

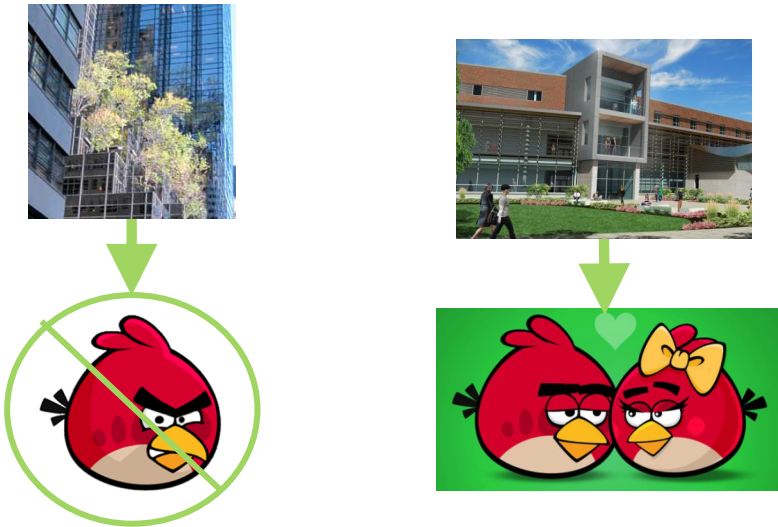
57th Annual Conference
AUUA 2012
Association of University Architects



Los Angeles, CA | June 24-28, 2012

On The Edge ...

Bird Strikes on Buildings



ON THE EDGE...
AUUA 2012
57TH ANNUAL CONFERENCE

Bird Strikes on Buildings

THE STORY

WHERE College at Brockport
State University of New York

WHO 6900 Undergraduate Students

WHAT 61,000 SF / 3-Story / Liberal Arts Building

WHEN Occupancy Summer 2014

HOW MUCH \$30 Million – Project Cost
State University of New York Construction Fund

