

Floodplain, Stormwater, Emergency Management

Presented by Karen C Kabbes, PE, CFM, ENV-SP KEI

What We Are Going to Cover

- Introduce Envision
- How It Helps Communities
- What it Includes
- Why Floodplain & Stormwater Managers Have a Head Start
- What You Can Do to Use it





Definition of Sustainability

Sustainability: A set of *environmental*, economic and social conditions in which all of society has the capacity and opportunity to maintain and improve its quality of life indefinitely without degrading the quantity, quality or availability of natural, economic and social resources.



Definition of Infrastructure

Oxford Dictionaries define infrastructure as "the basic physical and organizational structures and facilities (e.g. buildings, roads, and power supplies) needed for the operation of a society or enterprise..."



Institute for Sustainable Infrastructure Founded in 2010 by Three Organizations









ISI is a 501 (c) (3) not for profit organization, structured to develop and maintain a sustainability rating system for civil infrastructure



ENVISION[™] Infrastructure Rating System *Joint Collaboration Between*









ENVISION[™] – Incorporates a New Sustainability Paradigm

Are we doing the right project?

Are we doing the project right?





America's Infrastructure Today













Resource Depletion







Plotted by Irene Dhong, UFL ENV 6932

Figure 6: Human development index vs. ecological footprint by country (Source: Living Planet Report 2006, World Wildlife Fund).

10

ASCE's Report Card for America's Infrastructure

15 categories rated
 Overall grade of D
 \$2.2 trillion
 Ranked 23rd worldwide

| in the second | | |
|--|-------------------------------------|-------------------|
| | Aviation | D |
| | Bridges | C |
| | Dams | D |
| AZIN | Drinking Water | D- |
| | Energy | D+ |
| | Hazardous Waste | D |
| | Inland Waterways | D- |
| A = Exceptional B = Good C = Mediocre | Levees | D- |
| D = Poor F = Failing | Public Parks and Recreation | 6- |
| such category was waluated on the | Rail | C- |
| and performance, apacity vs. need, and funding vs. need. | Roads | D- |
| Contraction of the | Schools | D |
| | Solid Waste | C+ |
| | Transit | D |
| | Wastewater | D- |
| | AMERICA'S INFRASTRUCTURE G.P.A. | D |
| | ESTIMATED 5 YEAR INVESTMENT NEED | \$2.2 TRILLION |
| | | 1 |



The Future of Infrastructure











That Sweet Spot...





What Types Of Infrastructure Does **EnvisionTM Rate**?



ENERGY Geothermal Hydroelectric Nuclear Coal Natural Gas **Oil/Refinery** Wind Solar





WATER Potable water distribution Capture/Storage Water Reuse Storm Water Management **Flood Control**



WASTE

Solid waste Recycling Hazardous Waste Collection & Transfer



TRANSPORT

Airports Roads Highways Bikes **Pedestrians** Railways Public Transit Ports Waterways



LANDSCAPE **Public Realm** Parks Ecosystem **Services**



INFORMATION Telecommunications Internet Phones Satellites Data Centers Sensors



Envision[™] Is Uniquely Qualified to Address America's Infrastructure

- Envision[™] applies to all civil infrastructure
- Addresses design, planning, construction and maintenance
- Applicable at any point in an infrastructure project's life cycle
- Speaks to the triple bottom line: social, economic and environmental goals
- Designed to keep pace with a changing concept of sustainability



Why Was Envision[™] Developed?

Current rating systems for infrastructure in the U.S. are sector specific No U.S. system covers all aspects of infrastructure ■Envision[™] is designed to fill the gap









2050 is being built today





60 Credits in 5 Categories



Purpose, Community, Wellbeing



LEADERSHIP Collaboration, Management, Planning





Materials, Energy, Water





Siting, Land & Water, Biodiversity





Emission, Resilience



Levels of Achievement





Envision Sustainable Infrastructure Rating System



RESOURCE

4 Credits

RA1.2 Support Sustainable Procurement Practices

RA1.6 Reduce Excavated Materials Taken Off Site

RA1.7 Provide For Deconstruction & Recycling

RA2.3 Commission & Monitor Energy Systems

RA1.1 Reduce Net Embodied Energy

RA1.3 Use Recycled Materials

RA1.4 Use Regional Materials

2 ENERGY

3 WATER

RA1.5 Divert Waste From Landfills

RA2.1 Reduce Energy Consumption

RA2.2 Use Renewable Energy

ALLOCATION



QL1.1 Improve Community Quality of Life QL1.2 Stimulate Sustainable Growth & Development QL1.3 Develop Local Skills & Capabilities

