Introduction

This is the second course in the Northeastern School of Architecture sophomore studio sequence, and as such expands upon themes introduced in the final project of Studio 1. It is also the first studio dedicated to a semester-long architectural problem. The objective is to design a medium-scale, institutional architecture that is responsive to its urban context, critically informed by its program typology, and clear in its tectonic development. This process is divided into three phases. The first two are brief analytical studies, and the third is the design project itself which will require synthesis of your prior analytical work. Through these steps, you will build a rigorous argument for your final project as a strategic, urban intervention.

The studio will focus on schools as a project type. You will learn to uncover the internal logics of “the school” – its typological characteristics – and to understand its external obligations as a building in the city – its site and urban context. The design of your final project will emerge from a dialogue and negotiation between these internal and external dynamics.

Objectives

Assignments will focus on the following design subjects:

Diagram: Employ graphic and/or visual explanations that isolate and clearly articulate aspects of a composition or space (structure, enclosure, sequence, etc.).

Analysis: Study precedents and sites to understand logics that determine their form.

Context: Read and synthesize patterns of the city, edges of adjacent buildings, landscape features, and urban infrastructure as critical forces that shape architecture.

Composition: Arrange architectonic elements to shape space, matter and perceptual experience based on coherent and substantive analysis.

Technique: Refine drawing and modeling skills – i.e., to make a sophisticated and legible drawing, rendering or model – to develop a design, represent form and communicate ideas.

Evaluation

The course grade is a weighted average of assignments, listed below, as well as an overall process grade. Assignment evaluation is based on work at reviews, as well as your work at each class session.

Typology: 20%
Urban Analysis: 20%
School Design: 50%
Process: 10%

Conceptual ideas and rigorous thinking are integral to design work. In sophomore studios, it is equally important to develop drawing and model-making skills that effectively communicate one’s ideas.
A successful design project should meet each of these criteria with competence and balance:

-- Asserts a conceptual and spatial proposition that is rooted in a reading of site, program, and precedent.
-- Develops ideas independently with rigor and critical analysis, and produces the physical work associated with this process.
-- Shows comprehension of representational conventions and techniques for communicating spatial information.
-- Demonstrates knowledge of fundamental architectural design with respect to scale, dimension, circulation systems, and program/site relationships.

Narrative Outline

1. Typology Research and Analysis

Before undertaking the process of designing a school, it is important to understand the fundamental characteristics of school architecture. Schools contain typical program elements (classrooms, lockers/cubbies, offices, libraries, cafeterias and kitchens, playgrounds, etc.) and tend to be organized in particular ways. Repetitive elements such as classrooms are strategically aggregated with respect to building circulation, structural systems, and exposure to natural light and the outdoors. Often, dedicated spaces for individual or small-group learning activities are carefully located along with collective spaces for social gathering and administration. On a larger scale, schools are related in distinct ways to their external contexts – the landscapes, cities, and by extension, communities that surround them.

Typology defines the basic architectural parameters of a project, but it also allows for significant variation and invention among projects of the same type, playing the role of common denominator. We have collected a wide range of school designs to demonstrate this concept and to use as examples. For the typology exercise, you will rigorously study one of these precedents and also present your findings as a group. This exchange is central to developing a rich body of knowledge as a foundation for critical design decisions. The means of your investigation will be a set of analytical drawings and models that clarify the school's typological character and also extract aspects unique to its design.

2. Urban Analysis

Throughout the semester, we will be working with a single site located in the city of Boston. The first set of exercises will introduce the site and guide you through different modes of analyzing the urban context. The goal of your analysis will be to discover and document various patterns of the city on and around the site, patterns that will inform your reading of the site and ultimately affect your design decisions.

The urban analysis will take three steps: a streetscape study, a figure/ground study, and a massing study. The process for each exercise will involve gathering and synthesizing information from personal observation, maps and other sources, and then developing a set of drawings and models that interpret and represent important urban relationships that are relevant to the site. How you view the site, how you document, measure, and photograph it, how much time you spend there – these questions will in many ways determine your architectural approach later in the semester.

