A confluence is defined as “the junction of two rivers, especially rivers of approximately equal width” as well as “an act or process of merging.” (Oxford Dictionaries).

In 1948, Robert Moses, then the Commissioner of the City Parks Department, came to an agreement with the Staten Island Borough president to dump New York City’s trash in a swamp area known as Fresh Kills. What started as a two-year temporary operation ended up lasting over fifty years and turned the wetlands into, what became for a time, the world’s largest landfill.
Supported by the Environmental Protection Agency, local opposition to the landfill finally succeeded in closing the landfill in 2001, although it was temporarily reopened after 9/11 as a site for the debris and remains of the attack on the World Trade Center. After a two phase international competition, the design for Freshkills Park was awarded to Field Operations, a landscape architecture firm. The implementation of the master plan began in 2008 and is anticipated to last thirty years.


The confluences at the site of Freshkills Park are particularly complex. There is the physical, geographical confluence where Richmond Creek and Main Creek meet, but the site also embodies many other types of confluences -- between city and landscape, between technology and ecology, between infrastructure and recreation.

What is the role of architecture in this ecosystem? This is a large site but it is also just a small part of the history of our engagement and occupation of the landscape. On a global scale, we are faced with issues such as climate change, toxic pollution, species-depletion, dwindling resources, and the loss of historically significant landscapes. The built environment can both aggravate and alleviate these challenges: buildings and landscapes use energy and create it, generate heat islands, sequester carbon, re-chart waterways, and influence consumption and waste patterns. It was our waste patterns that created this park. Our architectural designs can reimagine how we engage with this constructed landscape and support a re-envisioning of our relationship to this site.

Have you been to Staten Island? This semester we will explore Freshkills Park and engage both local and global issues by designing places for the public to connect with this site. We are interested in the complexity and contradictions embedded in this place and expect that your research will make some of these invisible histories visible. Over the course of the semester, we will explore the site on foot, on bikes, and by bus – documenting our perception of this place as experienced and analyzing the ways that this park is connected to larger systems of urban infrastructure. There will be two distinct projects in order to interrogate the Freshkills site through multiple lenses of research and design. We will start at the scale of the body (and a bike) – focusing on the arrival at the site and then we will look at the site as part of a larger set of systems in the city, ultimately connecting that analysis to the cultural production of artistic and scientific research at Freshkills.
**Project 1 – Interface:** will focus on a small-scale project in the park where city and park interact. The project will begin with an experiential mapping of the journey to and from, into and out of Freshkills and you will design a welcome gateway and bike storage station at one of the entries into the park.

**Project 2 – Boundaries and Confluence** has two parts. The first part, Boundaries, is the analytical mapping of the networks and systems that Freshkills Park is connected to. This is intended to be a view from above and beyond the site – showing us how site is part of larger eco- and social systems. The second part of this project, Confluence, is to design a field house for art and science, supporting a programmatic goal of Freshkills Park to support arts research alongside science and ecological research.

**Confluences**

1898 Richmond Island joins New York City  
1947 Infrastructure meets Landscape (Robert Moses style)  
1964 More infrastructure: Brooklyn connects to Staten Island via Verazano Bridge (S.I. called Borough of Richmond until 1975)  
1990 Environmental Conservation efforts confront waste accumulation (decision to close landfill)  
1996 Trash and waste capped with concrete and plants (start capping process)  
2001 City supports Landscape Design (a design competition)  
2001 Closed dump temporarily reopens (9/11)  
2010 Freshkills interfaces with the public (parks open and new programming begins)

**Semester Overview**

We will travel to Freshkills Park twice this semester, exploring the constructed landscape with our alum, Mariel Villeré, who is the Manager for Programs, Arts, and Grants at Freshkills Park.