CONCLUSION <http://www.youtube.com/watch?v=89EiNgGJrIA&feature=related>



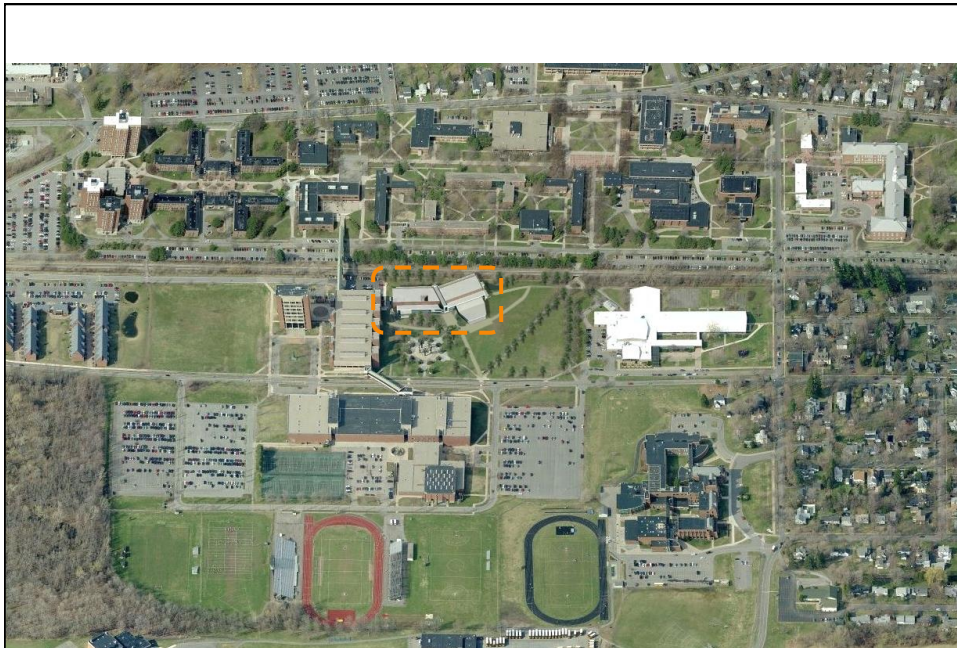
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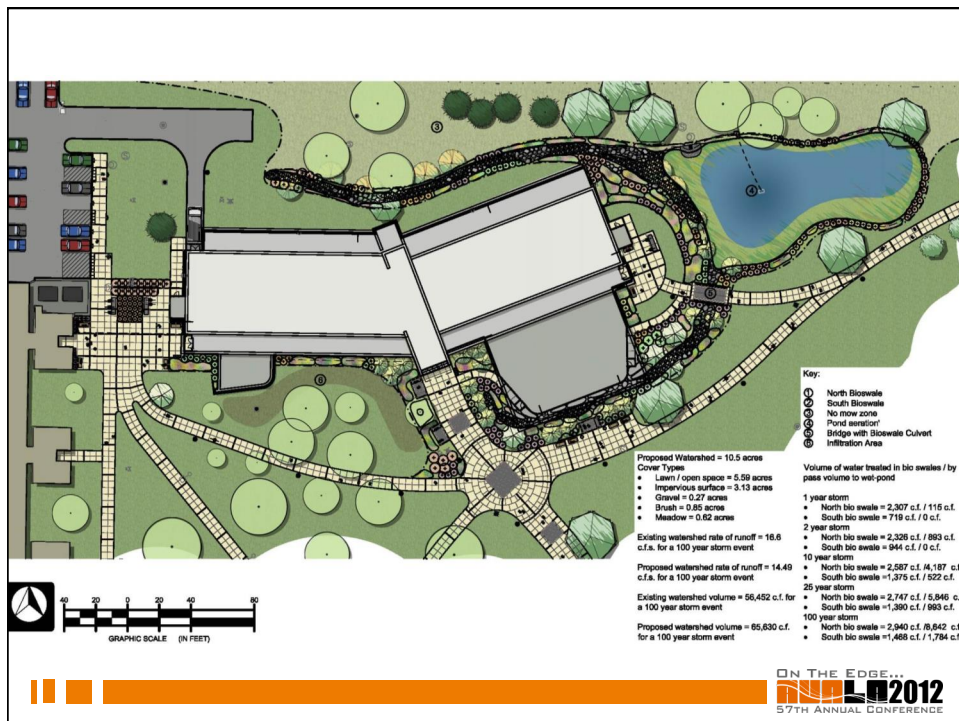
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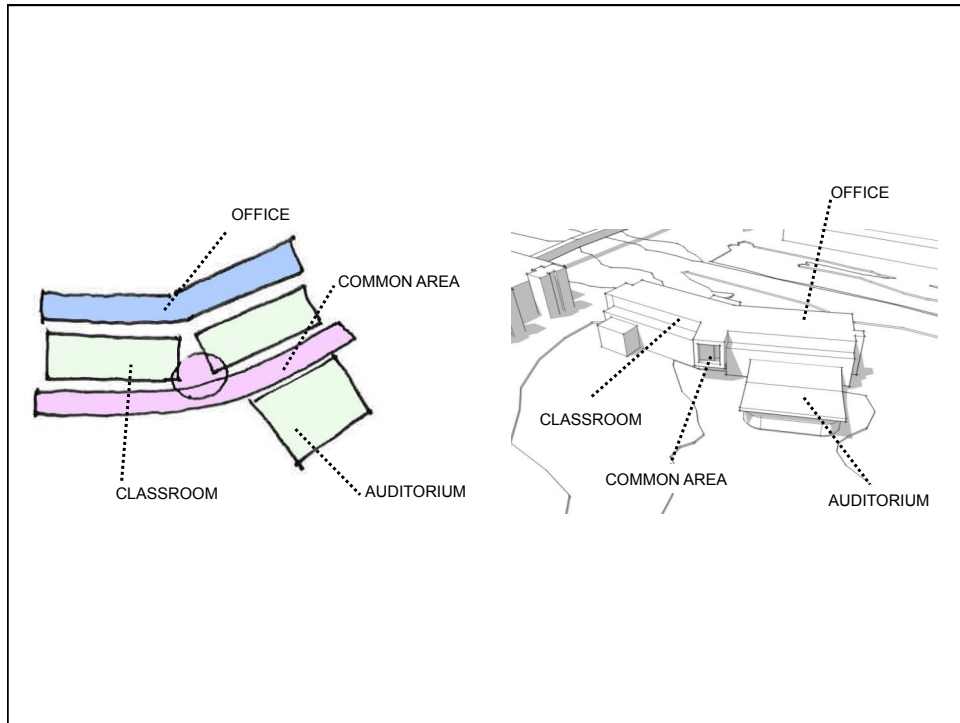


