RICE UNIVERSITY

XS Elementary:
A Space for Eccentricity

by

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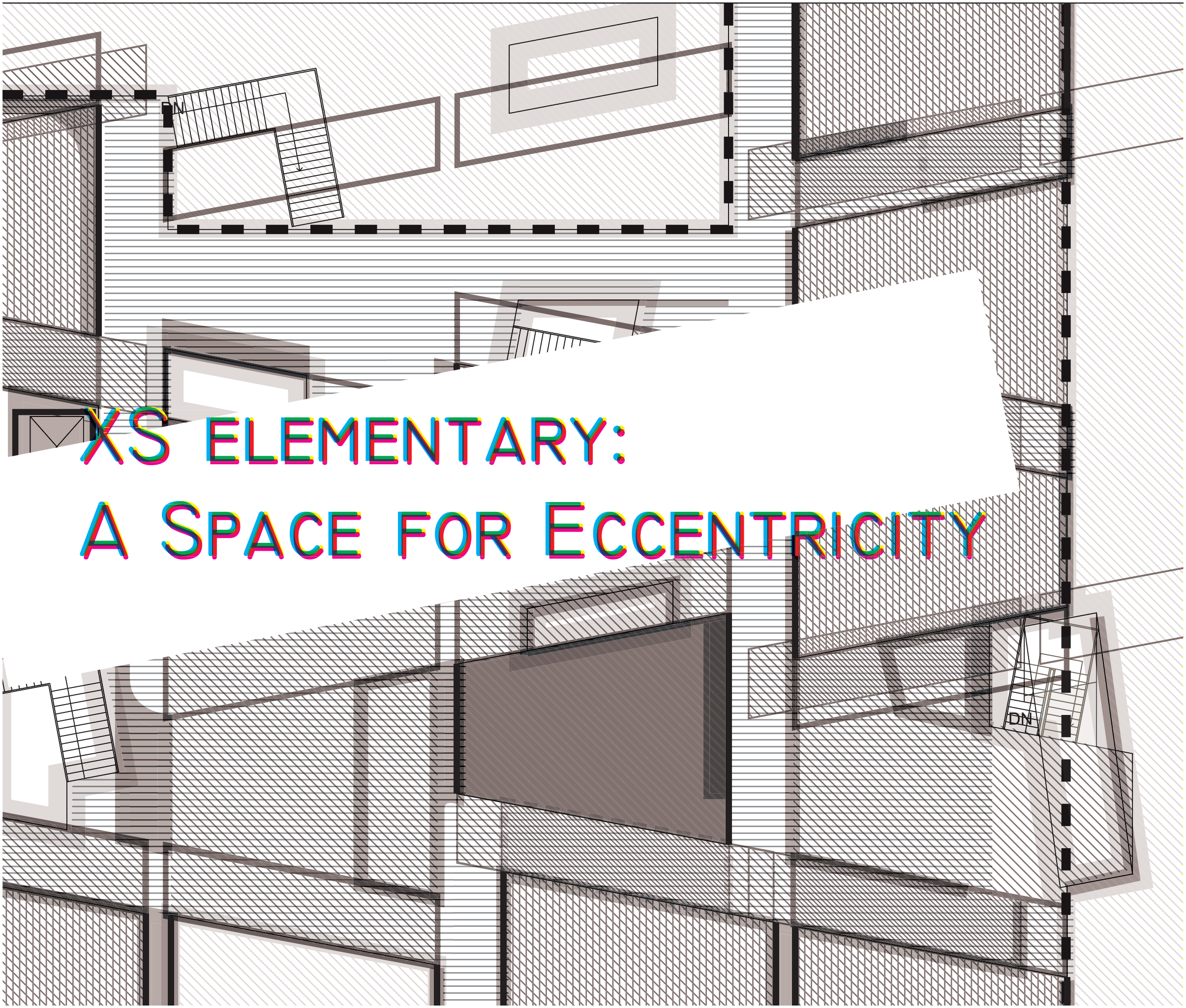
XS ELEMENTARY:

A Space for Eccentricity



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Abstract

XS Elementary: A Space for Eccentricity

by Riley Neal

Sited prominently in midtown Houston, XS Elementary explores eccentricity as a new spatial and graphic model for the public elementary school in order to reconfigure the structure of the learning and urban environment, establishing flexibility through architectural specificity and formal affect.

The project draws from the legacy of mat buildings, employing a dense unit-based framework that is both rationally systematic and embedded with pockets of productively discontinuous eccentric spaces. These auxiliary learning spaces expand education beyond the generic classroom and into an interconnected spatial sequence.

Graphic and spatial techniques of jitter, shift, and overprinting reveal, generate, and reinforce moments of internal eccentricity, embuing an internal urbanity to the school and allowing the city to penetrate the institution.

By engaging longstanding disciplinary efforts to design learning environments suitable to our time, this thesis confronts today's electronic delivery methods and emphasis on efficient standardization, asserting that spatial, graphic, and urban play (the slightly off, odd, and peculiar in the face of standardization) is the avenue through which Architecture can exercise innovative and dynamic design, moving beyond the banal mediocrity of design for specialized efficiency's sake.

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They say it takes a village, or at least in the case of this thesis it did.

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SCHOOLS
PEDAGOGY
UNIT & SYTEM
THE MAT
URBAN INTERIOR
URBAN CONDITION
GRAPHICS + SPACE

PREFACE

XS Elementary proceeds from a series of provocations regarding the way we engage our physical and graphic environments. The design and projection of a new urban public elementary school is not a task of problem-solving, but one of problem-seeking, in which graphic and urban techniques employed spatially permit layered and hybrid possibilities for architectural articulation beyond the banal.

Eccentricities, jitters, shifts, mistakes and sidesteps generate creative work-arounds that propel us beyond the bounds of our current conception, proving that intentionally coloring outside the lines can produce new and welcome deviations.

What follows is a series of investigations in which the bounds of the institution, discipline, and urban condition are mined for those pockets where eccentricity can permit new circulatory, programmatic, urban, and graphic possibilities for the public elementary school.

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A LONG-STANDING ENGAGEMENT

The Architectural discipline has a long and rich lineage of innovative school design. Both in the United States and abroad, developments of the Industrial revolution made public schooling an essential cultural and governmental institution for the progress and advancement of young citizens. While schooling was initially developed for the vocational training of new generations of skilled and literate workers, over time public schools have taken on important roles in social and academic development.

As attitudes towards the role of the public school have changed and access to public schooling has expanded the expectations and theories of educational architecture have evolved. The post World War II baby boom incited the dramatic expansion of the American public school system in the 1950s and provided a fertile ground for innovation in the design of learning environments. School designs featured access to plentiful daylight, adjacency between learning and outdoor play-space, and shared courts as architects explored school projects for programmatic and spatial innovation.

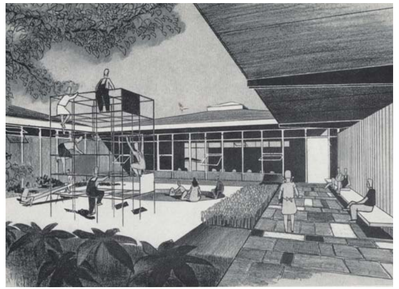
While the 1950s may have provided a fertile ground for the development of Architecture's engagement of the public school, the years since have proven to be much more challenging. Stringent budgetary constraints and safety demands coupled with increasing requirements for testing-validated student performance have shifted school design emphasis from innovation and quality to efficient standardization of learning. School designers have had to become technicians of school building, negotiating restrictive programs and competing with teams of engineers, financiers, and efficiency experts for the inclusion of any programmatic or spatial excess.

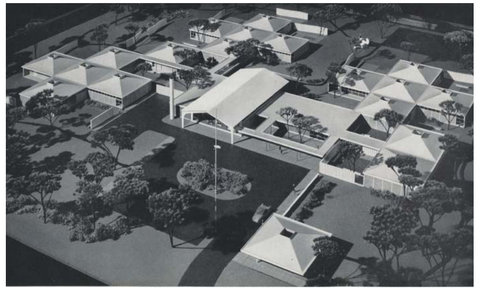
On March 15, 2012 at the Rice University Kennon Symposium, architectural theorist, critic, designer, and educator, Jeffrey Kipnis issued a call to action:

"We don't design prisons any more… because you can't leave the security of your neighbors open to the unpredictable imaginations of an architect. We don't design hospitals any more. ***Pretty soon we're not going to design schools, and when we lose schools that will be a big problem.***

… Boutique specializations come in with a psychologist, a safety expert, a legal expert, a cost evaluator and they make a team and … they do nothing but schools and they will win every argument about reproducing the banal mediocrity of a pretty good school, because that's actually what most anybody wants."

How can Architecture employ spatial, graphic, and urban play to move beyond the stale mediocrity of school building for efficiency and towards compelling and dynamic urban school design?





Baby-boom-era schools

(left) Bellaire Elementary School, San Angelo, Texas, CRS (1955)

(right, center) "The Universal School" for Collier's Magazine,TAC, Norman C. Fletcher, Walter Gropius (1957)

Movement between digital environments and tactile learning is an essential task of the contemporary public elementary school.

The project of a new public elementary school is at once a very small and a very large problem. The public elementary school, as a small, local construct, has the potential for great impact, both upon students, as a public who will explore the building over an extended period, and within the urban fabric, as a public institution.

One must acknowledge that the individual, and specifically the child of the digital age, is at the nexus of a vast and invisible global network of infrastructures and flows. While this interconnected environment has the potential to generate an overstimulated and insulating city — that Georg Simmel, in "The Metropolis and Mental Life", refers to as a **"structure of the highest impersonality"(72)** — it also offers both a challenge and an opportunity for Architecture to act in the smallest of ways to generate enormous impact.

As such, the school of both today and the future must recognize that contemporary children are in contact with an incredibly connected and hybrid reality in which they navigate seamlessly between finger swipes of an I-pad tablet and fistfuls of dirt from the playground. The architect, in turn, must embrace the eccentricity, physicality, and hybridity of that improvisation and play, designing with the intent to innovate within a reality of standardization, not for it.

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"I'm being grotesque but you got to be, you see what I mean? You've got to be crazy. It's too late to be sane…too late. You've got to go full-tilt bozo. Because you're only given a little spark of madness. If you lose that, you're nothing."

- Robin Williams from *Off the Wall* 1978

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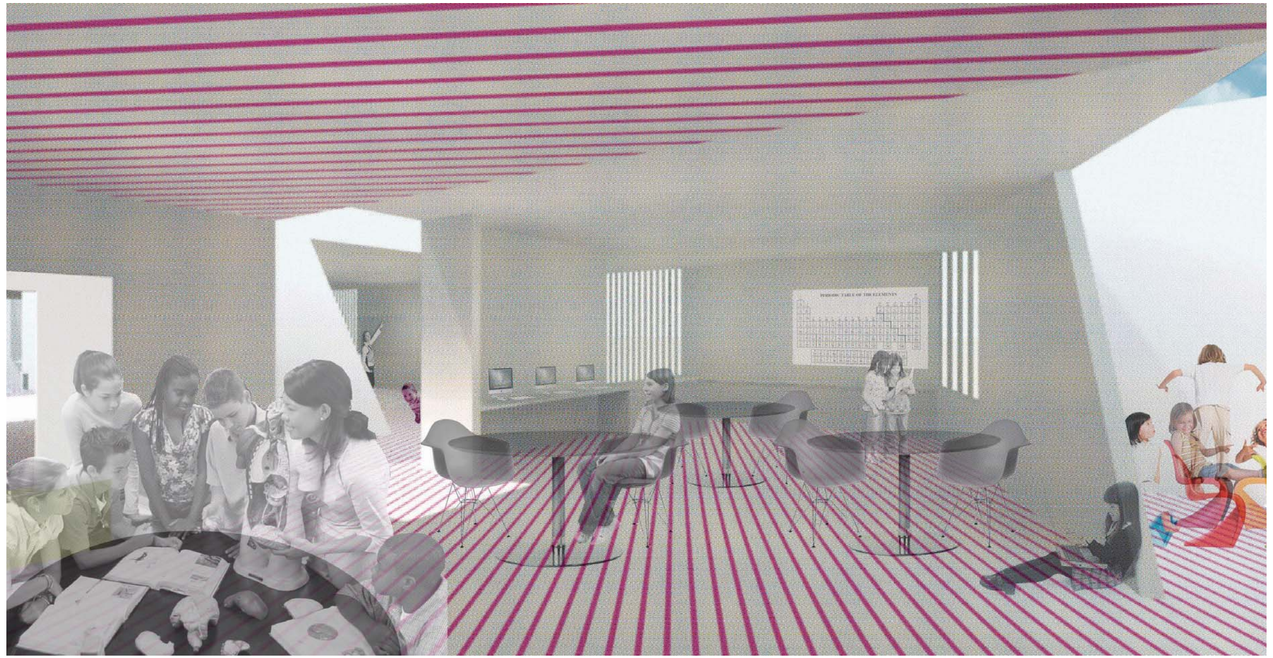
A Space for Eccentricity



ec·cen·tric [ik-sen-trik, ek-] ***adjective***

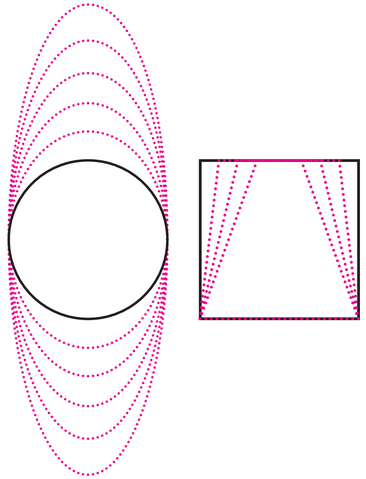
1. deviating from the recognized or customary character, practice, etc.; irregular; erratic; peculiar; odd: eccentric conduct; an eccentric person.

2. Geometry . not having the same center; not concentric:used especially of two circles or spheres at least one of which contains the centers of both.

XS Elementary posits eccentricity as a spatial and graphic technique to establish a new model for the public elementary school, one which reconfigures the structure of the learning environment, establishing flexibility through architectural specificity and formal affect. The thesis seeks the slightly odd, off, and peculiar in the context of educational systematization.

The project's interest in eccentricity is twofold, much like the standard definition of the word. On one hand, eccentricity is defined as a geometric and systematic condition depending upon measured permutation, while on the other it deals with a more qualitative and environmental character, allowing for lingering, detour and novelty within the systematic.

These two types of eccentricity are exploited within the context of, and as an alternative to, the proliferation of the efficient, interiorized, standardized, off-the-shelf, double loaded corridor, banal and mediocre school.



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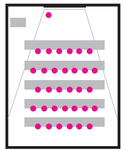
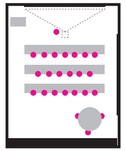
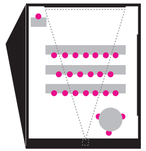
(above)Typical new school classroom, circa 2010. The classroom's plan (right) closely resembles the layout of classrooms dating back to the Industrial Revolution.



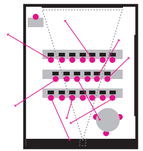
Industrial Revolution



1990's



2000's



Today

The public elementary school, while currently the predominant form of education for American children, is a relatively recent phenomenon, developing rapidly over the last century to meet the needs of a rapidly growing and changing democracy. Originally housed in a one-room, multi-aged school house, the contemporary elementary school has now grown and transformed to schools of over 20 classrooms and 800 students.

The school building, as a result of this rapid development and the prominence of education in the democratic system, has proven to be a particularly intriguing architectural problem; one which has resulted in a lineage of school types, creating not only new environments, but also new methods for interfacing with educational material and the social possibilities of the child's first adventures outside of the home and into the realm of the public.

It is surprising, then, to discover that the school room itself, as the unit of education, has remained largely unchanged despite the transformations of the industrial and information ages, retaining a form designed for the lecture format despite new developments in pedagogy that necessitate collaborative and hybrid teaching approaches. A new approach to school design must address the classroom as both an independent unit (of which much is demanded) and as a component of a larger system that allows for a connection to a series of other programmatic spaces with distinct scales and qualities.

efficient
interiorized
standardized
off-the-shelf
double-loaded corridor
BANAL & MEDIOCRE SPACE

In the investigation of school architecture across the last 100 years, we must question both the content and the graphic form in which we convey information.

How can we establish spatial and graphic systems that permit interconnectivity and hybridity appropriate for a digital age?

How can we interrogate both the spatial and graphic systems of the school simultaneously?

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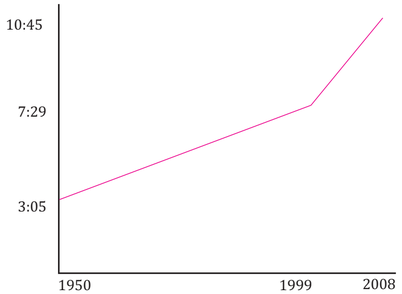
The survey of the contemporary public school is as much a graphic and spatial problem as it is one of information, index, and analysis. Contemporary children are avid and prolific consumers of media and graphic content. According to the Kaiser Family Study, *Generation M2*, which tracked media consumption in children between the ages of 8 and 18, youth in 2008 consumed an average of ten hours and fourty-five minutes of media daily (2), up from three hours and five minutes in the 1950s . Today, that means increasing hours of engagement with digital environments and graphic media.

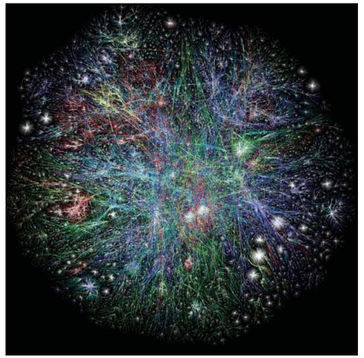
As such the design of the new public elementary school must address the saturated, dense, and highly relational nature of digital environments and graphic media in which children regularly operate (think highly mobile navigation, access, and interrelationship). The method by which information (within the learning environment, as well as in the study of the learning environment) is composed, juxtaposed and conveyed forms a new type of graphic and spatial content, actively reconfiguring the relationship between informational bits, the vehicle by which they are conveyed, and the individual who interacts with them.

