USING ENVISION AS A TOOL TO ASSESS AND IMPROVE THE SUSTAINABILITY OF INFRASTRUCTURE PROJECTS
Incorporating other agency sustainability efforts:

- Collaborating with NYC Department of Environmental Protection
- Collaborating with NYC Mayor’s Office of Recovery and Resiliency
- Collaborating with NYC Office of Emergency Management
- Collaborating with NYC Department of Transportation
We make sure that the city’s goals are implemented
NYC DDC’s Efforts On Sustainable Design

- **2004**: High Performance Infrastructure Guidelines
- **2008**: Sustainable Urban Site Design Manual
- **2010**: Operations Manual
- **2016**: Design and Construction Excellence 2.0 Guiding Principles
DDC’s Comprehensive Plan to Improve Capital Project Delivery; Lays Out Themes to Deliver Projects Faster and Within Budget

Infrascture

The Infrastructure Division delivers projects on behalf of the Department of Environmental Protection (DEP) and the Department of Transportation (DOT), and last year reconstructed 25 lane miles of New York City streets, and installed or replaced 118 miles of the City’s sewers and water mains. The Infrastructure Division is also responsible for essential citywide programs strengthening the resiliency, sustainability, and livability of numerous connected communities. These include the City’s Coastal Resiliency Program, the innovative Bluebelt stormwater management network in Staten Island, as well as the multi-year effort to make pedestrian ramps throughout the City ADA compliant and the $1.9 billion initiative to improve streets and drainage in southeast Queens.

DDC will leverage recent, significant advances in physical technologies to improve the constructability and sustainability of its projects. These include trenchless construction, allowing for the installation of underground infrastructure with minimal excavation, modular building techniques to reduce in-place construction, and porous pavement and concrete to improve ground permeability.

Another factor that DDC must now take into account for every project is climate change. The warming of the planet creates new infrastructure challenges related to higher temperatures, sea level rise, droughts, and storms.
What Is Envision?
Envision Credit System

A framework that includes **64 sustainability and resilience indicators**, called ‘credits’, organized around five categories:

- **Quality Of Life**: 14 Credits
- **Leadership**: 12 Credits
- **Resource Allocation**: 14 Credits
- **Natural World**: 14 Credits
- **Climate and Resilience**: 10 Credits

### Categories

#### Energy
- Distribution
- Hydroelectric
- Coal
- Natural Gas
- Wind
- Solar
- Biomass

#### Water
- Treatment
- Distribution
- Capture / Storage
- Stormwater
- Flood Control
- Nutrient Management

#### Waste
- Solid waste
- Recycling
- Hazardous Waste
- Collection & Transfer

#### Transportation
- Airports
- Roads / Highways
- Bikes / Pedestrians
- Railways
- Transit
- Ports
- Waterways

#### Landscape
- Public Realm
- Parks
- Ecosystem Services
- Natural Infrastructure
- Environmental Remediation

#### Information
- Telecom
- Cables
- Internet
- Phones
- Data Centers
- Sensors
Envision award levels of applicable credits
With ENVISION as a TASK in our Design Contracts - DDC encourages brainstorming and creativity for design opportunities towards the HIGHEST LEVEL of verification.
How is Envision used?
Sustainability Workflow

NYC DDC
- Selects a Consultant for Design
- Consultant Assigns Project ENV SP

ENV SP
- The Project ENV SP will fill the Envision Sustainability Work Plan (SWP)

NYC DDC Reviews SWP

Sustainability Workshop
- Consultants and DDC's team conduct a meeting to finalize the SWP.

ISI (Third Party Verification)

Institute for Sustainable Infrastructure

Project Registration & Sustainability Workflow
- Uploading Documentation on the ISI Online portal
A workshop is held to approve the SWP and to set the game plan for achieving the anticipated Envision Verification Award Level.

The Project ENV SP will issue Memo(s) outlining strategies to improve sustainability of the project.
Sustainability Management Checklist
NYC DOT projects with the Envision Task

**TYPOLOGY IV**
- Pershing Square East
- Osborn Plaza

**TYPOLOGY VI**
- Henwood Place Step Street
- Davidson Step Street

**TYPOLOGY IX**
- 111th Street Improvements
- South Bronx Crosstown Select Bus Service
EXAMPLE PROJECT

Pershing Square, New York, NY
Project Description

• Initially NYCDOT closed the street segment to vehicular traffic with only paint, epoxied gravel, flexible bollards and large planters.

• Now, this repurposed area will be a permanent Plaza for general pedestrian and bicycle use.
Uploading Documentation on the ISI Online portal

ISI (Third Party Verification)

Appoints Consultant for ENVISION task

Consultant Assigns a Project ENV SP

The Project ENV SP will fill the Envision Sustainability Work Plan (SWP)

NYC DDC Reviews the SWP

Sustainability Workshop

Consultants and DDC’s team conduct a meeting to finalize the SWP.

Project Registration & Pershing Square – Envision Workflow diagram

Pershing Square – Envision Workflow diagram

ISI (Third Party Verification)

Institute for Sustainable Infrastructure

Project is at this stage

Project Registration & Uploading Documentation on the ISI Online portal
EXAMPLE PROJECT

Henwood Place Step Street
Bronx, New York
Project Description

• This NYC DOT capital project will reconstruct the vertical street to create safer travel conditions and reduce long-term maintenance burdens

• Will reconfigure the staircases and landings, increasing its visibility as a step street and improving the user experience

• The conceptual reconfiguration of the project also includes new design elements such as ramps and adding Street Trees
Henwood Place Step Street – Envision Workflow diagram

1. Appoints Consultant for ENVISION task
2. Consultant Assigns a Project ENV SP
3. The Project ENV SP will fill the Envision Sustainability Work Plan (SWP)
4. NYC DDC Reviews the SWP

Sustainability Workshop
Consultants and DDC’s team conduct a meeting to finalize the SWP.

Project Registration &
Uploading Documentation on the ISI Online portal

ISI (Third Party Verification)
Institute for Sustainable Infrastructure

Consultant Assigns a Project ENV SP
The Project ENV SP will fill the Envision Sustainability Work Plan (SWP)

NYC DDC Reviews the SWP

Project is at this stage
Thank You!