



**ENVISION®** 

The Blueprint for Sustainable Infrastructure



## WHAT IS ENVISION?

Envision® is a holistic sustainability framework and rating system that enables a thorough examination of the sustainability and resiliency of all types of civil infrastructure. It is a comprehensive tool that can assist private and public agencies and their consultants and contractors in delivering infrastructure that tackles climate change, addresses public health needs, supports environmental justice, creates jobs, and spurs economic recovery.

## **ENVISION CONSISTS OF:**

- A guidance manual that includes 64 sustainability and resiliency criteria.
- Project assessment tools.
- Professional training and credentialing.
- Third-party project verification.

Envision has been successfully applied to more than 160 infrastructure projects. The combined portfolio of completed and registered Envision projects is worth more than US\$237 billion in infrastructure development.

## WHO DEVELOPED ENVISION?

Envision was developed by the Institute for Sustainable Infrastructure (ISI) in collaboration with the Zofnass Program for Sustainable Infrastructure at Harvard University's Graduate School of Design. The American Public Works Association (APWA), the American Society of Civil Engineers (ASCE), and the American Council of Engineering Companies (ACEC) founded ISI and remain integral supporters.

## BENEFITS OF ENVISION

Envision supports better project planning, design, and delivery by:

- Promoting environmental justice and social equity principles within project processes and decision making.
- Supporting communities to achieve carbon neutrality.
- Facilitating improved stakeholder engagement and interagency collaboration.
- Increasing the resiliency, preparedness, and long-term viability of civil infrastructure.
- Addressing a broad range of social, economic, and environmental indicators.
- Providing climate-ready infrastructure.
- Delivering fiscally responsible and resourceefficient infrastructure.

## WHO USES ENVISION?

#### **PUBLIC AGENCIES**

More than 300 cities, towns, counties, public agencies, and academic institutions are using Envision. Credentialed Envision Sustainability Professionals (ENV SPs) in these organizations are using the framework to set standards for sustainable infrastructure and guide procurement. Public agencies in Seattle, Los Angeles, New York City, Miami, Dallas, Denver, Vancouver, and Montreal are a few examples of *Envision Supported Agencies*.

#### PRIVATE ORGANIZATIONS & ASSOCIATIONS

More than 260 private–sector companies and associations use Envision, applying the framework to set higher performance goals for projects and to collaborate and communicate on achieving those goals. AECOM, Arcadis, Burns & McDonnell, HDR, NV5, Stantec, Tetra Tech, WSP, and many others are *Envision Qualified Companies*.



# APPLICABLE TO ALL TYPES & SIZES OF CIVIL INFRASTRUCTURE



#### **Energy**

- Geothermal
- Hydroelectric
- Nuclear
- Natural Gas
- Oil / Refinery
- Wind
- Solar
- Biomass
- Distribution



### **Transportation**

- Airports
- Roads / Highways
- Bridges
- Railways
- Public transit
- Ports & Waterways
- Active Transportation



#### Water

- Potable water distribution
- Water / wastewater treatment
- Capture / storage
- Stormwater
- Flood control
- Nutrient management



#### Waste

- Solid waste
- Recycling
- Hazardous waste
- Collection and transfer



## Landscape

- Public realm
- Parks / Campgrounds
- Ecosystem services
- Natural / Green infrastructure
- Environmental remediation / restoration



#### **Information**

- Telecom
- Internet / Broadband
- Phones
- Data Centers
- Sensors
- Cables

Other sectors and project types that use Envision include: industrial projects (e.g., manufacturing facilities, warehouses, storage facilities), and food/agriculture projects (e.g., aquaculture, breweries, food manufacturing facilities).

# FIVE CATEGORIES OF SUSTAINABILITY & RESILIENCE

## 64 credits in 5 categories

## **Quality of Life – 14 credits**

#### Wellbeing, Mobility, Community

Addresses a project's impacts on communities, from the health, wellbeing, and equity of individuals to that of the larger social fabric.



