

**A6708**

**Sustainable Retrofits**

**408 Avery**

**Wednesday 11 AM -1:00 PM**

Michael Adlerstein, FAIA

Fall 2016

### **Description**

This course will explore the response of the building industry to climate change, which presently advocates sustainable construction. We will discuss whether a stronger response is more appropriate - a reconsideration of the financial rewards of new construction in favour of the public benefits of preservation and sustainable retrofits. Students will develop public policy proposals to move this initiative forward.

Historic preservation and sustainable design are considerations generated by our ethical obligations to the future. The public has generally accepted the wisdom of historic preservation. Likewise, the American public is finally on the road towards accepting the wisdom of sustainable design, even within the preservation field. It is evolving into a required skill set. The acceptance of historic preservation required decades of education, and its success was the result of significant financial incentives offered by the public sector for the public good – primarily tax breaks.

The acceptance of sustainable design has also made significant, but very slow, progress in recent years. However, damaging events caused by climate change are moving the politics of sustainable design at an increasing speed. After over 20 years of inconclusive UN sponsored climate change conferences seeking a coordinated strategy to slow climate change (Rio in the 1990s, Kyoto in the 2000's and Copenhagen in 2009) in recent years the world has witnessed an increased volume of very damaging weather events. These forces have created a shared sense of urgency. The tens of thousands of refugees that are moving away from the deserts of the Middle East brought the issue to everyone's front door. The refugees helped create cooperation at the UN climate conference in Paris in December 2015. Finally, consensus was reached on a climate change agreement.

That agreement demands a strong response from all countries and industry groups, however, the building industry, as we know, is responsible for a large share, some say the majority share, of the ongoing carbon production. We have convinced ourselves that our best contribution to save the planet is our commitment to greener buildings. This may be partially accurate, but perhaps not.

### **Objective**

The objective of this course is to explore whether building greener buildings is the best we can do to assure our future, or is building greener helpful, but building less might be necessary, much less. This course will explore the concepts of preserve/retrofit vs new green construction on a conceptual basis, and use as a case study the recent renovation/retrofit of the United Nations compound.

### **Assignments**

Each class will have 50 – 100 pages each week of required reading. An Abstract and a Final Policy Strategy (about 3,000 words) will be required.

## Grades

Class Participation		20%
Assignments	Abstract	30%
	Final Strategy	50%

## Schedule

### September 7 *Public Architecture and Overview of the UN Renovation*

*Public architecture –managing the execution of public projects for the public good; Overview of the course*

**Required reading:** United Nations Secretariat: Renovation of a Modern Icon, by Michael Adlerstein (unpublished paper, 2015).

<http://global.ctbuh.org/resources/papers/download/2483-united-nations-secretariat-renovation-of-a-modernist-icon.pdf> (Links to an external site.) (Links to an external site.)

### September 14 *Early Years of UN Planning*

*1948 – 1952 A Workshop for Peace; 1970 – 1998 the decline of facility maintenance, the cold war; Does the UN need this building? Does the world need the UN? Does NY want the UN?*

**Required Reading:** A Workshop for Peace: Designing the United Nations Headquarters, by George Dudley. The MIT Press, 1994. ISBN-10: 0262041375 pages 1 - 57:

[George Dudley -- A Workshop for Peace%2c Deisgning the UNHQ -- Pages 1 to 57.pdf](#)

<https://www.amazon.com/Workshop-Peace-Designing-Nations-Headquarters/dp/0262041375> (Links to an external site.) (Links to an external site.)

### September 21 *Renewal 1999 – 2014*

*Retrofit/preserve or demolish and build anew.*

*Early studies; dirty tours; security risks; Mayor Guliani; costs of swing space, NYC vs Geneva vs other places; organizing for a multiyear project*

**Required Reading:** Report of the Secretary-General proposing the Capital Master Plan to the General Assembly, A/55/117, 28 June 2000, pages 1-27

[3Renewal 1999 -2015.zip](#)

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/55/117](http://www.un.org/ga/search/view_doc.asp?symbol=A/55/117) (Links to an external site.) (Links to an external site.)