XS Elementary investigates formal, spatial, urban, and graphic operations which graphically recontextualize information in order to establish new relationships in the learning environment and to set new priorities for the elementary school operating in the hybrid and media-saturated present. Specifically, the project engages the folding of paper as an operation which establishes new spatial and graphic relationships between data and analysis displayed on the two-dimensional printed surface.



media consumption, age 8-18

(above) Kaiser Family Study, *Generation M2, Media in the Lives of 8- to 18-year-olds*



(left) Contemporary children move quickly and seamlessly between digital and analog learning and exploration both within schools and in their homes.

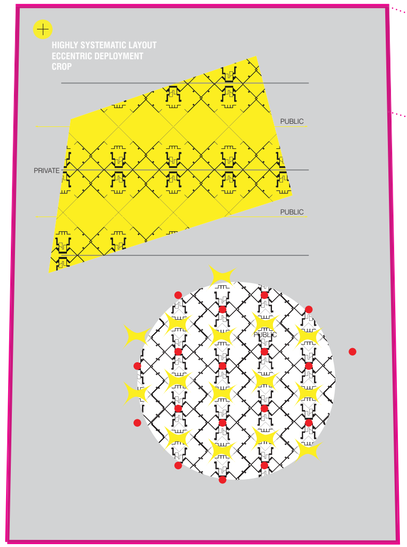
(above) Map of the Internet, The Opte Project (2003)

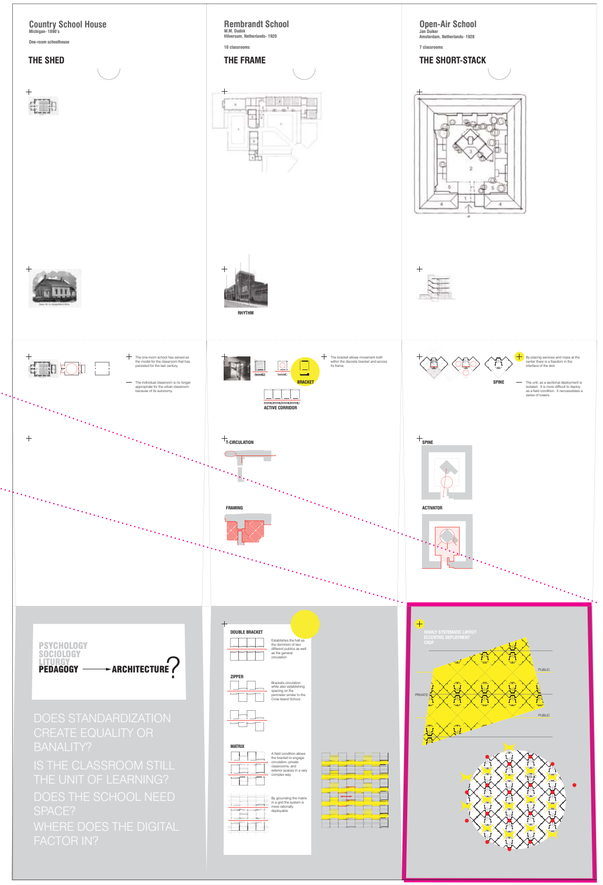
Survey of Contemporary School Architecture

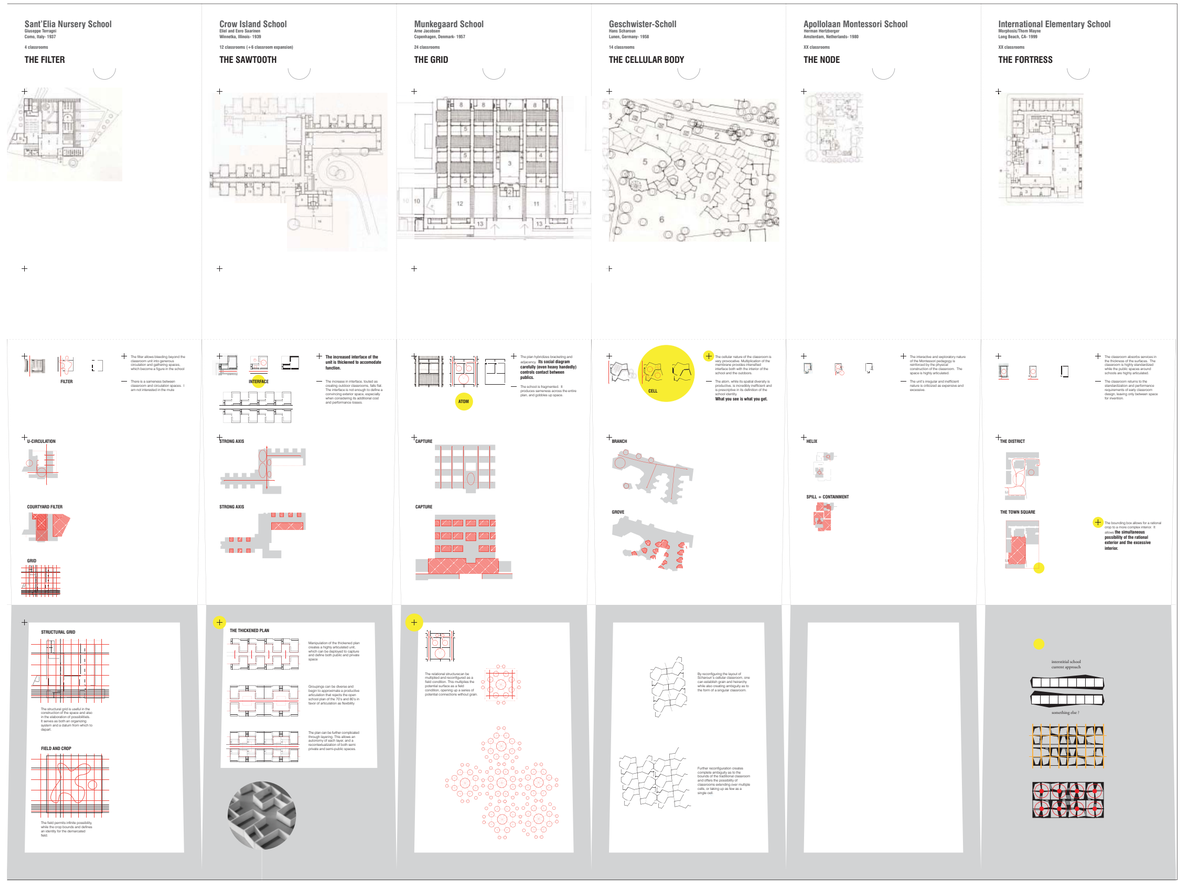
An initial survey of significant school architecture seeks to instrumentalize a rigid grid in order to densify content and create new relationships across large amounts of data. The resulting document tracks pedagical and architectural shifts across a large amount of time, while also projecting the productive remixing of these techniques. The lower portions of the matrix project new typologies using the organizational and programmatic systems of the investigations. The studies quickly developed into interrogations on the unit structure based on an interest in a dense and interrelational learning structure.

(Right) Plan drawings and base information from Thomas Hille's *Modern Schools: A Century of Design for Education*

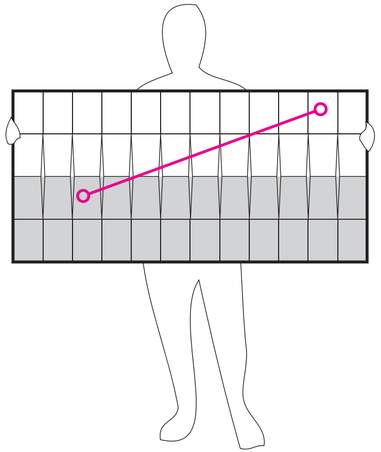
(Below) The hybridization of spatial systems and techniques for school precedents results in play with extreme density and grain. The hybrid does not represent a future school, but instead incites new organizational possibilities for the future school.

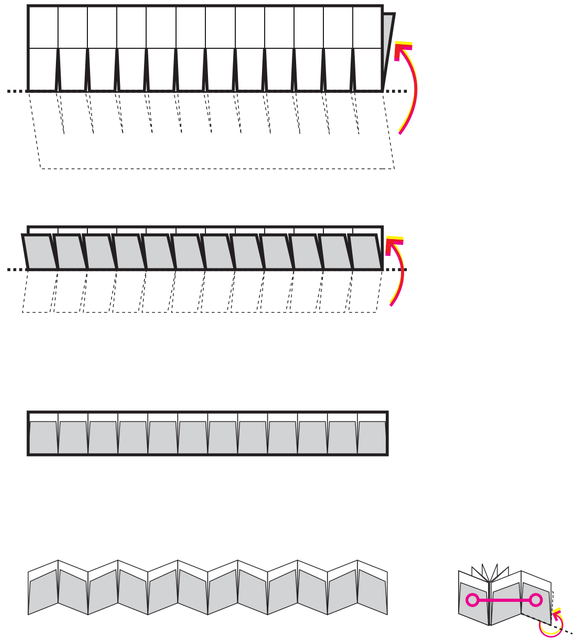






(Below) The precedent study of the contemporary public school is designed to be a tool, which, through the use of the folded surface and a rigorous organizational matrix allows information to be repeatedly reconfigured, juxtaposed, and compared.



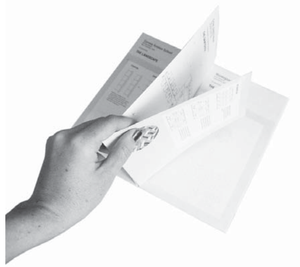


In an ecentric investigation, information is laid out chronologically on the flat surface, with notable precedents of school design occupying columns along the horizontal axis. As the eye moves across the plane, the individual is presented with a highly rational matrix of plan drawings, classroom design, pedagogical approaches, and classroom unit accumulation, presenting changes in the public elementary school over time as the priorities for public schooling have changed.

Through the introduction of a fold as a spatial manipulation of the rational informational surface, chronologically disparate items are brought into close contact for comparison, analysis, and hybridization, and larger threads in school design emerge as important facets for the design of the future elementary school. As such, the fold is both a formal/informational operation (systematized eccentricity) and a performative tool (affective eccentricity) that reveals latent threads within school design and provokes new possibilities for hybrid, dense, and saturated learning environments.

The switch between the flat surface, which displays all content evenly, and the fold which selectively juxtaposes bits of information, permits a nimble and dynamic navigation through informational material. By giving the individual the power to juxtapose, reconfigure, and hybridize their informational content, the fold encourages a highly interactive engagement with learning materials which dialogues with digital environments and suggests the possibility of a systematic but highly dynamic learning environment and an intimate relationship between the student, their environment, and curated interaction with learning materials.

Elementary education in the digital age must become interactive. The classroom is no longer the sole unit of learning, but is one instance in a series of highly articulated learning spaces that the child experiences through exploration over the school day and throughout their school years. The teacher is no longer a lecturer. Through the incorporation of both physical and digital tools, the future teacher acts as a curator for exploratory learning. The school must become a highly relational structure, which finds specific interest in both a strong social diagram and a highly articulated unit and spatial system.



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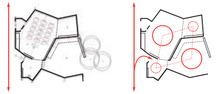
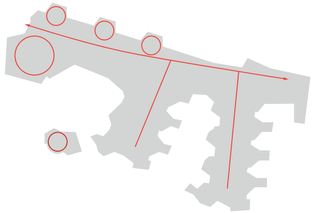
THE SOCIAL DIAGRAM

Geschwister-Scholl
Hans Scharoun
Lunen, Germany (1958)

14 Classrooms



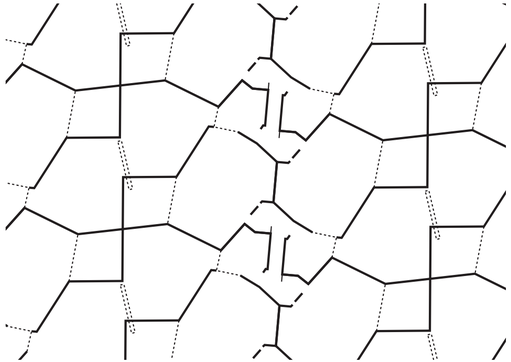
The classroom unit is actually a cluster of cells. Progressing from the hall this cluster includes a workroom, large primary classroom, breakout space, and an outdoor learning court overlooking shared outodoor play space.



The school plan uses a branching structure in order to give community spaces (above) and classrooms (below) all access to natural light and the outdoors. The system is inefficent, but provides great amenities to school rooms.

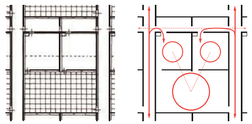
Eccentric investigation of the precedent study permits the hybridization of relational structures, establishing new spatial systems for the use of the furture elementary school. Through the use of this hybridization in the survey of the Contemporary elementary school. Specific interest in the unit and the strong social diagram establishes the basis for XS Elementary and the assertion that the new public elementary school will be a decidedly relational unit-based urban construction.

The Geschwister-Scholl, by Hans Scharoun, investigates the classroom not as a single generic space which accomodates many activities, but instead as a series of highly articulated spaces which allow for interconnected and specific learning. This conception of the classroom, while seemingly abandoned in the development of the contemporary school, has value for a contemporary society in which many types and scales of learning must occur simultaneously within the same classroom unit.

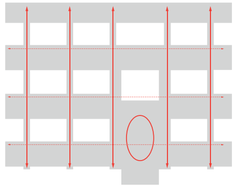


Munkegaard School
Arne Jacobsen
Copenhagen, Denmark (1957)

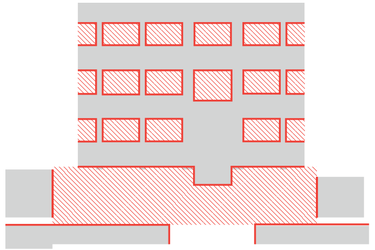
14 Classrooms



The classroom unit is highly rational and orthogonal in plan, but includes differentiated spaces including the primary classroom, a small entry space, and a large courtyard shared with an adjacent classroom.

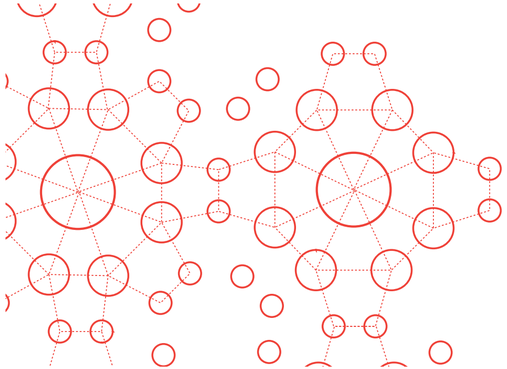


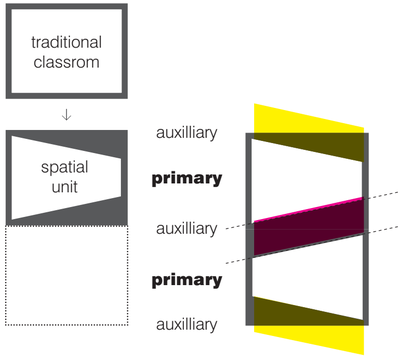
The classroom's innovation comes in the way it brings distinct groups into contact with another. Circulation (above) is overstated. Students in a shared court enter their classrooms from distinct corridors creating a strong social diagram in which children are involved in the the casual encounter of their corridor, and in a separate association with the intimacy of their courtyard (below).

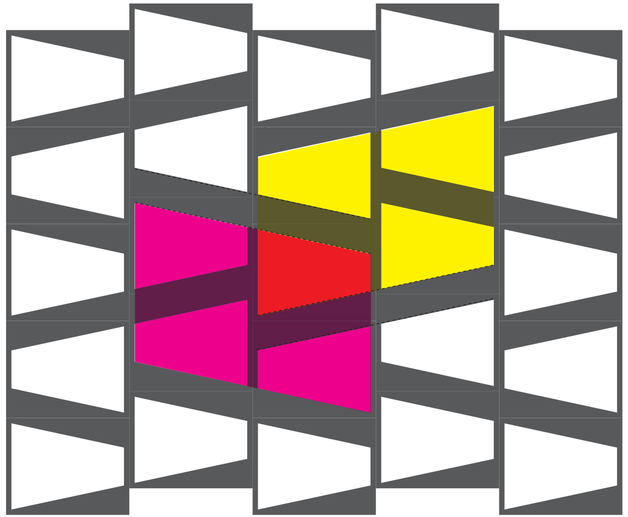


The Munkegaard School establishes a strong social diagram in which distinct publics are delineated and then recombined through circulatory manipulation. Students from adjacent classrooms enter through distinct hallways into their respective classrooms, and through them into a semi-private courtyard intimagely shared with the adjacent classroom. This structure brings distinct groups of students into contact in ways that otherwise would not be possible using the pocket courtyard as a mechanism.

By remixing the two projects XS elementary projects a dense and differentiated structure (center, left) emerged from the stacking of the Geschwister unit. A similar rethinking of the Munkegaard classroom further articulates its spatial structure, establishing reciprocal circulatory and programmatic relationships between classrooms and auxilliary learning spaces which permits nimble relationship between students, teachers and learning materials.







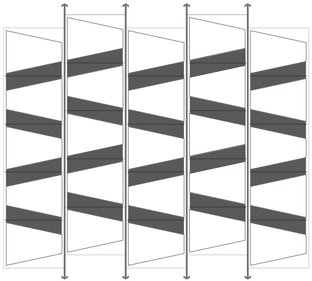
Pairing (above)
The pairing of spatial units produces a series of primary and auxilliary learning spaces along the oblique.

Each spatial unit is implicated in a series of relationships with adjacent learning spaces through those obliques (right).

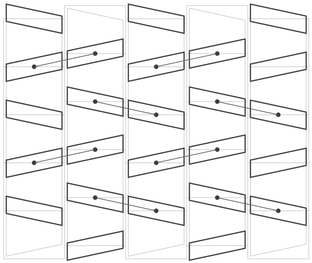
The investigation of the new elementary school sets up a unit-based spatial and programmatic framework in which the independent classroom "box" is no longer the unit of learning. The classroom is replaced with a spatial unit, which contains a primary learning space as well as two secondary fragments that, when paired, produce two primary learning spaces as well as a shared auxiliary learning space along the oblique. This space serves as a spatial and programmatic pocket in which eccentricity is encouraged.

Primary classrooms accommodate groups of up to 20 students, fostering smaller group interactions than traditional classrooms. Within these spaces student learning moves quickly between teacher-directed and teacher-curated learning. Oblique pockets put occupants in close contact with auxiliary learning spaces, housing break out and collaborative space as well as resources traditionally separated from the classroom in a central library or media center. By dispersing a number of these resources into direct contact with the classrooms themselves, education incorporates interactivity and encourages collaboration between classrooms.