QL2.1 Enhance Public Health & Safety QL2.2 Minimize Noise and Vibration QL2.3 Minimize Light Pollution QL2.4 Improve Community Mobility & Access QL2.5 Encourage Alternative Modes of Transportation 3 PLANNING QL2.6 Improve Accessibility, Safety, & Wayfinding

QL3.1 Preserve Historic & Cultural Resources QL3.2 Preserve Views & Local Character QL3.3 Enhance Public Space

QL0.0 Innovate or Exceed Credit Requirements



1 COLLABORATION





1 MATERIALS

LD1.1 Provide Effective Leadership & Commitment LD1.2 Establish A Sustainability Management System LD1.3 Foster Collaboration & Teamwork LD1.4 Provide for Stakeholder Involvement

2 MANAGEMENT LD2.1 Pursue By-Product Synergy Opportunities

LD2.2 Improve Infrastructure Integration

LD3.1 Plan For Long-Term Monitoring & Maintenance LD3.2 Address Conflicting Regulations & Policies LD3.3 Extend Useful Life

LD0.0 Innovate or Exceed Credit Requirements

RA3.1 Protect Fresh Water Availability RA3.2 Reduce Potable Water Consumption RA3.3 Monitor Water Systems

RA0.0 Innovate or Exceed Credit Requirements

WORLD 15 Credits

NATURAL

1 SITING

NW1.1 Preserve Prime Habitat NW1.2 Protect Wetlands & Surface Water NW1.3 Preserve Prime Farmland NW1.4 Avoid Adverse Geology NW1.5 Preserve Floodplain Functions NW1.6 Avoid Unsuitable Development on Steep Slopes NW1.7 Preserve Greenfields

2 LAND+WATER

NW2.1 Manage Stormwater NW2.2 Reduce Pesticide & Fertilizer Impacts NW2.3 Prevent Surface & Groundwater Contamination

3 BIODIVERSITY

NW3.1 Preserve Species Biodiversity NW3.2 Control Invasive Species NW3.3 Restore Disturbed Soils NW3.4 Maintain Wetland & Surface Water Functions

NW0.0 Innovate or Exceed Credit Requirements



CR1.1 Reduce Greenhouse Gas Emissions CR1.2 Reduce Air Pollutant Emissions

CR2.1 Assess Climate Threat CR2.2 Avoid Traps & Vulnerabilities CR2.3 Prepare For Long-Term Adaptability CR2.4 Prepare For Short-Term Hazards CR2.5 Manage Heat Island Effects

CR0.0 Innovate or Exceed Credit Requirements











Quality of Life



QL2.4 IMPROVE COMMUNITY MOBILITY AND ACCESS

INTENT:

Locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability.

LEVELS OF ACHIEVEMENT

| IMPROVED | ENHANCED | SUPERIOR | CONSERVING | RESTORATIVE |
|---|--|---|--|-------------|
| (1) Limited coordination. The project team recognizes the need and utility in providing access to adjacent facilities, amenties and transportation hubs. However, the team has not coordinated fully with owners and operators of adjacent facilities, amenities and/ or transportation operators. Design decisions are made internally, within the project team. Despite attempts at coordination, design gaps in mobility and access are still significant. Principles and specifications for reducing negative impacts on mobility and access in the construction phase are limited. (Å, B) | (4) Satisfactory access. Project team recognizes the need and utility of providing such access, and seeks input from the operators of adjacent facilities, amenities and transportation hubs. Design decisions are based in part on improved access. Access design decisions based on coordination with operators of adjacent facilities, amenities and transportation hubs. Principles and specifications for reducing negative impacts in the construction phase extend to adjacent facilities. (A, B) | (7) Exceptional access and flow. Project team expands access considerations to expected traffic flows and volumes, preferred modes of access. Discussions with decision-makers to optimize design choices. Project team works with decision-makers in adjacent facilities and amenities and transportation hubs to determine best modes of access. Designs based on expected traffic flows and transportation choices. Principles and specifications for reducing negative construction impacts emphasize substantially reduced impacts, well beyond construction norms. Construction specifications direct the contractor to consider alternative modes of access, e.g., rail, water, to reduce road traffic. Also, takes into consideration materials to be brought in and taken off site. (A, B, C, D, E) | (14) More livable communities. Project team expands the range of discussion. The team works not only with decision-makers in adjacent facilities, et al., but also with local community officials. Design considerations have moved beyond access issues and now address the reduction of traffic congestion, improvements in walkability in the community, and other key measures of mobility and access. The location of the project has been chosen to utilize and improve the existing transportation infrastructure. It incorporates a community transportation strategy. Principles and specifications for reducing negative construction impacts require strong programs for working with affected community. (A, B, C, D, E, F) | |