3. School Design

Based on a comprehensive program and incorporating your work from the previous exercises, you will design a public school for the site. Development of tectonic and spatial strategies for the school will be emphasized, and must be evident in your drawings and models of the project. As part of your school design, you will develop a classroom module in detail, both interior and exterior. This exercise will overlap with a project in your course ARCH 2240 Structures 2: Tectonics.
## Schedule

<table>
<thead>
<tr>
<th>WK</th>
<th>DATE</th>
<th>STUDIO SESSION</th>
<th>PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 10</td>
<td>M</td>
<td>Spring Semester Begins</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Jan 11</td>
<td>Tu</td>
<td>Course Introduction</td>
</tr>
<tr>
<td></td>
<td>Jan 14</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>2</td>
<td>Jan 18</td>
<td>Tu</td>
<td>Desk Crits</td>
</tr>
<tr>
<td></td>
<td>Jan 21</td>
<td>F</td>
<td>LECTURE (Shillman 305, 2pm) &amp; PIN UP in studio</td>
</tr>
<tr>
<td>3</td>
<td>Jan 25</td>
<td>Tu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan 28</td>
<td>F</td>
<td>TYPOLOGY REVIEW</td>
</tr>
<tr>
<td>4</td>
<td>Feb 01</td>
<td>Tu</td>
<td>URBAN ANALYSIS LECTURE and Site Visit</td>
</tr>
<tr>
<td></td>
<td>Feb 04</td>
<td>F</td>
<td>Desk Crits – Streetscapes</td>
</tr>
<tr>
<td>5</td>
<td>Feb 08</td>
<td>Tu</td>
<td>Desk Crits – Figure / Ground</td>
</tr>
<tr>
<td></td>
<td>Feb 11</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Feb 15</td>
<td>Tu</td>
<td>PIN UP: URBAN ANALYSIS, Part 1, and Site Model Due</td>
</tr>
<tr>
<td></td>
<td>Feb 18</td>
<td>F</td>
<td>Massing Models</td>
</tr>
<tr>
<td>7</td>
<td>Feb 22</td>
<td>Tu</td>
<td>Massing Models</td>
</tr>
<tr>
<td></td>
<td>Feb 25</td>
<td>F</td>
<td>URBAN ANALYSIS REVIEW</td>
</tr>
<tr>
<td>Mar 01</td>
<td>Tu</td>
<td>SPRING BREAK</td>
<td>NO CLASSES</td>
</tr>
<tr>
<td>Mar 04</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mar 08</td>
<td>Tu</td>
<td>SCHOOL PROGRAM Distributed</td>
</tr>
<tr>
<td></td>
<td>Mar 11</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Mar 15</td>
<td>Tu</td>
<td>PIN UP: PROGRAM DIAGRAMS</td>
</tr>
<tr>
<td></td>
<td>Mar 18</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>10</td>
<td>Mar 22</td>
<td>Tu</td>
<td>Desk Crits</td>
</tr>
<tr>
<td></td>
<td>Mar 25</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>11</td>
<td>Mar 29</td>
<td>Tu</td>
<td>Desk Crits</td>
</tr>
<tr>
<td></td>
<td>Apr 01</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>12</td>
<td>Apr 05</td>
<td>Tu</td>
<td>MID-REVIEW</td>
</tr>
<tr>
<td></td>
<td>Apr 08</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>13</td>
<td>Apr 12</td>
<td>Tu</td>
<td>Desk Crits</td>
</tr>
<tr>
<td></td>
<td>Apr 15</td>
<td>F</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>14</td>
<td>Apr 19</td>
<td>Tu</td>
<td>Desk Crits</td>
</tr>
<tr>
<td></td>
<td>Apr 20</td>
<td>W</td>
<td>Classes End</td>
</tr>
<tr>
<td>15</td>
<td>TBD</td>
<td></td>
<td>FINAL REVIEW (DURING EXAM WEEK)</td>
</tr>
<tr>
<td></td>
<td>Apr 29</td>
<td>F</td>
<td>EXAMS END</td>
</tr>
</tbody>
</table>
Requirements

-- Only complete work will be reviewed and graded at any review (desk crit, pin-up, or jury review). Computer output issues are not acceptable excuses for incomplete or missing work. The requirements are due for each desk crit and review, regardless of the media choices that you make. Lateness of work will reduce its grade.

-- Each project grade will be based primarily upon major reviews. However, process is part of each project grade, and it is also a separate component of the course grade. We record grades based upon your work for every studio session. In addition, a consistent application of serial iterations is highly encouraged (especially for those interested in good work and its associated higher grades).