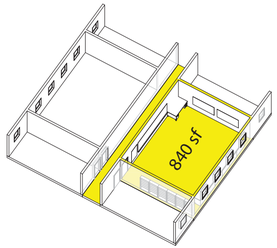
System (left)
The system allows for the establishment of both a unit and a series of sub-assemblies in which the unit is implicated.



Efficiency (above)
In one grain, efficiency establishes an ordering system accomodating normative circulation, wayfinding, and building systems such as mechanical and plumbing.

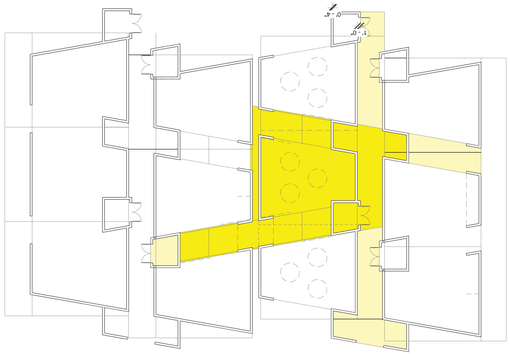


Pocket (above)
A secondary, discontinuous grain within the assembly establishes a spatial system of pockets in wihich non-traditional programs, circulation, and spatial qualities are fostered, expanding the classroom beyond the generic box.



Traditional Unit (below)
Double-loaded corridor
Spational optimization through standardization
Unit-based system

Eccentric Unit (right)
Redundant circulation system
Spatial optimization through grain
System-based unit
Space accomodating eccentricity

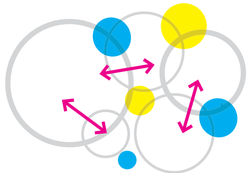


AGGREGATION

The aggregation of primary and auxiliary learning spaces into larger subassemblies encourages a series of relationships between the parts. An individual unit is directly connected through the oblique to its pair on each side, but also possesses eccentric connections to a much larger series of spaces. These pairings and subassemblies allow the expansion of the classroom from a single generic unit into a series of spaces with different scales and qualities, expanding the types of interactions that occur between teachers, students, and learning materials.

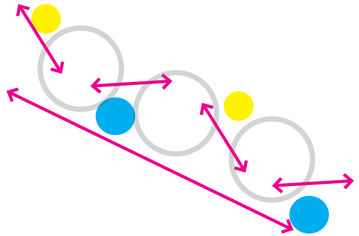
These relationships are subtly manipulated in the yearly advancement of the student through their elementary school education. Distinct articulation of the classroom at each level of education creates evolving social relationships throughout the student's occupation of the building.

A series of spaces outside of the classroom proper become the dominion of the classroom through auxilliary, shared, and interconnected learning spaces.



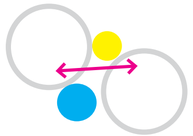
Soup (Grades 4 and 5)

The soup establishes a highly relational environment in which units of varying size allow interconnectivity and interaction. Pocket spaces are articulated by unique lighting conditions, including both filtered and direct natural light and built in seating encourages lingering in "between spaces"



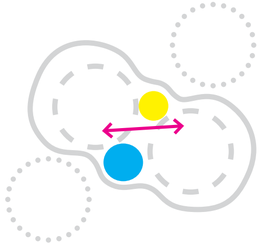
Spine (Grades 2 and 3)

The spine establishes hierarchy within the system for younger students. Along the space, classes are arranged by grade level and students can choose to circulate either through the direct corridor or along the oblique, moving at angles through classroom and pocket spaces.



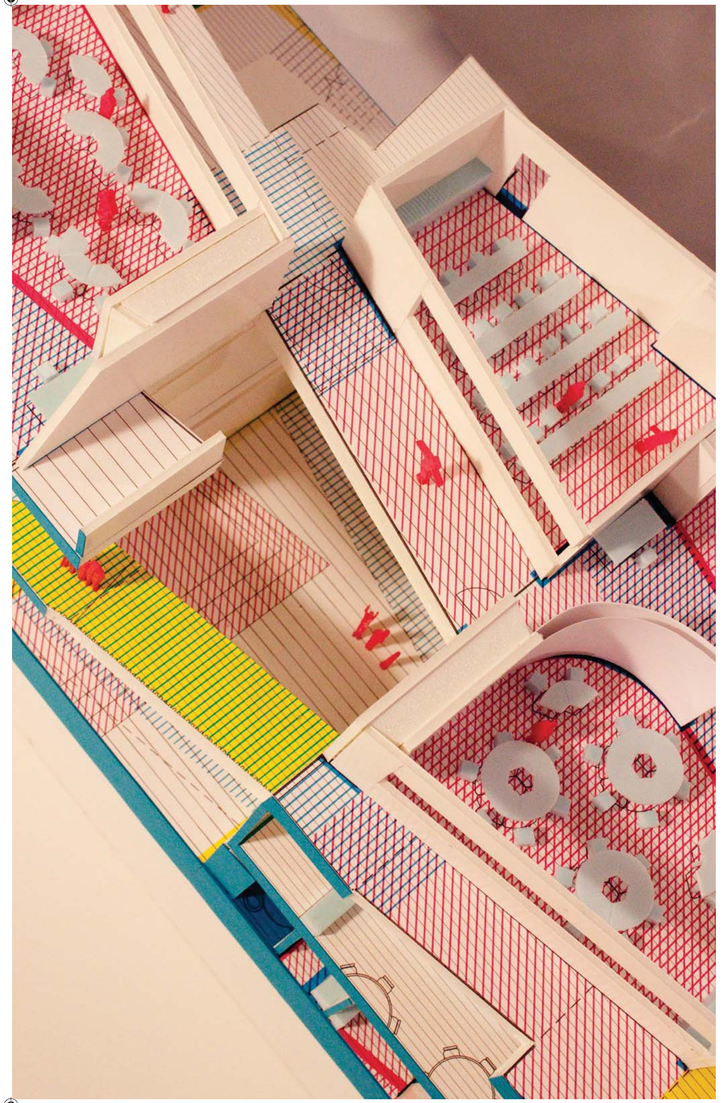
Buddy System (Grade 1)

Classrooms for Grade one operate on the buddy system. They allow for the connectivity of the upper grades, while provididing a level of containment indicative of the younger grades. These classroom subassemblies are located on the 2nd level in direct contact with the library and play space, encouraging extroversion.



Pair (Kindergarten)

The kindergarten classroom provides a level of containment. Each unit is doubled with another and allowed to share central service cores and activity spaces. The Unit absorbs a series of adjacent spaces so that pocket space can be absorbed into the unit, chargin the space with a series of possibilities.



(left) Foam-core and laser-print detail section model-illustrates manipulation of structural bay system and affect of eccentric graphic application.

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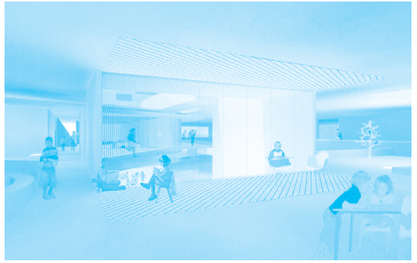
A perfect overprint (above, top) compared with a jittered overprint (above, bottom) reveals the eccentricity of the disjunction between layers, revealing moments of dense overlay within the screen as intensities worth exploring.

(far right) Individual screens of cyan, magenta, yellow and black are separated.

Beyond an isolated interest in the structural and social framework of the elementary school, XS elementary explores graphic play as a means to produce new qualitative and spatial affect for the public elementary school. By employing the graphic as a performative design element, the project moves beyond graphic play as diagram and towards a graphic with spatial content. Specifically, the thesis explores the technique of overprinting as both a design technique and a surface articulation in order to further expand the spatial effect of the eccentric framework.

Overprinting is a graphic technique originating in the fields of printing and lithography. Commonly associated with the CMYK color model, the process involves the overlay of a series of individual color screens. Transparent ink transferred to the image surface is overlain in the creation of an emergent image possessing a vastly larger array of tints and shades based on the combination of the initial two or more pigments. Traditionally used pigments include cyan (C), magenta (M), yellow (Y), and black (K).

While overprint is commonly used in the production of stunningly realistic photographic depictions, the technique, through its highly relational and layered nature, also possesses the potential for productive misuse as both a graphic and spatial technique.



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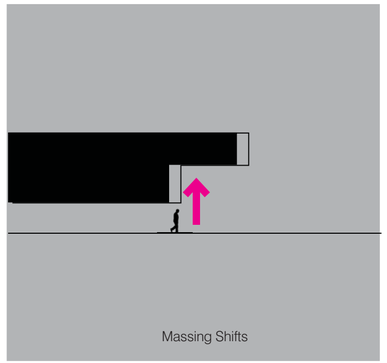
Overprinting process allows for the creation of a pleothora of colors from the use of only 4 primary tints. Cyan (C), Magenta (M), Yellow (Y) and Black (K). This process can be used to create the most realistic images through systemic calibration of the additive process. But it can also be misuesed to create new possibilities within the system. Two primary techniques are examined in this project, including shifts and jitters. They are utilized in both the urban environment and the interior to create possibilities beyond efficiency and relism within the context of systems.

(below) An example of architectural application of jitter as a surface technique at the Brandhorst Museum in Munich, by Sauerbruch Hutton (in 2009). By overlaying two grains of surface the perception of each grain is contingent upon viewing angle. Thus the jitter between the layers becomes performative as the visitor inhabits the space.

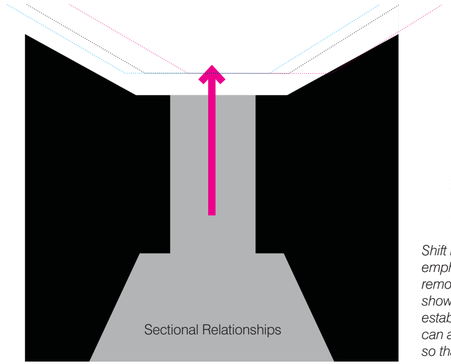
XS Elementary exploits the nature of overprinting as a planometric system and a means of generating qualitative affect. Color is employed as a design tool embedded with spatial meaning, and monochromatic screens establish relationships for pockets/poche (cyan), program (magenta), daylighting (yellow), and efficient systematic distribution. When overlaid, these screens, through their loosely relational structure and emergent disruptions, disjunctions, coincidence, and jitters create moments of intensity within the project suggestive of differentiated activity, programmatic bleeds, and spatial anomaly. The localized and qualitative graphic effects of the manipulation of these screens opens up the image to a range of permutations, established by the graphic, manipulated, and finally establishing the quality of the space by the literal graphic application within the school.

The project employs two distinct overprinting manipulations in this graphic play; jitters and shifts. Jitters represent minute discrepancies in color plate placement in overprinting, and can be utilized to produce localized and qualitative graphic effects, signaling subtly perceived spatial manipulations over time. Shifts, on the other hand, are larger disruptions or moves which are employed in the printing process to establish hierarchy or coherence. These types of moves signal entry, or deliberately bring a portion of urban fabric into the form of the school. These moves bridge the gap between the strong plan reading of the technique and the three-dimensional play through the section and between levels.

URBAN



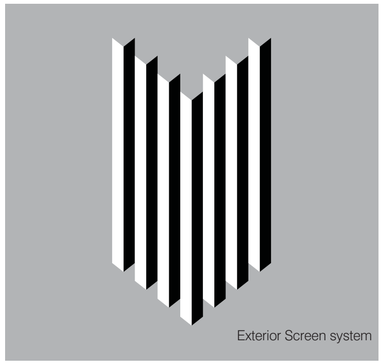
INTERIOR

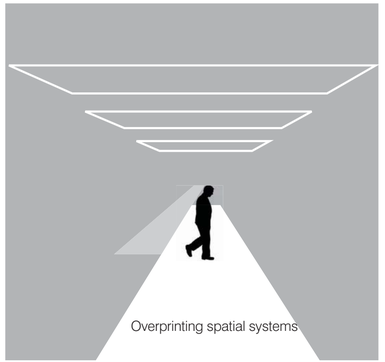


GRAPHIC

SHIF T

Shift is used as a means of introducing hierarchy and emphasis within a graphic. In addition to knockouts, which remove a portion of a screen so that other screens may show through, Shift as a graphic, spatial, and urban form establishes moments of clarity within the dense overlay and can also be associated with erasure and immediacy more so than the layered affect of jitter.





JITTER

Jitter employs a disjunction in coincident screens in order to produce qualitative affect. Activated by navigation of the graphic, space, or urban environment, the affect of jitter is a flickering of several layers of information which is perceived subtly over time and occupation. It is particularly useful in the school where inhabitants explore the building over a period of years of their schooling.

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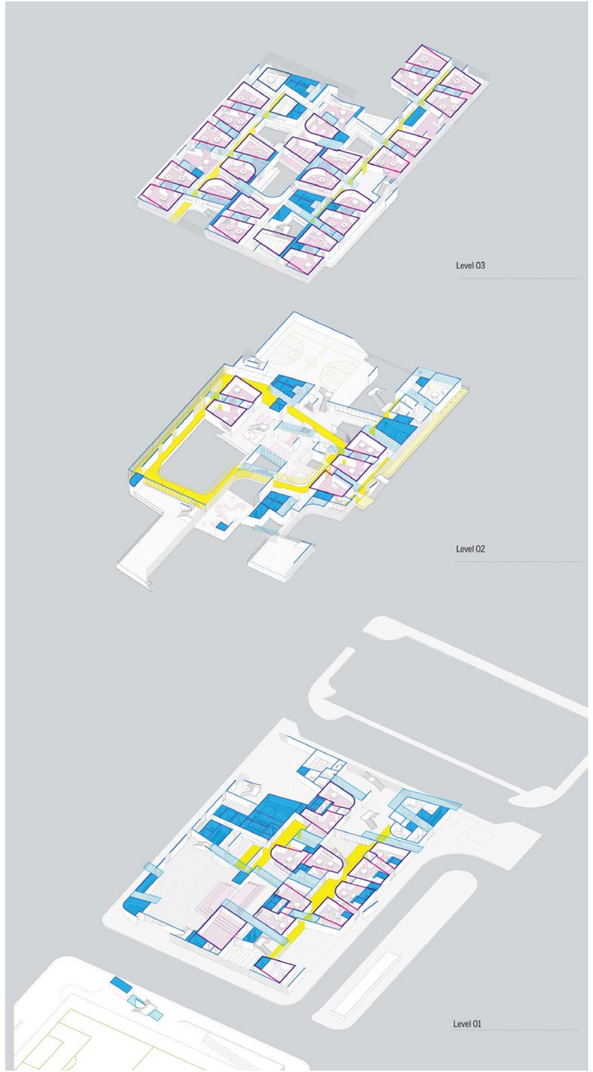
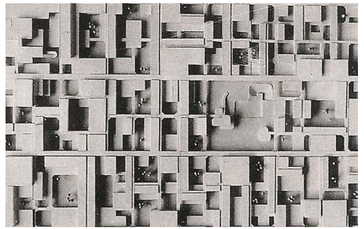


(right) XS Elementary Exploded axon. Classrooms are indicated by magenta hatching, Cyan fills are pockets of differentiated learning and support space. Yellow indicates circulatory manipulation within the system, highlighting its change as one moves through the project.

XS Elementary, in its interest in the highly relational nature of its planometric and sectional moves engages in direct dialogue with the legacy of the mat building. Its approach must therefore address issues of grain, density, and the urban condition.

The mat building takes on many forms. Referred to by Hashim Sarkis in his introduction to "Le Corbusier's Venice Hospital" under as diverse nomenclature as fields, grounds, carpets, and matrices, mats are unique as a building category in that they represent a wide range of styles and address a wide range of problems always rooted in an operation between building and infrastructure(13). As such the mat is a fundamentally rational and regular system, which permits a high degree of variation through local adjustment. The mat implies a vast horizontality in which in-between (and eccentric) spaces are essential activators of the urban interior, denying an exterior urbanity for a decidedly interior one.

XS Elementary is not a mat, but rather, in the words of Neil Denari at Rice University's Thesis Defense on January 11, 2013, a "stack attack" made possible through a graphic urbanism which bridges the switch between a compelling and recognizable urbanistic presence for the institution and an eccentric urban interior. The stack attack appropriates the mat as a system of loosely self similar levels, but articulates distinct urban and programmatic relationships which evolve through the section, establishing distinct spatial character on each level.



(above) Berlin Freie University, Candilis Josic Woods (1970's)

Grain

These buildings, because of their massivity often develop assemblies and subassemblies which organize space. These assemblies create grains as a way of dealing with the movement across a flat plane in infinite directions.

Density

Density within mat buildings is dealt with through the use of courtyards and intervening spaces. These allow for density while negotiating the deep plate for daylighting and access to outdoor space

Interconnectivity

The contemporary American School has long been associated with the flat. However, it does not always leverage its potentials. The mat building exploits the flat to create interconnectivity, the bleeding and packing of programs as a way to create new possibilities.

