management Ricardo Solorio (MX)	Digital twins for road infrastructure asset management João Vieira (PT)	Experiences on the implementation of BIM in Chile Robinson Lucero (CL)
10:30 - 11:00	BIM section of PIARC Asset Management Manual Slawomir Heller (DE)	Implementation of a CIM model for slope stabilization <b>Mateo Maldonado (CO)</b>	Reality Capture of existing conditions for asset management Angélica Ortiz (MX)
11:00 - 11:30	Round table	Round table	Round table
11:30 - 12:00	Coffee break	Coffee break	Coffee break
12:00 - 12:30	Applicability of BIM to asset management processes  Matthew Haubrich (US)	Infrastructure projects in the State of Quintana Roo, Mexico Alejandro Varés (MX)	BIM and asset management systems: an example of implementation and dialogue Fernando Varela (ES)
12:30 - 13:00	Maturity of BIM for asset management around the world Adam Matthews (UK)	Federal road network survey program Hugo Ayala (MX)	Data integration and interoperability Jagannath Mallela (US)
13:00 - 13:30	Rade Hajdin (CH)	BIM implementation for the overall improvement of Cusco City express highway Fiorella Rivasplata et al. (PE)	First report on BIM bidding in public works Carolina Soto (CL)
13:30 - 14:00	Round table	Round table	Round table
14:00 - 16:00			Closing Meal







# Technical Visit AGENDA FOR THE VISIT TO IMT

Event	PIARC INTERNATIONAL SEMINAR ON BIM
Number of visitors	40 (To be defined)
Date	13 DE OCTUBRE DE 2022
Salida del hotel sede:	08:00 h
Start time and location	11:00 h, "Nabor Carrillo" event building, IMT

Hours	Activity
11:00 - 11:15	Welcome, presentation of IMT areas and institutional video
11: 15 - 11:50	Coordination of transport safety and operation
	Visit to specialized laboratories
12:00 - 12:35	Vehicle Performance (test track)
12:45 - 13:05	Bridge inspection and monitoring
13:05 - 13:25	Refreshments
13:30 - 14:05	Maritime Hydraulics Laboratory
14:10 - 14:30	Vessel Maneuvering Simulation Laboratory
14:35 - 15:00	Road Infrastructure Laboratory
15:05 - 15:25	National Laboratory for Technological Innovation





# Mexico City- Toluca Train Visit Program

Event:	SEMINARIO INTERNACIONAL BIM DE PIARC
Visitors:	50
Date:	OCTOBER 13th, 2022
Hotel departure:	09:00 h
Start and Place:	10:00 h, Welcome to the worshop

Time	Activity	
1 0:00-1 0:1 0	Welcome to the workshop	
10:15 -10:30	General information about the workshops.	
1 0:30-1 0:40	Visit to the workshop plant.	
10:40-11:10	Visit to the Operation Control Center.	
11:10-11:30	Visit to the Training and Simulator building.	
11:30-12:00	Visit the train	
1 2:00-1 2:30	Transfer to the "Tecnológico" Station	
1 2:30-1 3:00	Visit to the "Tecnológico" Station	
13:00-13:40	Transfer to "El Caminero"	
13:40-14:00 Travel through dirt roads 2 and Viaduo		
1 4:00-1 4:1 5	Transfer to the "Portal México" Tunnel	
1 4:1 5-1 4:55	Tour and explanation in the Tunnel.	



#### **General Data**

Length 57.7 km

(4.7 km length of the tunnel and 7 stations)

Total estimated investment

90,000 m of p





#### Registration

Registration for the PIARC International Seminar on Implementing BIM in Road Asset Management: Challenges and Opportunities will require the payment of a registration fee, the amount of which will depend on the desired mode of participation (face-to-face or virtual) and will be specified in the second announcement. In addition, the registration fee will correspond to the income level of the participants' country of origin, according to the World Bank classification. Finally, a reduced fee will be offered to members of the association.

PIARC has a special fund that can cover up to 100% of the travel or accommodation expenses of participants from low- and lower-middle-income countries (as classified by the World Bank) who are members of the association.

#### Lodging and transportation

The second announcement will also include information on accommodations options additional to the venue hotel, as well as local transportation alternatives.