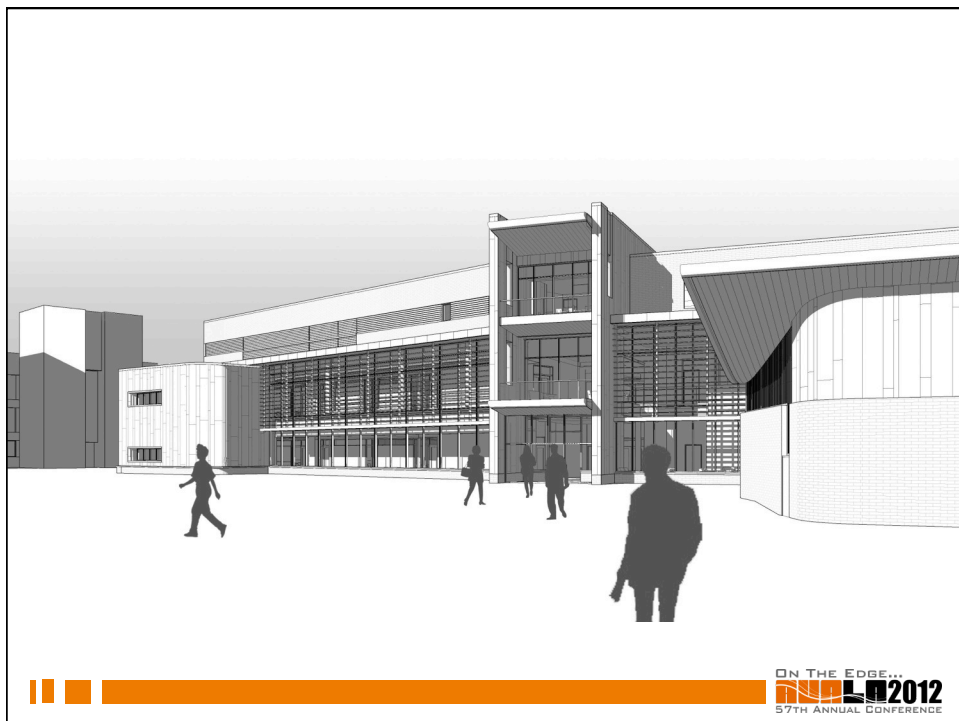
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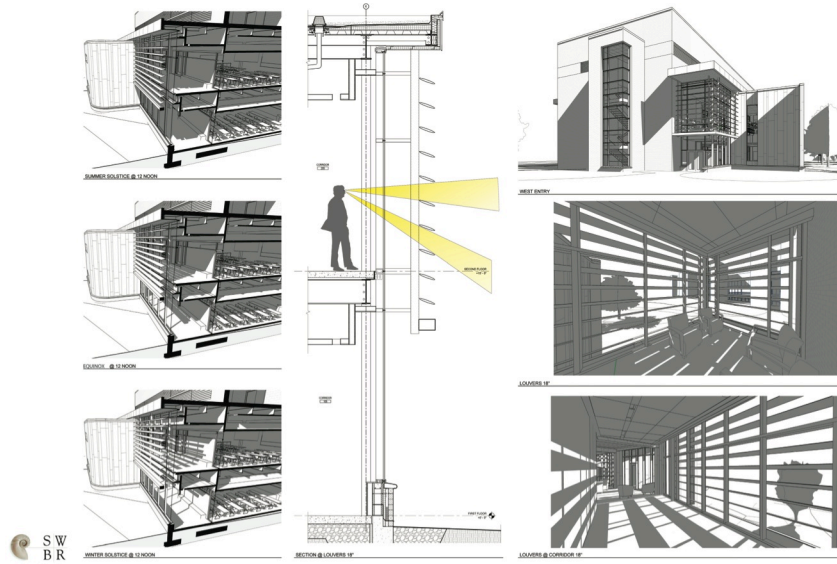
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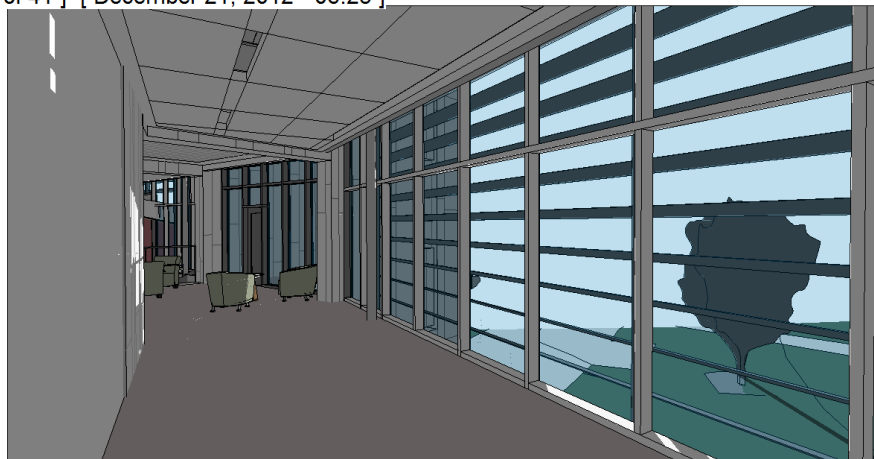
Building Solar Studies – 20 degree @ 18" spacing