## **Leadership – 12 credits**

#### Collaboration, Planning, Economy

Rewards communication, collaboration, teamwork, leadership, and commitment to sustainability. Also rewards meaningful stakeholder engagement and lifecycle economic evaluation.



## **Resource Allocation – 14 credits**

#### Materials, Energy, Water

Broadly concerned with the quantity, source, and characteristics of the resources needed to build infrastructure and keep it running.



## Natural World - 14 credits

#### Siting, Conservation, Ecology

Addresses how projects are located within and affect the natural world and ecosystem services. Rewards projects that minimize negative impacts and those that protect and restore habitats.



## Climate & Resilience - 10 credits

#### Emissions, Resilience

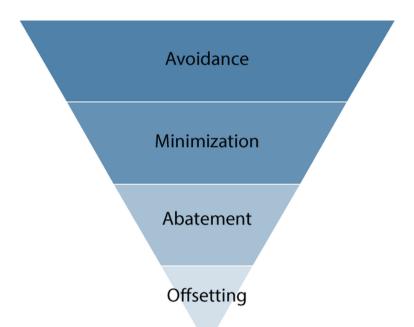
Focuses on minimizing emissions that exacerbate climate change and magnify short- and long-term risks; ensures projects are resilient and contribute to resilient communities.



## **ENVISION'S APPROACH**

Uses proven, best-practice approaches to achieve sustainable, resilient, and equitable infrastructure. Examples include the following: mitigation hierarchy, triple-bottom line considerations, innovation, higher performance in three dimensions, and lifecycle considerations. (Descriptions are below.)

#### **Mitigation Hierarchy**



Envision employs a **Mitigation Hierarchy** that prioritizes the steps needed when building civil infrastructure.

**Avoidance** — measures taken from the outset to avoid creating negative impacts.

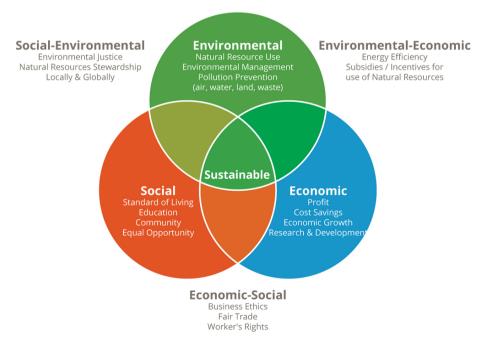
**Minimization** — measures taken to reduce the duration, intensity or extent of impacts that cannot be avoided.

**Abatement** — measures taken to rehabilitate degraded ecosystems.

**Offsetting** — measures taken to compensate for any residual adverse impacts.

#### **Triple-Bottom Line Considerations**

Sustainability is found in the triple-bottom line. In other words, Envision bolsters environmental protections and conserves resources, promotes social wellbeing / equity, and helps communities thrive economically.

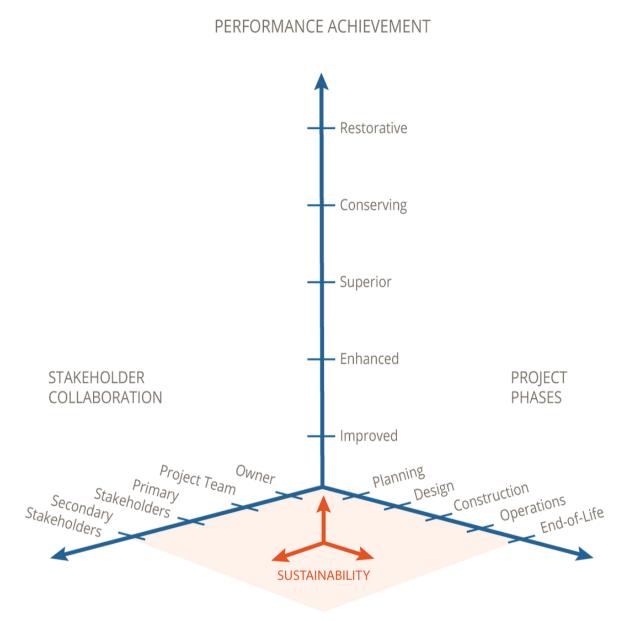


#### Innovation

Envision encourages innovation across all aspects of sustainability and resilience. Some topics and approaches in Envision are aspirational, laying out a best-case scenario and allowing projects to determine the best approach for achieving this scenario. Other approaches are a blank slate, allowing project teams to innovate and develop new solutions to suit their present and future needs.

