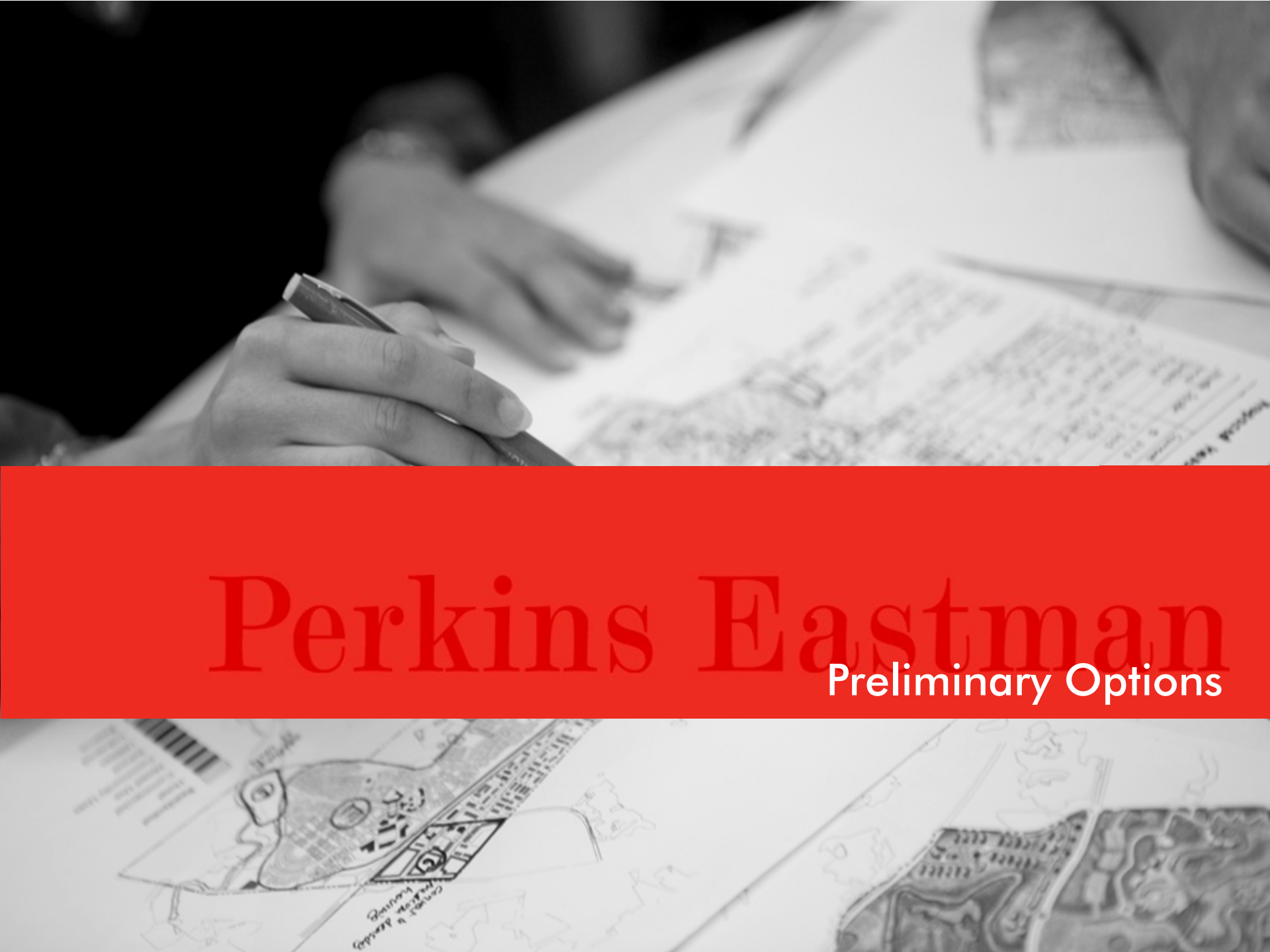
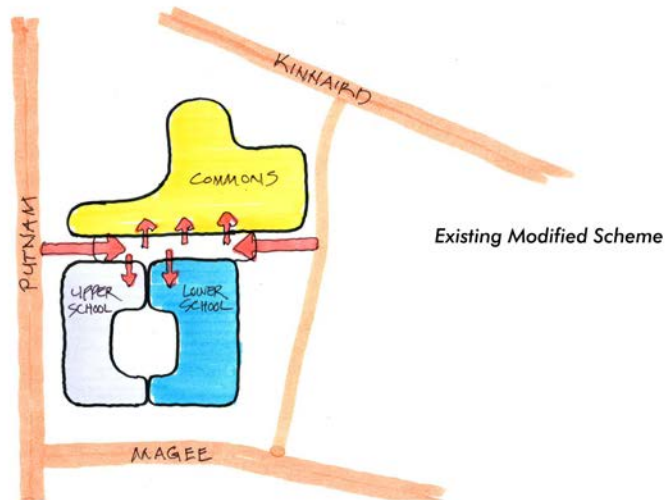


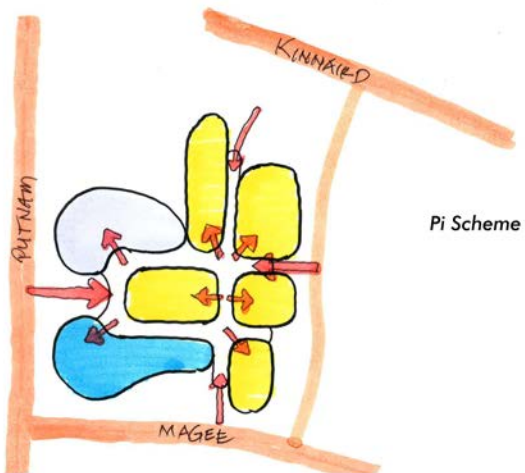
A grayscale background image showing architectural drawings. In the upper half, a person's hand is visible holding a pen, poised to draw on a large sheet of paper. The lower half of the image is dominated by a red banner containing the company name. Below the banner, more architectural drawings are visible, including a site plan with numbered circles and a topographic map with contour lines.