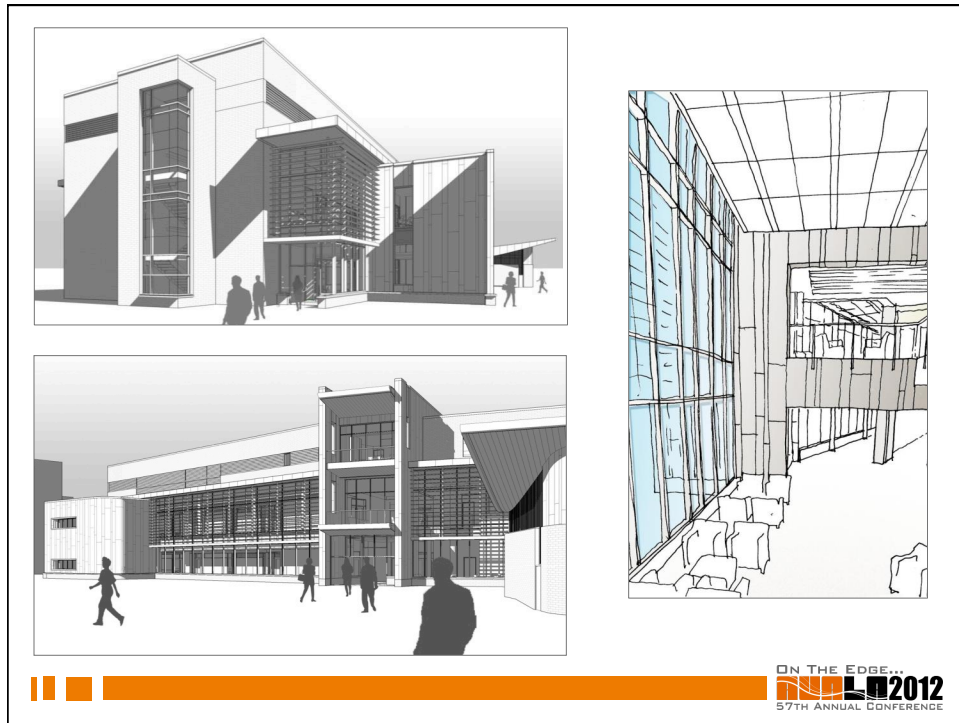
SW
BR

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[1 of 41] [December 21, 2012 - 06:25]



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What causes bird collisions?

