



RELI RESILIENCY ACTION LIST (FULL)

REFERENCE BRIEF

For Communities, Buildings, Homes + Infrastructure

Pilot V1.1

An Action List + Strategic Resource Incorporated into the Green + Resilient Property Underwriting Standards
C3 Living Design . Capital Markets Partnership . AREA Research . University of Minnesota Arch8561

For Field Interpretation
MAY 2015 | ORIGIN AUG 2014

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| STRUCTURES | COMMUNITY | NUMBER | DESCRIPTION | POINTS | DIRECT VALUE | REFERENCE |
|------------|-----------|--------|--|--------|--------------|-----------|
| | | | STRUCTURE Applies to Buildings, Homes and Artifacts COMMUNITY Applies to Organizations, Neighborhoods, Districts, Infrastructure, Urban + Campus Projects POINTS Points have not be allocated and will be established as part of the RELI Pilot Phase DIRECT VALUE If 'Y' (yes) the requisite or credit is a line-item in the RELI Green + Resilient Finance Standard REFERENCE The RELI Credit Catalog is inclusive + comprehensive drawing from multiple sources POLY-REQs + POLY-CREDITS Contain sub-requisites + credits. | | | |

PANORAMIC APPROACH

PA PANORAMIC APPROACH TO PLANNING, DESIGN, MAINTENANCE + OPERATIONS

| | | | | | | |
|---|---|---------------|---|----------|---|--------------------|
| S | C | Req 1 | Study: Short-Term Hazard Preparedness + Mitigation | Required | Y | RELI |
| S | C | Req 2 | Integrative Process, Development + Community Stakeholder Involvement | Required | Y | IP LEED Envision |
| S | C | Poly-Req 3 | Commissioning + Long-Term Monitoring / Maintenance | Required | Y | LEED Envision |
| S | C | Poly-Credit 1 | Business + Community Case Analysis, Post-Development Evaluation and Reporting | TBD | | Varies |
| S | C | Credit 2 | Establish a Sustainability + Resiliency Management System | TBD | | Envision |
| S | C | Credit 3 | Address Conflicting Regulations + Policies | TBD | | Envision |

Credits 4-7 below expand the Integrative Process required by requisite 2 above.

| | | | | | | |
|---|---|---------------|---|------------|--|------------------|
| S | C | Poly-Credit 4 | Study + Design for By-Product + Underutilization Synergies | TBD to TBD | | Adapted Envision |
| S | C | Poly-Credit 5 | Study + Design for Improved Project Element + Infrastructure Integration | TBD to TBD | | Adapted Envision |
| S | C | Poly-Credit 6 | Study + Design for Long-Term Adaptability, Diversity + Redundancy | TBD | | RELI |
| S | C | Poly-Credit 7 | Study + Living Design for Advanced Resiliency using a diversity of ecology based perspectives | TBD | | RELI |
| S | C | Credit 8 | Third Party Leadership + Next Generation Certifications and Programs | TBD | | RELI |

RISK ADAPTATION + MITIGATION FOR ACUTE EVENTS

HP HAZARD PREPAREDNESS

| | | | | | | |
|---|---|---------------|--|----------|---|------|
| S | C | Req 1 | Fundamental Emergency Planning + Preparedness for Common Hazardous Events | Required | Y | RELI |
| S | C | Req 2 | Fundamental Access To: First Aid, Emergency Supplies, Water, Food, Communications | Required | Y | RELI |
| S | C | Poly-Credit 1 | Enhanced Emergency Planning for Common Hazards + Extreme Events | TBD | Y | RELI |
| S | C | Credit 1.1 | Enhanced Emergency Planning for Common Hazards + Extreme Events. | TBD | | RELI |
| | C | Credit 1.1 | Project organization actively participates in or starts a United We Serve Team | TBD | | RELI |
| S | C | Credit 2 | Enhanced Access: Emergency Care + Supplies, Water, Food, Communications | TBD | Y | RELI |
| S | C | Poly-Credit 3 | Additional Emergency Provisions For the Community + for Longer Timeframes | TBD | Y | RELI |
| S | C | Credit 3.1 | 4 Days of additional Provisions provided for the Community | TBD | | RELI |
| S | C | Credit 3.2 | 4 Days of additional Provisions and Shelter provided for the Community | TBD | | RELI |
| S | C | Credit 3.3 | 10 Days of additional Provisions provided for the Community | TBD | | RELI |
| S | C | Credit 3.4 | 10 Day of additional Provisions and Shelter provided for the Community | TBD | | RELI |
| S | C | Credit 3.5 | 10 Day of additional Provisions provided for the Facility(s) Occupants | TBD | | RELI |
| S | C | Credit 4 | Community Education: Authentic Dialogues on ever-increasing Weather, Safety + Resiliency Risks | TBD | | RELI |