Perkins Eastman

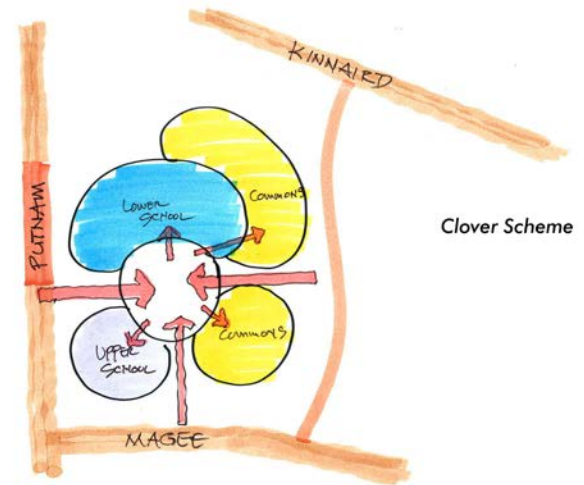
Preliminary Options



Existing Modified Scheme



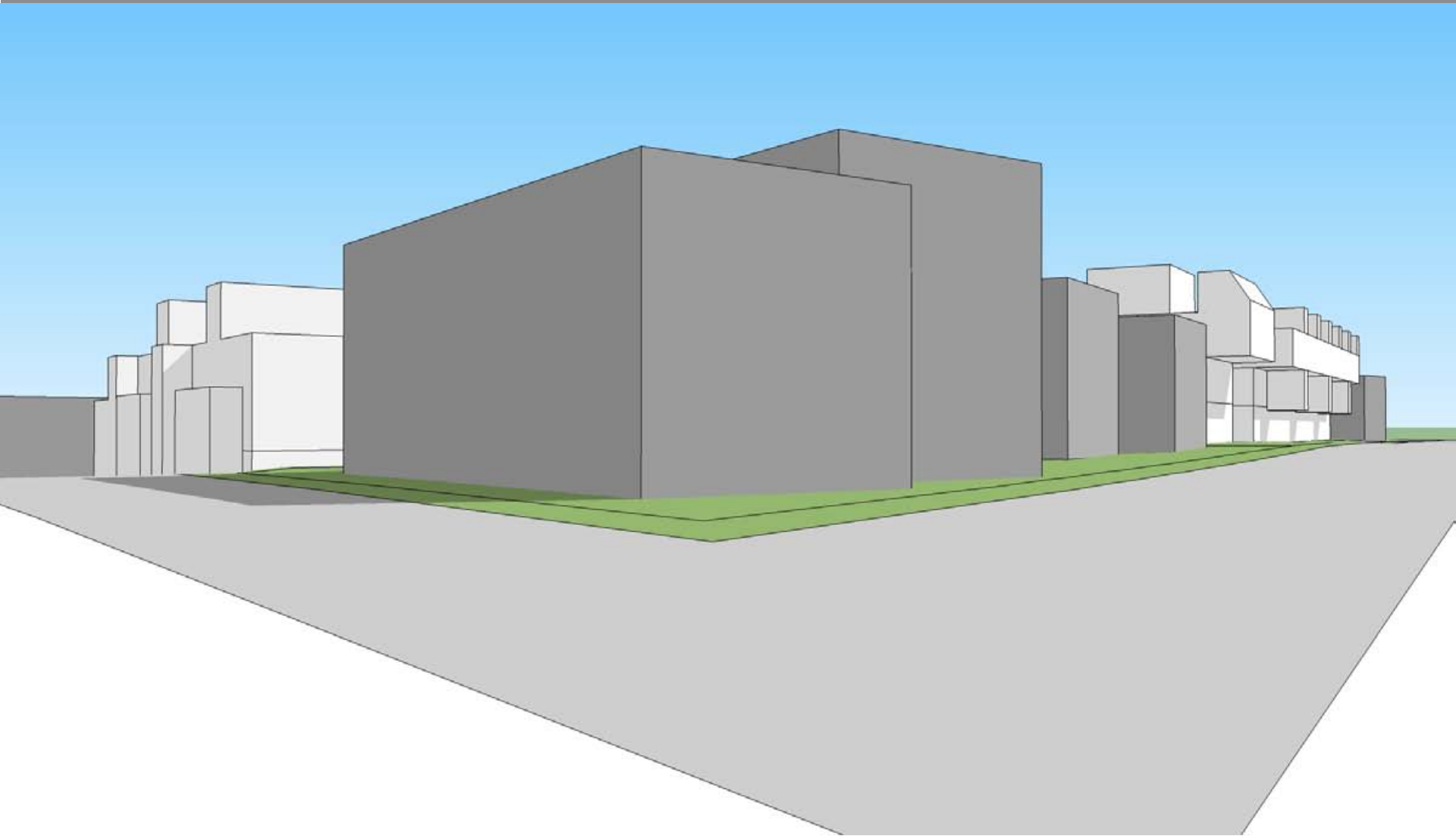
Pi Scheme

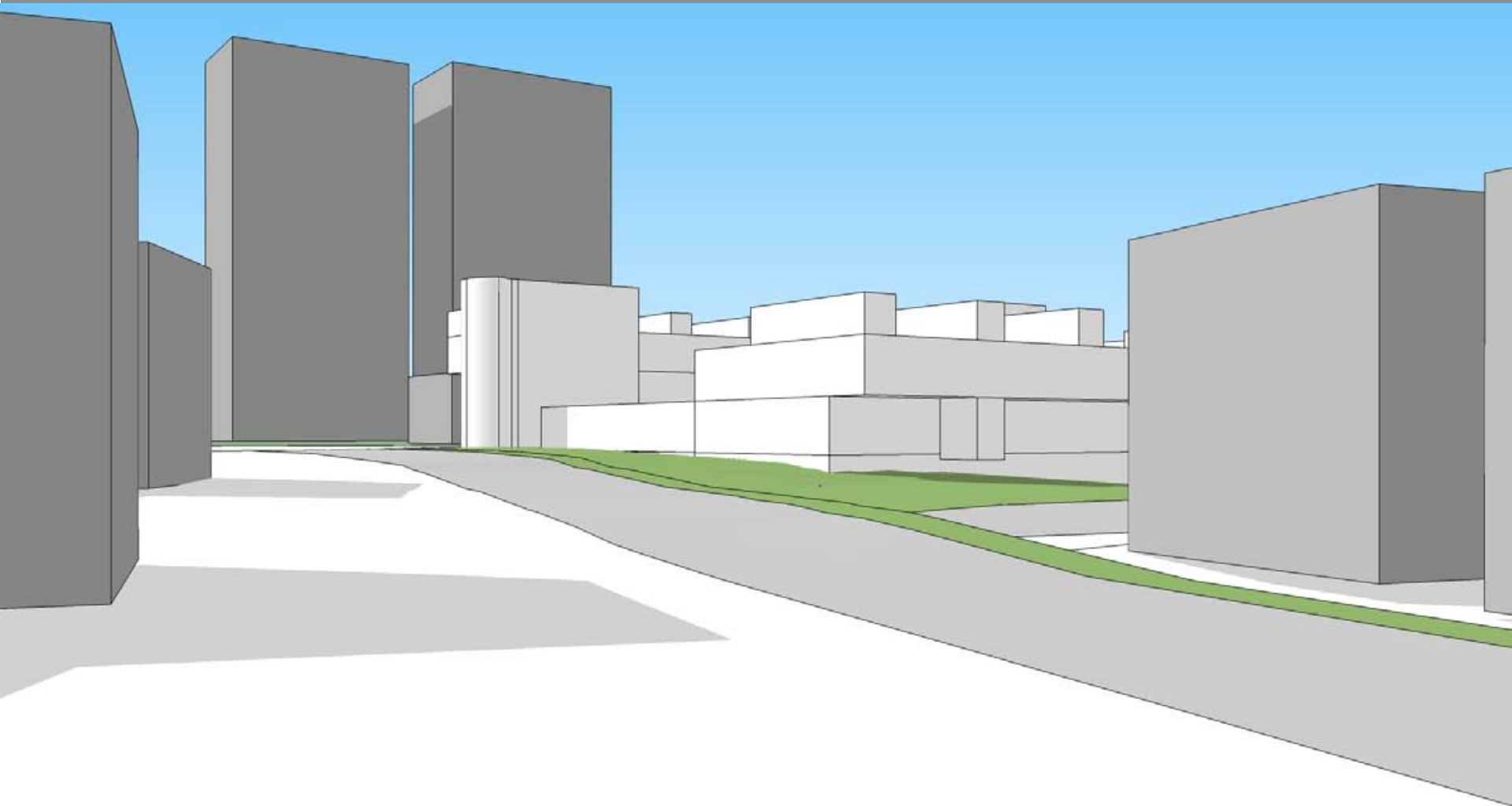