- Reflection
- See-through
- Passage Effect
- Light pollution makes things worse



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Building Comparative Mortality

Collisions with	Date of reference	Mortality estimate
Wind turbines	2008	400,000
Cell towers	2008	50,000,000
Power lines	2000	15,000,000
Buildings/glass	2006	1,000,000,000

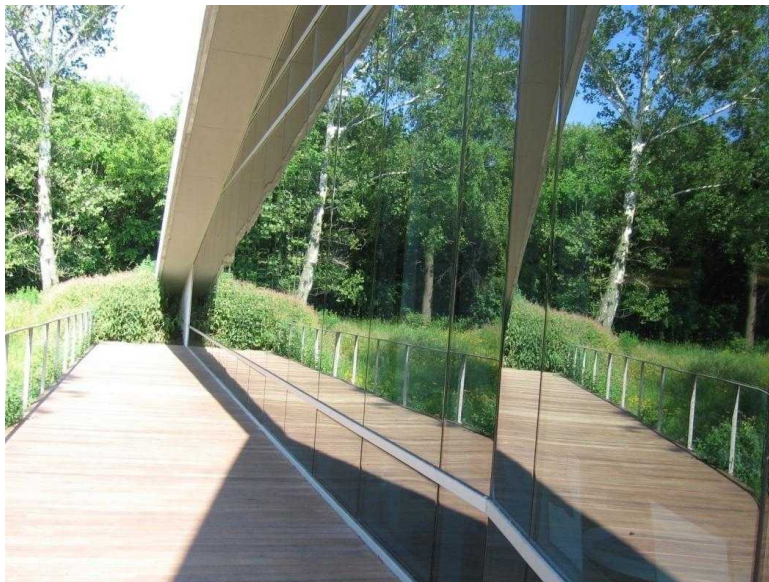


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Building Reflection or Reality?



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Project Safe Flight 1998- 2001

- Pre-dawn: Dozens of birds dead or disoriented at base of Towers
- One morning Spring 2000: 65 birds
- Total Count: 2352 birds
- “Skyscrapers were like magnets sucking birds groundward”

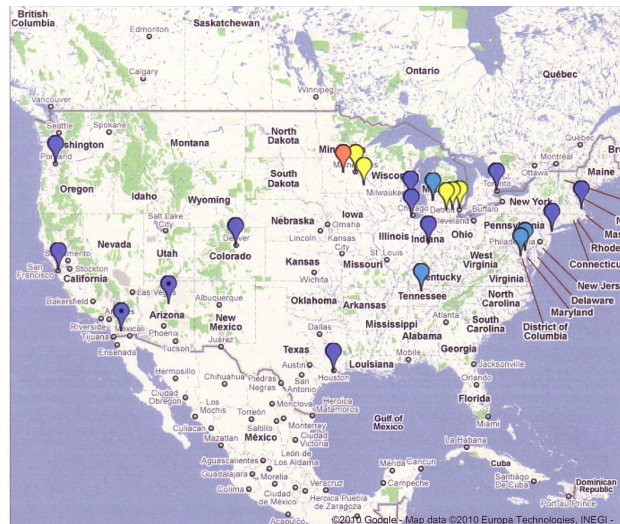
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Building Night Lighting/ Dark Sky



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Lights Out Programs in North America



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THE JHU GAZETTE

January 18, 2011

Hawk's tale

An uplifting story: Good Samaritans rescue wild bird injured in collision



You thought our Blue Jays were tough. An adult female red-tailed hawk—who, along with her mate, has enjoyed a celebrity status on the Homewood campus—is poised to make a full recovery following a calamitous collision with a Milton S. Eisenhower Library window in mid-November. The winged creature has some Johns Hopkins animal enthusiasts to thank. The bird could be released on campus within weeks, after nearly two months of rehabilitation at a Baltimore County animal clinic. The hawk slammed into one of the library's upper windows, located on the Keyser Quadrangle side, just after noon on Nov. 16. Witnesses said that the bird hit the window at full force, leaving a basketball-sized hole in the thick glass. "I heard a loud thump, and then saw people rushing to the window where glass had fallen," said Kamillah Cole, the manager of the library's Cafe Q coffee bar, which is located near the building's Keyser Quad entrance. "Students stood over the bird, not sure what to do, as feathers fell down around them."