HA HAZARD ADAPTATION + MITIGATION

| | | | | | | |
|---|---|-------|---|----------|---|-----------|
| S | C | Req 1 | Sites of Avoidance + Repair: 500 Year Flood Plain, Storm Surge + Sea Rise | Required | Y | RELI |
| S | C | Req 2 | Fundamental Emergency Operations: Back-up Power + Operations | Required | Y | RELI |
| S | C | Req 3 | Fundamental Emergency Operations: Thermal Safety During Emergencies | Required | Y | RELI |
| S | C | Req 4 | Safer Design for Extreme Weather, Wildfire + Seismic Events | Required | Y | Fortified |



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| | | | | | | |
|---|---|---------------|---|-----|---|--------------|
| S | C | Poly-Credit 2 | Adaptive Design for Extreme Rain, Sea Rise, Storm Surge + Extreme Weather, Events + Hazards | TBD | Y | RELI |
| S | C | Credit 2.1 | Adaptive Design for Resilient Management of Extreme Rain Events | TBD | | RELI |
| S | C | Credit 2.2 | Adaptive Design for Sea Rise, Storm Surge | TBD | | RELI |
| S | C | Poly-Credit 3 | Advanced Emergency Operations: Back-up Power, Operations, Thermal Safety + Operating Water | TBD | Y | RELI |
| S | C | Credit 3.1 | Advanced Emergency Operations: Back-up Power + Operations: Critical Services, Lighting | TBD | | RELI |
| S | C | Credit 3.2 | Advanced Emergency Operations: Thermal Safety During Emergencies | TBD | | RELI |
| S | C | Credit 3.3 | Advanced Emergency Operations: On-Site Water Storage for Operations | TBD | | RELI |
| S | C | Credit 3.4 | Thermal Safety: Moderate to Large Cooling Center | TBD | | RELI |
| S | C | Credit 3.5 | Thermal Safety: Advanced Cooling Center | TBD | | RELI |
| S | C | Poly-Credit 4 | Passive Thermal Safety, Thermal Comfort + Lighting Design Strategies | TBD | Y | 2030 Palette |
| S | C | Credit 4.1 | Landscape based Passive Cooling | TBD | | 2030 Palette |
| S | C | Credit 4.2 | Passive Lighting | TBD | | 2030 Palette |
| S | C | Credit 4.3 | Passive Heating | TBD | | 2030 Palette |
| S | C | Credit 4.4 | Passive Cooling | TBD | | 2030 Palette |
| S | C | Poly-Credit 5 | Transit + Transportation System Protection + Continuous Operations | TBD | Y | RELI |
| S | C | Credit 5.1 | Protect below ground system vents and entrances from flooding | TBD | | RELI |
| S | C | Credit 5.2 | Plan systems for 500 Year Floods | TBD | | RELI |
| S | C | Credit 5.3 | Plan Systems for Extreme Rain Events | TBD | | RELI |
| S | C | Credit 5.4 | Provide Distributed Generation Power Sources | TBD | | RELI |
| S | C | Poly-Credit 6 | Provide Environmental Protection + Remediation for Parks + Preserves | TBD | | RELI |
| S | C | Credit 6.1 | Option 1: Develop action plans + stow needed supplies on-site for flood protection | TBD | | RELI |
| S | C | Select One | Option 2: Protect, restore + develop flood protection (including natural systems) | TBD | | RELI |
| S | C | Credit 6.2 | Provide Buffer Zones protecting from development + supporting bio-diversity and biophilia | TBD | | RELI |
| S | C | Credit 6.3 | Provide wildlife corridors between parks + preserves to support bio-diversity and biophilia | TBD | | RELI |

COMPREHENSIVE ADAPTATION + MITIGATION FOR A RESILIENT PRESENT + FUTURE

CV COMMUNITY COHESION, SOCIAL + ECONOMIC VITALITY

| | | | | | | |
|---|---|---------------|---|----------|--|----------|
| S | C | Poly-Req 1 | Improve Community Quality of Life | Required | | Envision |
| | | | Option 1: Broad community alignment (Envision QL1.1 Superior Level) | Required | | Envision |
| S | C | Select One | Option 2: Holistic assessment and collaboration (Envision QL1.1 Conserving Level) | | | Envision |
| | | | Option 3: Community Renaissance (Envision QL1.1 Restorative Level) | | | Envision |
| S | C | Poly-Credit 1 | Incorporate important community views and aspects of local landscape | TBD | | Envision |
| | | Credit 1.1 | Understanding and balance - (Envision QL3.2 Improved Level / required for this credit) | | | Envision |
| | | Credit 1.2 | Alignment with community values- (Envision QL3.2 Enhanced Level / required for this credit) | | | Envision |
| S | C | Credit 1.3 | Option 1: Community preservation and enhancement - (Envision QL3.2 Superior Level) | TBD | | Envision |
| | | Select One | Option 2: Community connections and collaboration - (Envision QL3.2 Conserving Level) | TBD | | Envision |
| | | | Option 3: Restoration of community and character - (Envision QL3.2 Restorative Level) | TBD | | Envision |