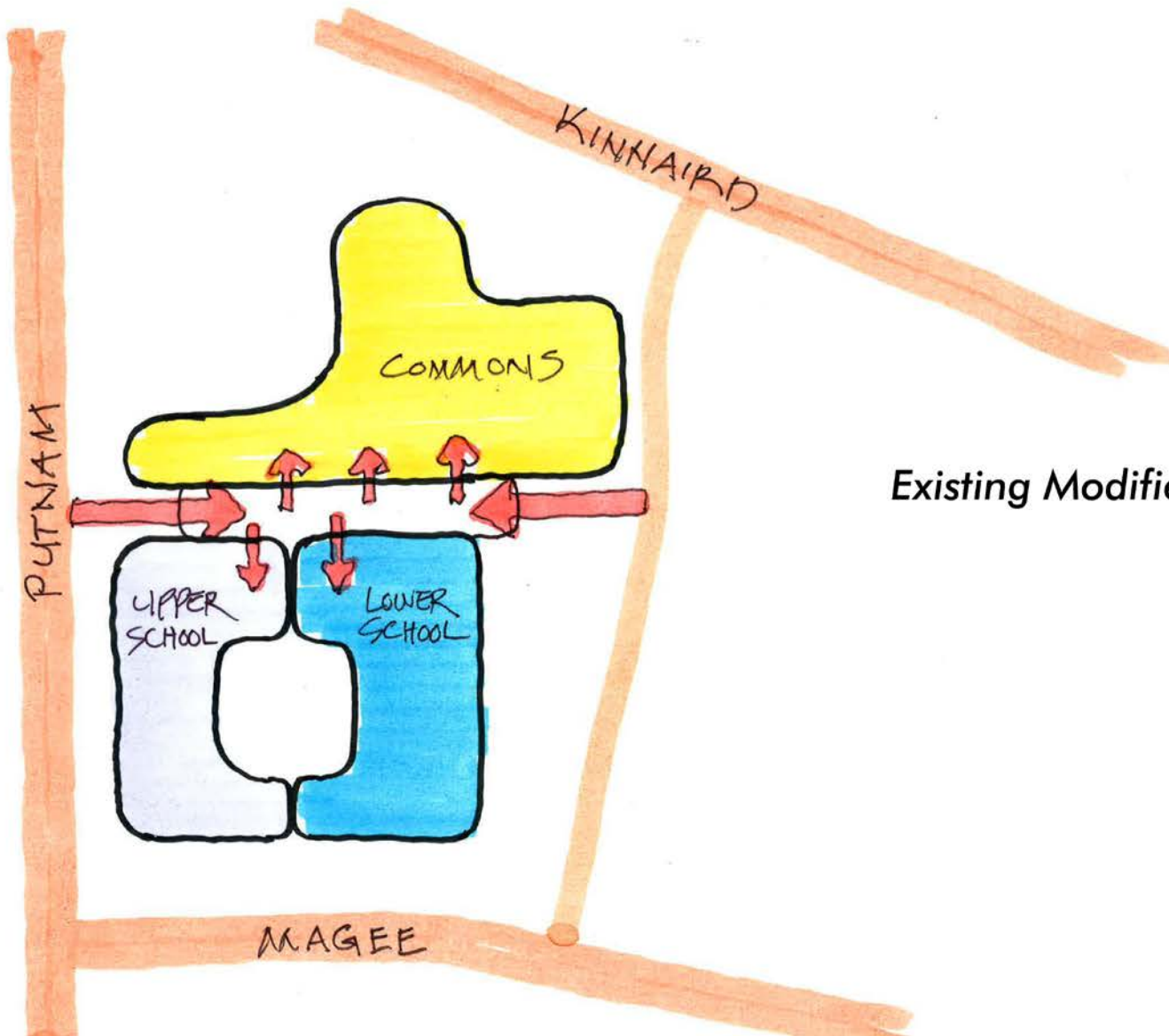
Clover Scheme



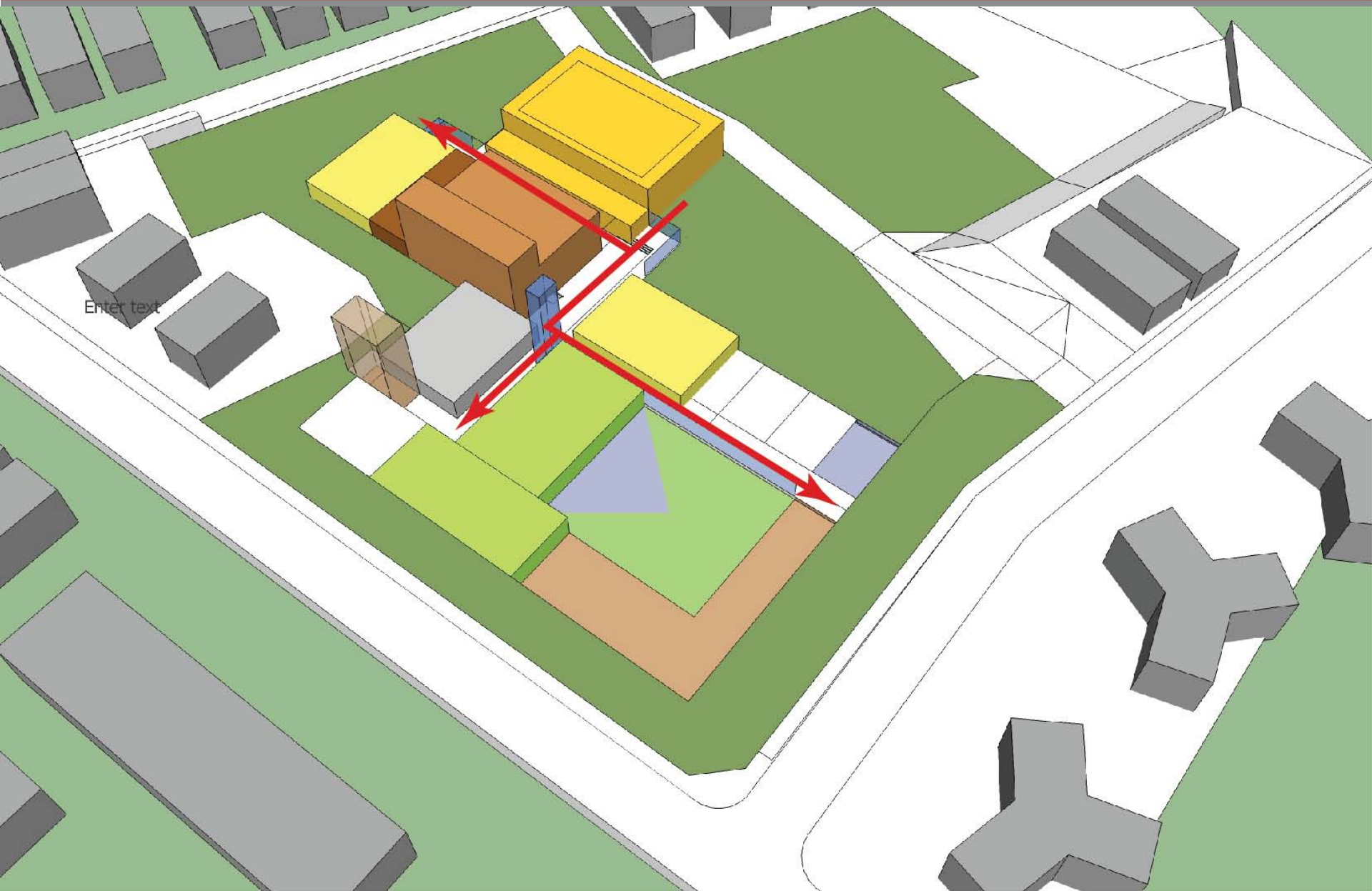


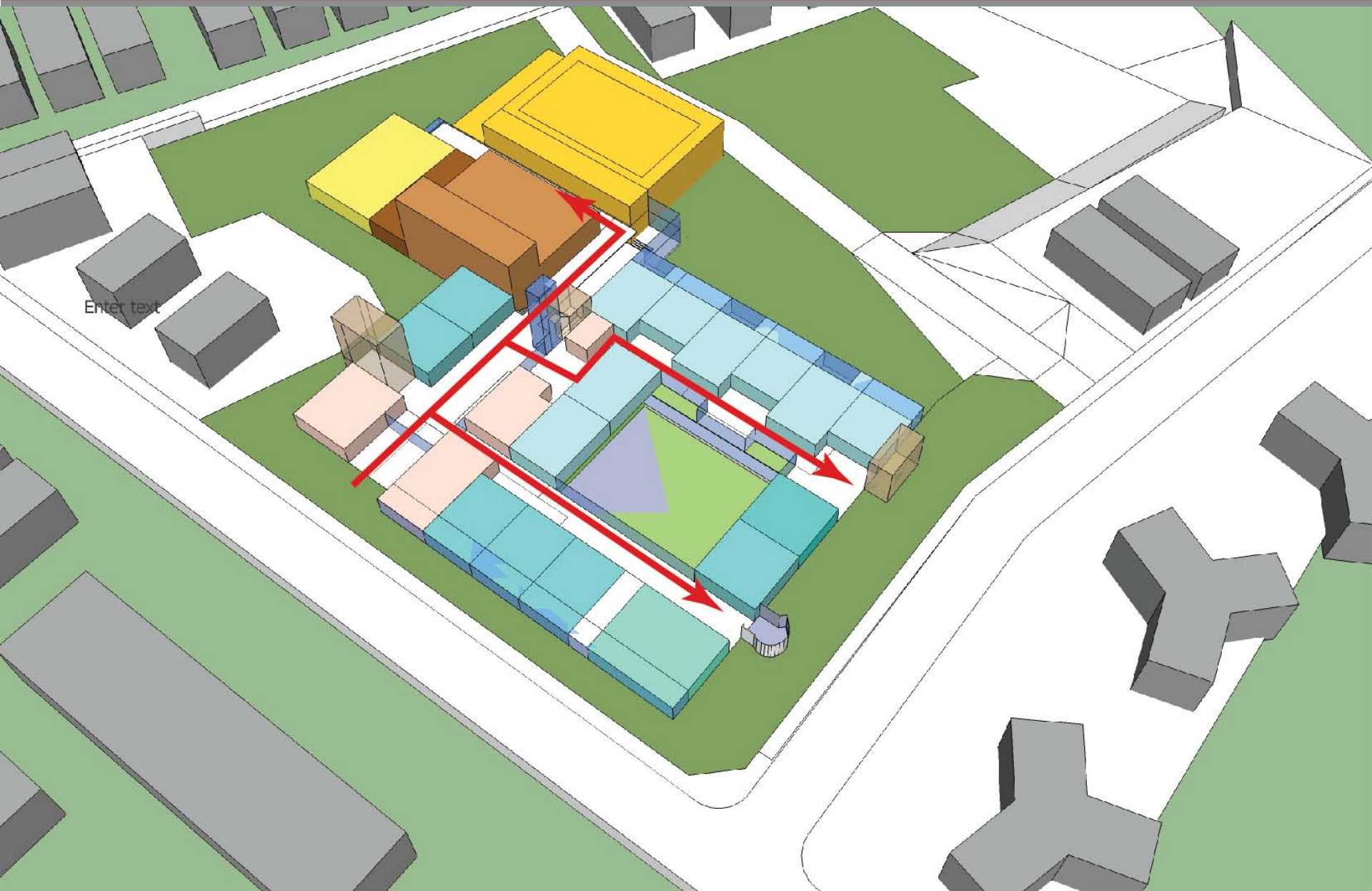