Example Credit QL 2.4

Improve Community Mobility and Access



DESCRIPTION

The purpose of this credit is to reduce the negative impacts of the constructed works on transportation, mobility and access, thereby reducing congestion, improving traffic flow and contributing to community livability.

If public access is required and the site and constructed works are not located near existing public transportation, consider creating new links to public transport rather than relying on motorized vehicles providing access.

The use of alternate materials and sources that reduce the need for materials transport should be specified in construction. Alternate means of transportation, e.g., rail, water should be considered in the deliver of construction materials, as well as waste materials needing to be transported off site.

ADVANCING TO HIGHER ACHIEVEMENT LEVELS

Benchmark: Compliance with local laws and regulations regarding construction transport, but no inspection and enforcement programs beyond what's required, if anything. Only conducting conventional impact studies as required by local regulations. No particular efforts in the design to improve access or reduce congestion. Only using conventional design standards for access.

Performance improvement: Broader consideration given to coordination with adjacent facilities, amenities and transportation hubs. Focus on reducing traffic congestion and improving walkability. Net improvement on community livability.

EVALUATION CRITERIA AND DOCUMENTATION

- A. Have the impacts of the project on community access and mobility during construction and operation been properly and comprehensively addressed?
 - 1. Assessment studies and reports addressing the effects of the constructed works on access and mobility.
 - 2. Completeness of the assessment studies and reports.
- B. Has the project team coordinated with owners and operators of adjacent facilities, amenities and/or transportation hubs to address issues of mobility and access during operation of the constructed works?
- Reports, memoranda, minutes of meetings with managers and operators covering access to adjacent facilities, amenities and transportation hubs.
- 2. Decisions made and actions taken.
- C. Has the project team considered, and incorporated when feasible, the use of alternate modes of transport?

Example Credit QL 2.4

Improve Community Mobility and Access









Leadership





DOES THE PROJECT MINIMIZE THE USE OF FOSSIL-FUEL BASED ENERGY?

DOES THE PROJECT UTILIZE LOCAL MATERIALS? DOES THE PROJECT CONSIDER THE LIFE CYCLE OF THE MATERIALS USED, AND PLAN FOR THEIR END-OF-LIFE?

HOW IS WASTE FROM THE PROJECT HANDLED?

DOES THE PROJECT USE SUSTAINABLE 4 MATERIALS, SUCH AS RECYCLED, REUSED, OR CERTIFIED MATERIALS? DOES THE PROJECT PROTECT FRESHWATER AVAILABILITY BY MINIMIZING ITS POTABLE WATER USE?

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Resource Allocation









Natural World



NW1.5 PRESERVE FLOODPLAIN FUNCTIONS

INTENT:

Preserve floodplain functions by limiting development and development impacts to maintain water management capacities and capabilities.

LEVELS OF ACHIEVEMENT

| IMPROVED | ENHANCED | SUPERIOR | CONSERVING | RESTORATIVE |
|--|--|--|--|-------------|
| (2) Avoid or mitigate impacts. Avoid or limit new development within the design frequency floodplain for waterways of all sizes, unless water dependent infrastructure that must cross or be adjacent to a waterway. Design water dependent infrastructure to minimize floodplain impacts or waterway crossings. Maintains pre- development floodplain storage and does not increase flood elevations. (A) | (5) Maintain infiltration and water quality. Limit or eliminate the use of impervious surfaces to allow for groundwater infiltration. Maintain or enhance the vegetation and soil protection zones (VSPZs). Impacts from overall site development shall not decrease the capacity of the floodplain riparian vegetation and soil protection zone to support the desired vegetation. Take into consideration possible beneficial use of storm water runoff. (A, B) | (8) Enhance riparian and aquatic habitat. Prepare flood emergency plan for floodplain infrastructure. Maintain or enhance the riparian and in- channel physical and vegetative habitat to support threatened and endangered or otherwise desirable species. Emergency operation and/ or evacuation plans are prepared for all infrastructure in floodplain. (A, B, C) | (14) Enhance connectivity and sediment transport. Modify or remove structures frequently damaged by floods. The project is designed to not inadvertently trap sediment and allow fish passage through project reach. If repeatedly damaged structures are in project reach they are removed or modified to reduce potential for flood damages. (A, B, C, D) | |