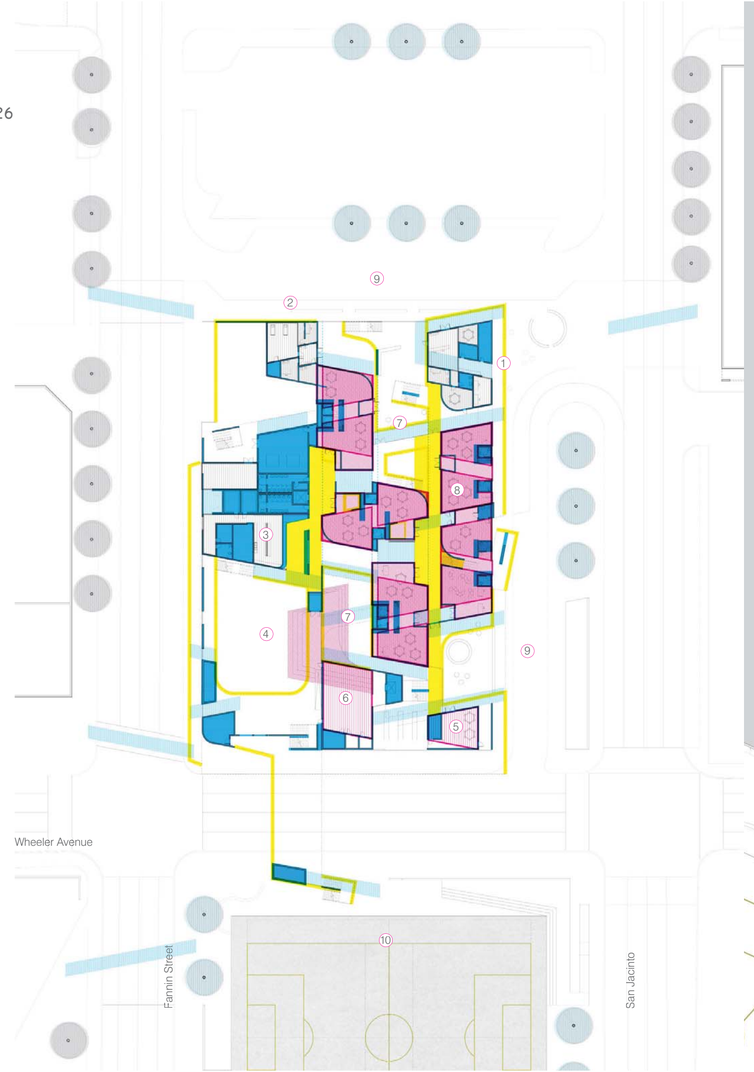
The Urban Condtion

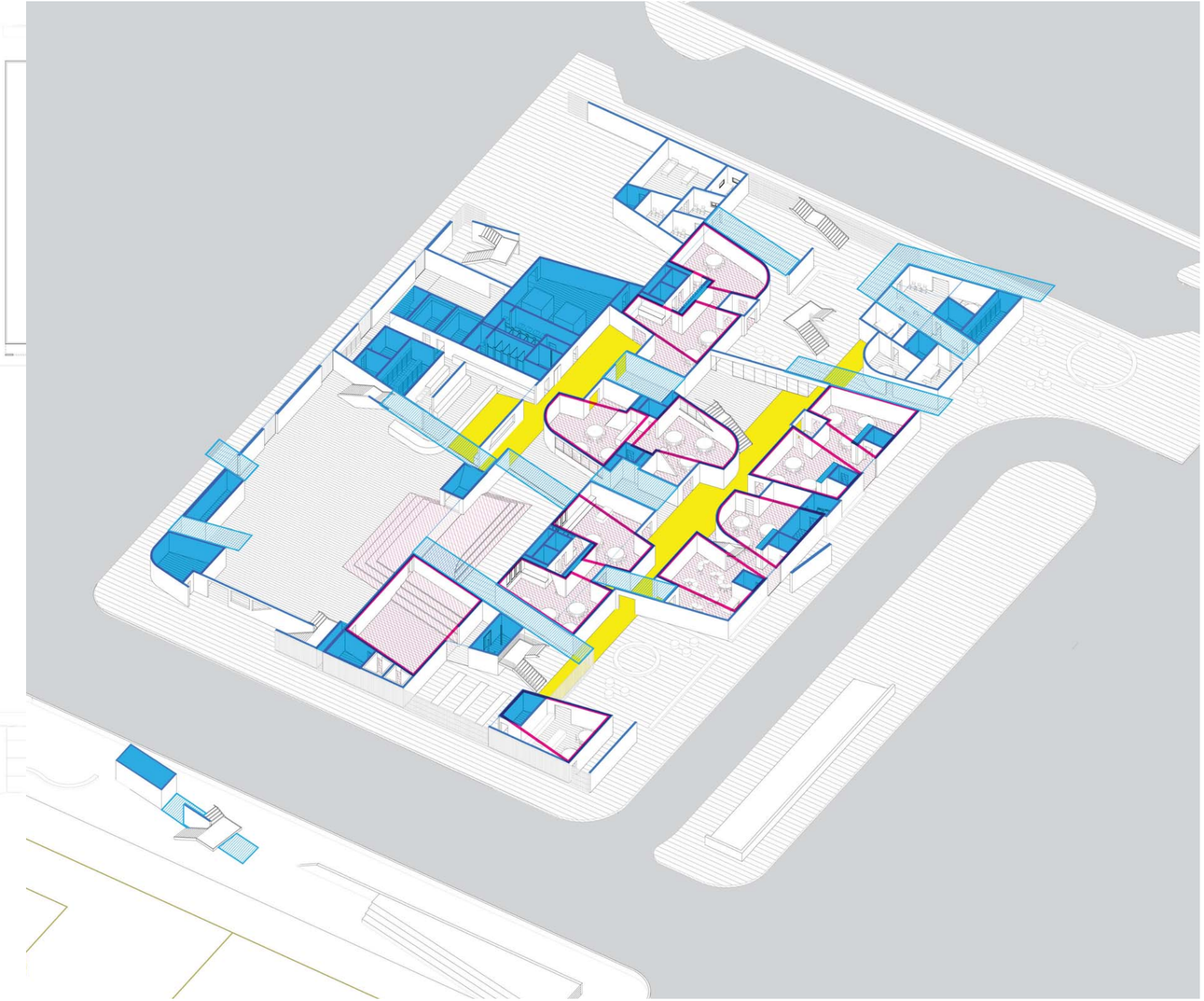
The mat building, for these reasons deals with a variety of issues faced in the urban condition and for that reason establishes its on interior urbanity which can either engage or disrupt the flows and norms of the exterior urban environment.

LEVEL 01

On level one the programmatic and spatial framework of XS elementary manages site circulation flows and requirements. The classroom unit, housing the youngest children, becomes introverted and paired. Ammenities on this level include an administration wing, large multi-purpose hall, stage, music classroom, kindergarten play court, and spaces for student drop-off and pick up.

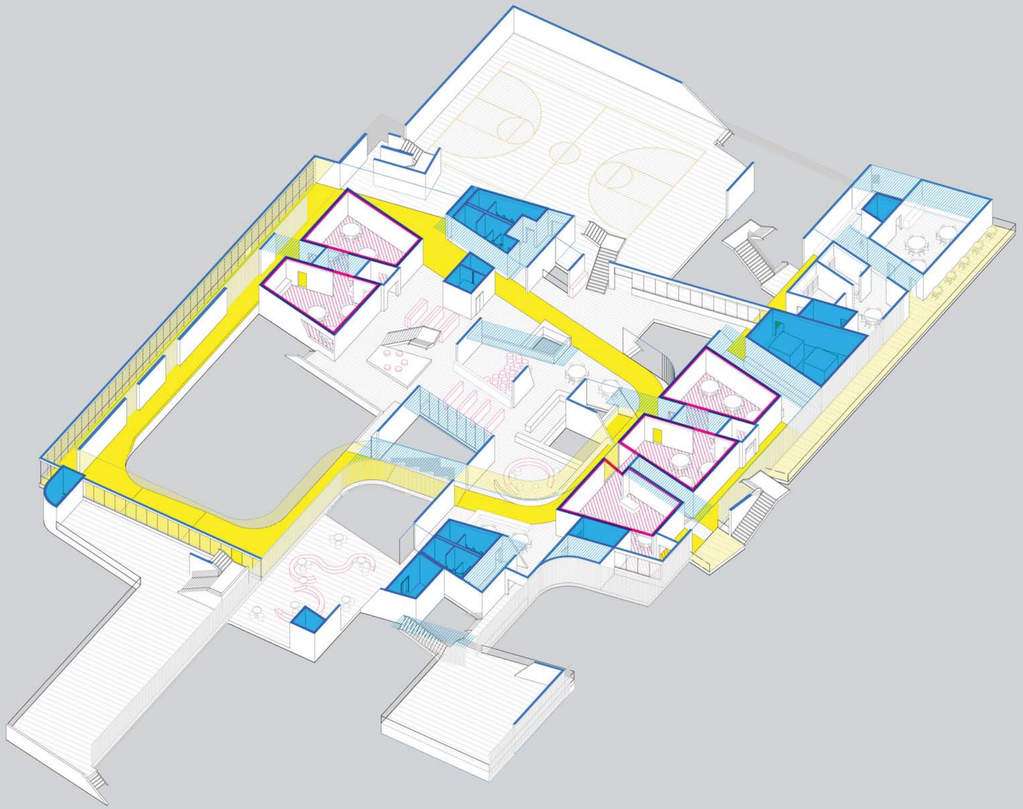
1. Administration
2. Health
3. Cafe
4. Multi-purpose Hall
5. Multi-purpose Classroom
6. Specialty classroom
7. Courtyard
8. Classroom (typical)
9. Student drop-off
10. Public Park

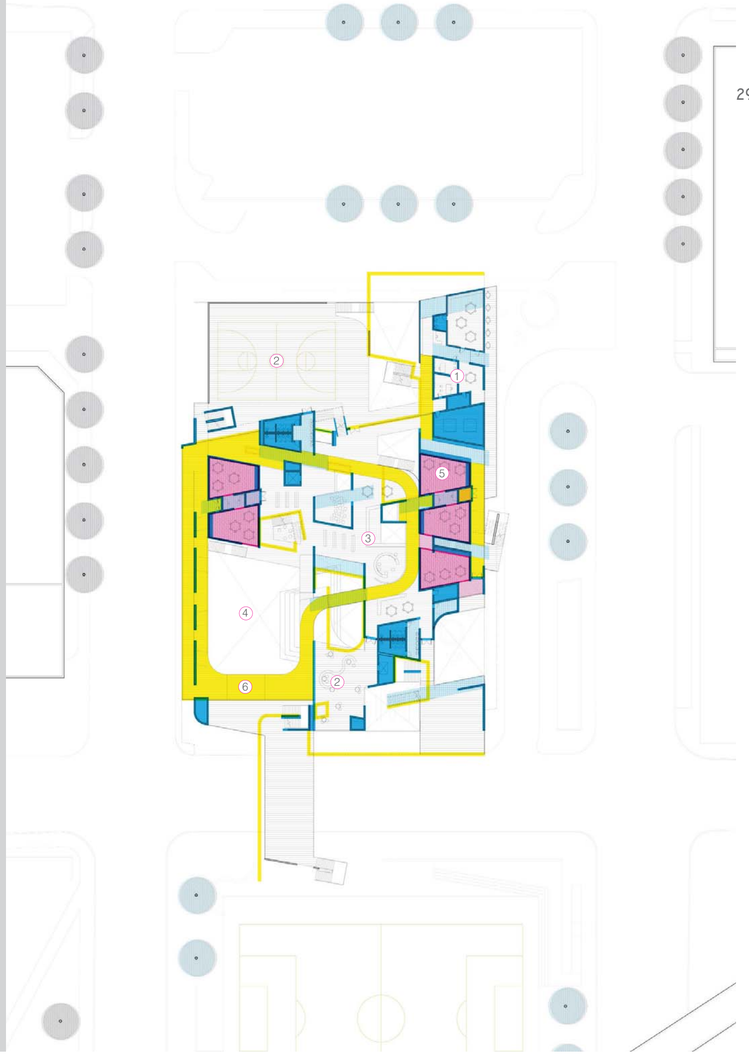




(center, left) XS Elementary Level 01 Plan and Site Plan

(far right) XS Elementary Level 01 Axonometric





LEVEL 02

On level two the on-off sectional condition of the school allows for association between framing classrooms and a free-span mediatheque, indoor track, and rooftop oudoor play deck. The open plate is penetrated by courtyards and skylights from above, allowing audible hints of the activity of the level to gently flow into spaces on the first and third levels.

1. Administration
2. Rooftop play space
3. Library+Mediatheque
4. Multi-purpose Hall (below)
5. Classroom (typical)
6. RunningTrack

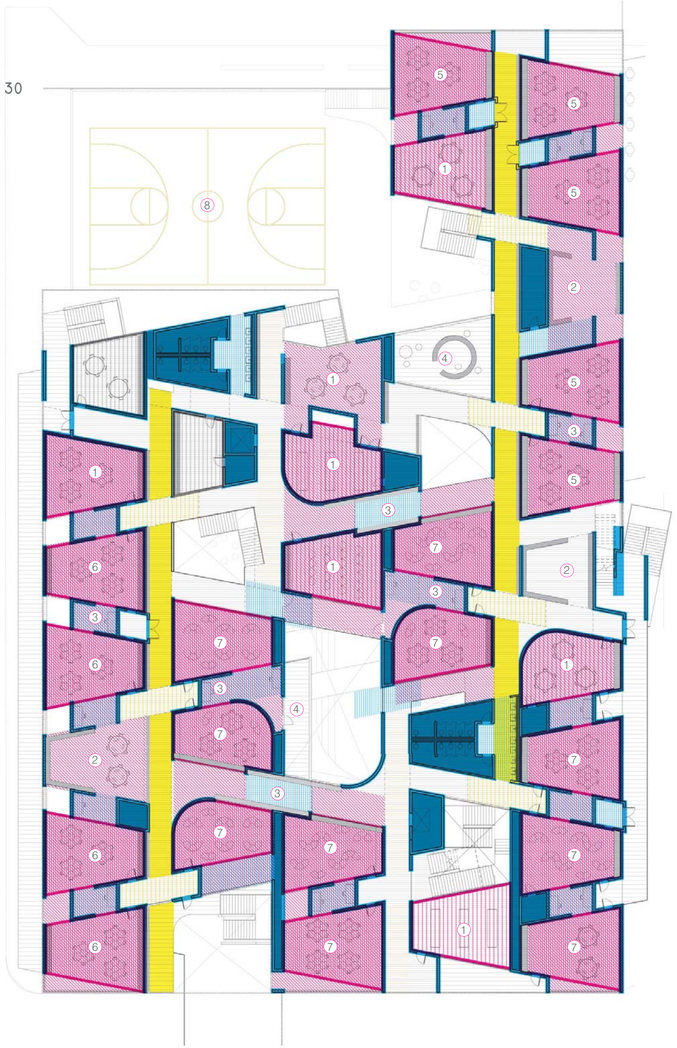
(center, right) XS Elementary Level 02 Plan and Site Plan

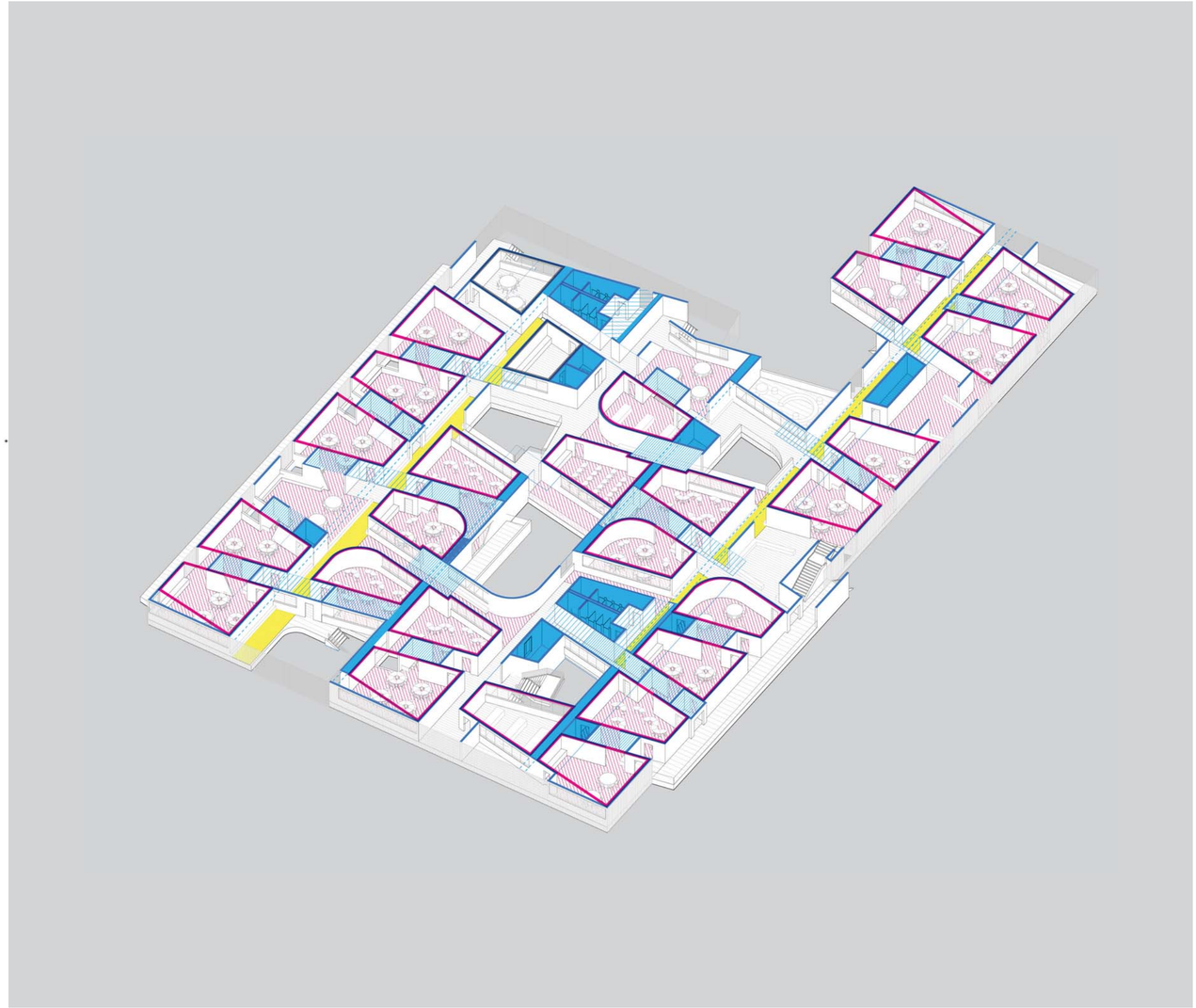
(far left) XS Elementary Level 02 Axonometric

LEVEL 03

Level three is primarily occupied by the expanded classroom unit, establishing a dense learning environment in contrast to the free span of the mediatheque level below. On this level the system articulates a learning soup of primary classroom spaces, specialty classroom units (for music, art, and science classes) break out spaces, and auxilliary learning spaces.