**September 28**

**Project Approval/Sustainable Retrofits**

*2007 The benefits of the project; approved budget and funding mechanism; the politics and failure of DC5; selecting staff, consultants, the CM and contractors; critics, press, politicians; NYC code issues and Sovereignty; phasing strategies, Climate Change USGBC LEEDS , BREEN, CASPE; role of the UN in climate discussion*

**Required Reading:** Assessing the Carbon-Saving Value of Retrofitting versus demolition and new construction at the United Nations Headquarters, by Michael Adlerstein, 2016. (21 pages)

[UN Embodied Carbon Report\\_\\_26aug2016\\_vidaris\\_rev.pdf](#)[Columbia Final Syllabus Sustainable Retrofits.docx](#)

**October 5**

**The art collection and Technology**

*The growth of the value and consequences of the collection; the selection of art “gifts”; art during construction; Moving from 1950’s mechanicals to state of the art; broadcast and documentation systems; robotic cameras; preservation and window shades vs blinds; data centers; Con Ed electric vaults;*

**Required Reading: TBD**

**October 12**

**Class Cancelled due to studio work. In lieu of the class, the following reading is required:**

*"Sustainable Design" by David Bergman. Chapters: Eco design, active techniques, site issues, water efficiency, energy efficiency: passive techniques and energy efficiency: active techniques.*

**October 19**

**Safety and Security**

*NYC Fire and emergency codes; attacks on the UN overseas – raising the blast levels; the structural redesign; hardening the edge; redesign of the service drive; the caterpillar tent*

**Required Reading: TBD**

**October 26**

**Design**

*Retaining functionality and traditional circulation; Security Council protocols; Secretary-General’s Office; General Assembly seating problems, Trusteeship Council preservation; electronics in the Conference Rooms; design by donation; protocols vs costs of labor (robotic cameras, simultaneous interpretation) ; the glass curtain wall, accessibility codes*

**Required Reading:** Wallace K Harrison, Architect. By Victoria Newhouse. Rizzoli, New York, 1989. ISBN-10: 0847806448, chapters 11, 12 and 13- pages 104 - 143:

[Victoria Newhouse -- Wallace K. Harrison -- Pages 104 to 143.pdf](#)

<https://www.amazon.com/Wallace-Harrison-Architect-Victoria-Newhouse/dp/0847806448> (Links to an external site.) (Links to an external site.)

**November 2**                      **Construction**

*Managing the CM, phasing the work while still in partial use, noise control, what does restoration look like? Speed without risking safety, details, functionality, turn over to “the house”*

**Required Reading: TBD**

**November 9**                      **Preservation**

*Retaining the character defining characteristics in a dangerous world; reshaping the conference rooms for better intimacy and accessibility; restoring the magical materials of the 50's – formica, naugahyde, aluminium for stainless;*

**Required Reading: TBD**

**November 16**                      **National Park Service -- complex partnerships projects**

*Statue of Liberty, Ellis Island, Gettysburg,*

**Required Reading: TBD**

**November 23**                      **Field Trip to the United Nations**

**November 30**                      **The Renovation of the Palais des Nations (Geneva) Jack Howard**

*Discussion with the leadership of the Strategic Heritage Plan*

**Required Reading: TBD**

**December 7**                      **Final Strategy Presentations**

**Bibliography**

**Books and articles:**

1. The United Nations at 70: Restoration and Renewal. Rizzoli, New York, 2015. ISBN: 978-0-8478-4615-3

<https://www.amazon.com/United-Nations-70-Restoration-Renewal/dp/0847846156> (Links to an external site.) (Links to an external site.)

2. United Nations: The Story Behind the Headquarters of the World. Max Strom, Stockholm, Sweden, 2016. ISBN-10: 9171263438

[https://www.amazon.com/United-Nations-Story-Behind-Headquarters/dp/9171263438/ref=sr\\_1\\_1?ie=UTF8&qid=1467317254&sr=8-1&keywords=ISBN-10%3A+9171263438](https://www.amazon.com/United-Nations-Story-Behind-Headquarters/dp/9171263438/ref=sr_1_1?ie=UTF8&qid=1467317254&sr=8-1&keywords=ISBN-10%3A+9171263438) (Links to an external site.) (Links to an external site.)

3. “Constructing” the United Nations Headquarters: Modern Architecture as Public Diplomacy. By Linda Sue Phipps. Unpublished dissertation. UMI Dissertation Services, Ann Arbor, Michigan, 1998.

<http://www.worldcat.org/title/constructing-the-united-nations-headquarters-modern-architecture-as-public-diplomacy/oclc/77701116?referer=di&ht=edition> (Links to an external site.) (Links to an external site.)

4. International Territory: Official Utopia and the United Nations. Verso, London, 1994 ISBN-10: 1859849016

[https://www.amazon.com/dp/1859849016/ref=olp\\_product\\_details?\\_encoding=UTF8&me](https://www.amazon.com/dp/1859849016/ref=olp_product_details?_encoding=UTF8&me) (Links to an external site.) (Links to an external site.)=

5. The United Nations (Building Block Series), Princeton Architectural Press, 1999. ISBN-10: 156898183X

<https://www.amazon.com/United-Nations-Building-Block/dp/B007PMQM58> (Links to an external site.) (Links to an external site.)