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| | | | | | | |
|---|------------|---------------|---|-----|---|--------------|
| S | C | Poly-Credit 2 | Community Connectivity: Walkability, Public Transit, Non-motorized Transit | TBD | Y | LEED V4 |
| S | | Credit 2.1 | Surrounding Density + Diverse Uses (Option 1. Surrounding Density) | TBD | | LEED NC V4 |
| S | | Credit 2.2 | Access to Quality Transit | TBD | | LEED NC V4 |
| S | | Credit 2.3 | Bicycle Facilities | TBD | | LEED NC V4 |
| S | | Credit 2.4 | Reduced Parking Footprint | TBD | | LEED NC V4 |
| | C | Credit 2.5 | Preferred Location | TBD | | LEED NC V4 |
| | C | Credit 2.6 | Access to Quality Transit | TBD | | LEED NC V4 |
| | C | Credit 2.7 | Bicycle Facilities | TBD | | LEED NC V4 |
| | C | Credit 2.8 | Walkable Streets | TBD | | LEED ND V4 |
| | C | Credit 2.9 | Compact Development | TBD | | LEED ND V4 |
| | C | Credit 2.10 | Connected and Open Community: Surrounding Connectivity (Case 1.) | TBD | | LEED ND V4 |
| | C | Credit 2.11 | Connected and Open Community: Internal Connectivity (Case 2.) | TBD | | LEED ND V4 |
| S | C | Poly-Credit 3 | Community Connectivity: Mixed-Use Commercial, Housing + Public / Community Space | TBD | Y | LEED RELI |
| S | C | Credit 3.1 | Surrounding Density + Diverse Uses (LEED NC, Option 2. Diverse Uses) | TBD | | LEED V4 |
| S | C | Credit 3.2 | Surrounding Density + Diverse Uses (RELI Resilient Use Categories) | TBD | | RELI |
| S | | Credit 3.3 | Provide Community Access to Useful Space | TBD | | RELI |
| S | | Credit 3.4 | Open Space | TBD | | LEED V4 |
| S | C | Credit 3.5 | Joint Use of Facilities | TBD | | LEED Schools |
| S | C | Credit 3.6 | Housing and Jobs Proximity | TBD | | LEED ND V4 |
| S | C | Credit 3.7 | Mixed-Use Neighborhoods | TBD | | LEED ND V4 |
| | C | Credit 3.8 | Option 1: Access to Civic and Public Space | TBD | | LEED ND V4 |
| | Select One | | Option 2: The 2030 Palette - Parks Swatch | TBD | | 2030 Palette |
| S | C | Credit 3.9 | Access to Recreation Facilities | TBD | | LEED ND v4 |
| S | C | Credit 3.10 | Access to Public Schools + Public Libraries | TBD | | RELI |
| S | C | Poly-Credit 4 | Expand Citizen Participation: Public Amenities, Councils, Organizations, Communication | TBD | | RELI |
| S | C | Credit 4.1 | Public Amenities: Manage + Operate a Community Space + Resource | TBD | | RELI |
| S | C | Credit 4.2 | Actively Participate in Local Disaster Recovery Programs | TBD | | RELI |
| S | C | Credit 4.3 | Actively Participate in a Local, Regional or National Groups + Organizations | TBD | | RELI |
| S | C | Credit 4.4 | Organize and Develop a Community Communication Tool | TBD | | RELI |
| S | C | Poly-Credit 5 | Resilient Organizations: Cooperative + B-Corporation(s), Non-Profits + Social Equity Measures | TBD | | RELI |
| S | C | Credit 5.1 | Develop a Resilient Organization: Producer / Consumer / Worker Cooperative, B-Corp., Non-Profit | TBD | | RELI |
| S | C | Credit 5.2 | Human PHD: Social Equity Within the Community | TBD | | LEED Pilot |
| S | C | Credit 5.3 | Human PHD: Social Equity Within the Supply Chain | TBD | | LEED Pilot |
| S | C | Credit 5.4 | Human PHD: Social Equity Within the Project Team | TBD | | LEED Pilot |
| S | C | Poly-Credit 6 | Develop or Expand Local Skills, Capabilities + Long-Term Employment + Mix | TBD | | Envision |
| | | Select One | Option 1: Hire Locally - (Envision QL1.3 Enhance Level) | TBD | | Envision |
| | | | Option 2: Specific Skills Outreach - (Envision QL1.3 Superior Level) | TBD | | Envision |
| | | | Option 3: Local Capacity Development - (Envision QL1.3 Conserving Level) | TBD | | Envision |
| | | | Option 4: Long Term Competitiveness - (Envision QL1.3 Restorative Level) | TBD | | Envision |
| S | C | Poly-Credit 7 | Use Regionally Sourced + Manufactured Materials and Products | TBD | | LEED Envis |
| S | C | Poly-Credit 8 | Stimulate Sustainable Growth and Development | TBD | | Envision |