There are many opportunities for design exploration this semester, and as liberal arts students, we expect that you will bring unique perspectives related to your own particular research interests. Some of the topics/issues we are interested in as a studio:
- making the invisible visible
- relationships between infrastructure + city; landscape + architecture; art + science
- bound / unbound / boundedness
- micro / macro scales
- systems and networks
- parks and constructed landscapes
- materials and effect
- ecological / Biological
- artists as mediators
- research and experimentation
The studio method requires a commitment to the design process – an iterative process with an expectation for risk taking and experimentation. There are no “correct” answers for many of the questions that arise during desk crits – only suggestions for ways to approach research. We expect you to establish your own research question(s) based on the project and to develop a graphic argument to support it. The development of your project, the rigor of your research, the clarity of your representation, the presentation of your design are all significant parts of the evaluation of your work – not just the final product.

**Student Learning Objectives**

Students in Architectural Design 1 & 2 should be able, at an advanced level, to:

1. Visually communicate architectural concepts and design intent using discipline-specific techniques including:
   - orthographic projections (plans, elevations, sections),
   - paraline projections (axonometrics, isometrics),
   - physical models using various techniques and materials,
   - multiple media and/or combined representational strategies
2. Verbally communicate architectural research methods and spatial concepts
3. Demonstrate an understanding of precedent and site analysis
4. Demonstrate an understanding of design method as a step-by-step, iterative and incremental process of research, synthesis and feedback
5. Demonstrate an understanding of design thinking as responsive to and shaper of social and cultural context
6. Demonstrate the ability to work independently and collaboratively
7. Demonstrate an understanding of the historical and theoretical contexts for architectural representational conventions
8. Utilize both analog and digital techniques in the design process
9. Demonstrate an understanding of program, use and activity
10. Demonstrate an understanding of material and fabrication
11. Utilize a range of analog and digital techniques in the design process
Studio Notes

0.0 READ ME
This course introduces the student to the complex array of ideas, methods and techniques that form the discipline of architecture. Architectural Design 1 and 2 broaden and deepen the scope of architectural research begun in the major’s entry-level classes and adds a variety of cultural, technological and theoretical issues with which students learn to work.

Architectural Design 1 and 2 is a two-semester sequence of design projects which require that each students work at a variety of scales, with a variety of techniques and in a variety of research situations. Architectural issues include the interpretation of the body in space, the shifting conditions of scale, light, and texture, the nature and complexity of a site or a program and the role of structure, materials and construction. At the same time, the projects in Design 1 and 2 are purposefully embedded in the cultural and social fabric that shapes, and is shaped by, the forms and processes of architectural production. Projects investigate the connections between architecture and other disciplines familiar to the liberal arts students. The projects also refine the students’ knowledge of the designer’s tools – models, drawings, digital images, etc. – that join, often in unexpected ways, the mind, the hand, and the eye. Readings, lectures and workshops complement these tools. Finally, and perhaps most important, the course emphasizes the examination of the process of design as well as its outcome.

0.1 STUDIO PROCEDURES
Design is a unique type of knowledge production requiring unique working methods. This course is taught by the studio method – an iterative process that requires dialog, design production, and risk taking by the student to explore ideas in the form of a variety of media. The Studio will be divided into small, individual sections, each led by a Studio Critic. The core method of instruction is that of 'desk crits', a one-to-one dialogue at the desk between the student and the Critic. At the desk crit, previous design work is reviewed and discussed and the student and critic formulate the next steps in the process. Desk crits are supplemented by Interim Reviews, or 'Pin-ups', where all students in the Section (sometimes teamed up with another Section) present their design ideas for group critique and discussion. The culmination of each project is the Final Review in which students present their work for public evaluation by a group of Studio Critics and Visiting Critics.

Students will remain in the same Studio Section, at the same desk, for each semester. At the midpoint of each semester, critics will shift sections so by the end of the academic year, each student will have been exposed to four different approaches to design methods. Teaching Assistants will be conducting workshops focusing on techniques and methods relevant to ongoing projects.

0.2 ATTENDANCE
You are encouraged to work in the studio and to take advantage of the shared learning environment to discuss your work with your peers.

Attendance is mandatory at all scheduled classes. Studio is held Monday and Wednesday beginning promptly at 9:00 AM. Any student arriving after 9:20 AM will be considered 'late' and arrivals after 10:00 AM will be considered as absent. The only excused absences are those for reasons of health or crisis, and you must alert your critic or the studio coordinator. Unexcused absences, late arrivals, or early departures from class will reduce your course grade.

