Overview of the Envision™ Sustainability Rating System

Facing the Challenges Together
APWA Annual Conference
October 14, 2014

Art Hirsch
TerraLogic Sustainable Solutions
Sustainability Definition
ASCE

- **Sustainability** - set of economic, environmental 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 the availability of natural resources and ecosystems.
Envision Purpose

- Initiate a systematic change to transform the way infrastructure is designed, built, and operated.
- Foster a necessary improvement in infrastructure performance and resiliency across full economic, environmental, and social dimensions of sustainability.
- Need to design infrastructure now to be operationally efficient for the next 50 years.
Infrastructure Projects for Envision

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

**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**
- Communications
- Internet
- Phones
- Satellites
- Data Centers
- Sensors

TerraLogic Sustainable Solutions
Envision™ Structure

- Stage 1- Self Assessment (future)
  - conceptual/pre-planning phase
### NW 1.7 Preserve Greenfields

**Intent:** Conserve undeveloped land by locating projects on previously developed greyfield sites and/or sites classified as brownfields.

**Metric:** Percentage of site that is a greyfield or the use and cleanup of a site classified as a brownfield.

<table>
<thead>
<tr>
<th>Assessment Questions</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the project team consider how the project can conserve undeveloped land?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will a significant amount of the project development be located on previously developed sites?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
</tbody>
</table>

Total 2 of 2

### 2. Land and Water

#### NW 2.1 Manage Stormwater

**Intent:** Minimize the impact of infrastructure on stormwater runoff quantity and quality.

**Metric:** Infiltration and evapotranspiration capacity of the site and return to pre-development capacities.

<table>
<thead>
<tr>
<th>Assessment Questions</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the project be designed to reduce storm runoff to pre-development conditions?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will the project be designed to significantly improve water storage capacity?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
</tbody>
</table>

Total 1 of 2

#### NW 2.2 Reduce Pesticides and Fertilizer Impacts

**Intent:** Reduce non-point source pollution by reducing the quantity, toxicity, bioavailability, and persistence of pesticides and fertilizers, or by eliminating the need for the use of these materials.

**Metric:** Efforts made to reduce the quantity, toxicity, bioavailability, and persistence of pesticides and fertilizers used on site, including the selection of plant species and the use of integrated pest management techniques.

<table>
<thead>
<tr>
<th>Assessment Questions</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will operational policies be put in place to control and reduce the application of fertilizers and pesticides?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will the project include runoff controls to minimize contamination of ground and surface water?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will the project team select landscaping plants to minimize the need for fertilizer or pesticides?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will the project team select fertilizers and pesticides appropriate for site conditions with low-toxicity, persistence, and bioavailability?</td>
<td>o</td>
<td>o</td>
<td>?</td>
</tr>
<tr>
<td>Will the project designed to eliminate the need for pesticides or fertilizers?</td>
<td>o</td>
<td>o</td>
<td>?</td>
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Total 4 of 5
Envision™ Structure

- Stage 2- Assessment, Verification and Recognition (Certification)
  - Phase 1 Planning and Design (current)
  - Phase 2 Construction (future)
  - Phase 3 Operation and Maintenance (future)
  - Phase 4- Deconstruction/Decommissioning (future)
### Sustainable Sites

**Possible Points:** 26

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Y</td>
<td>Prereq 1</td>
<td>Construction Activity Pollution Prevention</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 1</td>
<td>Site Selection</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 2</td>
<td>Development Density and Community Connectivity</td>
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<td>Y</td>
<td>Credit 3</td>
<td>Brownfield Redevelopment</td>
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<tr>
<td>Y</td>
<td>Credit 4.1</td>
<td>Alternative Transportation—Public Transportation Access</td>
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<tr>
<td>Y</td>
<td>Credit 4.2</td>
<td>Alternative Transportation—Bicycle Storage and Changing Rooms</td>
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<tr>
<td>Y</td>
<td>Credit 4.3</td>
<td>Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles</td>
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<tr>
<td>Y</td>
<td>Credit 4.4</td>
<td>Alternative Transportation—Parking Capacity</td>
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<td>Y</td>
<td>Credit 5.1</td>
<td>Site Development—Protect or Restore Habitat</td>
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<tr>
<td>Y</td>
<td>Credit 5.2</td>
<td>Site Development—Maximize Open Space</td>
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<td>Y</td>
<td>Credit 6.1</td>
<td>Stormwater Design—Quantity Control</td>
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<td>Credit 6.2</td>
<td>Stormwater Design—Quality Control</td>
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<tr>
<td>Y</td>
<td>Credit 7.1</td>
<td>Heat Island Effect—Non-roof</td>
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<td>Y</td>
<td>Credit 7.2</td>
<td>Heat Island Effect—Roof</td>
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<tr>
<td>Y</td>
<td>Credit 9</td>
<td>Light Pollution Reduction</td>
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### Materials and Resources, Continued