DESCRIPTION

Impervious surfaces increase storm water runoff volume, increase stream temperatures, and increase pollutant loading on waterways. Some infrastructure projects may not be able to avoid the floodplain (e.g., roadway and utility crossings, wastewater treatment facilities, ports and other water dependent structures). However these structures should be designed to minimize waterway crossings and floodplain impacts. The project is designed to maintain floodplain storage and not increase flood elevations.

ADVANCING TO HIGHER ACHIEVEMENT LEVELS

Benchmark: Floodplain functions are not considered beyond local laws and requirements.

Performance improvement: Shift from avoiding floodplain development to maintaining floodplain functions. Extend to enhancement of riparian and aquatic habitat. Move to considering aquatic habitat connectivity and sediment transport. Shift to consideration of extreme flood events due to climate change and to restore connectivity to fragmented aquatic and riparian habitat and sediment transport.

EVALUATION CRITERIA AND DOCUMENTATION

A. Does the project avoid or limit new development within the design frequency floodplain for waterways of all sizes, unless water dependent infrastructure that must cross a waterway, or is the water dependent infrastructure designed to minimize floodplain impacts or waterway crossings?

- 1. Documentation showing the location of the project relative to the 100-year or design floodplain.
- 2. Documentation showing siting choices relative to floodplains and how impacts to the floodplain have been reduced.
- Document that pre- and post-floodplain storage and floodplain elevations and show that the project does not increase flood elevations outside of project easements and maintain floodplain storage.
- B. Does the project maintain pre-development floodplain infiltration and water quality?
 - Documentation of strategies used to maintain pre-development floodplain infiltration, such as amount of impervious surfaces, established vegetation and soil protection zones, and other strategies that allow for natural floodwater infiltration and filtration of pollutants.
 - Estimates of pre-development floodplain infiltration capacity and estimates of post-development floodplain infiltration capacity using above-described strategies.
- C. Does the project maintain or enhance riparian and aquatic habitat and the maintenance or enhancement of the riparian and in-channel physical and vegetative habitat to support threatened and endangered or otherwise desirable species? Has a flood emergency plan been prepared for all infrastructure in the floodplain accounting for emergency operations and/ or evacuation?
 - 1. Documentation of strategies to maintain or enhance habitat, within and along the waterway in the floodplain.

Example Credit NW 1.5

Preserve Floodplain Functions





DOES THE PROJECT REDUCE AIR

DOES THE PROJECT MANAGE HEAT

POLLUTANT EMISSIONS?

ISLANDS?

DOES THE PROJECT MINIMIZE GREENHOUSE GAS EMISSIONS?

SHORT-TERM HAZARDS?

DOES THE PROJECT PREPARE FOR

DOES THE PROJECT PREPARE FOR LONG-TERM ADAPTABILITY?

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Climate and Risk

CR1.1 Greenhouse Gas Emissions CR1.2 Air Pollutants CR2.1 Climate Threat CR2.2 Traps and Vulnerabilities CR2.3 Long-term Adaptability CR2.4 Short-term Hazards CR2.5 Heat Islands CR0.0 Innovation