### Comité organizador

Jesús E. Sánchez Argüelles President Juan Carlos Espinosa Rescala General Director lazmín Orozco Pastrana General Coordinator Ricardo Solorio Murillo Technical Coordinator lorae Monforte Alarcón Logistics Coordinator Pericles Sánchez Leal Finance Coordinator Miguel Sánchez Contreras Registration Coordinator lesús González Zúñiga Dissemination Coordinator



Ubicado en la Zona Sur de la Ciudad de México, muy cerca del Centro Comercial Perisur, Hotel Royal Pedregal se distingue de otros hoteles en Periférico Sur por poseer amplia capacidad, tanto en hospedaje como en salones, espacios e infraestructura. Royal Pedregal es un hotel Gran Turismo en Ciudad de México con arquitectura de estilo modernista que cubre las necesidades de viajeros de negocios y familias. El hotel fue construido en 1992 y realiza renovaciones y mejoras constantemente para la comodidad de sus huéspedes. El Hotel Royal Pedregal cuenta con Distintivo H y a tener un Restaurante reconocido por la Asociación de Hoteles como el mejor Restaurante de Hotel.







## Welcome to Mexico

Mexico is a country located between the United States and Central America, known for its beaches on the Pacific and the Gulf of Mexico, and its diverse landscape of mountains, deserts and jungles.

Ancient ruins, such as Teotihuacan and the Mayan city of Chichen Itza, are scattered throughout the country, as are cities from the Spanish colonial era. In Mexico City, elegant stores, famous museums and gourmet restaurants are part of modern life. Its hotel infrastructure, unique concepts and diversified offer, with more than 900,000 high-quality rooms in all categories. Its air and land connectivity. With more than 260 flights per day from 17 destinations in the United States and Canada, as well as from the main cities in Mexico. Foreign transportation service throughout the country.

The gastronomy is catalogued as one of the best in the world, which is enriched annually with the celebration of culinary festivals. Its beaches are certified as the cleanest in the country. Being an example in beach quality monitoring programs. Excellence in the quality of service and hospitality; undoubtedly what most distinguishes us internationally. Excellent diversified offer and high quality tourism products; with a great variety of tours, activities and daily expeditions. Distinguished and internationally recognized as the "Friendliest City in the World" by Conde Nast magazine. Experience in the organization of important national and international events.



# Important information for foreign visitors foreign visitor



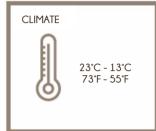
Mexico has the largest number of of Spanish speakers in the world



The native language is Spanish



English is the second most spoken language in tourism







Most of Mexico, including Mexico City, Monterrey, Guadalajara use "Central Time".

#### CURRENCY EXCHANGE RATE AND BANKS



The currency used is the Mexican Peso (MXN)



It is recommended to use exchange houses or banks to to exchange currency.

Called "Automatic Teller Machines" (ATMs)



There are many banks and ATMs in Mexico City Mexico City



cash or credit cards

The use of cash or



#### VISA



More than 90 countries NO VISA required

A valid VISA or Permanent Permanent Residency from the United States, Canada, Japan, United Kingdom or the European Union.



To be eligible for a tax refund you must spend at least 1,200.00 pesos on Mexican products.



There is no tax refund for tax refund for lodging services.



If payment was made in cash the amount cannot exceed 3,000.00 Mexican pesos.



Mastercard, Visa and American Express are accepted.



In Mexico you can issue invoices or receipts for payment of purchases.

#### CLIMATE AND DRESS CODE DRESS CODE



The climate in Mexico Mexico City is temperate



The use of sweaters is is recommended.



Formal and semi-formal formal and semi-formal, such as a jacket or vest in the case of gentlemen.

Women light clothing with a jacket and comfortable comfortable.