Three non-consecutive absences within the semester will result in a grade reduction by one-third (1/3) of one letter grade (e.g., A- to B+). Three consecutive absences or four nonconsecutive absences will mean that you have dropped the course, whether or not you have filed the appropriate "drop" form. You may not leave class early or after a desk crit. Plan to use your time in the studio so that you are not simply waiting for your Critic.

0.3 GRADING
Each Studio Project will be graded with a letter grade and a written evaluation. Your work will be evaluated by the following criteria: (1) idea/concept; (2) conceptual development and design process; (3) final execution. Project #1 will count for 40% of your final grade and Project #2 will count for 60% of your final grade. Sketchbooks will be reviewed periodically by your critic and may be required for grading. The instructors recognize learning and improvement as important factors in determining your final grade.

Students are required to present their work in all Interim and Final Reviews. Failure to do so will reduce the grade of the exercise by a minimum of one letter grade (e.g. B to C). Work not presented at the designated time will not be reviewed at a later date. Project grades will be based on the work you present at your Final Review. Required work that was not completed at the Final Review must be completed in time for grading. Additional work completed after the Final Review and before grading will not be considered at the grading session unless otherwise stated by the Studio Critics. NO INCOMPLETES will be given at the end of the course.

0.4 SECURITY
Please attend to the security of the Studio space. You will have swipe access to the studio through your ID and it is crucial that this door remain closed and locked at all times. Only students enrolled in the class should have access to the space. Because there is occasional theft, it is highly recommended that you do not prop open the door, leave any valuables unattended when away from your desk, and leave costly tools or devices (iPods, laptops, cameras, etc.) in your desk even if locked. You may leave your parallel rule attached to your desk. Columbia Security does make periodic checks of the studio but security is a responsibility that we all share; please help us maintain a safe and productive environment. IF SOMETHING OF YOURS IS TAKEN, PLEASE MAKE SURE YOU CONTACT SECURITY AS WELL AS THE STUDIO COORDINATOR.

0.6 STUDIO WORK PRACTICES
Please refrain from the use of spray paints, spray adhesives, or similar products in the studio – there is a spray hood in the adjacent storage room for this. In order to maintain a productive workspace for all, music must be listened to through your headphones.

0.7 PRE-REQUISITES
Architectural Representation: Abstraction and Architectural Representation: Perception are both pre-requisites for this course. It is recommended that the lecture course, Perceptions of Architecture has been completed before enrolling in this class. Priority for this course is given to Architecture Majors.

0.8 ACADEMIC INTEGRITY
The faculty statement on academic integrity begins with: “The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.” The full statement can be found here: http://www.college.columbia.edu/academics/integrity/statement. We expect that students will work in accordance with their honor code (Barnard: http://barnard.edu/dos/honorcode and Columbia: https://www.college.columbia.edu/honorcode). The consequences of committing an academic integrity violation in this class will be an academic sanction the matter will be referred to the Dean’s Discipline process.

0.9 DISABILITY SERVICES
Students with disabilities who will be taking this course and may need disability-related accommodations are encouraged to register in advance with the Office of Disability Services (ODS) in 008 Milbank for Barnard students or Disability Services at Wien Hall, Main Floor — Suite 108A for Columbia students.
Bibliography and Resources:

Freshkills
http://freshkillspark.org/the-park/chronology-of-the-freshkills-park-site
http://freshkillspark.org/the-park/the-park-plan
http://freshkillspark.org/design-construction
http://freshkillspark.org/os-art
http://freshkillspark.org/os-research
http://freshkillspark.org/videos

Staten Island
CUF conducted a study on Staten Island a few years ago:
https://nycfuture.org/research/publications/staten-island-then-and-now
Staten Island “Green Zone”: http://www.landscapeandurbanism.com/2010/12/07/city-concealed-statens-island/ (La Tourette Park and William T. Davis Wildlife Refuge, the Staten Island Greenbelt, Arden Woods, etc.)