-- Studio session time should be used for work, reviews, lectures, site visits and desk crits only. Unproductive use of studio time will result in an unexcused absence recorded for that session, and therefore reduce your grade. See attendance policy below.

-- A CD that documents all your work from the semester is a requirement and no final grade will be recorded until a complete CD is submitted at the end of the semester. This documentation is very useful for your portfolio as well. We suggest that you document your work incrementally throughout the semester.

Attendance

Design is a process in which feedback and participation is critical; it is consequently imperative that you attend class and have drawings and/or models to discuss with the instructor. 2 unexcused absences will result in a deduction of the course grade by a full letter grade. 3 or more unexcused absences will result in a failure of the course. Attendance is mandatory at all reviews (refer to course schedule for dates). Any excused absence requires proper documentation.

Grading Standards

In accordance with Northeastern School of Architecture grading policy, grades will be distributed according to the following scale. Refer to: http://www.architecture.neu.edu/student_resources/grading_policy/studio_course

(A) superb quality work. (A-) high quality work.
(B+) good quality work. (B) above average work. (B-) average work. [i.e., everyone starts here and goes up or down from here based on your work and attendance]
(C+) below average work. (C) well below average work. (C-) minimal work.
[D+, D, D-] marginally acceptable work.

Grade Changes

Any final grade changes will only be discussed in person, during office hours -- not through email. If you want to discuss your grade, take the following steps. Assemble your projects, process work, and attendance from the semester, record their grades in a spreadsheet, and write a one page summary of the perceived differences. After completing this work, make an office hours appointment and bring your documentation of your work to the appointment. All requests of this nature will be reviewed by two faculty of this course.

Academic Honesty

Northeastern University is committed to the principles of intellectual honesty and integrity. All members of the Northeastern community are expected to maintain complete honesty in all academic work, presenting only that which is their own work in tests and assignments. If you have any questions regarding proper attribution of the work of others, contact your professor prior to submitting work for evaluation. For more detail refer to: http://www.osccr.neu.edu/policy.html
Assignment 1 School Typology Analysis

OVERVIEW

In this assignment, you will study a school precedent, with particular emphasis on the organization of program and circulation – the parti - and on the volumetric and spatial consequences of these organizational strategies. You will each produce analytical diagrams and models of your assigned school precedent. Then each studio will create a matrix of comparative diagrams of all of the schools that summarizes the approaches exemplified by each of the precedents. The analyses and comparative matrix will lay the groundwork both for Assignment 2 (Urban Analysis) and for your eventual design of a school for a site in Boston.

SCHOOLS

1. Asilo Infantile Sant’Elia (1937), Como, Italy. Guiseppe Terragni
2. Crow Island School (1939), Winnetka, IL. Eliel Saarinen / Perkins & Will
3. Colonia Enel(1961-64), Riccione, Italy. Giancarlo de Carlo
4. Apollo School (1980-83), Amsterdam, Netherlands. Herman Hertzberger
5. West Middle School (1989), Bryn Mawr, PA. Kieran Timberlake
8. Gary Middle School (2000’s), Tacoma, WA. Mahlum
10. Burr Street Elementary School (2004), Fairfield, CT. SOM

RESEARCH AND ANALYSIS

Step 1 Research and Documentation
Acquire complete plan and section documentation of your project. Information on these projects is readily available in books and journals at the Northeastern, Harvard (Loeb), and MIT libraries. Adequate sources cannot be exclusively downloaded from a Google search. You are encouraged to cooperatively collect and share information with the students in other sections assigned to the same precedent, but all documentation drawings must be of your own construction.

Determine the scale of the building and draw the critical plans and sections (at least two of each) in CAD. If you aren't certain of the scale, approximate it (a door is generally 3'-0").

Step 2 Preliminary Analysis
As you research and document your precedent, begin to look critically at the building and the set of principles underlying its design. You will construct a set of analytical drawings investigating the logics of the precedent, including (but not limited to) the following:

- Hierarchy and relationships of programs: large programs (gym, cafeteria, etc), classroom zones, administration, service/utility zones
Circulation zones (especially relative size of circulation areas, how they connect and separate programs)

Key zones/dimensions determined by structure

Projection of identity (both within the school and within the surrounding community)

Relationship to context

Relationships between interior and exterior spaces

Parti

In addition to the drawings above, you will construct an analytical model of the building parti. The model should be abstract and should be constructed to a scale (1/16" = 1'-0").