## Arrival in Mexico

It is served by 31 domestic and international passenger airlines and 12 cargo airlines. Because it is the main hub for the country's largest airline (Aeromexico, along with Aeromexico Connect), the airport has become a SkyTeam hub. It is also a hub for Aeromar, Volaris and Viva Aerobus. Currently, the AICM offers inside, outside and access to the T1 and T2 terminal building, services and facilities for people with disabilities, pregnant women and senior citizens, in order to offer this group of users greater comfort during their stay at the airport. TAXIS at the AirportThe safest way to get to your final destination is Yellow cab. 55 25.99.60.24











# Visas and entry to Mexico

Traveling to Mexico City for tourism or pleasure is very easy. It all starts with applying for a visa. Visa Requirements Visitor's visa without permission to carry out remunerated activities: Performing this procedure allows you to travel to Mexico, present yourself in places authorized for international transit of persons and stay in Mexican territory for a period of up to 180 days, as long as your activity does not involve any remuneration. Necessary documents:- Original visa application form.-Valid passport or identity and travel document in accordance with international law in original and copy.- Photograph.- Document that accredits your economic solvency.- Document that accredits your legal stay in original and copy. Options to carry out your procedure- In person: at any of the 148 consular offices that Mexico has abroad. Visit the website: www.gob.mx/tramites/migracion-visa-y-pasaporte for the most convenient location.- By telephone: by calling 1 877 639 4835 (1 877 MEXITEL) from the United States and Canada or 01 800 639 4835 (01 800 MEXITEL) from the Mexican Republic. Hours are Monday through Friday from 8:00 am to 9:00 pm; Saturdays, Sundays and holidays from 9:00 am to 6:00 pm. The representations that already have the appointment scheduling system through MEXITEL are:In the United States: McAllen, Laredo, San Antonio, Denver, San Jose, Boston, Sacramento, Del Rio, Eagle Pass, Phoenix, New Orleans, Detroit and Albuquerque.In Canada: Calgary.In the rest of the world: Cuba, Guatemala (Guatemala City and Tecún Umán), China (Beijing, Canton and Hong Kong), India, Ecuador, Nigeria, Spain (Madrid and Barcelona), Nicaragua, France, Dominican Republic, Argentina, Panama, Peru, Chile, Haiti and Honduras.



If you are going to apply for a visa at a consular representation other than those listed above, we recommend that you consult directly with the office of your choice.

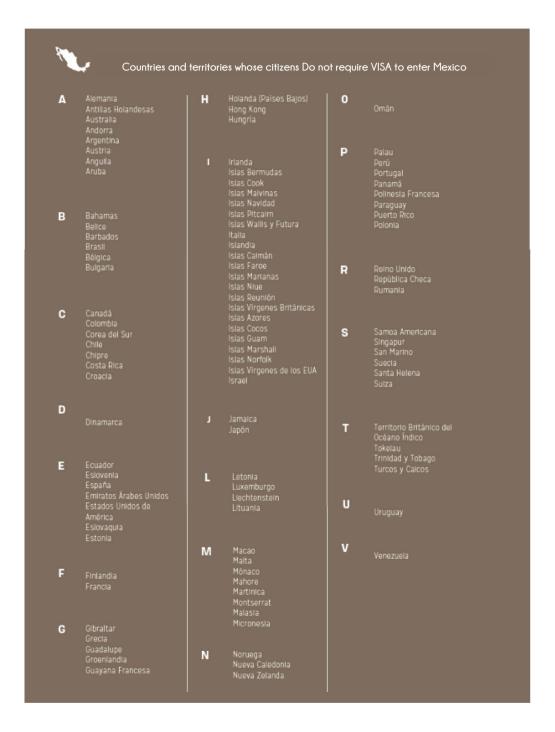
#### Notes:

- It is necessary that you consult with the Mexican consular office of your preference the options you have to prove your economic solvency and legal stay (where applicable).
- You must present the documents legibly, without erasures or amendments.
- The photograph must be recent, with a maximum of six months old, with the face visible and without glasses; in color and passport size. Its measurements must be a minimum of  $32.0 \, \text{mm} \times 26.0 \, \text{mm}$  and a maximum of  $39.0 \, \text{mm} \times 31.0 \, \text{mm}$ , with white background and front view.
- It is essential that you present proof of payment of the corresponding fees. Please contact the Mexican consular office abroad to find out where to do it.
- The visa issuance has a cost of US\$36. Foreigners will not require a Mexican visa if they present any of the following documents:
- a) Document accrediting permanent residence in any of the following countries: Canada, United States, Japan, United Kingdom, Northern Ireland, Germany, Austria, Belgium, Denmark, Slovakia, Estonia, Finland, France, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, Netherlands, Poland, Portugal, Czech Republic, Sweden and Switzerland.
- b) Valid and valid U.S. Visa.
- c) APEC Business Traveler Card (ABTC) approved by Mexico.
- d) Certificate that accredits him/her as a member of the crew of the aircraft in which he/she is arriving.
- e) Seaman's book, if he/she is a member of the crew of the vessel arriving to a Mexican port on an international voyage. If the crew member arrives by air to enlist in a vessel operating in a national port, he/she must present, in addition to the sea book, a document that accredits his/her enlistment, the data of the vessel and the Mexican port in which it is located.

