



AMVIC ICF

LEED Product Assessment Report

Last Updated: September 25th, 2006



Yes Y? N? No

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Sustainable Sites				14 Points	Description	Amvic Direct Benefit?		Comments	Benefits	
Yes	Y?	N?	No	Yes		No				
N					Prereq 1 Erosion & Sedimentation Control	Required	The design of a sediment and erosion control plan to prevent loss of soil, sedimentation into storm sewer or receiving streams, and air pollution.		x	
			1		Credit 1 Site Selection	1	To avoid developing a building in inappropriate sites to minimize environmental impacts		x	
			1		Credit 2 Urban Redevelopment	1	Channel development to urban areas with existing infrastructure.		x	
			1		Credit 3 Brownfield Redevelopment	1	Rehabilitate damaged sites where development is complicated by real or perceived contamination.		x	
			1		Credit 4.1 Alternative Transportation, Public Transportation Access	1	Reduce pollution and land development impacts from automobile use.		x	
			1		Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms	1	Reduce pollution and land development impacts from automobile use.		x	
			1		Credit 4.3 Alternative Transportation, Hybrid & Alternative Fuel Vehicles	1	Reduce pollution and land development impacts from automobile use.		x	
			1		Credit 4.4 Alternative Transportation, Parking Capacity and Carpooling	1	Reduce pollution and land development impacts from single occupancy automobile use.		x	
			1		Credit 5.1 Reduced Site Disturbance, Protect or Restore Open Space	1	Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.		x	
			1		Credit 5.2 Reduced Site Disturbance, Development Footprint	1	Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.		x	
			1		Credit 6.1 Stormwater Management, Rate and Quantity	1	Limit disruption and pollution of natural water flows by managing stormwater runoff.		x	
			1		Credit 6.2 Stormwater Management, Treatment	1	Limit disruption and pollution of natural water by eliminating stormwater runoff, increasing on-site filtration, and eliminating contaminants		x	
1					Credit 7.1 Landscape & Exterior Design to Reduce Heat Islands, Non-Roof	1	Reduce heat-islands to minimize impact on microclimate and human and wildlife habitat.	x		The ICF allows the designer a freedom of choice for exterior finishing, including light colored, high albedo materials.
			1		Credit 7.2 Landscape & Exterior Design to Reduce Heat Islands, Roof	1	Reduce heat-islands to minimize impact on microclimate and human and wildlife habitat.		x	
			1		Credit 8 Light Pollution Reduction	1	Reduce light trespass from the building and site, improve night sky access and reduce development impact on nocturnal environments		x	

Yes Y? N? No

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Water Efficiency				5 Points	Description	Amvic Direct Benefit?		Comments	Benefits	
Yes	Y?	N?	No	Yes		No				
			1		Credit 1.1 Water Efficient Landscaping, Reduce by 50%	1	Limit or eliminate the use of potable water for landscape irrigation		x	
			1		Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation	1	Eliminate the use of potable water for landscape irrigation		x	
			1		Credit 2 Innovative Wastewater Technologies	1	Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.		x	
			1		Credit 3.1 Water Use Reduction, 20% Reduction	1	Maximize water efficiency within buildings to reduce the burden on municipal water supplier and wastewater systems		x	
			1		Credit 3.2 Water Use Reduction, 30% Reduction	1	Maximize water efficiency within buildings to reduce the burden on municipal water supplier and wastewater systems		x	