**Step 3  Synthetic Understanding**

The drawing and modeling will be an iterative process of exploring, synthesizing and editing. This process will allow you to extract and clearly describe the essential characteristics of your school precedent, and to understand the way in which those characteristics work together to form a synthetic (integrated) whole. You will share the results of this process with your classmates in a working pin-up.

**COMPARATIVE MATRIX**

As a studio, you will compile all the precedents into matrix of analytical diagrams summarizing and comparing the school design logics. To make these comparisons clear, the diagrams must have a consistent graphic language (i.e. each of the diagrams will be drawn in the same way), should include a similar amount of detail, and be drawn to the same size. A lecture on diagramming techniques will provide examples to help you develop an appropriate graphic style for these analyses. The content and graphic character of the matrix will be determined with your instructor.

**EVALUATION CRITERIA**

The evaluation of your work will be based on two primary criteria: the intensity and insight of the analysis and the graphic quality of the analysis. Representation of the analysis must be designed as rigorously as the building is analyzed. The selection of building documentation, color, lineweights, and text are all critical decisions in the description of the building and its organization.

**SCHEDULE**

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1/11</td>
<td>Assignment Issued</td>
</tr>
<tr>
<td>F 1/14</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>T 1/18</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>F 1/21</td>
<td>Diagramming Lecture and Working Pin-Up</td>
</tr>
<tr>
<td>T 1/25</td>
<td>Desk Crits</td>
</tr>
<tr>
<td>F 1/28</td>
<td>Final Review</td>
</tr>
</tbody>
</table>
Site Analysis

In this phase of the semester will analyze the site of your final building project, documenting fundamental patterns on the existing site that will directly inform later architectural production. As such, this is not a passive analytic exercise but rather a critical, active design exercise that in many ways determines what follows later in the project.

How you view a site, how you document it, measure it, photograph it, what and how you choose to draw, represent, and analyze site conditions and patterns will all influence your site strategies later in the design process. A primary criterion for your success in this studio is the degree to which your work this semester is intelligently and strategically informed by the city and, in response, what potential contributions to the city your work uncovers.

Overview – Scope of work

You will develop your urban analysis and proposals in three stages:

Part 1A  Streetscape studies: (Pin up: February 15)

- 6 Serial vision sketches
- 2 Site sections
- 8 Street sections
- Material observations
- 4 Proposed boundary conditions

Part 1B  Urban analysis: (Pin up: February 15)

- Figure ground drawing
- 3 Figure ground propositions
- Analytical drawings
- Group model

Part 2A  Massing studies: (Due: February 18)

- 3 preliminary massing models

Part 2B  Final massing studies: (Due: February 25- Urban Analysis Final Review)

Note: The complete scope of this exercise will be distributed separately on February 18 with basic programmatic information about the building design project.

- Final massing model at 1/32" = 1’
- 2 site sections at 1/32" = 1’
- 4 street sections at 1/16" = 1’
- Min 2 Street perspectives, manual or digital
- Figure ground diagram, showing context
- Plan or axon diagrams of site [e.g., edges, porosity, circulation, etc.]
- Site plan at 1/32" = 1’

Part 1A: StreetScape Studies

Serial Vision

For first part of the StreetScape Study, you will prepare a series of perspective images through and around the site. The images should be organized into a narrative that documents the existing views and emerging views along a path
as you progress through and/or around the site. Organize the images so the views are linked to show relationships between the buildings, open spaces, contrasting elements, various scales and progression. Map your path in plan and key in the location of each perspective. The method of image generating for this exercise may include free hand sketches, collages, photo montages and computer drawings.

The path you choose to document should be a conscious decision that reflects your attitude toward the site. This may result in a path which emphasizes the edge conditions of the site, an approach to the site or from the site, follows a common pedestrian or traffic path, focuses on a point of interest, highlights similar urban patterns etc.

(6) Serial Vision sketches on a single 11x17 - First drafts due February 4

Site Sections

In this exercise, you will cut two "site sections" and eight "street sections" through the site. Use the CAD file provided to indicate the location of your sections.

The StreetScape sections should demonstrate an understanding of the sectional relationships on and around the site. Choose the location of your sections carefully and provide as much information as possible. Articulate the smaller relationships and larger relationships, slopes, building heights, major projections, openings, topography etc. Pay attention to the content, scale, densities and urban patterns that are revealed through the site sections. To correctly execute this part of the analysis you will have to count, pace and measure the StreetScape. This information will also be useful when you create your site model later in the semester.