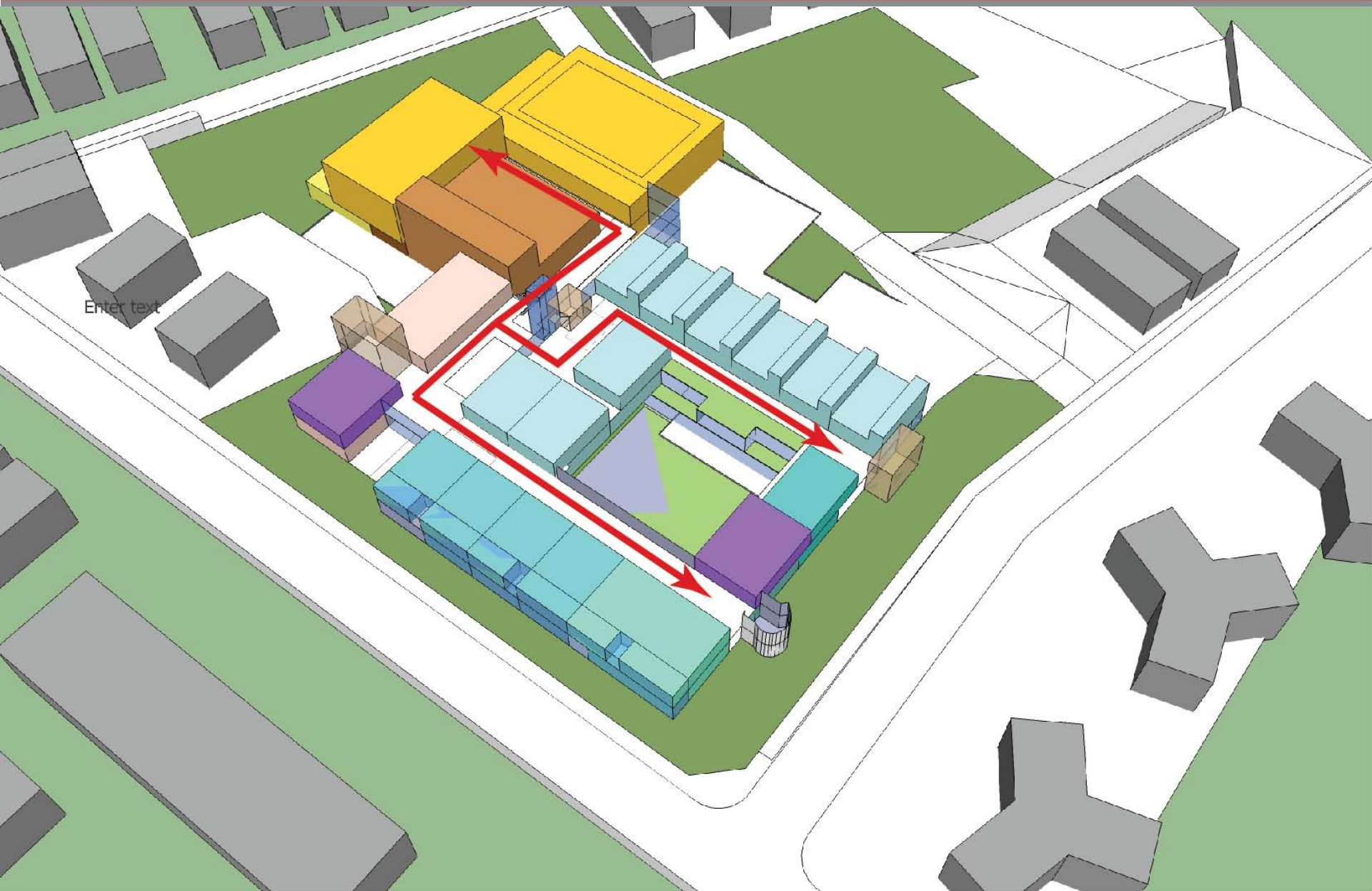


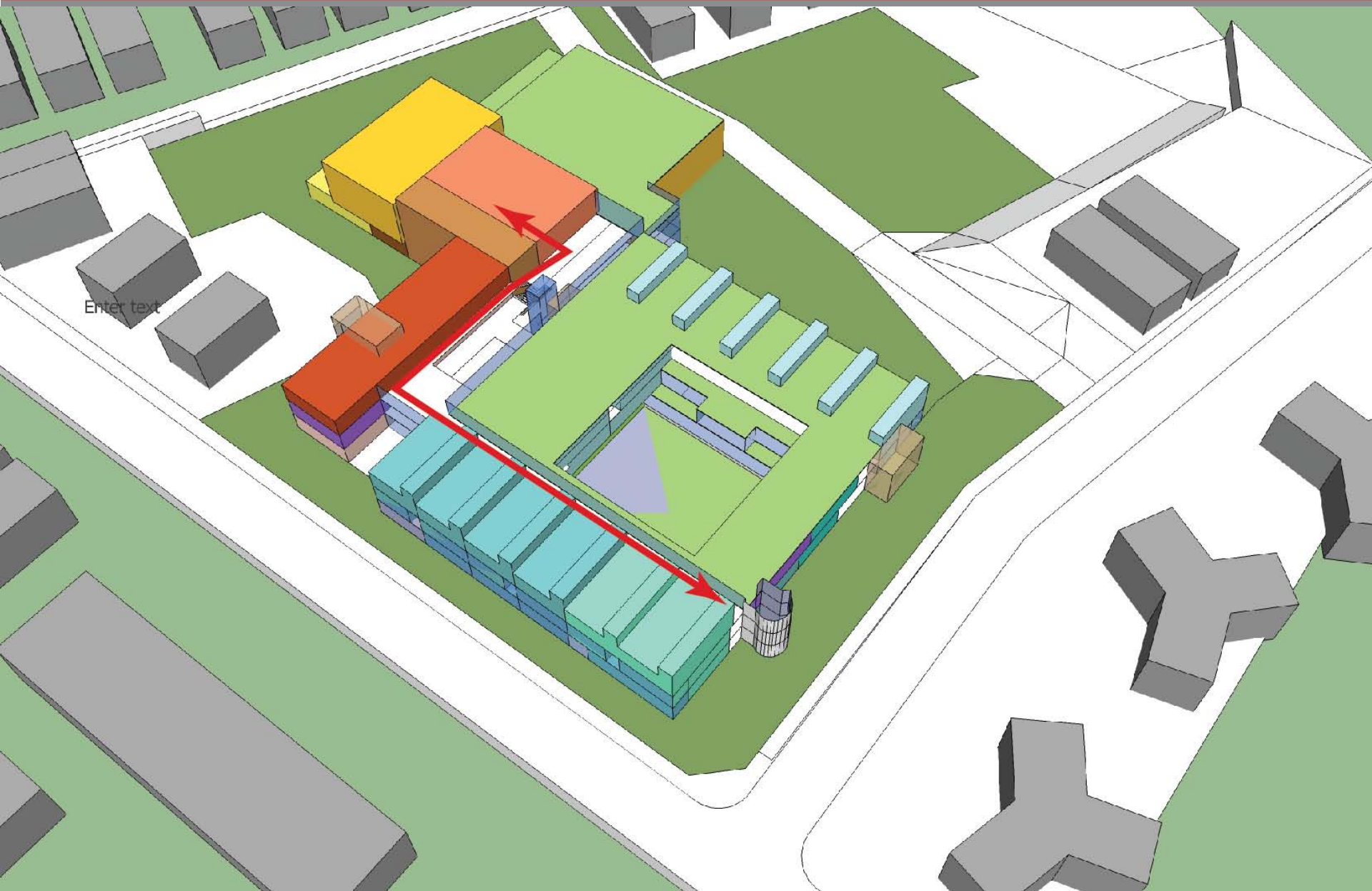