Yes Y? N? No

8 1 1 7 Energy & Atmosphere 17 Points					Description	Amvic Direct Benefit?		Comments	Benefits	
						Yes	No			
N					Prereq 1 Fundamental Building Systems Commissioning Required	Verify and ensure that fundamental building elements and systems are designed, installed and calibrated to operate as intended.		x		
Y					Prereq 2 Minimum Energy Performance Required	Establish the minimum level of energy efficiency for the base building systems.	x		AMVIC ICF provides an improved thermal insulation performance level (up to 40%), high thermal mass, plus an improved air-tightness performance. These combined features free the designer to utilize strategies which will improve Building Performance.	Designer
N					Prereq 3 CFC Reduction in HVAC&R Equipment Required	Reduce the use of CFC-based refrigerants		x		
4	1	1	4		Credit 1 Optimize Energy Performance 1 to 10	Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.	x		An estimated 4 points is associated to the incorporation of AMVIC ICFs based on it's contribution to thermal insulation, thermal mass, and improved air-tightness performance.	Designer
1					Credit 2.1 Renewable Energy, 5% 1	Encourage and recognize the increasing levels of on-site renewable energy in order to reduce the environmental impacts associated with fossil fuel energy use.	x		As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the total energy use of a building will be reduced. As a result, the incremental costs to achieve a desired Renewable energy percentage will be accounted for as an off-set cost in energy savings.	Owner / Designer
1					Credit 2.2 Renewable Energy, 10% 1	Encourage and recognize the increasing levels of on-site renewable energy in order to reduce the environmental impacts associated with fossil fuel energy use.	x		As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the total energy use of a building will be reduced. As a result, the incremental costs to achieve a desired Renewable energy percentage will be accounted for as an off-set cost in energy savings.	Owner / Designer
1					Credit 2.3 Renewable Energy, 20% 1	Encourage and recognize the increasing levels of on-site renewable energy in order to reduce the environmental impacts associated with fossil fuel energy use.	x		As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the total energy use of a building will be reduced. As a result, the incremental costs to achieve a desired Renewable energy percentage will be accounted for as an off-set cost in energy savings.	Owner / Designer
				1	Credit 3 Best Practice Commissioning 1	Verify and ensure that the entire building is designed, constructed, and calibrated to operate as intended		x		
				1	Credit 4 Ozone Depletion 1	Reduce the use of HCFC based refrigerants		x		
				1	Credit 5 Measurement & Verification 1	Provide ongoing accountability and optimization of building energy and water consumption over time.		x		
1					Credit 6 Green Power 1	Encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.	x		As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the total energy use of a building will be reduced. As a result, the costs to purchase a Green Power contract will be reduced.	Owner

6 3 2 3 Materials & Resources 14 Points					Description	Amvic Direct Benefit?		Comments	Benefits	
						Yes	No			
N					Prereq 1 Storage & Collection of Recyclables Required	Facilitate the reduction of waste generated by building occupants that is hauled to the landfill		x		
1					Credit 1.1 Building Reuse, Maintain 75% of Existing Shell 1	Maintain 75% of existing walls, floors, and roof	x		As appropriately designed AMVIC ICF buildings are re-used, their energy performance benefits can be appreciated. Therefore, they will continue to provide value as well as design opportunity.	Designer / Owner / Contractor
1					Credit 1.2 Building Reuse, Maintain 100% of Shell 1	Maintain 95% of existing walls, floors, and roof	x		As appropriately designed AMVIC ICF buildings are re-used, their energy performance benefits can be appreciated. Therefore, they will continue to provide value as well as design opportunity.	Designer / Owner / Contractor
1					Credit 1.3 Building Reuse, Maintain 100% Shell & 50% Non-Shell 1	Maintain 50% of interior non-structural elements	x		As appropriately designed AMVIC ICF buildings are re-used, their energy performance benefits can be appreciated. Therefore, they will continue to provide value as well as design opportunity.	Designer / Owner / Contractor
1					Credit 2.1 Construction Waste Management, Divert 50% 1	Divert construction, demolition, and land clearing debris from landfill disposal, and return recyclable resources back to the manufacturing process.	x		The EPS constituent of the ICF product is recyclable and may be accepted at some landfills. Moreover, the excess waste is accepted as resale to the manufacturer.	Designer / Contractor