THE BALTIMORE SUN

LIGHT FOR ALL
MARYLAND SPORTS CIRCLES BUSINESS LIFE HEALTH ENTERTAINMENT EVENTS OPINION VIDEO
BREAKING NEWS WEATHER TRAFFIC OBITUARIES GAMES NATIONWORLD WEIRD NEWS MOBILE ALERTS BLOGS PHOTOS

Injured hawk, a Hopkins fixture, is put to sleep

Campus favorite never recovered from hitting window

September 13, 2011 | By David Conrad, The Baltimore Sun
Kathy Woods tried everything she could think of to save the female red-tailed hawk it crashing into a library window at the Johns Hopkins University. Even bird acupuncture. But the hawk's nerve damage proved too serious to overcome, and she was put to sleep Tuesday. "The impact of the glass was just too much," Woods, who runs the Phoenix [Bistro](#), said.
Aria by Google



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What is the American Bird Conservancy doing to address this problem?

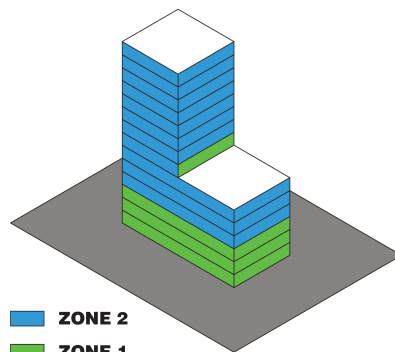


**Standards for
Bird-Safe Buildings**
SAN FRANCISCO PLANNING DEPARTMENT | Adopted July 14, 2011

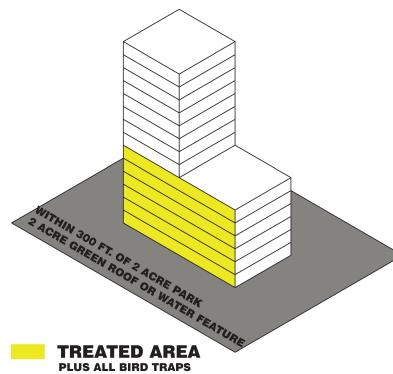


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Building Bird Friendly Standards



LEED PILOT CREDIT # 55



**SAN FRANCISCO BIRD-SAFE
BUILDING STANDARD**

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Building Bird Friendly Testing Lab



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Building Bird Friendly Standards

2 x 4 Rule:

The majority of birds will not attempt to fly:

- Between horizontal lines less than 2" apart
- Through vertical lines less than 4" apart
- Lines should be at least 1/8" wide

<http://www.wimp.com/tinyspaces/>



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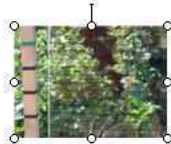
Building Bird Friendly Standards

Highly Effective Patterns
 Strikes < 10% Coverage < 10%

Pattern	Coverage	# Trials	# to control	% to control	# to pattern	% to pattern
Plexi Black H -05	6.7%	89	83	93.3	6	6.3
Plexi Black H-06	6.7%	85	79	93.0	6	7.0
Glass Black-H surface	6.7%	84	75	89.3	9	10.7
Banded 10V 2	~5%	81	73	90.2	8	9.8
10V Orange(0.2" wide)	4.8	86	72	94.2	5	5.8



Plexi Black H



Glass Black-H surface



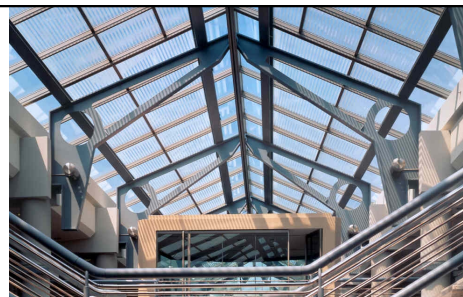
10V orange



Banded 10V-2



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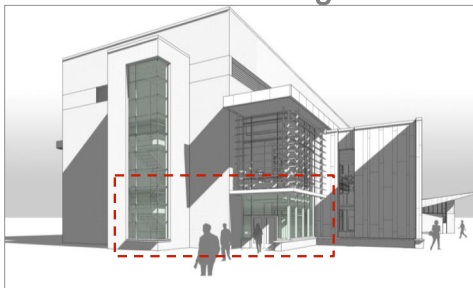