#### Mexican Embassies abroad

Algeria, Argentina, Australia, Austria, Belgium, Belize, Bolivia, Brazil, Canada, Chile, China, Costa Rica, Cuba, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Germany, Greece, Guatemala, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Ireland, Israel, Italy, Jamaica, Japan, Kenya, Korea, Lebanon, Morocco, Netherlands, Nicaragua, Nigeria, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Saint Lucia, Saudi Arabia, Serbia, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, Trinidad and Tobago, Turkey, Ukraine, United Kingdom, United States, Uruguay, Venezuela and Vietnam.

# Countries and territories whose citizens Do not require VISA to enter Mexico



# Gastronomy

How Mexican gastronomy became a World Heritage Site. In 2010, Mexican gastronomy was declared Intangible Cultural Heritage of Humanity by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

One of the people who made this recognition possible is Gloria López Morales, Mexican writer, journalist and diplomat, as well as founder and president of the Conservatorio de la Cultura Gastronómica Mexicana (Conservatory of Mexican Gastronomic Culture).

Gloria has dedicated the last two decades of her life to the rescue, safeguarding and promotion of traditional Mexican food as one of the most outstanding expressions of the country's Cultural Heritage. Forbes Life spoke with Gloria about this effort for the worldwide recognition of this important part of the national culture and in an interview the diplomat highlighted the importance of taking care of the Mexican culinary roots that gave and have given food to Mexicans for so long.

Eating in Mexico City is a true celebration with more than 1000 options in the area with excellent restaurants with all types of food and atmospheres.

Other dishes that can be savored in the city are: fish ceviche, shrimp pozole and zarandeado fish.

You can also try some of the region's specialties such as tortas ahogadas or birria, and of course accompanied with tequila.













## Tourist areas in Mexico City

The Zócalo: Plaza de la Constitución (Constitution Square)
Usually known as Zócalo, it is the perfect place to get into Mexican culture. With almost five centuries of history, this space is where you can see the convergence of the indigenous and viceregal past reflected in the architecture that surrounds this square.

Surrounding the Zócalo you will find the Plaza de Santo Domingo where the baroque style Church of Santo Domingo is located and where Pedro de Moctezuma, one of the sons of Moctezuma II, is buried.

The Metropolitan Cathedral of Mexico City, located north of the Plaza de la Constitución, is one of the oldest buildings in the city. Its construction took about 250 years and is reflected in its eclectic architectural style, a mix of Gothic, Baroque, Churrigueresque, Neoclassical, among others. It is a place you should take the time to appreciate, whether you are a believer or not, thanks to its wealth of art and architecture.

#### Aztec Templo Mayor Museum

This temple was the religious and worship center of the ancient inhabitants of the city. Thanks to several archaeological excavations, under the direction of Eduardo Matos Moctezuma, resulting in the recovery of a collection of more than 7,000 objects, the remains of the Templo Mayor of Tenochtitlan and some surrounding buildings such as the Temple of Huitzilopochtli. The museum is open from Tuesday to Sunday from 9 am to 5 pm.

#### Palace of Fine Arts

This building houses the greatest artistic expression in all of Mexico. It is the home where the greatest Mexican artists and from all over the world have a space to show their works. It also gathers all the activities related to culture, music and art.

#### Plaza Garibaldi: A night with Mariachis

Looking for a good plan for the night? An excellent option is Plaza Garibaldi, famous for the mariachi groups, romantic trios, music groups that gather with their typical attire and instruments.