1					Credit 2.2 Construction Waste Management, Divert 75%	1	Divert construction, demolition, and land clearing debris from landfill disposal, and return recyclable resources back to the manufacturing process.	x		The EPS constituent of the ICF product is recyclable and may be accepted at some landfills. Moreover, the excess waste is accepted as resale to the manufacturer.	Designer / Contractor
				1	Credit 3.1 Resource Reuse, Specify 5%	1	Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste.		x		
				1	Credit 3.2 Resource Reuse, Specify 10%	1	Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste.		x		
1					Credit 4.1 Recycled Content, Specify 7.5% (post-consumer + ½ post-industrial)	1	Use materials with recycled content such that the sum of post-consumer content plus one-half of the post-industrial content constitutes 7.5% of the total value of materials in the project.	x		The AMVIC ICF block is comprised of 70% recycled materials, of which some is post-consumer polypropylene. Further, Portland cement used during construction can be structurally designed to handle 20% fly-ash content.	Designer / Contractor
1					Credit 4.2 Recycled Content, Specify 15% (post-consumer + ½ post-industrial)	1	Use materials with recycled content such that the sum of post-consumer content plus one-half of the post-industrial content constitutes 15% of the total value of materials in the project.	x		The AMVIC ICF block is comprised of 70% recycled materials, of which some is post-consumer polypropylene. Further, Portland cement used during construction can be structurally designed to handle 20% fly-ash content.	Designer / Contractor
	1				Credit 5.1 Regional Materials, 10% Extracted & Manufactured Regionally	1	Use a minimum of 10% of building materials or products for which at least 80% of the mass is extracted, processed and manufactured 500 miles of the project site, or 1500 miles of the project site and shipped by rail or water.	x		With six manufacturing plants distributed across North America and more under development, the regional content of the AMVIC ICF block can meet the intended requirements depending on site location.	Contractor / Owner
			1		Credit 5.2 Regional Materials, 20% Extracted & Manufactured Regionally	1	Use a minimum of 20% of building materials or products for which at least 80% of the mass is extracted, processed and manufactured 500 miles of the project site, or 1500 miles of the project site and shipped by rail or water.	x		With six manufacturing plants distributed across North America and more under development, the regional content of the AMVIC ICF block can meet the intended requirements depending on site location.	Contractor / Owner
				1	Credit 6 Rapidly Renewable Materials	1	Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials		x		
	1				Credit 7 Certified Wood	1	Encourage environmentally responsible forest management.	x		The AMVIC ICF system, the need for certified wood-framing materials is reduced. Thus, the incremental costs to use certified wood will be reduced.	Owner
			1		Credit 8 Durable Building	1	Minimize materials use and construction waste over a building's life resulting from premature failure of the building and its constituent components and assemblies.	x		As a building envelope product, the AMVIC ICF system details several water damage protection strategies (for damp-proofing and water-proofing) that can be practiced on a site-specific basis.	Designer / Contractor

Yes Y? N? No

6 2 7 Indoor Environmental Quality 15 Points

	Y	N			Description	Amvic Direct Benefit?		Comments	Benefits		
						Yes	No				
	Y				Prereq 1 Minimum IAQ Performance Required	Establish minimum indoor air quality performance by meeting ASHRAE 62, addendum N.	x		The AMVIC ICF product itself releases zero VOCs and/or air-borne particulates post-construction, and any adhesive and/or caulking required during construction can be met with low VOC levels. This product feature leads to an improved IAQ for the occupants. Improved noise attenuation properties are also beneficial.	Owner / Contractor	
	N				Prereq 2 Environmental Tobacco Smoke (ETS) Control Required	Prevent or minimize the exposure of building occupants to second hand smoke.		x			
				1	Credit 1 Carbon Dioxide (CO₂) Monitoring	Provide capacity for IAQ monitoring to help sustain long-term occupant comfort		x			
	1				Credit 2 Ventilation Effectiveness	Provide for the effective delivery and mixing of supply air to support the safety and comfort of building occupants	x		When properly installed, the AMVIC ICF will reduce the infiltration levels within a building, which provides the designer with more control to achieve the required air-change effectiveness.	Designer	
	1				Credit 3.1 Construction IAQ Management Plan, During Construction	Prevent indoor air quality problems resulting from the construction process in order to help sustain the comfort and well-being of workers and occupants during construction	x		The AMVIC ICF product itself releases zero VOCs and/or air-borne particulates post-construction, and any adhesive and/or caulking required during construction can be met with low VOC levels. This product feature leads to an improved IAQ for the occupants.	Owner / Contractor	
				1	Credit 3.2 Construction IAQ Management Plan, Before Occupancy	Prevent indoor air quality problems resulting from the construction process in order to help sustain the comfort and well-being of workers and occupants during construction		x			