1. Specialty classroom
2. Shared learning spaces
3. Pocket
4. Outdoor learning terrace
5. 2nd grade classroom
6. 3rd grade classroom
7. 4th-5th grade classroom
8. Roof-top play space (below)



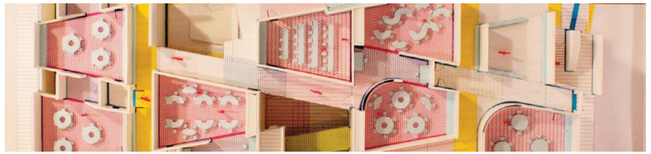


(center, left) XS Elementary Level 03 Plan and

(far right) XS Elementary Level 03 Axonometric

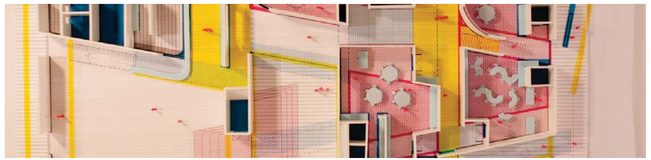
Level 04
2 large group activity pavilions

Level 03
20 Classrooms, Grade 2-5
4 Classrooms, Subject Specific
6 Large Group Public Learning Spaces
1 Outdoor Learning terrace
1 Teacher's work-room
2 Restrooms



Level 02
5 Classrooms, Grade 1
1 Distributed Library & Media Center
1 Running Track
1 Rooftop Play area with basketball court
1 Teacher's work-room
2 Restrooms

Level 01
8 Classrooms, PK & Kinder
2 Classrooms, Special Education
2 Classroom, Subject Specific
1 Multi-purpose Hall
2 Administrative wings
1 Servery
1 Restroom



The deployment of the eccentric learning framework, while it is generated by a system of loosely self-similar units, permits nimble manipulation of classroom relationships and unit articulation. XS elementary takes advantage of this room for play, establishing a strong sectional partii as a spatial technique (permitting day-lighting and relief from the deep plate of the mat) while also orchestrating the student's academic progression through the building (as a sectional move between an on-off massing condition).

As such, the student's progression through their elementary education is organized sectionally. Kindergarten classrooms and public programs occupy the ground level with sectional glimpses of media spaces at the intermediate level. On the second floor, first grade classrooms engage a free-span mediatheque and rooftop play yard. As the culmination of the learning experience at the school, a "learning soup" on the third floor establishes a dense educational environment in which teachers become the curators of academic exploration in grades 2 through 5. Classes move between the mediatheque and a series of highly articulated education spaces, each offering either filtered glimpses of the city fabric or unique interactions internal to the school and library program, each offering its own distinct urbanity.

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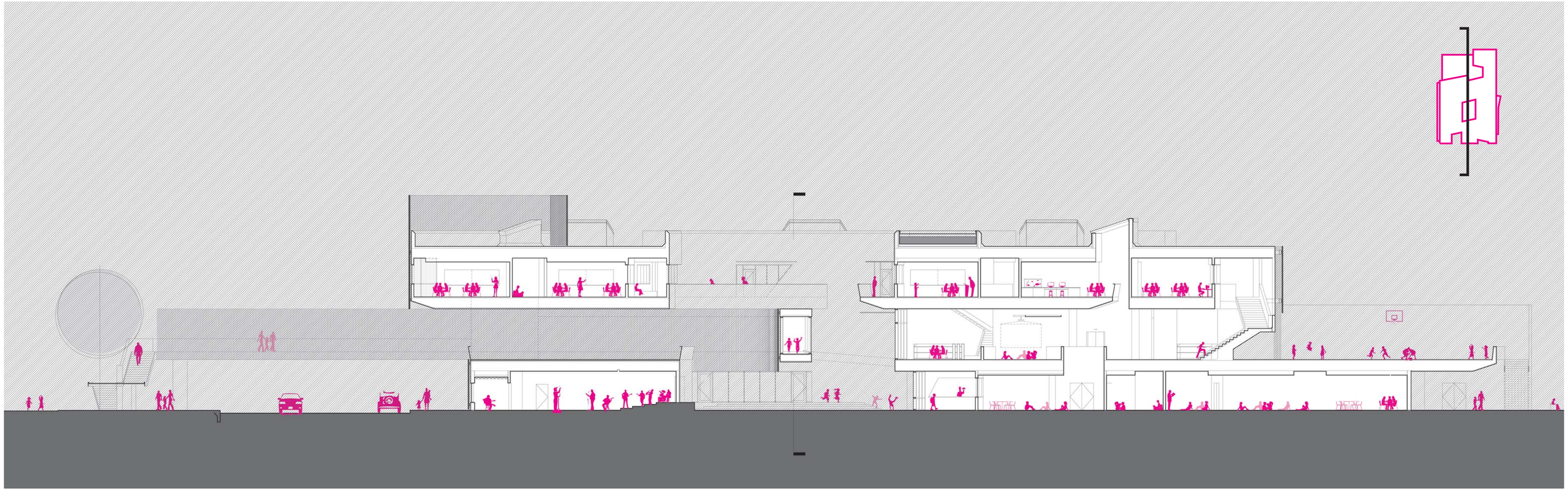

Building Longitudinal Section

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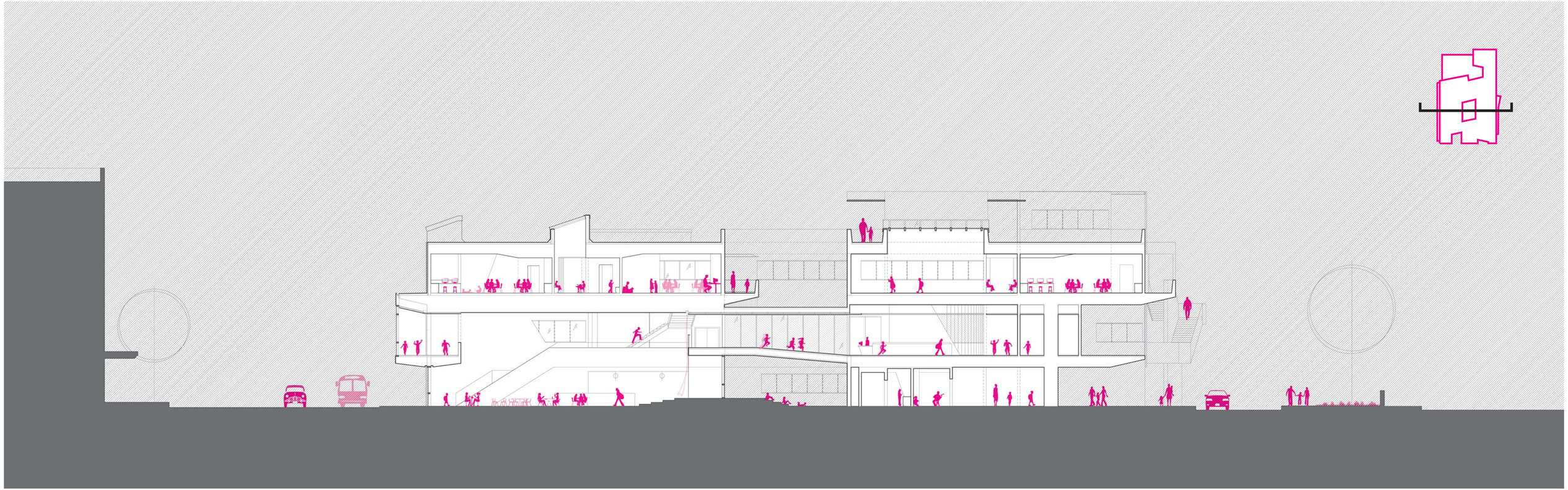

Building Cross Section

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As a social structure, the school is the child's first introduction to the city. The public elementary school serves as the student's first independent foray into the city and forms the child's first images of the city. As such, the public elementary school must address an urban interiority as well as its urban context. XS Elementary's interior, through its employment of an underlying spatial framework, establishes an internal urbanity that is distinctly organizational and graphic.

Through the employment of educational avenues within the eccentric framework, the child is introduced to the structure of the city and is provided with hierarchical way-finding. These spaces are not hallways, but instead act as public promenades and points of encounter between classrooms, permitting glimpses across and between learning spaces. In order to establish urban activity within these spaces, the avenues are activated by eccentric auxiliary learning spaces. These obliques spill activity into the avenues, encouraging wandering, lingering, and detour within the system, in the same way in which the urban fabric sets up an infrastructural system of efficiency which also permits and even fosters moments of eccentric movement.

The urbanistic play of the interior of XS elementary is not simply spatial/organization, but is codified by the graphic, which operates performatively within the space. Drawing from the legacy and saturation of urban markings and signage, XS elementary appropriates the pedestrian crossing as a graphic technique. Synthesizing a graphic language across distinct levels of the building, the surface graphic indicates programmatic zones and normative circulation, establishing distinct identities for learning districts within the project while also tying them together in a common urban language. In turn, manipulations of pattern act in moments of eccentricity to induce non-normative movement along the oblique and to set apart portions of the system for programmatic, circulatory, and spatial deviations.

Learning avenue within XS Elementary's 3rd level. The avenue is a space of encounter for students, putting them in close contact with students from other classrooms, small-group work space, and views of the midtown context.

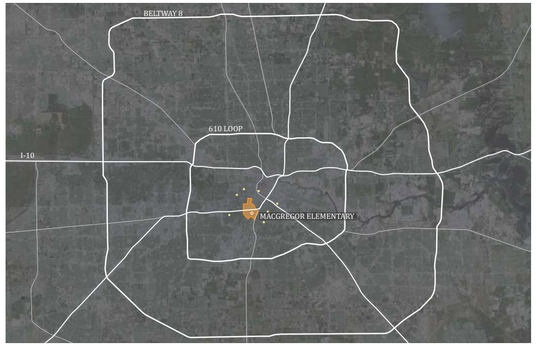
XS Elementary Pages3.indd 38-39 4/8/2013 12:41:20 AM

(below) Location of existing MacGregor Elementary within Midtown Houston

(below, right) Macgregor Elementary School current and proposed location, indicating school boundaries and important public infrastructures within and adjacent to those boundaries.

(bottom, left) Current MacGregor Elementary school site in suburban neighborhood

(bottom, right) Proposed site of XS Elementary and Macgregor relocation



The creation of the eccentric learning environment (with its urban interior) has specific repercussions within the city. For this reason it is placed strategically within the urban environment to leverage its internal eccentricity as an actor in the metropolis. The project is designed as the replacement and relocation of the existing MacGregor elementary school. The new elementary school is sited in Midtown Houston, TX at the nexus of a number of important and prominent infrastructures, which include Main Street, Houston's Metro Red Line, and the elevated 59 freeway, which establishes prominent views of the school at high speeds from passing vehicles.

The relocation of the elementary school from a small residential neighborhood to an urban site provokes opportunities related to circulatory engagement at a variety of speeds (pedestrian, transit, and high speed freeway), public access, urban navigation, and image-making & institutional identity. By placing the school on the level and at the scale of public infrastructure, the project positions the elementary school as an essential urban infrastructure within the city fabric.

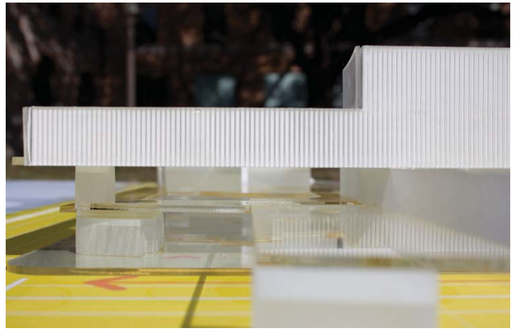
The Houston Independent School district, like many other urban school districts in the United States at the turn of the century faces a number of pressures. With aging central schools and a rapidly expanding city edge, the school district is under constant pressure for new schools, while also facing expectations of standardization and the restraints of budgetary shortfalls and quantitative benchmarks.

In an effort to fund the construction of new and replacment schools, the Houston Independent School district employs bond programs, voted on during general elections. In 2007, the first major bond proposal passed, which has allowed for 20 new schools and the renovations at an impressive 134 campuses across the district.

As of the fall of 2012, a second bond package was passed which will provide the funding to repair and replace 40 schools across the district. As this money is distributed, Houston Independent school District has the opportunity project a new type of public elementary school, one which will engage its students in a compelling physical and digitial environment.

(below) XS Elementary Site, Midtown Houston, Texas

XS Elementary Pages3.indd 40-41 4/8/2013 12:41:33 AM

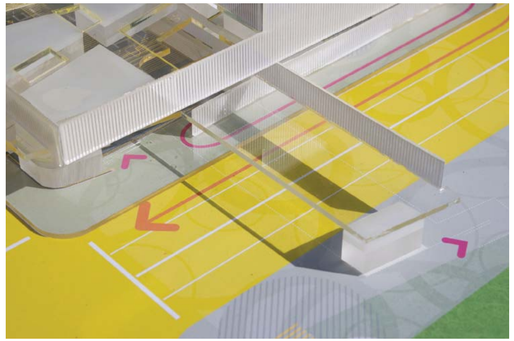


PEDESTRIAN

Shifts in the school's massing allow the building to use its massing to draw in portions of the urban environment through overhangs. In place of establishing security through fencing, the Building perimeter establishes a security line which protects the school while also creating space for urban gathering and a perceived access to the school. Shifts in massing above the first level create a rooftop play area with views north towards downtown and a series of outdoor learning spaces which open to the sky and to selective views of a park to the north. Urban graphics indicate zones of pedestrian movement across the site. The graphic establishes a school "district" within the urban fabric, replacing typical infrastructural moves such as speed bumps and signage with a graphic surface which increases in intensity and prominence as one moves closer to the school.

(above) Pedestrian experience of massing shifts

(below) Interaction between pedestrian traffic, transit movement, and shifts in building massing



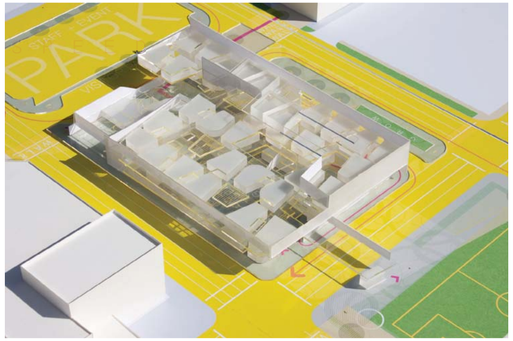
TRANSIT

The school's accessibility is expanded through its proximity to the Metro Light rail. The light rail offers an important amenity for the school, making it a community resource for those who live along it. The light rail also provides the opportunity for field trips to a larger range of urban experiences including the museum district, Hermann Park, and downtown destinations.

Local automobile and transit movement around the site interacts with the school's graphic surface, which directs flows around the site. The graphic saturation of the surface is designed with the intent to slow traffic, indicating precise zones where drivers should be on the lookout for children at play, while also constructing a place within the city identifiable with the public's investment in the school as an essential public and community infrastructure and amenity.

HIGH SPEED

The investment in the school as a public and community infrastructure is most visible form the high speed of the freeway. The prominent siting of the school suggests an importance within the city fabric, operating on the scale of adjacent large commercial centers and within the city skyline. A translucent screen system suggests the form of an object within the city, but is simultaneously undermined by shifting massing beyond the veil creating sheltered outdoor learning and gathering spaces. The image of the school, with its identity-forming potential, must act with the immediacy of a roadside billboard, and the subtlety of shifts which intrigue the passing driver over time on their daily commute. The school therefore is not a stagnant object, but one which actively reconfigures the city around itself, playing with institutional identity, infrastructural prominence, and flicking the switch between attention and the distraction of the daily grind, if only for a single moment on a high-speed commute.



(top) XS Elementary as seen within the context from a birdseye view. At high speeds, the building must become perceptible as a moment of urban eccentricity within the city.

(above) Site views at high speed from the freeway. XS Elementary must declare a presence of the instititution of public schooling within these snapshots.

XS > EXCESS

GRAPHICS+SPACE

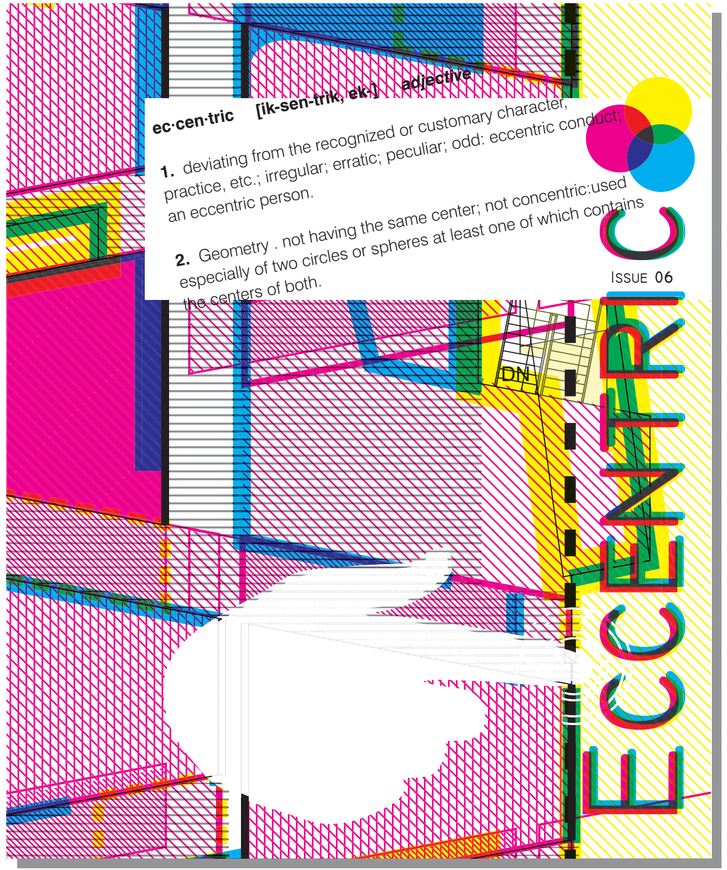
XS Elementary, in all of its eccentricity and extroversion within the city fabric argues not for excess, but instead for the shirking of the economy-based mathematics of 1+1=2 in favor of the assertion that 1+1=11. Architecture must engage the public elementary school once again as a vital and vibrant public institution and infrastructure, celebrating its building type restrictions and challenges with unfettered and unabashed graphic, spatial, and urbanistic play. By approaching the school as a problem to be found, not solved, and children as highly nimble and interested explorers of graphic environments, the possibilities for educational innovation open up. Math that some would say doesn't add up, operates performatively to become more than the sum of its parts.

John C Harkness, of The Architectural Collaborative (TAC) in the firm's mongoraph, *TAC's Educational Buildings* asserted,

"… few teachers would agree with the premise that we study literature only for what is stated, not also because of the way in which it is stated."