Conservine Restorative Enhanced Improved Superior TABLE OF POINT VALUES QL1.1 Improve community quality of life QL1.2 Stimulate sustainable growth and development QUALITY OF LIFE QL1.3 Develop local skills and capabilities QL2.1 Enhance public health and safety QL2.2 Minimize noise and vibration QL2.3 Minimize light pollution QL2.4 Improve community mobility and access QL2.5 Encourage alternative modes of transportation QL2.6 Improve site accessibility, safety and wayfinding QL3.1 Preserve historic and cultural resources QL3.2 Preserve views and local character QL3.3 Enhance public space LD1.1 Provide effective leadership and commitment LD1.2 Establish a sustainability management system LEADERSHIP 16 17 LD1.3 Foster collaboration and teamwork LD1.4 Provide for stakeholder involvement LD2.1 Pursue by-product synergy opportunities LD2.2 Improve infrastructure integration LD3.1 Plan for long-term monitoring and maintenance LD3.2 Address conflicting regulations and policies LD3.3 Extend useful life RA1.1 Reduce net embodied energy RESOURCE ALLOCATION 24 25 26 27 28 29 30 RA1.2 Support sustainable procurement practices RA1.3 Use recycled materials RA1.4 Use regional materials RA1.5 Divert waste from landfills RA1.6 Reduce excavated materials taken off site RA1.7 Provide for deconstruction and recycling RA2.1 Reduce energy consumption RA2.2 Use renewable energy RA2.3 Commission and monitor energy systems RA3.1 Protect fresh water availability RA3.2 Reduce potable water consumption RA3.3 Monitor water systems NW1.1 Preserve prime habitat NW1.2 Protect wetlands and surface water NW1.3 Preserve prime farmland NATURAL WORLD NW1.4 Avoid adverse geology NW1.5 Preserve floodplain functions NW1.6 Avoid unsuitable development on steep slopes NW1.7 Preserve greenfields NW2.1 Manage stormwater NW2.2 Reduce pesticide and fertilizer impacts NW2.3 Prevent surface and groundwater contamination NW3.1 Preserve species biodiversity NW3.2 Control invasive species NW3.3 Restore disturbed soils NW3.4 Maintain wetland and surface water functions CR1.1 Reduce greenhouse gas emissions Emission 51 52 CR1.2 Reduce air pollutant emissions CR2.1 Assess climate threat CR2.2 Avoid traps and vulnerabilities Resilience CR2.3 Prepare for long-term adaptability CR2.4 Prepare for short-term hazards CR2.5 Manage heat islands effects

Scoring

Currently Up to Owner, Engineer and Assessor to Determine What Score Means



ENVISION[™] Self Assessment Checklist

Envision Rating System Self-Assessment Checklist

| 100% | | | | |
|---|---------|------|-----|---|
| 80% | | | | |
| 60% | | | | |
| 40% | | | | |
| uality of Life | | | | |
| L. Purpose ^{0%} | | | | 0 |
| QL 1.1 Improve Community Quality of Life | | | | |
| Intent: Improve the net quality of life of all communities affected by the project and mitigate negative imp communities. | acts to | | | |
| Metric: Measures taken to assess community needs and improve quality of life while minimizing negative i | mpacts. | | | |
| Assessment Questions: | Yes | No | N/A | |
| Are the relevant community needs, goals and issues being addressed in the project? | 0 | 0 | ۲ | ? |
| Are the potentially negative impacts of the project on the host and nearby communities been reduced or eliminated? | 0 | 0 | ۲ | ? |
| Has the project design received broad community endorsement, including community leaders and stakeholder groups? | 0 | 0 | ۲ | ? |
| Тс | otal C |) of | 2 | |



Checklist Example

Envision Rating System Self-Assessment Checklist

| QL 2.4 Improve Community Mobility and Access | | | | | | |
|--|--|------|-----|---|--|--|
| I ntent: Locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability. | | | | | | |
| Metric: Extent to which the project improves access and walkability, reductions in commute times, traverse t facilities and transportation. Improved user safety considering all modes, e.g., personal vehicle, commercial and bike/pedestrian. | Metric: Extent to which the project improves access and walkability, reductions in commute times, traverse times to existing facilities and transportation. Improved user safety considering all modes, e.g., personal vehicle, commercial vehicle, transit and bike/pedestrian. | | | | | |
| Assessment Questions: | Yes | No | N/A | | | |
| Will the project provide good, safe access to adjacent facilities, amenities and transportation hubs? | 0 | 0 | ۲ | ? | | |
| Will the project design take into consideration the expected traffic flows and volumes in and around the project site to improve overall mobility and efficiency? | 0 | 0 | ۲ | ? | | |
| Has the project team coordinated the design with other infrastructure assets to reduce traffic congestion, and improve walkability and livability? | 0 | 0 | ۲ | ? | | |
| Tota | al C |) of | 3 | | | |



Rating System

| | Section and Objective Numbers | Objectives | Required for Project | Level Of Achievement | Score | Objective Available Points |
|-----|--|---|----------------------|-------------------------|-------|----------------------------------|
| QU | ALIT | Y OF LIFE | | | | |
| | QL1.1 | Improve community quality of life. Improve the net quality of life of all communities affected by the project and mitigate negative impacts to | YES | Restorative < | 25 | 25 |
| | | communities. details / guidance | Notes: | | | |
| | | | | | | |
| | QL1.2 | Stimulate sustainable growth and development. Support and stimulate sustainable growth and development, including improvements in job growth, | YES | Superior 💌 | 5 | 16 |
| QL1 | | capacity building, productivity, business attractiveness and livability. details / guidance | Notes: | | | |
| | | | | | | |
| | QL1.3 Develop local skills and capabilities. Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and | | Assessor Decision | Improved 💌 | 1 | 15 |
| | | develop. details / guidance | Notes: | | • | |