1					Credit 4.1 Low-Emitting Materials, Adhesives & Sealants	1	Reduce the quantity of indoor air contaminants that are odorous, potentially irritating, or harmful to the comfort and well-being of installers and occupants	x		The AMVIC ICF product itself releases zero VOCs, and any adhesive and/or caulking required during construction can be met with low VOC levels.	Contractor
				1	Credit 4.2 Low-Emitting Materials, Paints	1	Reduce the quantity of indoor air contaminants that are odorous, potentially irritating, or harmful to the comfort and well-being of installers and occupants		x		
				1	Credit 4.3 Low-Emitting Materials, Carpet	1	Reduce the quantity of indoor air contaminants that are odorous, potentially irritating, or harmful to the comfort and well-being of installers and occupants		x		
				1	Credit 4.4 Low-Emitting Materials, Composite Wood & Agrifiber	1	Reduce the quantity of indoor air contaminants that are odorous, potentially irritating, or harmful to the comfort and well-being of installers and occupants		x		
				1	Credit 5 Indoor Chemical & Pollutant Source Control	1	Minimize exposure of building occupants to potentially hazardous particulates, biological contaminants, and chemical pollutants that adversely impact air and water quality.		x		
1					Credit 6.1 Controllability of Systems, Perimeter	1	Provide a high level of controllability of thermal, ventilation, and lighting systems to promote productivity and well-being.	x		As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the thermal frequency will be reduced. As a result, the designer will have more control over ventilation systems, and have more freedom to incorporate operable windows into the regularly occupied areas.	Designer
				1	Credit 6.2 Controllability of Systems, Non-Perimeter	1	Provide a high level of controllability of thermal, ventilation, and lighting systems to promote productivity and well-being.		x		
1					Credit 7.1 Thermal Comfort, Comply with ASHRAE 55	1	Provide a thermally comfortable environment that supports the productivity and well-being of building occupants	x		An AMVIC ICF building offers the opportunity for design features to address thermal radiation, humidity control, and air speed control.	Designer
	1				Credit 7.2 Thermal Comfort, Permanent Monitoring System	1	Provide a thermally comfortable environment that supports the productivity and well-being of building occupants	x		An AMVIC ICF building offers design features that address thermal radiation, humidity control, and air speed control; therefore, the implementation of a monitoring system is within the designers control	Designer
1					Credit 8.1 Daylight & Views, Daylight 75% of Spaces	1	Provide building occupants with a connection between indoor spaces and the outdoors through daylighting.		x	As the energy performance of a building is improved with an appropriate design using AMVIC ICF, the thermal frequency will be reduced. As a result, the designer will have more control over ventilation systems, which offers freedom to design a window layout such that daylight exposure is improved.	Designer
	1				Credit 8.2 Daylight & Views, Views for 90% of Spaces	1	Provide building occupants with a connection between indoor spaces and the outdoors through daylighting.		x		

Yes Y? N? No

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Innovation & Design Process 5 Points					Description	Amvic Direct Benefit?		Comments	Benefits		
Yes	Y?	N?	No	Yes		No					
	1				Credit 1.1 Innovation in Design: Exceptional performance (construction waste management 95%)	1	Divert construction, demolition, and land clearing debris from landfill disposal, and return recyclable resources back to the manufacturing process.	x		The EPS constituent of the ICF product is not accepted at landfills, and is only recyclable. Moreover, the excess waste is accepted as resale to the manufacturer.	Designer / Contractor
				1	Credit 1.2 Innovation in Design:	1			x		
				1	Credit 1.3 Innovation in Design:	1			x		
				1	Credit 1.4 Innovation in Design:	1			x		
				1	Credit 2 LEED™ Accredited Professional	1			x		

Yes Y? N? No

21 7 3 39

70

Product Point Contribution out of 70 Points

Certified 26-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points