Existing Modified Scheme

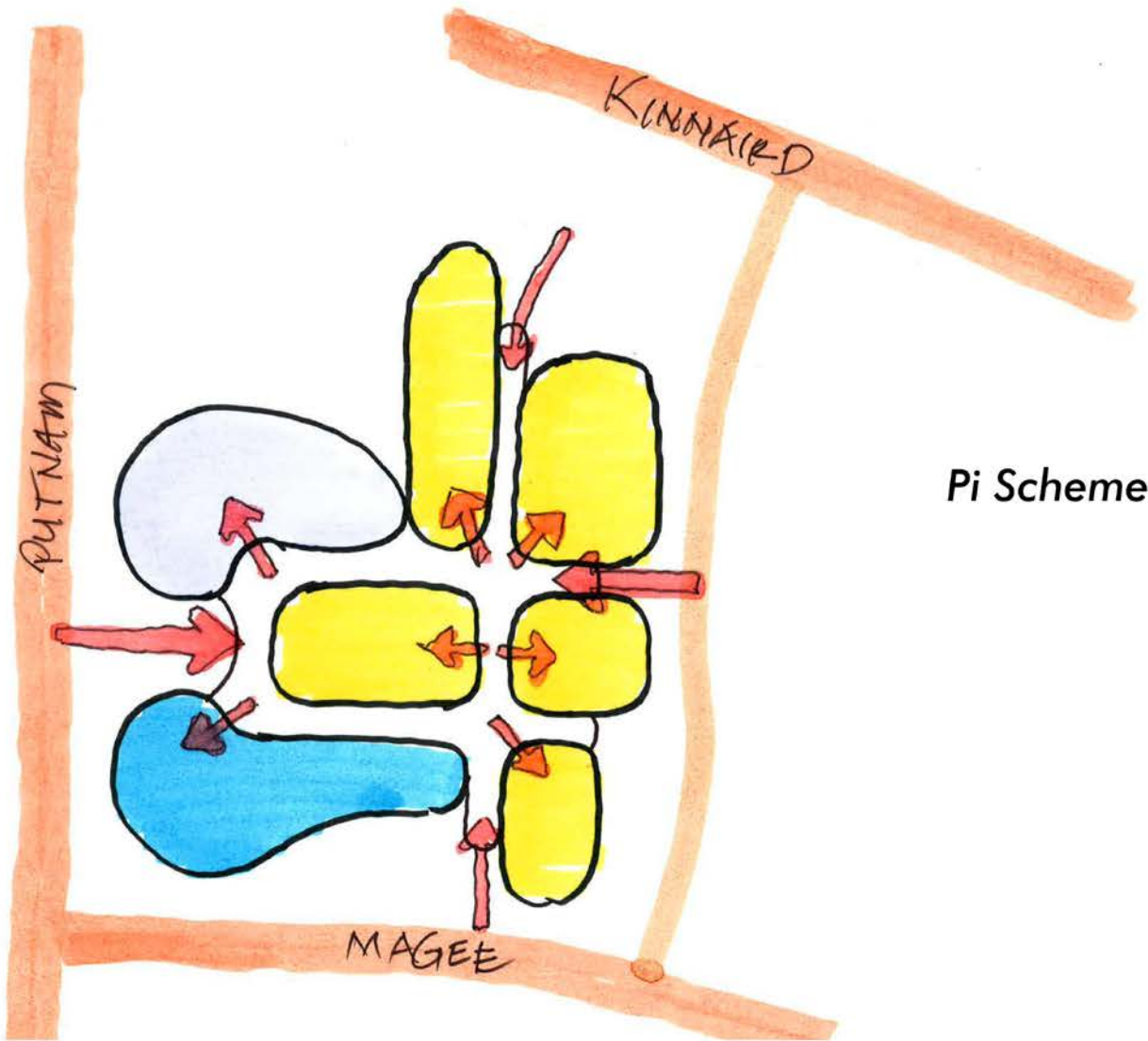


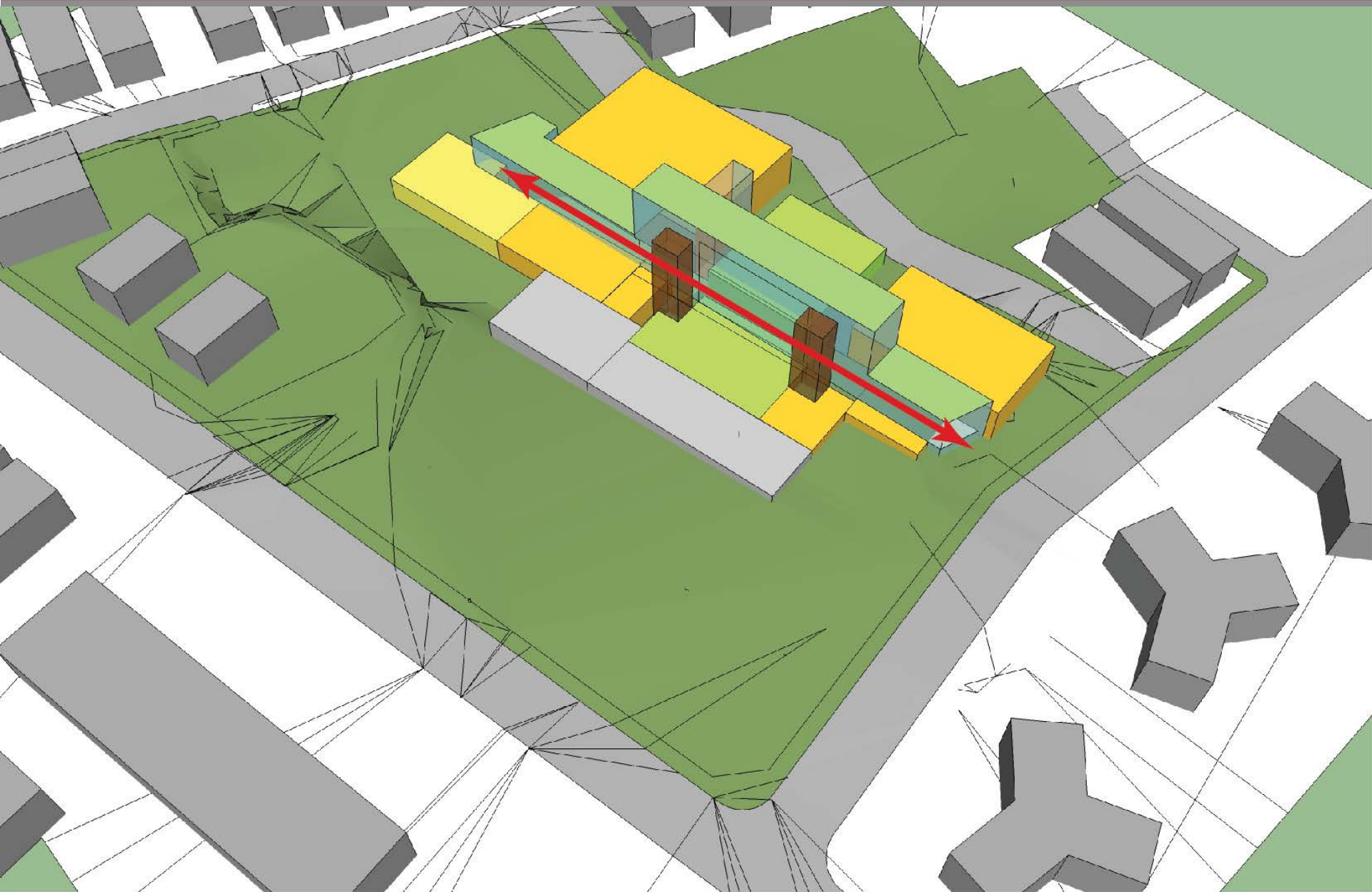