XS Elementary proclaims the saturated, dense, and interrelated… in other words, the power of interruption, alliteration, pun, and hyperbole in the context of banal and mediocre statement.

XS Elementary Pages3.indd 44-45 4/8/2013 12:41:40 AM



Eccentric, *Manipulations*

The zine is employed as a means to explore and unpack the possibilities of eccentricity for the public school through the lens of manipulation and permutation. These manipulations encompass graphic, programmatic, urban, and pedagogical mutations employed as a means to expand the possibilities for learning spaces.

Manipulations particularly seeks to bring to the forefront the intersection between digital and analog interactions with media, acknowledging that the way our hands engage with an ipad screen is distinct from the way one engages a page. Movement, exploration, adjacency and gesture are wholly relevant in a new way for both our digital and physical environments, and for this reason beg for an architecture that engages the dense, saturated, and rich digital environment with a physical one that is equally compelling.

The zine is a graphic pamphlet which is designed and employed to provoke innovation. It has a rich heritage in the Architectural development harkening back Archigram's graphic and technological exploits in its series of highly accessible graphic compilations. Produced in limited qualities, these graphic experimentations were made as non-profit ventures, created for the sake of pure and unabashed graphic and architectural play.

(below) Archigram 4, Zoom, Spring/Summer 1964

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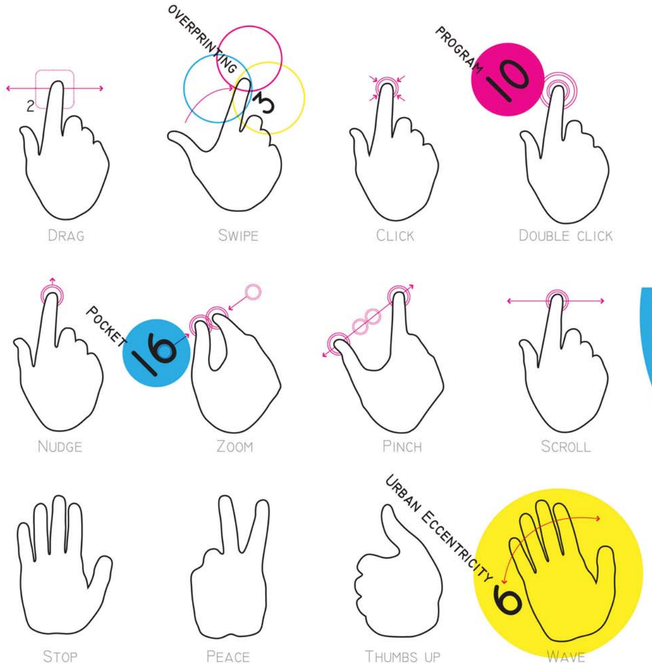


manipulations

OVERPRINTING

Overprinting is a graphic printing technique which utilizes cyan (C), magenta (M), yellow (Y), and black (K) within a systematic dot matrix to create a pleothora of shades. Manipulation of each of the individual screens can in turn produce either incredibly photo-realistic prints, or eccentric deviations which produce new spatial possibilities for architecture.

What is most important, though, is not that we learn the technique but instead that we own up to the power of the manipulation.

ECCENTRIC 3
Issue 06

XS Elementary Pages3.indd 48-49 4/8/2013 1:01:33 AM

4 In This Issue

ma•nip•u•late [muh-nip-yuh-leyt]
verb (used with object), ma•nip•u•lat•ed, ma•nip•u•lat•ing.

1. to manage or influence skillfully, especially in an unfair manner: to manipulate people's feelings.

2. to handle, manage, or use, especially with skill, in some process of treatment or performance: tomanipulate a large tractor.

3. to adapt or change (accounts, figures, etc.) to suit one's purpose or advantage.

4. Medicine/Medical . to examine or treat by skillful use of the hands, as in palpation, reduction of dislocations, or changing the position of a fetus.

In medicine, to manipulate is to examine or treat by skillful use of the hands. The hands are a vehicle through which the mind is able to engage the tactile world, and within which thirty-four coordinated muscle movements control dexterity of the fingers and the thumb, working in such a complex fashion that medicine uses six separate descriptive terms just for the directional movement of a single thumb joint.

With precise exertion of pressure and nuanced musculature control the hands of the medic explore abnormalities and manipulate the system, while the hands of a sculptor wander the face of a marble slab, searching out the location on its surface, and then delivering a forceful blow. Even the long- repressed hands of the computer programmer are no longer bound by clicks and scrolls, but now engage a series of gestures which allow them to navigate and impact digital environments.

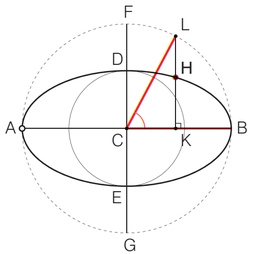
manipulations

ECCENTRIC
Issue 06

Manipulation is the topic for the Eccentric precisely because we are operating at the intersection between the digital and the physical, opening up new possibilities for engagement not with quantitative production, but with the opportunities that emerge from play, misuse, and swerves. The future of the eccentric involves movement between fistfuls of crayons and finger-swipes of an IPad. And where better to explore this than in the Urban Elementary school

In the pages that follow you will find the exploration of what it is to learn in this hybrid environment, and what mistakes, and misuses might create new possibilities for the contemporary school and its perception as an institution.

We at Eccentric are owning up to our own manipulations, staking a claim for the hybrid, the saturated and the artificial. We recognize the bias in our assertions (a definite preference for the bright, of course), and we ask you to make some BIASed manipulations of your own. Take a look at these pages, fold them, write on them, cut them up, and stake a claim of your own.



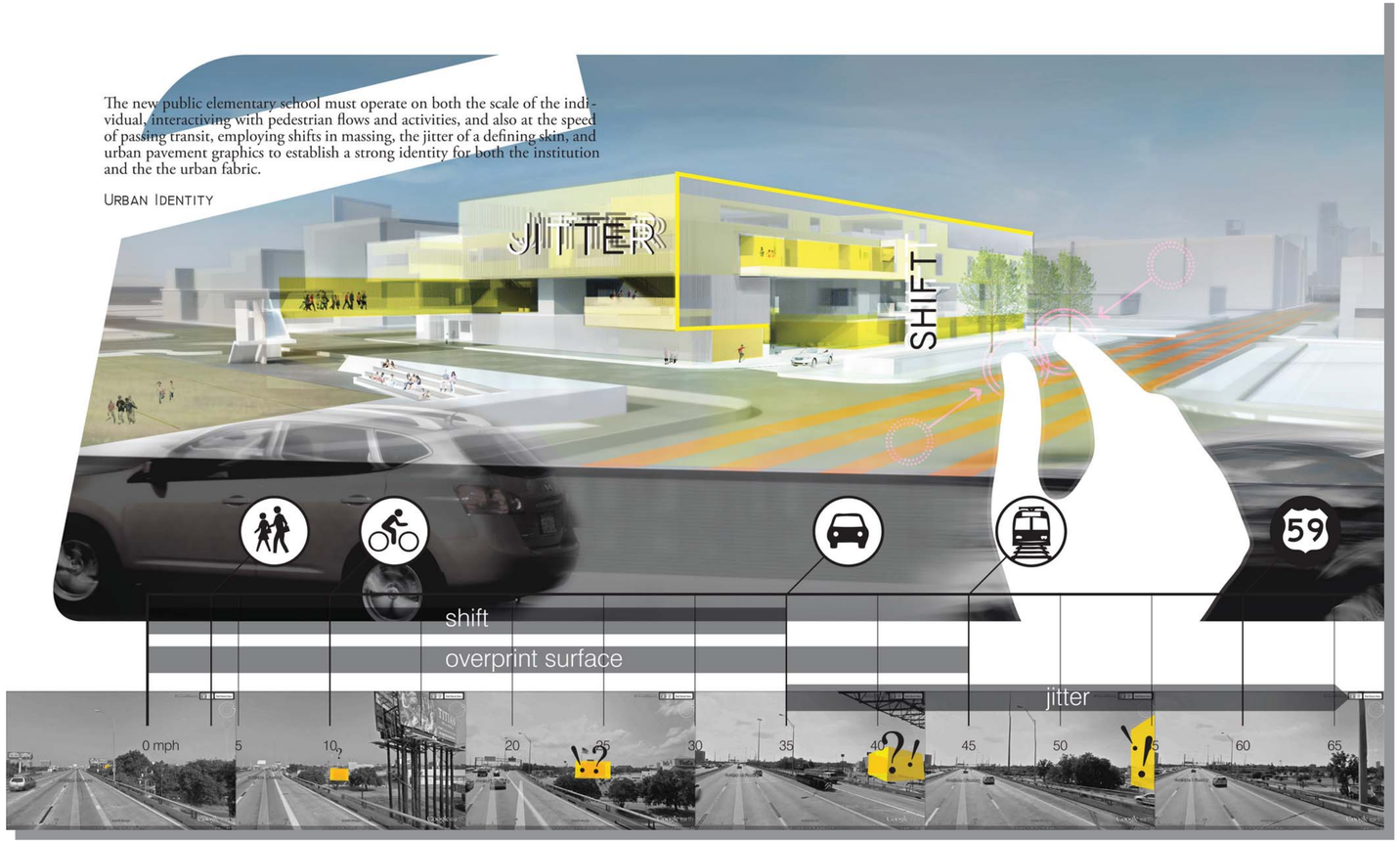
eccentric angle

"In geometry, an angle connected with an ellipse and defined as ... angle BCL, reckoned from one determinate end, B, of the transverse axis, called the eccentric angle of the point H." -Whitney, 1911

XS Elementary Pages3.indd 50-51 4/8/2013 1:01:45 AM

The new public elementary school must operate on both the scale of the individual, interactiving with pedestrian flows and activities, and also at the speed of passing transit, employing shifts in massing, the jitter of a defining skin, and urban pavement graphics to establish a strong identity for both the institution and the the urban fabric.

Urban Identity



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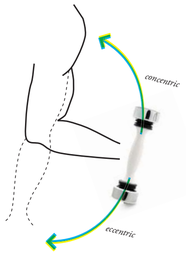
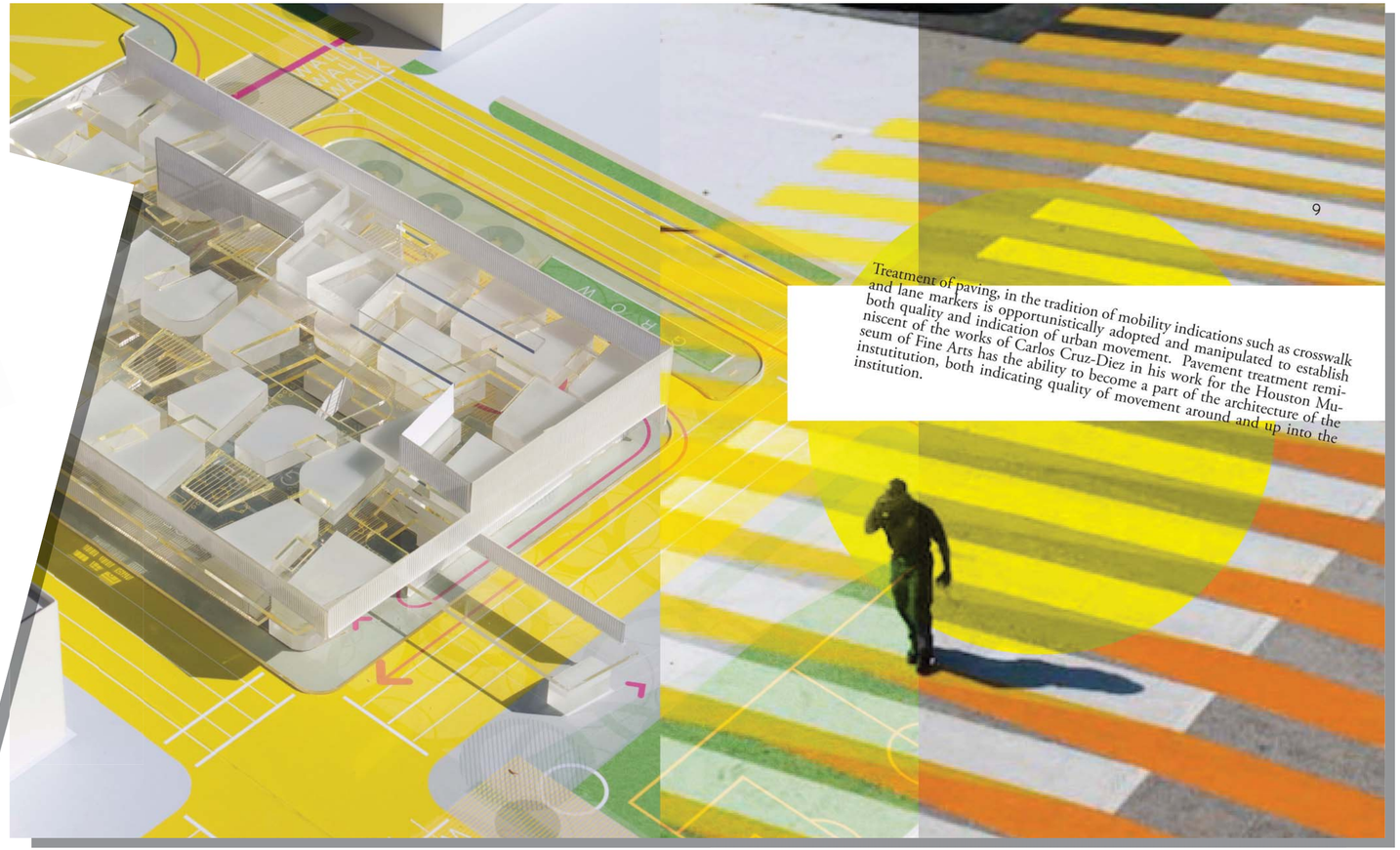


eccentric action

During an eccentric contraction (lengthening contraction), the muscle elongates while under tension due to an opposing force greater than the muscle can generate.[4] Rather than working to pull a joint in the direction of the muscle contraction, the muscle acts to decelerate the joints at the end of a movement or otherwise control the repositioning of a load.



9

Treatment of paving, in the tradition of mobility indications such as crosswalk and lane markers is opportunistically adopted and manipulated to establish both quality and indication of urban movement. Pavement treatment reminiscent of the works of Carlos Cruz-Diez in his work for the Houston Museum of Fine Arts has the ability to become a part of the architecture of the instutitution, both indicating quality of movement around and up into the institution.

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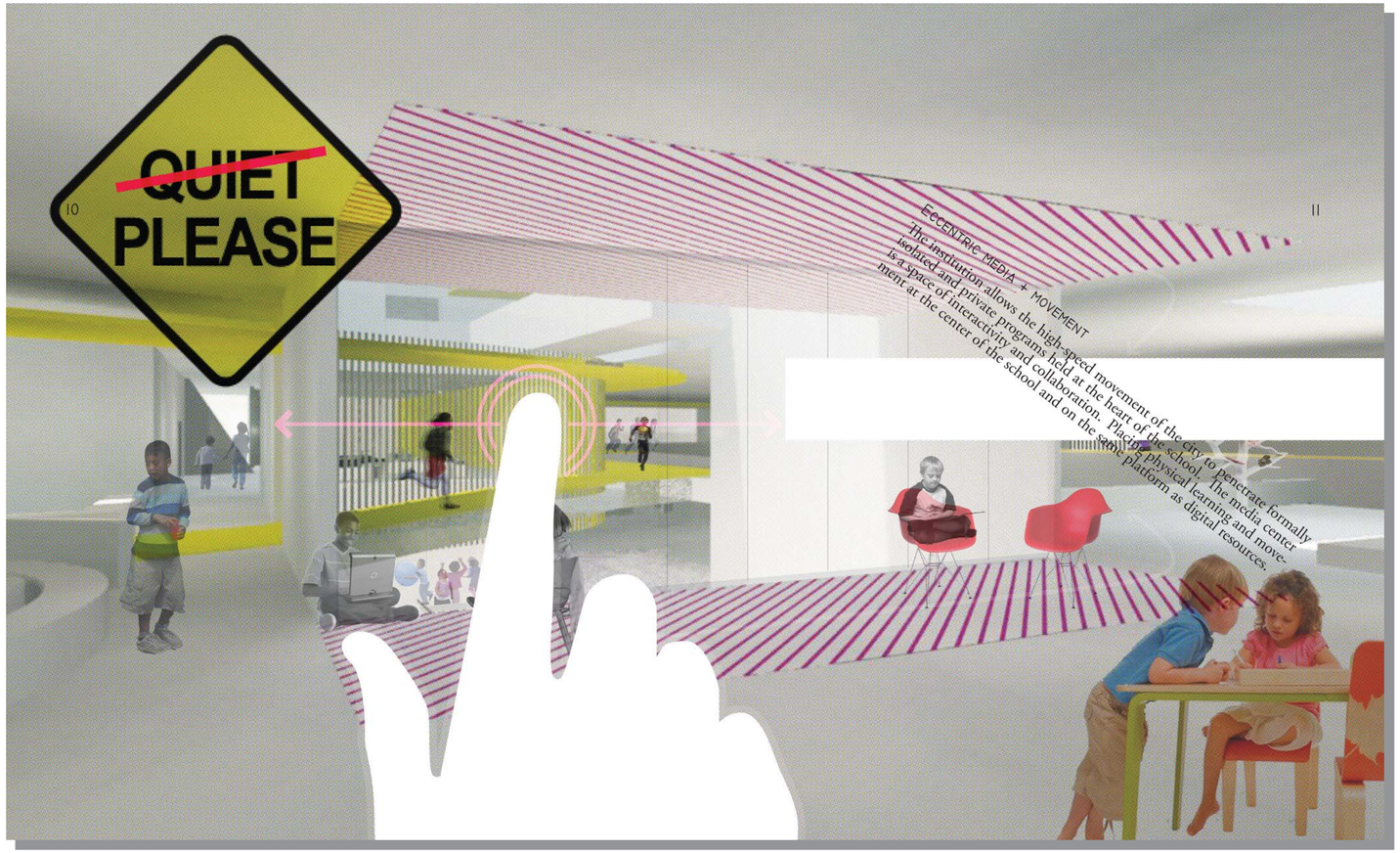
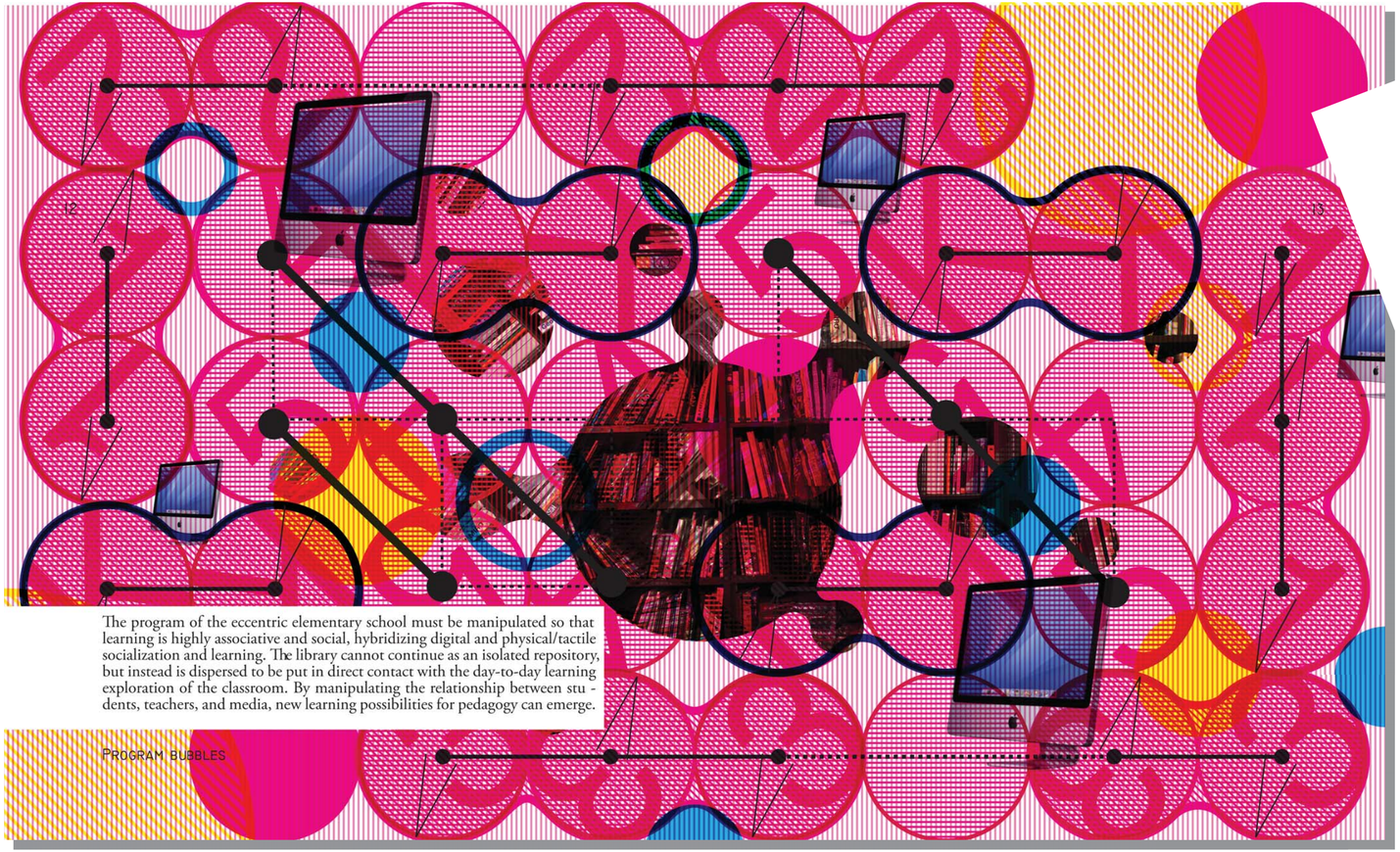