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<tr>
<td>Y</td>
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<td>Y</td>
<td>Credit 5</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 6</td>
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<td>Credit 7</td>
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### Indoor Environmental Quality

**Possible Points:** 15

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<tr>
<td>Y</td>
<td>Prereq 1</td>
<td>Minimum Indoor Air Quality Performance</td>
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<td>Y</td>
<td>Prereq 2</td>
<td>Environmental Tobacco Smoke (ETS) Control</td>
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<td>Y</td>
<td>Credit 1</td>
<td>Outdoor Air Delivery Monitoring</td>
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<td>Y</td>
<td>Credit 2</td>
<td>Increased Ventilation</td>
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<td>Y</td>
<td>Credit 3.1</td>
<td>Construction IAQ Management Plan—During Construction</td>
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<td>Construction IAQ Management Plan—Before Occupancy</td>
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<td>Credit 4.1</td>
<td>Low-Emitting Materials—Adhesives and Sealants</td>
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<tr>
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<td>Credit 4.2</td>
<td>Low-Emitting Materials—Paints and Coatings</td>
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<td>Y</td>
<td>Credit 4.3</td>
<td>Low-Emitting Materials—Flooring Systems</td>
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<td>Low-Emitting Materials—Composite Wood and Agrifiber Products</td>
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<td>Y</td>
<td>Credit 5</td>
<td>Indoor Chemical and Pollutant Source Control</td>
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<td>Controllability of Systems—Lighting</td>
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<td>Controllability of Systems—Thermal Comfort</td>
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<td>Credit 7.1</td>
<td>Thermal Comfort—Design</td>
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<td>Y</td>
<td>Credit 8.1</td>
<td>Daylight and Views—Daylight</td>
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<td>Daylight and Views—Views</td>
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### Water Efficiency

**Possible Points:** 10

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<tr>
<td>Y</td>
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<td>Water Use Reduction—20% Reduction</td>
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<td>Water Efficient Landscaping</td>
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<td>Y</td>
<td>Credit 2</td>
<td>Innovative Wastewater Technologies</td>
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<td>Y</td>
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<td>Water Use Reduction</td>
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### Energy and Atmosphere

**Possible Points:** 35

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<tr>
<td>Y</td>
<td>Prereq 1</td>
<td>Fundamental Commissioning of Building Energy Systems</td>
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<td>Y</td>
<td>Prereq 2</td>
<td>Minimum Energy Performance</td>
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<tr>
<td>Y</td>
<td>Prereq 3</td>
<td>Fundamental Refrigerant Management</td>
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<td>Y</td>
<td>Credit 1</td>
<td>Optimize Energy Performance</td>
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<td>Y</td>
<td>Credit 2</td>
<td>On-Site Renewable Energy</td>
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<td>Y</td>
<td>Credit 3</td>
<td>Enhanced Commissioning</td>
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<td>Y</td>
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<td>Enhanced Refrigerant Management</td>
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<td>Y</td>
<td>Credit 5</td>
<td>Measurement and Verification</td>
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<tr>
<td>Y</td>
<td>Credit 6</td>
<td>Green Power</td>
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### Innovation and Design Process

**Possible Points:** 6

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<tr>
<td>Y</td>
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<tr>
<td>Y</td>
<td>Credit 1.2</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 1.3</td>
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<tr>
<td>Y</td>
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<td>Y</td>
<td>Credit 1.5</td>
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### Materials and Resources

**Possible Points:** 14

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<tbody>
<tr>
<td>Y</td>
<td>Prereq 1</td>
<td>Storage and Collection of Recyclables</td>
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<tr>
<td>Y</td>
<td>Credit 1.1</td>
<td>Building Reuse—Maintain Existing Walls, Floors, and Roof</td>
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<tr>
<td>Y</td>
<td>Credit 1.2</td>
<td>Building Reuse—Maintain 50% of Interior Non-Structural Elements</td>
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<td>Y</td>
<td>Credit 2</td>
<td>Construction Waste Management</td>
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<tr>
<td>Y</td>
<td>Credit 3</td>
<td>Materials Reuse</td>
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### Regional Priority Credits