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PH PRODUCTIVITY, HEALTH + DIVERSITY

| | | | | | | |
|---|---|---------------|---|----------|---|---------------|
| S | C | Poly-Req 1 | Minimum IAQ + Views to the Exterior | Required | Y | LEED RELi |
| S | C | Poly-Req 2 | Minimum Protection for Prime Habitat + Floodplain Functions | Required | Y | LEED Envis |
| S | C | Poly-Credit 1 | Human PHD: Expanded IAQ, Daylight + Views, Fresh Air | TBD | Y | LEED NC V4 |
| S | C | Poly-Credit 2 | Human PHD: Active Design for Buildings, Communities and Urban Environments | TBD | | Active Design |
| S | C | Credit 3 | Human PHD: Provide for Social Equity: Interdisciplinary / Intercultural Opportunities | TBD | | RELi Stars |
| S | C | Poly-Credit 4 | Human + Eco PHD: Reduce Pesticides, Prevent Surface + Groundwater Contamination | TBD | Y | Envision |
| S | C | Poly-Credit 5 | Ecological PHD: Protect Wetlands + Avoid Slopes and Adverse Geology | TBD | Y | Envision |
| S | C | Poly-Credit 6 | Ecological PHD: Biodiversity, Habitat + Soil | TBD | | LEED Envis |

EW ENERGY, WATER + FOOD

| | | | | | | |
|---|---|---------------|---|----------|---|--------------|
| S | C | Poly-Req 1 | Minimum Water Efficiency + Resilient Water and Landscapes | Required | Y | LEED |
| S | C | Poly-Req 2 | Minimum Energy Efficiency + Atmospheric Impacts | Required | Y | LEED |
| S | C | Poly-Credit 1 | Plan For Rainwater Harvesting , Resilient Landscapes + Food Production | TBD | Y | RELi |
| S | C | Poly-Credit 2 | Plan the Site and Orientation For Sun + Wind Harvesting, Natural Cooling | TBD | Y | Multiple |
| S | C | Poly-Credit 3 | Water Use Reduction, Near Zero / High Efficiency Water Flows and Resilient Landscapes | TBD | Y | LEED RELi |
| S | C | Poly-Credit 4 | Energy Optimization, Near Zero / Carbon Neutral, Net Zero, Net Positive Energy Flows | TBD | Y | Multiple |
| S | C | Poly-Credit 5 | Edible Landscaping, Urban Agriculture + Resilient Food Production | TBD | Y | RELi |
| S | C | Poly-Credit 6 | Reduced Site Environmental Impacts: Lighting, Heat-Island, Airborne Toxins | TBD | Y | LEED Envis |

MA MATERIALS + ARTIFACTS

| | | | | | | |
|---|---|---------------|---|----------|---|--------------------|
| S | C | Poly-Req 1 | Minimum Material Effectiveness + Life Cycle Planning | Required | | Multiple |
| S | C | Credit 1 | Safer, Non-Toxic Materials (SMaRT or equivalent Certified) | TBD | Y | RELi |
| S | C | Credit 2 | Material + Artifact Effectiveness: Full Life Cycle Design for durability, adaptability, flexibility | TBD | Y | Adapted Autodesk |
| S | C | Credit 3 | Material + Artifact Effectiveness: Design for Disassembly, Reuse, Recycling + Composting | TBD | Y | Adapted AutoDesk |
| S | C | Poly-Credit 4 | Material Effectiveness: Use Recycled Content Materials, Salvaged Materials + Local Materials | TBD | | LEED |
| S | C | Credit 5 | Use Legally Logged Wood from Ecologically Managed Forests (FSC Certified) | TBD | Y | RELi LEED |
| S | C | Credit 6 | Reduce Net Embodied Energy + Carbon, Water and Toxins | TBD | Y | ADAPTED LEED SMART |
| S | C | Poly-Credit 7 | Divert Waste from Landfills, Reduce Excavated Soils Taken from Site | TBD | | LEED Envis |

APPLIED CREATIVITY AND CONTEXTURAL FACTORS FOR RESILIENCY

AC Applied Creativity, Innovation + Exploration

| | | | | | | |
|---|---|---------------|---|--|--|--|
| S | C | Poly-Credit 1 | Applied Creativity in Resiliency + Integrative Design | | | |
| S | C | Poly-Credit 2 | Contextual Factors + Project Responsive Topics | | | |
| S | C | Poly-Credit 3 | Exemplary Performance | | | |