(2) Site sections @ 1/32" = 1': Your instructor will clarify the general section locations

(8) Street sections @ 1/16" = 1': Cut through the boundary edges of the site showing the relationships on and across the street. You may also choose to analyze the neighboring streets - First drafts due February 4

Material Observations

To additionally examine the fabric of the site collect 12 detail images of materials that show the content and character of your StreetScape. These photographs should document patterns, colors, scale or textures on and around the site. Compile these images into a 4 x 3 grid on an 11x17 sheet of paper. Note each materials location. Print in color.

(12) Images on a single 11x17 - First drafts due February 4

Site Propositions

Using your observations and analysis from the StreetScape study create a proposal for each of the boundary edges of the site. This exercise does not include the massing or the "meat" of the proposed building but specifically focuses your response to the StreetScape. The proposals should be perspective representations and use your previously gathered photographs, material images, sketches, sections etc. Use a combination of techniques, collage, montage, and line drawing.

(4) Proposals - each proposal on an 11x17 - First drafts due February 4

Part 1.B: Urban Analysis

Urban Morphology

You will document the site and develop three proposals for the site using figure ground plan drawing techniques. In figure ground drawings, buildings – the figures - are rendered solid black; open spaces such as streets, plazas, and parks - the ground - remain white. This reductive drawing technique highlights the structure, scale, pattern and density of the urban fabric and will be a tool for examining how buildings respond to the fabric and shape urban spaces.
Documentation:

You will construct a figure-ground of the existing site. The drawing should cover the full extent of the CAD drawing given. Include a graphic scale.

Due February 8 – one 11x17

Site Propositions

You have documented the site morphology; now develop three figure-ground proposals for your site. The propositions should respond to the specific site conditions you observed in the figure-ground drawings of the neighborhood: consider density, scale, and movement. Use the following metrics as you carry out this phase of study:

Site area: Approx 57,000 sf
Gross footprint area of buildings: 35,000 sf
Gross open space: 22,000 sf

Configure the open spaces in such a manner that there are two identifiable major open areas totaling about 15,000 sf, one of which is directly accessible by public from the street and one of which shall be directly linked to and subservient to one or a portion of the buildings that you propose. Consider what the character of these spaces will be and propose an urban agenda for how these spaces may function within the urban context. Exposure, size, connective/isolating nature and basic material palette of these spaces are some parameters that you could consider. Take into account that the definition of an open space may include but not limited to piazzas, squares, parks, buffer zones, corridors, active recreation areas etc.

(3) 11x17 sheets for each of the three proposals: one sheet showing the larger neighborhood and one sheet showing the block and its immediate surroundings. Decide what the extents of this second drawing should be depending on your proposal. Third sheet should introduce another layer of analytical/diagrammatic graphical information on the neighborhood drawing to indicate major spatial relationships that your proposals seek to establish. Include a graphic scale on all drawings. - First drafts due February 8

Part 2.A: Massing Studies

You will now combine your previous propositions into a series of massing studies. Each study should represent a distinct strategy for filling the site with a mixture of buildings and open space. Start by taking your 3 figure/ground proposals and making each into a study model. Before this process, you might revise your figure/ground diagrams based on criticism from the pin-up. Further evolve the schemes as you shape them three-dimensionally. Each should have a clear formal logic related to a typical urban massing strategy. As a set, your 3 schemes should also present a range of approaches. You do not need to adopt the specific approaches depicted below; they simply suggest examples of representative strategies.

For this study assume the overall size of development to be about 150,000 sf.

As you develop the models, consider the streetscapes you generated earlier in perspective and section. The information and context in that work should guide your decisions about heights, edges, and materials in your massing models. There is no height restriction on the site. How does the context imply heights on each of the site’s edges?

(3) massing models that fit into site model. Indicate the nature of ground materials, as well as changes in ground planes. Do not show floor plates. – Due: February 18
Site Analysis and Massing, Part 2B: Block Massing with School Program

Revise your massing studies into a single scheme. Document that scheme with the following work at the scales indicated. Be prepared with verbal arguments that explain the scheme in urban terms. Also be prepared to discuss how a school program would be located on the site. Redesign your urban proposal to specifically locate the school program. Assume that the rest of the development consists of commercial and residential developments.