**Possible Points:** 4

<table>
<thead>
<tr>
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<th>N</th>
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<tbody>
<tr>
<td>Y</td>
<td>Credit 1.1</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 1.2</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 1.3</td>
</tr>
<tr>
<td>Y</td>
<td>Credit 1.4</td>
</tr>
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</table>

### Total

**Possible Points:** 110

Certified: 40 to 49 points  Silver: 50 to 59 points  Gold: 60 to 79 points  Platinum: 80 to 110
Envision Credit List

1 PURPOSE
DL1.1 Improve Community Quality of Life
DL1.2 Stimulate Sustainable Growth & Development
DL1.3 Develop Local Skills & Capabilities

2 WELLBEING
DL2.1 Enhance Public Health & Safety
DL2.2 Minimize Noise & Vibration
DL2.3 Minimize Light Pollution
DL2.4 Improve Community Mobility & Access
DL2.5 Encourage Alternative Modes of Transportation
DL2.6 Improve Accessibility, Safety, & Wayfinding

3 COMMUNITY
DL3.1 Preserve Historic & Cultural Resources
DL3.2 Preserve Views & Local Character
DL3.3 Enhance Public Space
DL3.4 Innovate or Exceed Credit Requirements

1 COLLABORATION
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

3 PLANNING
LD3.1 Plan For Long-Term Monitoring & Maintenance
LD3.2 Address Conflicting Regulations & Policies
LD3.3 Extend Useful Life
LD3.4 Innovate or Exceed Credit Requirements

1 MATERIALS
RA1.1 Reduce Net Embodied Energy
RA1.2 Support Sustainable Procurement Practices
RA1.3 Use Recycled Materials
RA1.4 Use Regional Materials
RA1.5 Diversify Waste Form Landfills
RA1.6 Reduce Excavated Materials Taken Off Site
RA1.7 Provide For Deconstruction & Recycling

2 ENERGY
RA2.1 Reduce Energy Consumption
RA2.2 Use Renewable Energy
RA2.3 Commission & Monitor Energy Systems

3 WATER
RA3.1 Protect Fresh Water Availability
RA3.2 Reduce Potable Water Consumption
RA3.3 Monitor Water Systems
RA3.4 Innovate or Exceed Credit Requirements

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 Greenspaces

2 LAND+WATER
NW2.1 Manage Stormwater
NW2.2 Reduce Pesticide & Fertilizer Impacts
NW2.3 Protect 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
NW3.5 Innovate or Exceed Credit Requirements

1 EMISSIONS
ER1.1 Reduce Greenhouse Gas Emissions
ER1.2 Reduce Air Pollutant Emissions

2 RESILIENCE
ER2.1 Assess Climate Threat
ER2.2 Avoid Taps & Vulnerabilities
ER2.3 Prepare for Long-term Adaptability
ER2.4 Prepare For Short-term Hazards
ER2.5 Manage Heat Island Effects
ER2.6 Innovate or Exceed Credit Requirements
Levels of Achievement

QL1.1 IMPROVE COMMUNITY QUALITY OF LIFE

- Improved
- Enhanced
- Superior
- Conserving
- Restorative

No Negative Impact
# LD1.1 PROVIDE EFFECTIVE LEADERSHIP AND COMMITMENT

**INTENT:**
Provide effective leadership and commitment to achieve project sustainability goals.

**METRIC:**
Demonstration of meaningful commitment of the project owner and the project team to the principles of sustainability and sustainable performance improvement.

## LEVELS OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>IMPROVED</th>
<th>ENHANCED</th>
<th>SUPERIOR</th>
<th>CONSERVING</th>
<th>RESTORATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Limited commitment. General sustainability policy statements can be found in organizational literature, but are not extensive. Existence of public statements by the organization’s leadership about their commitment to sustainability, but not related to the specific project. A few substantive examples of how that commitment to sustainability principles translates into actual practice. (A)</td>
<td>(4) Better clarity and commitment. Commitment to sustainability has moved beyond general statements to more specific statements. Organizational demonstration of commitment is backed up by several, but not extensive, examples of activities undertaken and performance achieved. (A)</td>
<td>(9) Walking the talk. Significant commitment across the organization with a few exceptions. Programs to improve are underway. Organizational demonstration of commitment includes various examples of activities undertaken or performance achieved focused on this project. Commitment is backed up by numerous and wide-ranging examples of activities undertaken and performance achieved. Sustainability performance of the organization is reported regularly through annual reports. (A)</td>
<td>(17) Sustainability is a core value. Sustainability is a core value of the organization and the project team as demonstrated by their policies, activities and performance. Apparent full commitment by all parties to address all aspects of the triple bottom line as they apply to the project. Understanding of the issues and problems associated with sustainability. Explicit recognition of the need for action to address the consequences of operating in a non-sustainable environment. (A)</td>
<td></td>
</tr>
</tbody>
</table>