# OPPORTUNITIES FOR PERFORMANCE IMPROVEMENT

Incentivizing Higher Performance in Three Dimensions



#### **Project Phases**

The first dimension is the project life cycle. Here, project teams are using Envision to go beyond planning and design to the construction phase to consider operations, maintenance, and end of life considerations, such as the ability to disassemble and up-cycle materials.

#### Stakeholder Collaboration

When an inclusive group is engaged throughout a project's planning and design phases, resultant projects satisfy the needs and desires of the community. Collaborations with stakeholders also identify the widest practical array of sustainability alternatives for consideration, including byproduct synergies and social benefits.

#### **Performance Levels**

Each credit in the Envision framework includes up to five levels of achievement, ranging from Improved (sustainable performance that is slightly above conventional practice) to Restorative (sustainable performance that results in the restoration of natural or social systems).

## HOW TO GET STARTED

## **BECOME A MEMBER ORGANIZATION & ENV SP**

There are several ways to earn your Envision Sustainability Professional (ENV SP) credential. Becoming a member of ISI is the best way to start.



#### **PRIVATE-SECTOR MEMBERSHIP**

Once a private organization becomes a member, they earn a credit for one free ENV SP training, worth \$850. When an organization has an ENV SP on staff, they are listed on ISI's website as an *Envision Qualified Company*. The firm is then eligible for a \$150 credit on each subsequent employee who becomes Envision-credentialed. Credential renewals are discounted \$30 each year, and organizations can earn discounts on third-party project verification.



#### **PUBLIC-SECTOR MEMBERSHIP**

Any public agency at a federal, state, provincial, county, and municipal level may apply for a FREE annual membership account with ISI by submitting an application. Once the public agency has an ENV SP on staff, the agency is considered an *Envision Supported Agency* and listed on ISI's website. Envision Supported Agencies receive training discounts for employees, and they are eligible for discounts on project verification.



#### **ACADEMIC MEMBERSHIP**

The public-sector membership terms described above also apply to academic memberships — available for any institution of higher learning.

#### **INDIVIDUAL MEMBERSHIP**

If you are a professional, an academic, or a postsecondary student who is not affiliated with an organizational account, you can still join ISI with an individual membership account.



#### **Become an ENV SP**

The Envision Sustainability Professional (ENV SP) designation is becoming an increasingly important credential for any professional involved in civil infrastructure, worldwide. Currently there are more than 9,000 professionals have earned their ENV SP credential.

### Why earn your ENV SP?

The ENV SP credential demonstrates your passion for sustainability and signals to others that you have the knowledge and skills needed to apply ground-breaking Envision concepts to your daily work—ensuring infrastructure projects are sustainable, equitable, and resilient.

## What you will learn

- How infrastructure addresses the challenges inherent to sustainable development.
- The components of Envision.
- Using Envision to evaluate the sustainability of infrastructure projects.
- The Envision verification process.
- Using Envision to plan, design, and deliver more sustainable infrastructure.

#### Who should earn the credential?

Civil engineers, planners, designers, consultants, architects, CEOs, CFOs, government leaders, and procurement professionals — or any professional who is passionate about sustainability. The credential is also open to post-secondary students and faculty.



## Collaborate. Document. Validate. Achieve.



## SHOWCASE YOUR PROJECT'S VALUE WITH ENVISION VERIFICATION

It is one thing to say that an infrastructure project is sustainable and resilient, fights climate change, addresses environmental justice, creates jobs, and spurs economic recovery, it's another thing to prove it. Envision verification provides that proof.