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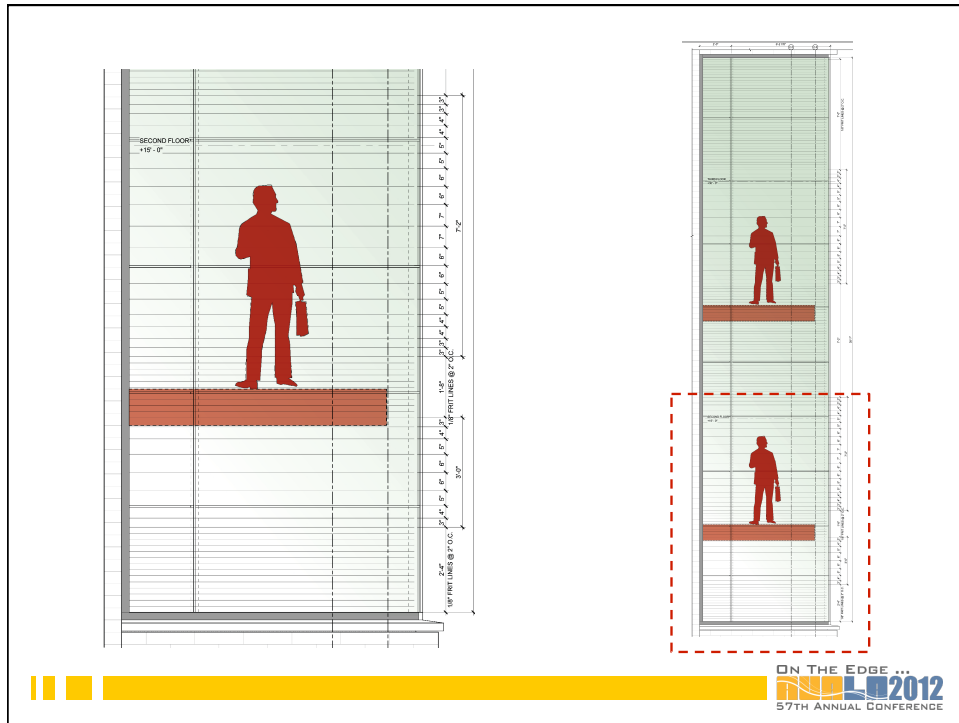


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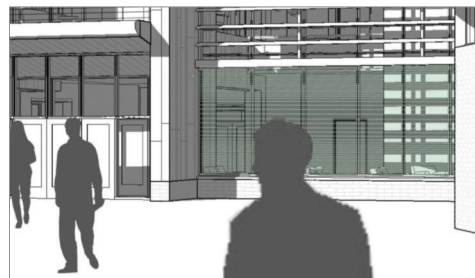
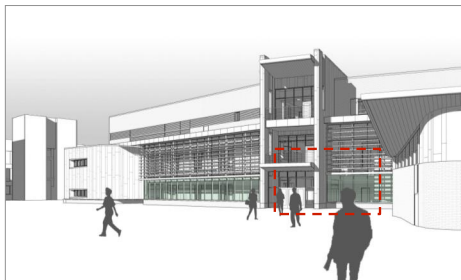
Glass Ceramic Fritting