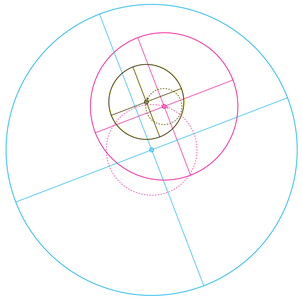
ECCENTRIC MEDIA + MOVEMENT

The institution allows the high-speed movement of the city to penetrate formally isolated and private programs held at the heart of the school. The media center is a space of interactivity and collaboration. Placing physical learning and movement at the center of the school and on the same platform as digital resources.



The program of the eccentric elementary school must be manipulated so that learning is highly associative and social, hybridizing digital and physical/tactile socialization and learning. The library cannot continue as an isolated repository, but instead is dispersed to be put in direct contact with the day-to-day learning exploration of the classroom. By manipulating the relationship between stu - dents, teachers, and media, new learning possibilities for pedagogy can emerge.

PROGRAM BUBBLES



eccentric circles

multiple circles not sharing a common center

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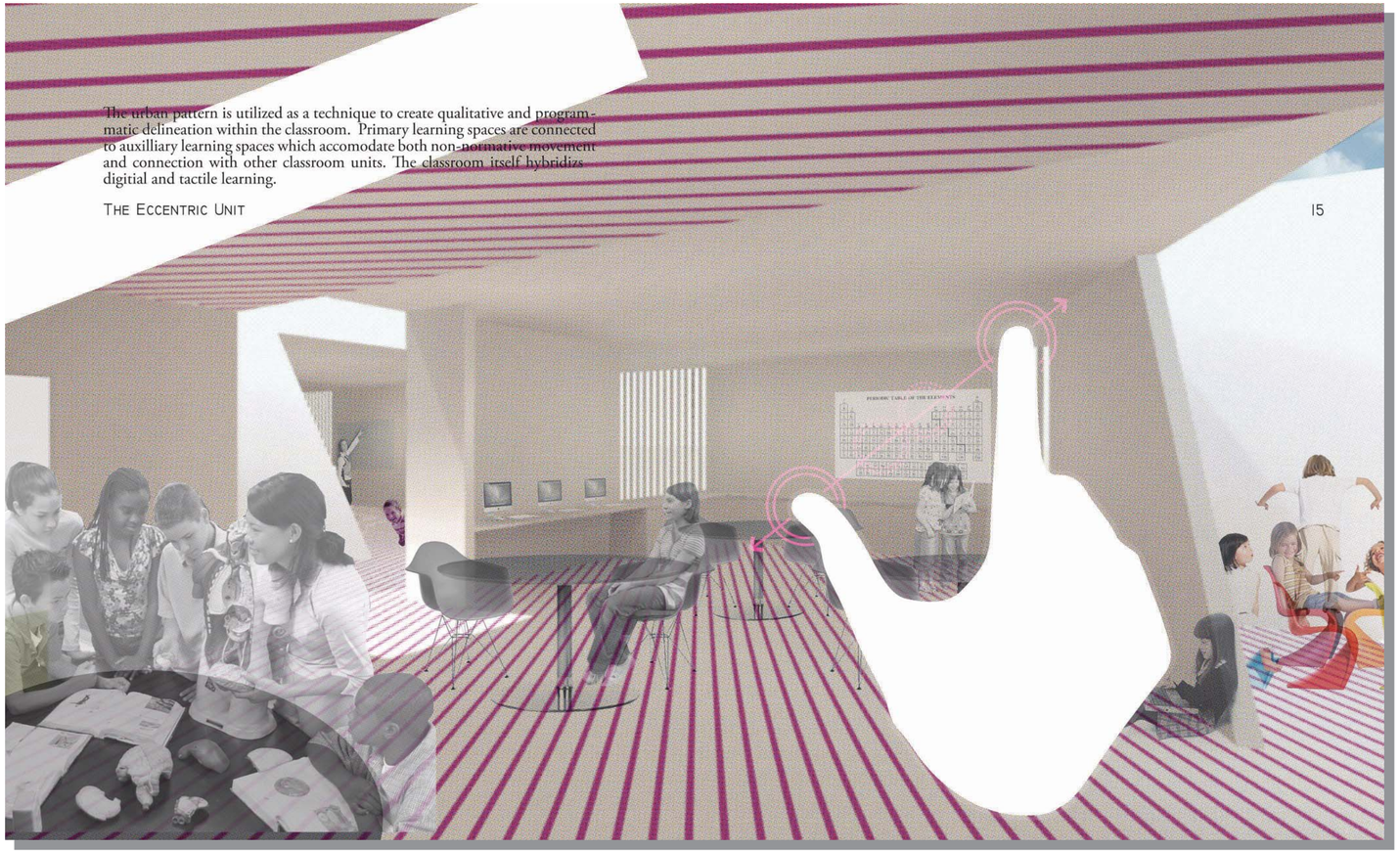

The urban pattern is utilized as a technique to create qualitative and programmatic delineation within the classroom. Primary learning spaces are connected to auxilliary learning spaces which accomodate both non-normative movement and connection with other classroom units. The classroom itself hybridizes digitial and tactile learning.

THE ECCENTRIC UNIT

15

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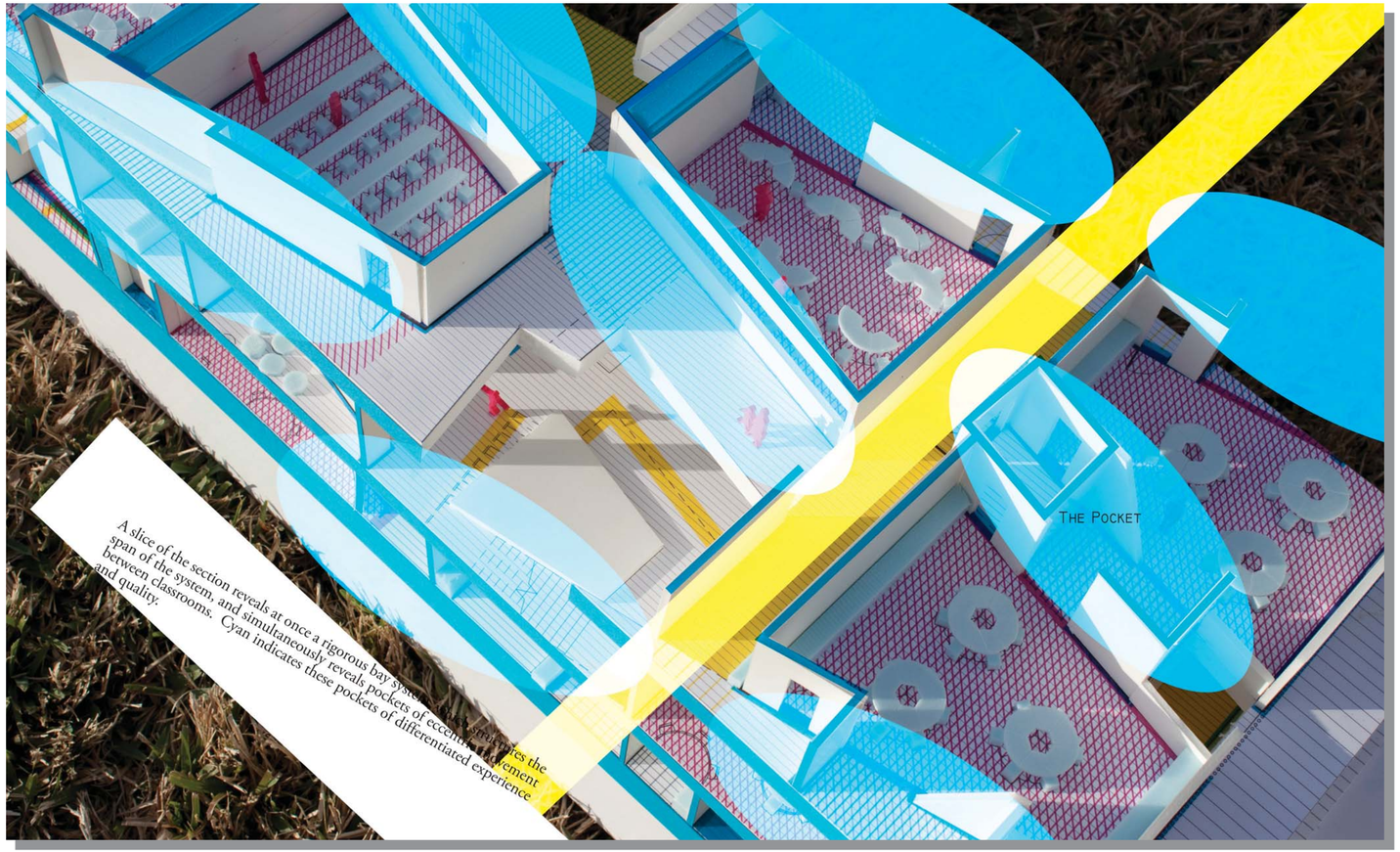

A slice of the section reveals at once a rigorous bay system, and implies the span of the system, and simultaneously reveals pockets of eccentric movement between classrooms. Cyan indicates these pockets of differentiated experience and quality.

XS Elementary Pages3.indd 62-63 4/8/2013 12:51:55 AM

XS ELEMENTARY

FROM THE EDITOR

Thank you for entering into the Eccentric's exploration of the public elementary school, and the possibilities of interacting in this hybrid environment. The images contained within this work explore the intersection between the systematic and the saturated, the rational and the eccentric, the qualitative and the quantitative, and the digital and the analog.

By problematizing the eccentric as a hybrid, we demand ownership of our own daydreams, fantasies, and hair-brained ideas as possibilities that have productive possibility for our built and digital environments. Thank you for sharing your own crazy with us.

CONCEPT AND DESIGN
Riley Neal

TYPEFACES
Technic, adobe garamond pro

PRINTING
laser jet

BINDING
Saddle-stitch signatures

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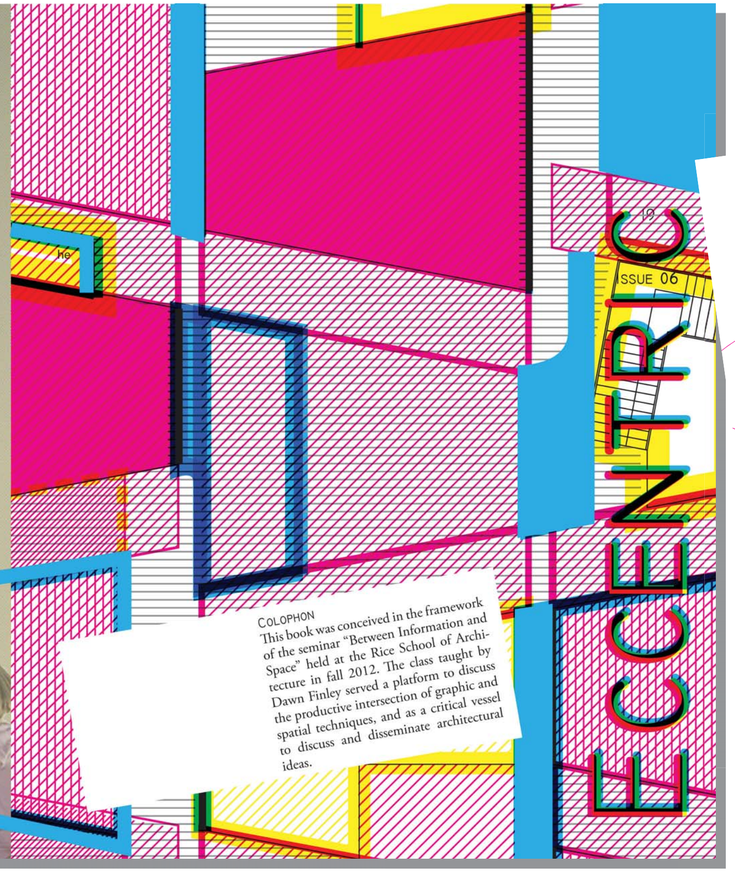
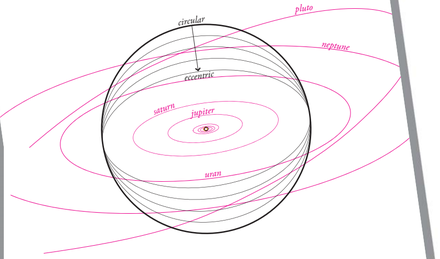


COLOPHON
This book was conceived in the framework of the seminar "Between Information and Space" held at the Rice School of Architecture in fall 2012. The class taught by Dawn Finley served a platform to discuss the productive intersection of graphic and spatial techniques, and as a critical vessel to discuss and disseminate architectural ideas.



eccentric orbit

The orbital eccentricity of an astronomical object is a parameter that determines the amount by which its orbit around another body deviates from a perfect circle

XS Elementary Pages3.indd 64-65 4/8/2013 12:52:03 AM

APPENDIX

THESIS FINAL REVIEWS

THURSDAY
JANUARY 10TH
1 PM
IAN SEARCY
JESSICA LUTZ
ALEX STITT
EUNIKE
MATT AUSTIN

FRIDAY
JANUARY 11TH
9:30 AM
SAM TANNENBAUM
GIORGIO ANGELINI

12:30 PM
JACK MUSSETT
MARIA BATISTA
ALEX TEHRANIAN
DUNCAN WHITE
RILEY NEAL

ALL SCHOOL RECEPTION
FOLLOWING REVIEWS

JURORS
PENELOPE DEAN, UNIVERSITY OF ILLINOIS, CHICAGO
NEIL DENARI, PRINCIPAL OF NEIL M. DENARI ARCHITECTS AND UCLA
HEATHER ROBERGE, PRINCIPAL OF MURMUR, AND UCLA

Rice University
Master of Architecture Thesis Defense
2013

XS Elementary Pages3.indd 66-67 4/8/2013 12:52:07 AM

Rice University

Master of Architecture Thesis Defense
January 11, 2013
Farish Gallery

Jury

Sarah Whiting Dean, *Rice School of Architecture*

Gordon Wittenberg Professor of Architecture, Director of Graduate studies, *Rice School of Architecture*

Scott Colman Senior Lecturer of Architecture, Thesis Chair, *Rice School of Architecture*

Dawn Finley Associate Professor of Architecture, Thesis Director, *Rice School of Architecture*

Albert Pope Gus Sessions Wortham Professor of Architecture, *Rice School of Architecture*

Ron Witte Associate Professor of Architecture, *Rice School of Architecture*

Penelope Dean Assistant Professor, *University of Illinois School of Architecture*

Neil Denari Principal of Neil M. Denari Architects, Professor and Vice Chair, *UCLA Department of Architecture & Urban Design*

Heather Roberge Principal of murmur, Assistant Professor and Associate Vice Chair, *UCLA Department of Architecture & Urban Design*

(top left) gallery space
(bottom left) Rice University thesis candidates with Thesis Director Scott Colman and Dean Sarah Whiting
(right) thesis defense

XS Elementary Pages3.indd 68-69 4/8/2013 12:52:08 AM

Director Dawn Finley \ Candidate Riley Neal

XS ELEMENTARY

A Space for Eccentricity

Schools

XS Elementary explores eccentric spaces as a means to foster eccentricity in students. It engages identity and architecture in a way unlocking identity in its design long after exposure to the building. Students are given a space to engage with and develop a deep understanding of themselves and their place in society. Identity, art, and personalities in the form of eccentricity are the driving forces behind the design. XS Elementary is intelligent in the ways it engages with its surroundings, in the ways it is flexible through architectural spaces and in the ways it fosters eccentricity.