## DESCRIPTION

1. Public statements by the leadership in the project organizational and project specific, to improving sustainable performance?
Envision™ Credit Components

DESCRIPTION

The effects and consequences of non-sustainability are changing the design assumptions and variables used in infrastructure design and construction. Strong leadership is required to manage this extraordinary level of change and make a contribution to long-term conditions of sustainability.

The purpose of this credit is to provide incentives for establishing sound and credible management and leadership to address adequately and competently the issues surrounding sustainability. The community will be better served with project teams led and managed by people and organizations that have a strong commitment to the principles of sustainability and have a demonstrated ability to effectively incorporate them into projects.

ADVANCING TO HIGHER ACHIEVEMENT LEVELS

Benchmark. No specific policy statements regarding sustainability work commitments to improve triple bottom line aspects of the project. Published statements say that the organization will meet all requirements.

Performance Improvement. Shift from tactical to strategic commitment. Sustainability becomes a core value of the individual organizations and the project team.

EVALUATION CRITERIA AND DOCUMENTATION

A. To what level and extent have the project owner and the project team made public commitments, both organizational and project specific, to improving sustainable performance?

1. Public statements by the leadership in the project owner’s organization, and the leadership of the project team regarding their commitment to the principles of sustainability.

2. Written commitment by the project owner and the project team to address the economic, environmental and social aspects of the project at each project stage. For large projects, evidence that a chartering session was conducted that included the project owner, designer, contractor and operator, with a charter document agreed to and signed by all parties.

3. Examples of published sustainability reports, and organizational principles and policies regarding sustainability.

4. Examples of past or ongoing significant actions taken to improve sustainable performance.

SOURCES


RELATED CREDITS

LD1.2 Establish a sustainability management system
LD1.3 Foster collaboration and teamwork
LD1.4 Provide for stakeholder involvement
Envision™ Sustainable Infrastructure Rating System

"Squirrel Bridge Modification Project"

Section 1: QUALITY OF LIFE

<table>
<thead>
<tr>
<th>Section and Objective Numbers</th>
<th>Objectives</th>
<th>Required for Project</th>
<th>Level of Achievement</th>
<th>Score</th>
<th>Objective Available Points</th>
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<tbody>
<tr>
<td>QL1.1</td>
<td>Improve community quality of life. Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities. details / guidance</td>
<td>YES</td>
<td>Enhanced</td>
<td>5</td>
<td>25</td>
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<tr>
<td>QL1.2</td>
<td>Stimulate sustainable growth and development. Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability. details / guidance</td>
<td>YES</td>
<td>No Added Value</td>
<td>0</td>
<td>16</td>
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<tr>
<td>QL1.3</td>
<td>Develop local skills and capabilities. Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop. details / guidance</td>
<td>Assessor Decision: Include</td>
<td>Improved</td>
<td>1</td>
<td>15</td>
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</table>

Notes:

Score: 6 Max Score: 181
### QUALITY OF LIFE

#### QL1.1 Improve community quality of life.
- **Objective:** Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.
- **Level of Achievement:** Required
- **Score:** 5
- **Max Available Points:** 25

#### QL1.2 Stimulate sustainable growth and development.
- **Objective:** Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability.
- **Level of Achievement:** Superior
- **Score:** 5
- **Max Available Points:** 16

#### QL1.3 Develop local skills and capabilities.
- **Objective:** Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop.
- **Level of Achievement:** Include
- **Score:** 2
- **Max Available Points:** 15

#### QL2.1 Enhance public health and safety.
- **Objective:** Take into account the health and safety implications of using new materials, technologies or methodologies above and beyond meeting regulatory requirements.
- **Level of Achievement:** Required
- **Score:** 2
- **Max Available Points:** 16
Envision™ Assessment Results