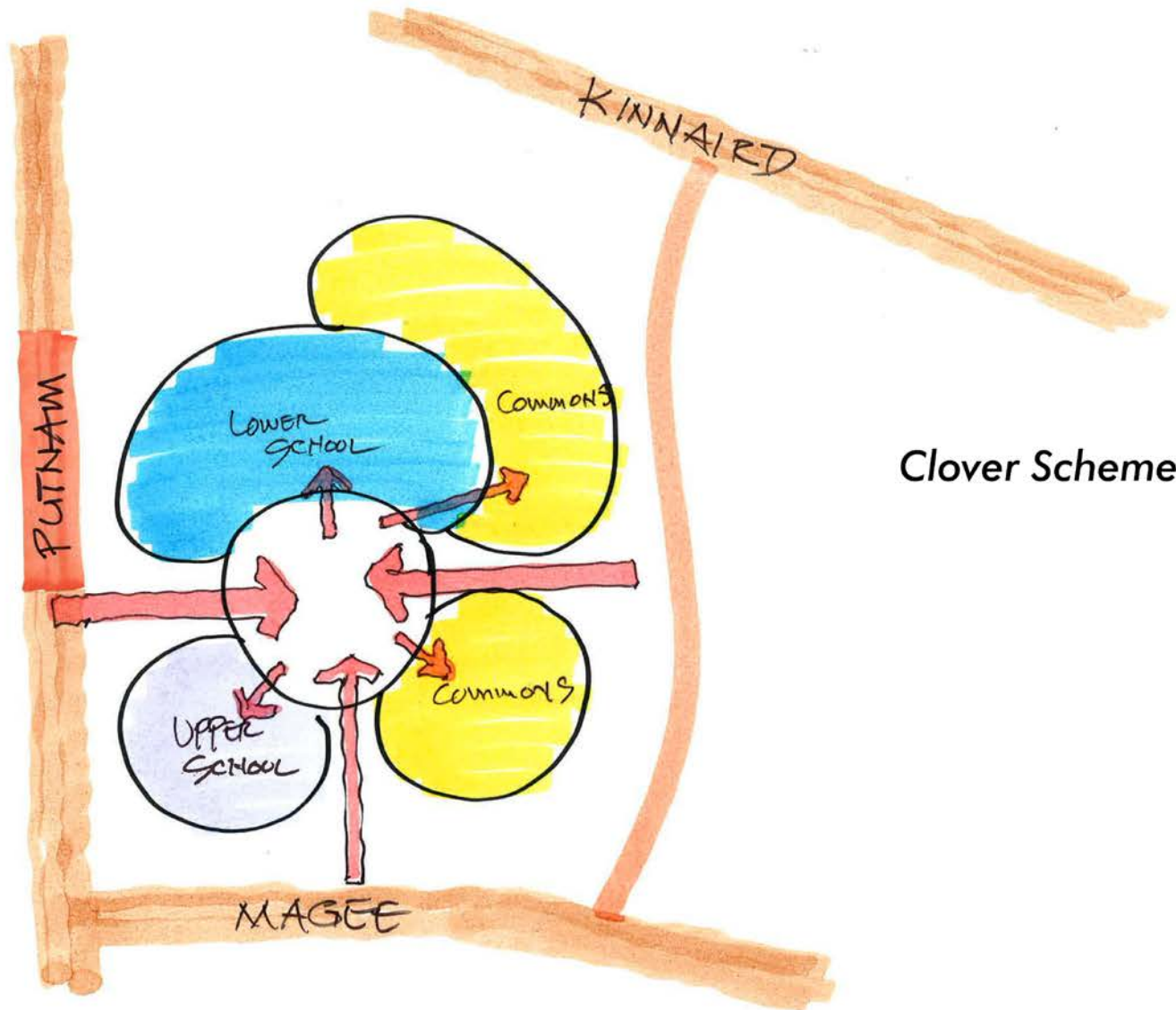




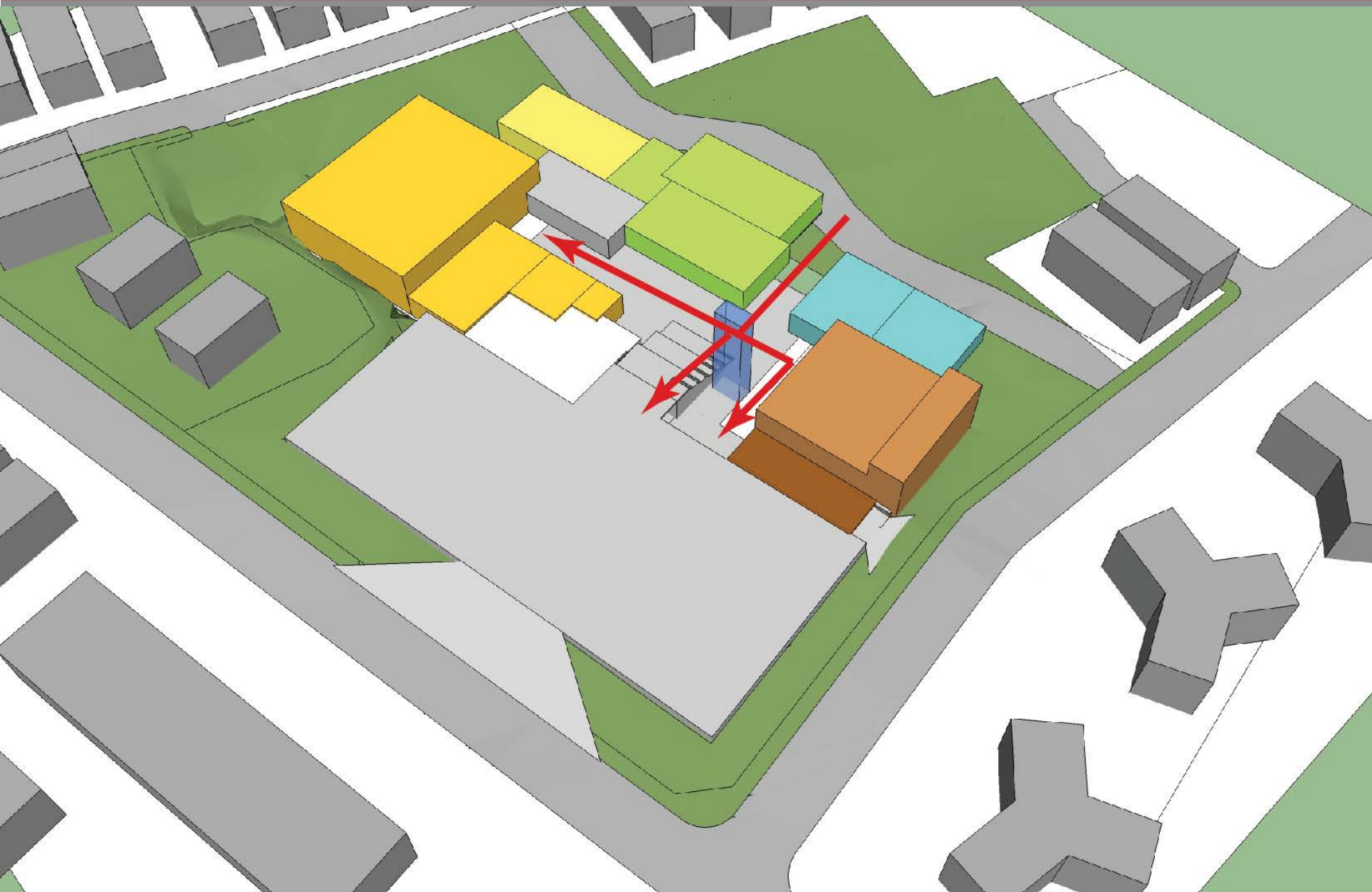