6. New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial. The Monacelli Press, 1997. ISBN-10: 1885254857

[https://www.amazon.com/New-York-1960-Architecture-Bicentennial/dp/1885254857/ref=sr\\_1\\_5?s=books&ie=UTF8&qid=1467317333&sr=1-5&keywords=NYC+1960](https://www.amazon.com/New-York-1960-Architecture-Bicentennial/dp/1885254857/ref=sr_1_5?s=books&ie=UTF8&qid=1467317333&sr=1-5&keywords=NYC+1960) (Links to an external site.) (Links to an external site.)

7. UN at 70: how money and modernist architecture came together at the UN headquarters in New York

<http://www.telegraph.co.uk/news/worldnews/northamerica/usa/11867602/UN-at-70-how-money-and-modernist-architecture-came-together-at-the-UN-headquarters-in-New-York.html> (Links to an external site.) (Links to an external site.)

### **Secretary-General’s Reports on the Capital Master Plan:**

1. Report of the Secretary-General on the outcome of the Capital Master Plan Study, A/57/285, 8 August 2002

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/57/285](http://www.un.org/ga/search/view_doc.asp?symbol=A/57/285) (Links to an external site.) (Links to an external site.)

2. First Annual Progress Report of the Secretary-General on the Capital Master Plan, A/58/599, 17 November 2003

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/58/599](http://www.un.org/ga/search/view_doc.asp?symbol=A/58/599) (Links to an external site.) (Links to an external site.)

3. Second Annual Progress Report of the Secretary-General on the Capital Master Plan, A/59/441, 19 October 2004

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/59/441](http://www.un.org/ga/search/view_doc.asp?symbol=A/59/441) (Links to an external site.) (Links to an external site.)

4. Third Annual Progress Report of the Secretary-General on the Capital Master Plan, A/60/550, 11 November 2005

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/60/550](http://www.un.org/ga/search/view_doc.asp?symbol=A/60/550) (Links to an external site.) (Links to an external site.)

5. Report of the Secretary-General on the Capital Master Plan: business analysis on the possibility of constructing a new permanent building of the North Lawn, A/60/874, 5 June 2006

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/60/874](http://www.un.org/ga/search/view_doc.asp?symbol=A/60/874) (Links to an external site.) (Links to an external site.)

6. Fourth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/61/549, 30 October 2006

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/61/549](http://www.un.org/ga/search/view_doc.asp?symbol=A/61/549) (Links to an external site.) (Links to an external site.)

7. Fifth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/62/364, 28 September 2007

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/62/364](http://www.un.org/ga/search/view_doc.asp?symbol=A/62/364) (Links to an external site.) (Links to an external site.)

8. Sixth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/63/477, 9 October 2008

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/63/477](http://www.un.org/ga/search/view_doc.asp?symbol=A/63/477) (Links to an external site.) (Links to an external site.)

9. Seventh Annual Progress Report of the Secretary-General on the Capital Master Plan, A/64/346, 16 September 2009

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/64/346](http://www.un.org/ga/search/view_doc.asp?symbol=A/64/346) (Links to an external site.) (Links to an external site.)

10. Eight Annual Progress Report of the Secretary-General on the Capital Master Plan, A/65/511, 14 October 2010

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/65/511](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/511) (Links to an external site.) (Links to an external site.)

11. Ninth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/66/527, 26 October 2011

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/66/527](http://www.un.org/ga/search/view_doc.asp?symbol=A/66/527) (Links to an external site.) (Links to an external site.)

12. Tenth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/63/350, 5 September 2012

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/67/350](http://www.un.org/ga/search/view_doc.asp?symbol=A/67/350) (Links to an external site.) (Links to an external site.)

13. Eleventh Annual Progress Report of the Secretary-General on the Capital Master Plan, A/68/352, 27 August 2013

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/68/352](http://www.un.org/ga/search/view_doc.asp?symbol=A/68/352) (Links to an external site.) (Links to an external site.)

Add. 1: [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/68/352/ADD.1](http://www.un.org/ga/search/view_doc.asp?symbol=A/68/352/ADD.1) (Links to an external site.) (Links to an external site.)

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14. Twelfth Annual Progress Report of the Secretary-General on the Capital Master Plan, A/69/360, 27 August 2014

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15. Thirteen Annual Progress Report of the Secretary-General on the Capital Master Plan, A/70/343, 27 August 201

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