QL

Report

Scoring Summary

NW

CR

Section Totals Summary

| Section | Maximum Possible Score | Section Points | Innovation Points | Total Points Earned |
|----------------------|------------------------|----------------|-------------------|---------------------|
| QL | 141 | 91 | 3 | 94 |
| LD | 106 | 66 | 0 | 66 |
| RA | 162 | 71 | 0 | 71 |
| NW | 177 | 118 | 2 | 120 |
| CR | 122 | 40 | 0 | 40 |
| Total Project Points | 708 | 386 | 5 | 391 |



envision[™] Scoring Allocation





Award Levels

| Recognition Level | Minimum Applicable Points | Minimum in Each Category |
|-----------------------------|---------------------------------|--------------------------------|
| Acknowledgement of Merit | 25% | 5% |
| Silver Award | 50% | 8% |
| Gold Award | 60% | 15% |
| Platinum Award | 80% | 20% |





Fee Schedule

Registration Fee: \$1000

Verification Fee

| Project Size (\$) | Non-Member Price | ISI Member Price | | |
|-------------------|---------------------------------|--|--|--|
| Up to 2M | \$3000 | \$2400 | | |
| 2-5M | \$8500 | \$7000 | | |
| 5-25M | \$17,000 | \$14,000 | | |
| 25-100M | \$25,000 | \$21,000 | | |
| 100-250M | \$33,000 | \$28,000 | | |
| Over 250M | \$5000 per 100M abc \$20,000 | 5000 per 100M above base price of 20,000 | | |

Appeals Fee: \$500 per credit



Submitting Projects for Rating and Verification

- Just open this month for 3rd party verification
- Rating fees dependent on estimated cost of project.
- Can be rated after planning and/or design phase
- Rating fee is little as \$3400 for \$2 million or less project (inexpensive advertising for consultants)



ISI Members

Charter

Sustaining

Public Sector

Academia

Membership benefits

- Discounts on training and professional accreditation
- Discounts on project
 Verification
- Networking opportunities
- Listing in the member directory
- Opportunities to serve on committees



ISI Charter Members

(as of September 4, 2012)

Charter Members

American Concrete Pipe Association American Society of Landscape Architects American Water Works Association Arcadis Arup ASFE/The Geoprofessional Business Association Asphalt Paving Alliance Autodesk Berger Group Holdings, Inc. Clark-Nexsen, PC Crawford, Murphy & Tilly, Inc. Dewberry Diaz Yourman & Associates exp Global Freese and Nichols, Inc. Gannett Fleming, Inc. GHD Inc. Granite Construction Inc. Greeley and Hansen

Green Agenda Committee, N. Little Rock, AR Halcrow Haley & Aldrich, Inc. Hanson Professional Services Harvard University HDR HNTB HR Green, Inc. J-U-B Engineers, Inc. Kabbes Engineering, Inc. KCI Technologies, Inc. Klotz Associates, Inc. Ladybird Johnson Wildlife Center Lawson Fisher Associates Merrick & Company MS Consultants, Inc. MWH Nitsch Engineering NV5, Inc.

Pinyon Environmental, Inc. Portland Cement Association Power Engineers, Inc. Psomas Short-Elliott-Hendrickson, Inc. Smith Seckman Reid, Inc. SSFM International, Inc. Stanley Consultants Stantec Strand Associates The Kelly-Buck Company Thompson Strategy Consulting, Inc. U.S. Botanic Garden University of Florida University of Texas at Austin Vanasse Hangen Brustlin, Inc. Verdunity, Inc. Walter P. Moore and Associates Wilbur Smith Associates

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Envision SP Training and Credentialing Costs and Criteria

ISI SP Training

- Six 1-hour webinars on Envision Rating System
- Application/Training Fee:
 - ISI Members \$350
 - Non-members \$450
 - Government \$150

ISI SP Credentialing

- Pass 75 questions exam, open book, online
- Passing requires 75% overall 50% in each category
- Test Fee: \$200, Free for Gov't.



Illinois Envision- PV's

Envision™ Sustainability Professional Directory

« Home

ENV PV Search - Results

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