Identity

Schools tend to be always more important than the buildings they are in. Schools long for a neutral architecture to aspire a legacy and a sense of place. Schools want students to feel a connection to place, while simultaneously the rapidly changing generation sought progression and change. This school is an exercise in flexibility and the transitional.

Pedagogy

Pedagogy is changing with an emphasis on flexible environments and the ability to move with ease. Schools, spaces and learning are changing to be more flexible and accommodate spaces specialized to a 21st Century.

The Unit

The traditional unit has with a learning focus and a homeroom as the place for social groups. It has also shown to be of little or problematic use in the transition of a kids with other organizations and schools.

Systems thinking

Interconnectivity

This contemporary American School has a connection to its surroundings. It is a place of deep relevance to its surroundings. Its interconnectivity is a place of deep interconnectivity, the blending and pushing of the spaces in a way to create new possibilities.

Grain

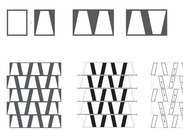
Texture building, because of their massivity, often blending assemblies and subassemblies into one. This school is a place of deep relevance and grain as a way of blending with the texture of its surroundings and a place of deep interconnectivity.

Density

Density within and building or street with through this one of a kind place and relevance. This school is a place of deep relevance, gathering the people by weaving and weave in and out of space.

Urban Condition

The Irish building, for Tritton Jackson Jones Architects, is a place of deep relevance to its surroundings and the ways people walk by. This school is a place of deep relevance and of deep ties to those and more of the surrounding urban environment.



The Kensington Lab is a self-funded Spatial Research Laboratory that explores the relationship between the physical environment and the ability of people to learn and develop. It provides a place to explore architecture as a pedagogy, and to develop a deeper understanding of the "Classroom" from a single person and their environment to a community of people and spaces, expanding the type of interactions and relationships between teachers, students, and learning.

System

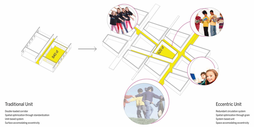
The system allows for the establishment of both a unit and a system of unit assemblies in which the units are replicable.

Efficiency

Efficiency is one direction for the Architecture Kensington Laboratory and is taken to an extent.

Pocket

The Pocket creates a secondary discovery, an organ within the assembly, expanding the classroom beyond the traditional unit.



Traditional Unit

Isolate student contact
Explicit participation through communication
Fixed spatial relations
Surface accommodating eccentricity

Eccentric Unit

Nonexistent circulation system
Explicit participation through gaze
Fluid spatial relations
Space accommodating eccentricity

Program

Level 01
- Large group activity pavilions

Level 02
- Classrooms: Grades 2-3
- Classrooms: Support Specialists
- Large Group Public Learning Spaces
- Teacher Collaboration
- Teacher Lounge
- Restrooms

Level 03
- Classrooms: Grades 4-5
- Specialized Library & Media Center
- Teacher Collaboration
- Rooftop Play area with basketball court
- Teacher Lounge
- Restrooms

Level 04
- Classrooms: PK & Grades
- Classrooms: Support Specialists
- Teacher Collaboration
- Multi purpose Hall
- Administrative wings
- Teacher
- Restroom

PAVILION / \ PAVILION
CLASSROOM / \ SCHOOL
HALL

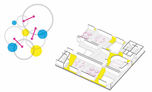
CLASS / MEDIA / ADMIN / PLAY
PUBLIC \ KINDER / GPED \ ADMIN

The student is progressed through their education in a linear fashion, from Kindergarten to 4th. Kindergarten classrooms are pavilion programs through the ground floor with a connection to the outdoor play space. Grades 2-3 are located on the second floor with a connection to the outdoor play space and the pavilion programs. Grades 4-5 are located on the third floor with a connection to the outdoor play space. Specialized classrooms are located on the fourth floor with a connection to the outdoor play space. Grades 2-5 Classrooms are located in the "classroom" wing of the building. Public, administrative spaces, support wing, and pavilion areas are within the "assemblies" wing. The school program is in the form of a linear program.

Key
PK - Pre-K
GPED - Gifted Program
Public - Public
Admin - Administrative Spaces
Kinder - Kindergarten

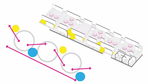
Subassemblies

Grades 4-5



Loop
The loop subdivides a highly sedentary environment in which units of varying ratios allow three exceptionally, and serious fun. Thicker spaces are articulated by unique lighting conditions, screening (with Fibreon) and direct natural light (with Velux) creating varying degrees of intimacy / openness.

Grades 2-3



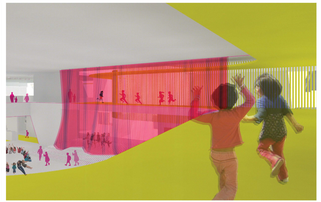
Spine
The spine subdivides linearity within the system for younger students. Along the spine, classes are arranged by grade level and students can choose to circulate either through the direct corridor or along the collapse, leaning, or angle through dispersed or enclosed spaces.

Grades 1

Rocky System
Rocky systems are those one ignores on the Sunday system. They allow for the connectivity of the upper grades, while providing a sense of enclosure for the younger grades. These classroom assemblies are located on the Kindergarten floor and connect with the Rocky outside space, encouraging exercises.

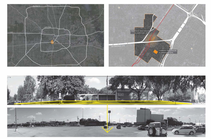
Kindergarten

Pop
The Kindergarten classroom provides a sense of entertainment. Each unit is stacked both another and attached to where entire ten units are stacked only square. The Kid attached a series of vibrant spaces so that partial spaces can be dismantled to the unit. Changes the space with ease or accessibility.



URBAN PRESENCE

Site

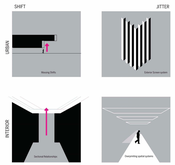


The project is a secondary school within Mitchell Park, a community park in the greater public realm of Austin, Texas, on the site of the old Kensington. Houston is a mixed-use area, with a high density residential core. The school is strategically placed where the residential core meets the park, allowing the interactions and flow, as an area in the urban core, to flow into the park.

The school is a flexible building that creates a connection to a significant urban precinct, with a strong connection to the surrounding residential precinct, and to the park. The site has many such as a connection to the residential precinct, which is known as a place of interaction and relationship. The school is a place of interaction, by the internal spaces to a neighborhood and the park. The school is a place of interaction, public spaces moving through the building.

The school's indoor environments leverage a sense of place, with a connection to the park to create a sustainable environment. Indoor colors, interaction, and interior ecosystem. It is a place of deep relevance to its surroundings and to the ecosystem, leveraging the park and the residential precinct, and is a place of deep relevance to its surroundings and to the ecosystem, leveraging the park and the residential precinct.

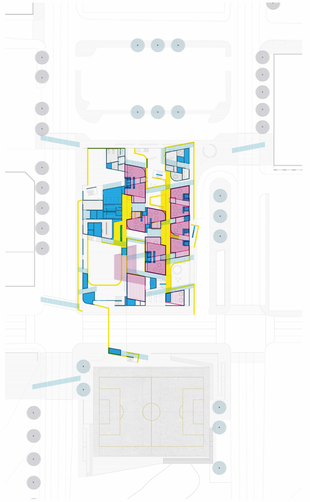
Eccentricity



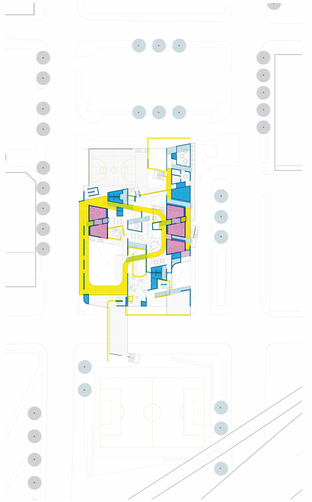
OVERPRINT

Overprinting process allows for the creation of a new color, based on the combination of two colors. Cyan (C) Magenta (M), Yellow (Y) and Black (K) are the four colors used in the process. Overprinting creates images through systematic collocation of the primary colors. The process allows for the creation of a wide array of possibilities within the system. Texture and color are layered, creating a new color that is itself and the other. They are utilized in both the exterior and interior of the building to create a sense of the layered. Whether, and which, within the context of a system.

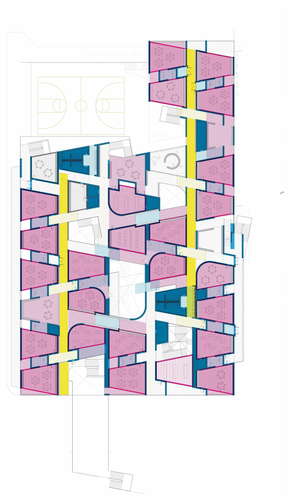
Level 01



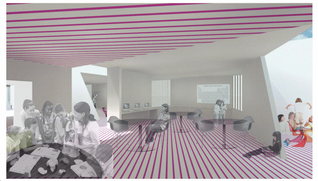
Level 02

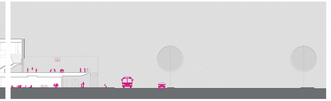


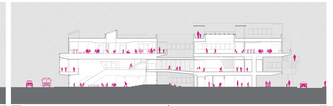
Level 03



LEARNING SOUP







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Barber, Benjamin R. "Public Schooling: Education for Democracy." ***The Public Purpose of Education and Schooling*****. Ed. Timothy J. McMannon John I. Goodlad. San Francisco: Jossey-Bass Publishers, 1997. 21-32. Print.**

The Public Purpose of Education and Schooling explores public schools as having roles beyond the traditional expectation of the transmission of knowledge and skill. The book explores the importance of public schooling in the construction and articulation of democracies. Education, in this capacity, speaks to something other than efficient transmission of information.

Harkness, John C. "TAC's Educational Buildings." ***The Architects Collaborative Inc.*** **Barcelona: Arthur Niggli, Ltd., 1966. 31. Print.**

Harkness, in his writing on the importance of educational buildings, asserts that school buildings in contemporary society should be what temples were for Rome, and theaters were for the Greeks. He articulates TAC's interest in school-building as a fascination that moves beyond the economic implications of building and demands a certain preoccupation and interest in the aesthetic. Harkness compares the school buildings to the structure of language learning, emphasizing the impor¬tance of not only the content of a statement, but also the way in which it is stated.

Hille, Thomas R. ***Modern Schools: A Century of Design for Education*****. Hoboken, N.J.: John Wiley and Sonss, 2011. Print.**

Thomas Hille's Survey of design for education is a comprehensive resource for developments in school design. Laid out thematically, the volume explores a number of pedagogical and spatial shifts in the design of the public school system, outlining important social and technological shifts and their impact and implications for design.

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Kipnis, Jeffrey. "Roundtable Discussion." ***Judgement II, 2011-12 Kennon Symposium Series. Rice University.*** **Rice University, Houston, TX. 15 Mar 2012. Lecture.**

Jeff Kipnis, in addressing issues of Judgement in conversation with Sylvia Lavin, Brett Steele, and R.E. Somol at the Rice University Kennon Symposium, addresses the issue of the discipline's withdrawal from certain architectural projects. Kipnis asserts that Architecture has recoiled from institutional projects because they cannot compete with design specialization, which designs for efficiency and economy, devaluing architectural design in favor of architectural technology. He asserts that this is dangerous to the profession in that it hints that architecture is a problem to be solved and not an exploration capable of creating new and innovative spatial affects.

Lefaivre, Liane. "Space, place, and play: Cybernetic, participatory urbanism." ***Aldo van Eyck: the playground and the city.*** **Rotterdam: NAi Publishers, 2002. 24-45. Print.**

Liane Lefaivre's exploration of Aldo van Eyck's playgrounds as deriving value from their performative qualities. The city has the opportunity to be a place of pleasure and enjoyment, independent (and often in contrast with) the imperatives of the economy. The playgrounds designed by van Eyck are inherently excessive. By investing in design, space gains value and performs in ways that weren't previously possible.

Sarkis, Hashim. "Le Corbusier's Venice Hospital." ***CASE Series*****. Munich: Prestel Verlag, 2001. 13. Print.**

In the CASE series' exploration of the MAT buidling the editor lays out the study of a thread within contemporary architecture that shirks style in favor of system, organization, and urbanity. The volume composes the premier resource on mat buildings, exploring their historical and contemporary implications.

Simmel, Georg. "The Metropolis and Mental Life." ***Rethinking Architecture: A reader in cultural theory.*** **Ed. Neil Leach. London: Routledge, 1997. 69-79.**

In "The Metropolis and Mental Life" Georg Simmel analyzes life in the metropolis. He explores the continuous stimulation of the city as a fragmenting, based on economic relationships, which beget systems of efficiency and managerialism, where distance becomes seen exclu¬sively as "an ill-afforded" waste of time. The city becomes a "structure of the highest imper¬sonality," which has an incredible influence on the person. This influence is manifested in what is called the "blasé attitude", characterized by the incapability to react. Awareness and atten¬tion are increasingly difficult to win, which affords the dweller of the metropolis a certain level of freedom. Simmel's ultimate conclusion is not that the system needs to be rectified, but that it needs to be understood (which would seem to be a nearly impossible task on its own).

Victoria J. Rideout, Ulla G. Foehr, and Donald F. Roberts. ***Generation M2: Media in the Lives of 8- to 18-Year-Olds*****. Study. Menlo Park: Kaiser Family Foundation, 2010. Print. 5 April 2012. <http://www.kff.org/entmedia/upload/8010.pdf>.**

This study examines the consumption of media amongst children between the ages of 8 and 18. It obviates trends towards the increase media usage among the younger demographic, and argues that the influence of this media culture is integral in the development of young people. The study does not analyze the phenomena as either good or bad, but instead pres¬ents the issue for consideration.

Williams, Robin, perf. "Robin Williams- Off The Wall." HBO: 1978. Television.

Robin Williams comedic performance calls for the embrace of the eccentric, asserting the value in going "full-tilt bozo." It is an argument that need not apply only to the comedic, but can have particular power for architectural innovation.

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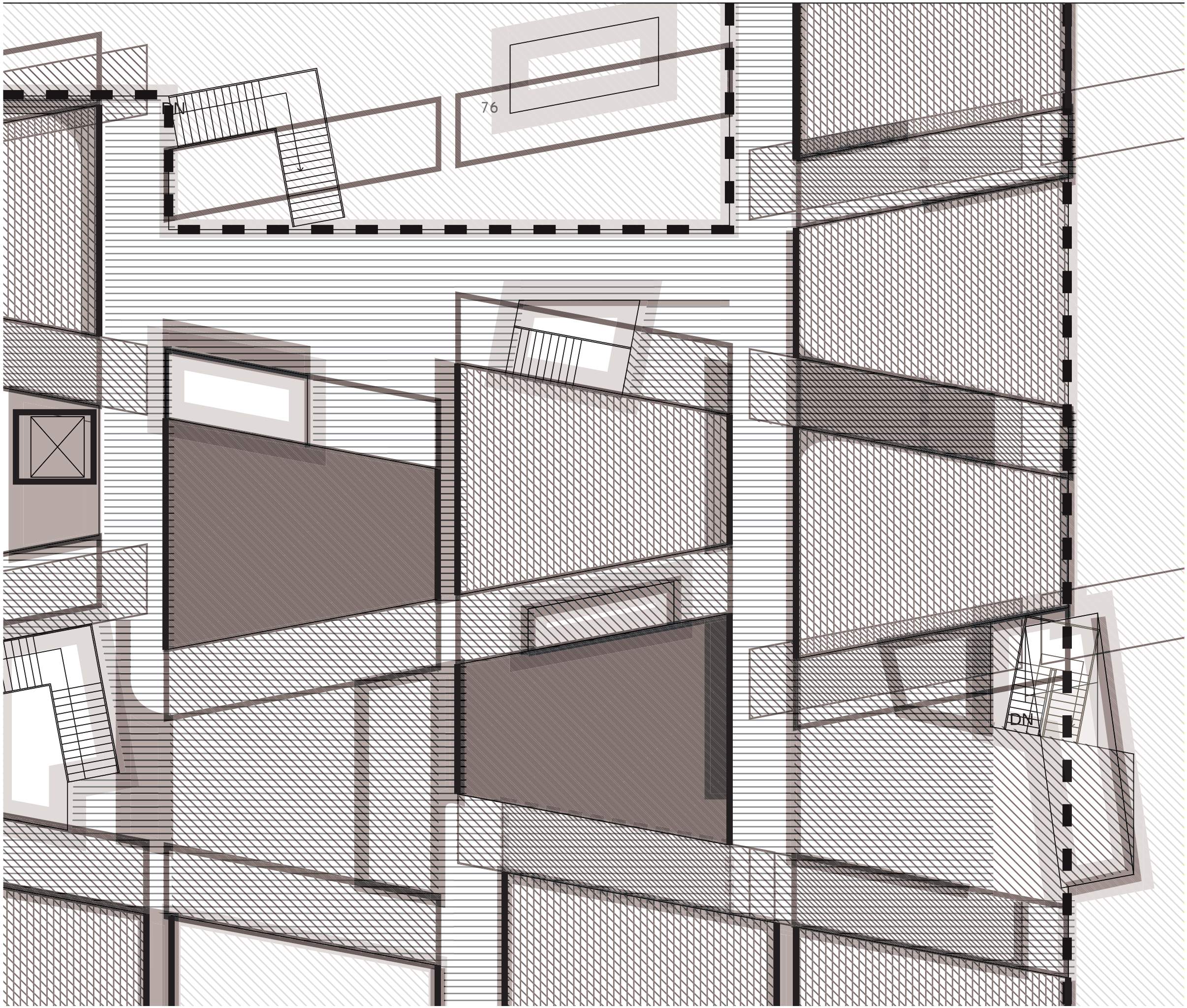
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