Verification is an objective, evidence-based approach that lends credibility to your project, and it showcases that the project is aligned with your community's needs and expectations.

Infrastructure owners, their consultants, and contractors who engage in the verification process feel a sense of accomplishment by demonstrating their work's ingenuity. There are "aha" moments that will change individual and team perspectives and lead to valuable insights for future projects.

Envision verification focuses on collaboration among internal and external project stakeholders to advance industry best practices and promote innovation.

#### WHY SEEK VERIFICATION?

- Verification demonstrates that your project meets environmental, social, and economic standards.
- Exhibits accountability, improves project management processes, and elevates learning opportunities for stakeholders.
- Satisifies local, state, provincial, and federal regulatory requirements.

#### **VERIFICATION BENEFITS**

Instills confidence in ratepayers and taxpayers that their money is being well spent.

Encourages and rewards industry best practices, inclusive engagement, and sustainable performance to bolster community confidence.

Helps teams clearly define and document their sustainable, resilient, and equitable achievements.

Extends learning opportunities and knowledge of sustainable practices and processes.

Promotes collaboration and provides opportunities for better dialogue, innovation, and critical thinking.

#### **COMMUNITY COLLABORATIONS**



Creates jobs & stimulates the economy.
Is cost-effective & leads to longterm operational efficiencies.



Leads to significant reductions in GHG emissions & achieves carbonneutral targets.



Reduces water & energy usage. Encourages sustainable material use.



Promotes social equity and community cohesion. Improves public health, safety, and access to essential services.



Protects and restores habitats.







#### **VERIFICATION PATHWAYS**

There are two verification pathways: Pathway A allows you to pursue Envision verification during a project's design phase. Pathway B allows you to pursue verification after construction is complete.

Pathway A: Design + Post-Construction



#### **ENVISION AWARDS**

Award levels are based on the percentage of applicable Envision points attained in verification.

## What people are saying

#### The Benefits of Envision, Verification, and Being an ENV SP



Sylvain Paquet
Senior Project
Manager
STM's Côte-Vertu
garage (Envision
Platinum)

"Obtaining this Envision recognition is an impressive achievement for the project team since all sustainability aspects of the project have been analyzed to incorporate best practices and to follow them meticulously during design and construction. It takes a lot of effort and rigor throughout the project and I tip my hat to my team for their work."



Stephanie
Dalo
Sustainability
Specialist,
DIALOG

"As an advocate for sustainable development, my objective is to consult decision makers on how to implement principles of sustainability into infrastructure planning, design, construction, and operations and maintenance. My goal is to reduce project risks through increased transparency, stakeholder involvement, inclusive practices, innovation, and leadership."



Gabriela
Duarte
Sustainability
Consultant,
Stantec

"Working on various infrastructure projects with Stantec and applying the Envision Framework has been an incredible experience. I've had the chance to witness firsthand how this framework, developed and managed by ISI, can help promote sustainable infrastructure development. As someone who is an ENV SP and Envision Verifier, I'm now excited to share my knowledge and experience as an Envision Trainer to contribute to promoting sustainable infrastructure development."



Jesse Unke VP of Canadian Operations at COWI

"In becoming an ENV SP, I really came to learn and appreciate the Envision framework and the level of detail associated with each credit. While I have yet to apply Envision to an active project as an ENV SP, the knowledge I have gained allows me to bring helpful insights to infrastructure projects across our portfolio."



Nancy Pridal CEO & President, Lamp Rynearson (USA)

"If you really dig into the components of Envision and collaborate with clients— even if they're not wanting to get certified— it brings a process together; it's system-thinking at its finest."



VP International
Relations &
Director
Binational
Infrastructure
(MEX/USA)
FEMCIC

"This type of process really fulfills the requirements under the UN 2030 agenda for Sustainable Development Goals, and it facilitates the implementation of processes and systems that can document how a project is going to be, even for the planning, design, construction, and operation. It also involves a life cycle analysis."