Landfills
Other NYC Landfills to Parks: Brookfield, Jamaica Bay, Pelham Bay

Art (+Science) Practices
Mel Chin http://melchin.org/oeuvre/mel-chin
Natalie Jeremijenko http://www.nataliejeremijenko.com/

Mapping and Data Visualization
Spatial Information Design Lab, GSAPP http://www.spatialinformationdesignlab.org/projects

Free Kayaking in New York City
The Downtown Boathouse http://www.downtownboathouse.org/
Manhattan Community Boathouse http://www.manhattancommunityboathouse.org/
New York City Parks http://www.nycgovparks.org/events/kayaking

Software Support
Lynda.com (Columbia University site license)

Your critics
http://www.fredericktang.com/
http://www.ignaciogalan.com/
http://www.kbaxi.net/
In our first project at Freshkills Park, we will examine the periphery where the landscape and the city interact. The project has two parts: a site documentation/site section which will be done in groups of 2 or 3 and the design of the welcome center / bike rental station.

Part A: Experiential Analysis

The exercise starts with the preparation for the field trip – selecting the documentation that you want to guide your experience and material that might enhance what is available to you in your visit with additional chronological dimensions and scales. You can begin with the resources provided on Courseworks including the Draft Master Plan for Freshkills and the Praxis article about the competition which shows alternate finalists for the schemes. The emphasis is on an experiential mapping of the site – this is to be sectional in nature and using any type of media that best captures that experience, including but not limited to: photography, video, orthographic section, and collage. We expect aspects of time, distance, scale, and section as perceived or experienced by a park visitor to be part of this mapping exercise. You will make this analysis in groups of 2 or 3 students. Each group will select particular aspects of their experience to form the basis of their mapping.

Where does the experience of this site begin? You will arrive at Freshkills having traveled, most likely, from the upper west side of Manhattan. And in one trip, you will have taken subways, ferries, and buses to get to the site, which you will then explore by walking and biking. Your analysis should include the following three components:
- **Site Section**: Document the edge condition in section. This should include both areas *inside* and *outside* of the park. The scale of this section can be determined based on the information being shown. Consider your body in relationship to the landscape. How does this particular vignette relate to the section in the rest of your journey.

- **Two Different Scales**: Incorporate two different scales of analysis. This could be a scale of the edge and a scale of the city. Think about the relationship of the park to the surrounding context – i.e. how do transportation networks that extend through the city respond to the edge of Freshkills, or how do programmatic uses in surrounding areas of Staten Island change as they approach the park.

- **Timeline**: Establish the chronological dimension of your experience. This could an analysis of where you are throughout the experience of the park, or it could be a speculation either into the past or future of the development of the site.

Deliverable: minimum 36” x 48” printed sheet, additional media as necessary (i.e. video or audio)

**Resources**

- Fresh Kills Draft Master Plan

- "Fresh Kills Landfill to Landscape" from Praxis 4. (pdf on courseworks)

- James Corner, “Agency of Mapping” (pdf on courseworks)

- James Corner, “Taking Measures Across the American Landscape” excerpt, (pdf on courseworks)
Part B: Welcome Center / Bike Rental Station

When it is eventually opened to the public, Freshkills Park will have many entrances and the approach to each will be different. While on maps, the border may appear as a single dimensional line, the experience of this intermediate zone is a complex and spatial one. Designing for our inhabitation of this edge zone, and for the approach from the city into the park, will necessarily address the relationship of material and immaterial conditions that affect design. At the east end of the park at the center of East mound, there will be a new entrance along Richmond Avenue. You will design a kiosk that includes a welcome station, a small exhibition space (for information on the history of the Park) and an area to rent bikes.

- Exterior covered storage for 30 bikes
- 30 mini lockers for visitors to store valuables
- 1 small office (10’ x 10’) 100 sf
- 1 information booth (10’ x 10’) 100 sf
- Storage area 100 sf
- Small exhibition area 500 sf
- 2 composting bathrooms (8’ x 10’ each) 160 sf
- 2 drinking fountain
- Outdoor resting area with benches
- SOLAR ENERGY – minimum 6 4’x8’ solar panels for powering the site
- SIGNAGE – see attached signage guidelines for Freshkills Park.

- Deliverable: Physical Model at 1/2” = 1'-0”

Freshkills Signage Guidelines.