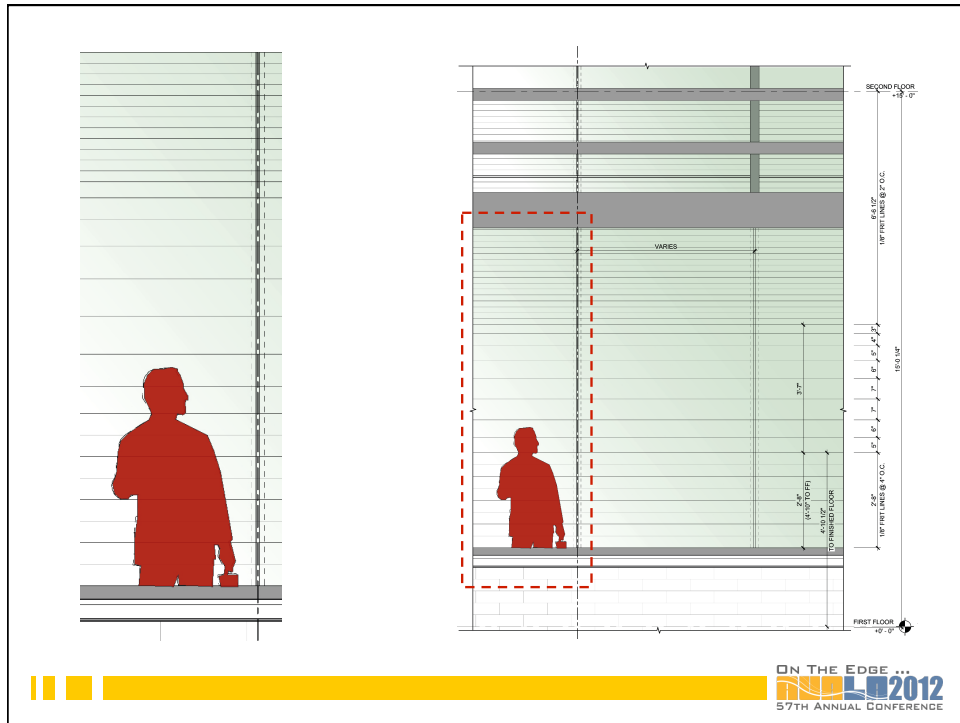
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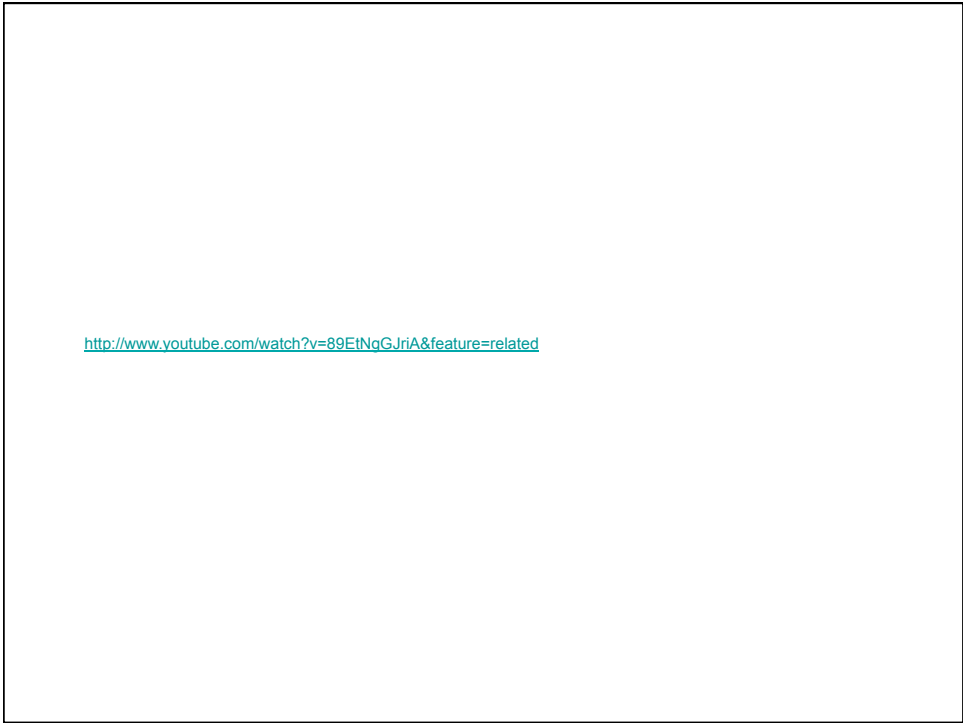


Glass Ceramic Fritting



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<http://www.youtube.com/watch?v=89E!NgGJrIA&feature=related>