Use the following guidelines:

- School building: 35,000 sf (may be multiple floors)
- School open space: 10,000 sf
- Public open space: 5,000 sf (min)
- Commercial program: 10,000 sf (primarily at street level)
- Residential program: 110,000 sf (min)

For the residential structures you can use these guidelines for plan dimensions. Assume 10’ floor to floor:
- Townhouses: min 18’ wide per unit; 36’ to 48’ depth.
- Point loaded, low to mid rise: min 60’ wide; 36’ to 48’ depth.
- Double loaded linear block, low to mid rise: 60’ to 80’ depth.
- Single loaded linear block, low to mid rise: 30’ to 42’ depth.

Other hybrid models generated along these dimensional guidelines are acceptable.

It is important that you have a general idea of entrances, major orientations and functioning for all of your proposed buildings. You may refer to your school typology studies when you shape the school on the site. The outdoor spaces should also be reconsidered in location and scale.

*****

Review on February 25:

- Final massing model at 1/32” = 1’ (floor plates of school area optional)
- 2 site sections at 1/32” = 1’
- 4 street sections at 1/16” = 1’
- Street perspectives, manual or digital
- Figure ground diagram, showing context
- Plan or axon diagrams of site [e.g., edges, porosity, circulation, etc.]
### Visual and Performing Arts School

<table>
<thead>
<tr>
<th>Program</th>
<th>qty</th>
<th>area</th>
<th>group sf</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public &amp; Open Spaces:</strong></td>
<td></td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td>Auditorium</td>
<td>4600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– fixed seating; open to public</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– stage accessible by Theater studios</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back of House</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– dressing rooms, green rooms, storage, props</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Space</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– student recreation and dining; adjacent to kitchen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– must be open, can be divided</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible Improvisation Space</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– performance and exhibition, impromptu and for class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– must be open, can be divided</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gallery</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– student exhibitions and crits, accessible to public</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Studios, Practice, &amp; Labs:</strong></td>
<td></td>
<td>15,200</td>
<td></td>
</tr>
<tr>
<td>Theater</td>
<td></td>
<td>3000</td>
<td></td>
</tr>
<tr>
<td>Group Practice / Rehearsal – must be closed</td>
<td></td>
<td>1400</td>
<td></td>
</tr>
<tr>
<td>Studios – small group rehearsals</td>
<td></td>
<td>(2) 800</td>
<td></td>
</tr>
<tr>
<td>Visual Art</td>
<td></td>
<td>3600</td>
<td></td>
</tr>
<tr>
<td>Studios – still lifes, models, instruction</td>
<td></td>
<td>(2) 1400</td>
<td></td>
</tr>
<tr>
<td>Workshop – materials, equipment, construction</td>
<td></td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Dance</td>
<td></td>
<td>3600</td>
<td></td>
</tr>
<tr>
<td>Group Practice / Rehearsal – must be closed</td>
<td></td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Studios – small group warm-up</td>
<td></td>
<td>(2) 800</td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td></td>
<td>3600</td>
<td></td>
</tr>
<tr>
<td>Group Practice / Rehearsal – must be closed</td>
<td></td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Studios – small session rooms, acoustically sound</td>
<td></td>
<td>(6) 200</td>
<td></td>
</tr>
<tr>
<td>Instrument Storage</td>
<td></td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Computer Lab (shared by disciplines)</td>
<td></td>
<td>1400</td>
<td></td>
</tr>
<tr>
<td><strong>Academic:</strong></td>
<td></td>
<td>7200</td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td>(12)</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>– lecture format rooms, not discipline specific</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Administration:</strong></td>
<td></td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>Reception</td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Principal's Office</td>
<td></td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Offices</td>
<td>(2)</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Conference Room</td>
<td></td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Guidance Room</td>
<td></td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Admin/Staff Lounge</td>
<td></td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** 36,000
Other / Service: (approx. 10% of above TOTAL)  

- Kitchen: 200
- Restrooms (6): 400
- Custodial Rooms (3): 50
- General Storage (3): 150
- Electrical / Mechanical Rooms (2): 250

Note: classrooms, studio and lab spaces should be designed with their own storage.

Circulation: (approx. 15-20% of above TOTAL)

Lobby, elevators, egress stairs, ramps as required. Circulation design should integrate with programs listed as "open".