"Squirrel Bridge Modification Project"

Section Totals Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Maximum Possible Score</th>
<th>Section Points</th>
<th>Innovation Points</th>
<th>Total Points Earned</th>
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<td>70</td>
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<td>RA</td>
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<td>Total Project Points</td>
<td>803</td>
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<td>12</td>
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Envision™ Section Scores

- QL: 181 points (121 achieved, 50 unachieved)
- LD: 121 points (121 achieved, 0 unachieved)
- RA: 182 points (121 achieved, 61 unachieved)
- NW: 197 points (121 achieved, 76 unachieved)
- CR: 122 points (121 achieved, 1 unachieved)
<table>
<thead>
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<th>Recognition Level</th>
<th>Minimum Applicable Points</th>
<th>Minimum in Each Category</th>
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<tbody>
<tr>
<td>Bronze</td>
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<td>No minimum category percentage required</td>
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<tr>
<td>Silver Award</td>
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<tr>
<td>Gold Award</td>
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<tr>
<td>Platinum Award</td>
<td>50%</td>
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</tr>
</tbody>
</table>
Envision Case Studies

- Sun Valley Watershed Multi Benefit Project
- William Jack Hernandez Sport Fish Hatchery
- Academy and Woodman Road Interchange
Los Angeles Department of Works
Sun Valley Watershed Multi Benefit Project
Platinum Award
Sun Valley Watershed Multi Benefit Project

- Stormwater and flood protection
- Former landfill
- Created wetlands, detention basin and park
- Collaboration with stakeholders on design
- Long term monitoring and maintenance plan
- Stormwater treatment train before infiltration
- Sustainability based watershed management plan
- Water conservation via native plants (potential water reuse water line)
Alaska Department of Fish and Game

William Jack Hernandez Sport Fish Hatchery

Gold Award
William Jack Hernandez Sport Fish Hatchery

- Recirculation Technology- 5% of energy and water usage than conventional systems
- Integrated team/partnership
- Public outreach and education
- Bicycle, walking paths and park
- Contaminated property siting and restoration
- Former power plant cooling pond
- Native landscaping- no herbicides
107 Fish Rearing Tanks

6 million fish per year
Academy and Woodman Road Interchange - Colorado Springs
Transportation
Academy/Woodmen Road Interchange

• Major public outreach program
• Public an active participant in the design
• An inverted single point urban interchange chosen as the best option to improve traffic flows
• Innovative context sensitive design and aesthetics
• Innovative BMPs for stormwater resulting in water quality improvements
• Client and Project Management behind sustainability concept
Envision Scoring

• Total Score=289 (*39%)
  – 110 Quality of Life
  – 60 Leadership
  – 56 Natural World
  – 35 Resource Allocation
  – 24 Climate and Risk
  – 4 Innovation

*Recognition Level “Acknowledgement of Merit”
Program Level Benefits

- Program guidance document
- The right project vs. doing the project right
- Meet sustainability expectations of decision makers
- Public relations tool
- Metrics to gauge program success
- Ideas to improve community quality of life
- Project economic evaluations (LCA)
Project Level Benefits

- Public meeting tool to gain acceptance
- Tool to develop project RFP & Contractor/subcontractor expectations
- Project recognition tool
- Cost savings
  - Avoidance of impacts
  - Material reuse/recycling
  - Energy conservation
  - Water conservation
  - Reduced potential for change orders
Project Level Benefits

• Promotes project team integration
  - Sustainability Coordinator
  - Construction
  - Engineering
  - Environmental
  - Community Outreach Specialists
  - Owner
Envision Utilization for Municipal Projects

- A new way to approach infrastructure projects
- Tool to integrate sustainability
- Performance metrics
- Public awareness and engagement
- Promotes project recognition
- Forces thinking about complex issues
www.sustainableinfrastructure.org
Art Hirsch-TerraLogic
AHirsch@Terralogicss.com
303-786-9111
www.TerraLogicss.com
**Fee Schedule**

**Registration Fee:** $1000

**Verification Fee**

<table>
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<tr>
<th>Project Size ($)</th>
<th>Non-Member Price</th>
<th>ISI Member Price</th>
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<tr>
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<td>$3000</td>
<td>$2400</td>
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<tr>
<td>2-5M</td>
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<td>Over 250M</td>
<td>$5000 per 100M above base price of $20,000</td>
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**Appeals Fee:** $500 per credit