Exterior Space: 10,000

- Performance Space: 7000
  - The site master plan requires that 10,000 sf of outdoor space is dedicated to the school. Part of this total area should be designed for outdoor performances and exhibitions. It may be accessible to the public.

General

The city seeks proposals for a school that is specialized for students of the visual and performing arts. It will serve grades 9-12, and students will come from all parts of the city. The site requires a master plan which also includes proposed buildings and outdoor spaces that can be developed in the future for non-school uses.

Site planning should include a school bus and car drop-off area. Visitor / temporary parking spaces are optional. This area requires curb modifications to the site. Parking spaces for staff and faculty have been provided off-site at various garages in the neighborhood. All designs require a loading area for deliveries and trash pick-up. Deliveries include books, food, furniture, etc. This area should have direct access to any of the streets.

Program Models and Diagrams

For this work, consider the many ways of dividing and organizing the program. The program consists of two large spaces (the auditorium and outdoor performance space) and many smaller spaces of various sizes. It has spaces which are specifically open and connected to the circulation area, and on the other hand, there are spaces of similar size that are specifically contained or closed. The academic programs could be grouped by discipline (art, theater, music, dance), or by type (large studios, small studios, classrooms).

Disregard your site massing for this exercise. Refer to your group typology research. Develop diagrammatic concepts based on both: 1) formal composition, and 2) readings of programmatic adjacencies / function. Specific issues:
- Overall proportion (linear, square, rectangular, etc.)
- Composition of figural spaces versus cellular / repetitive spaces (subtractive / additive; grids, regulation; etc.)
- Program adjacencies of public spaces and academic spaces (i.e., what is near what, and for whom?)
- Composition of cellular / repetitive spaces (rows, clusters, courts)
- Program distribution of cellular / repetitive spaces (by discipline or by type)
- Circulation system, dimension, and its relationship to “open” spaces that are social and connective
- Diagram of outdoor space, open interior space, public space against the solid form of whole (Nolli diagram)

For Friday, March 11:

Have 3 diagrammatic concept models at 1" = 32’ and one drawing per model. The 3 concepts should address the issues above, and the different concepts taken together should assert sufficient variety on all of the issues.

Pin-up on Tuesday, March 15:

Based on criticism, develop one version. Have 1 model at 1”=32’ and 6 diagrams at 1”=32’.
Northeastern University School of Architecture
ARC 2140: Studio 2, Spring 2011
Tuesday and Friday, 1:35 - 5:05 pm

FINAL REVIEW

All reviews in middle space: by print room by projector
April 28, Thursday 2:00 – 6:00: Kelly Ard Chris Genter
April 29, Friday 9:00 – 1:00: Sam Choi Rebecca Whidden
2:00 – 6:00: Amir Kripper Erkin Ozay

Requirements:

- Figure / ground diagram (or Nolli) -- scale at your discretion. Show your school and masterplan scheme. For context, show at least one full city block in each direction.

- Urban analysis diagrams.
  Revise, re-use, or make new diagrams that explain your site strategy.

@ 1/32" = 1':

- Model (this can be an older model if current). Fits in site model. Detail at your discretion.

- Site plan. This should show the main floor plan or roof plan of your school. Show master plan buildings as outlines. Show public space, streets, curbs, and immediate building context (at least opposite side of streets). Indicate material changes (use tone, hatch, or color at this scale). Indicate north.

- Concept diagram, program diagram, circulation diagram, minimum. Axonometric or plan.

@ 1/16" = 1':

- Main floor plan. Show public space, bus drop-off, adjacent building context. Indicate exterior materials and site level changes. Indicate north. Should be in similar orientation as site plan.

- Upper floor plans. Show at least 2 upper levels @ 1/16". If more, discuss with instructor.

- (2) Sections, minimum. Show ground, figures.

- (1) Elevation.

- Model. Show interior public spaces, stairs (as ramps if you wish), interior partitions as necessary to describe space. Discuss glazing and elevation model techniques with instructor. Include context / base as relevant.

- Perspectives. At least one interior and one exterior.
  Images should be processed in a rendering program or Photoshop, Illustrator – please do not present raw Sketchup images. Use collage techniques for site information, materials. Include landscape and figures.

- Tectonics assignment. Detailed study of an area of the school, shown in model and drawings.

** All drawings should use appropriate standards (lineweight, dashes, etc.) of architectural representation.
Floor plans should show some furniture to indicate room program / function (use gray or fine black line).