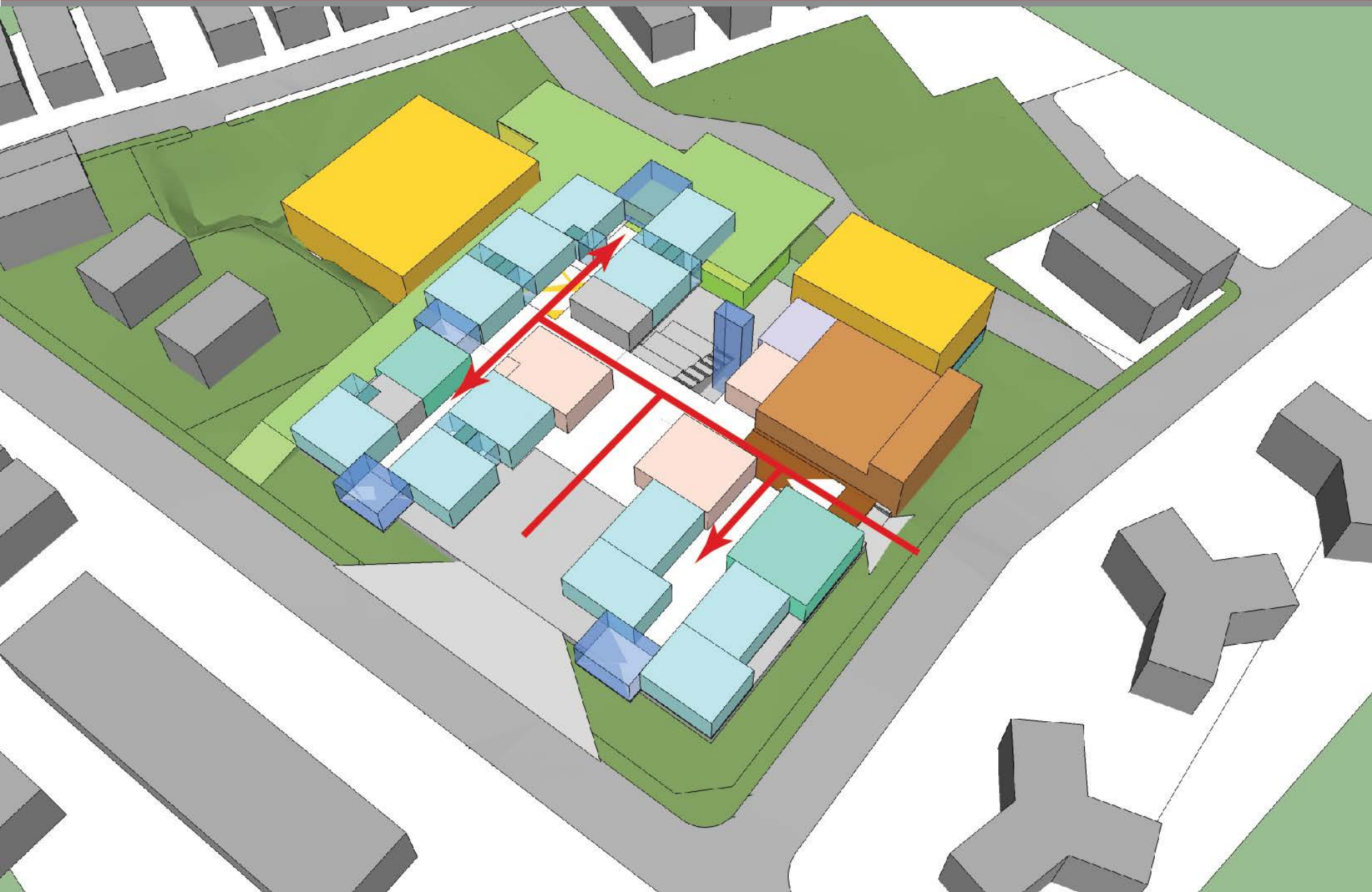


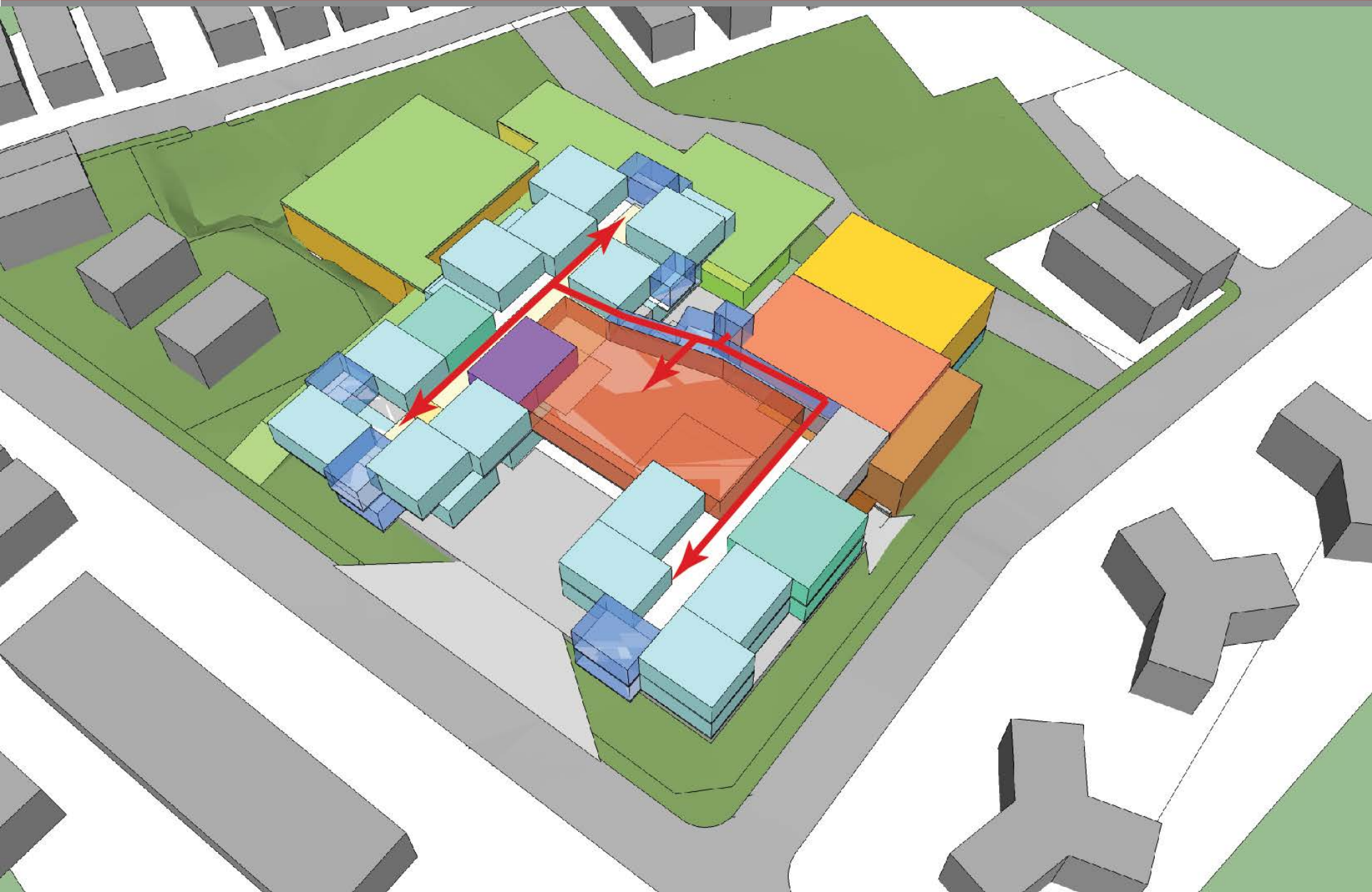


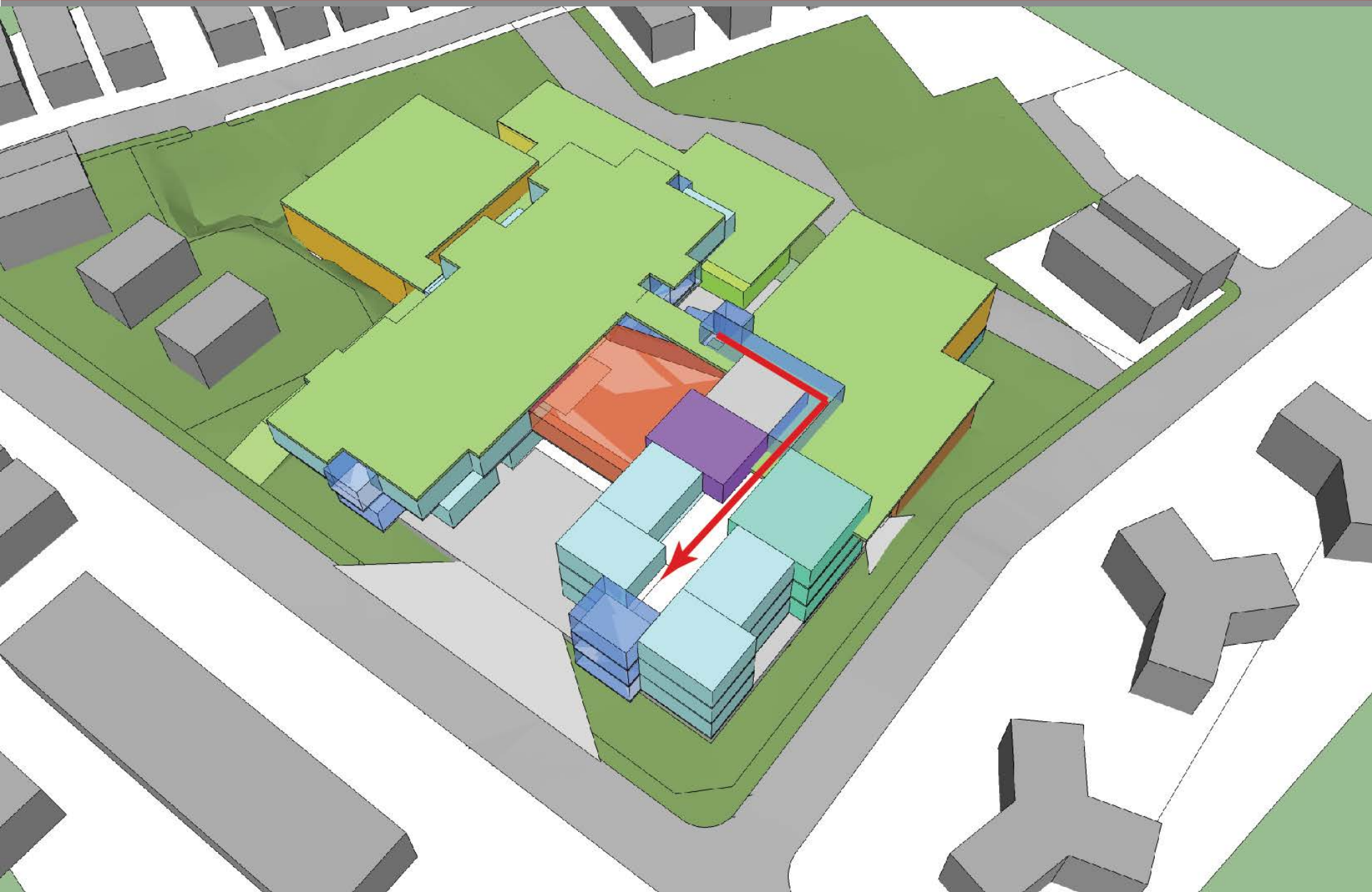


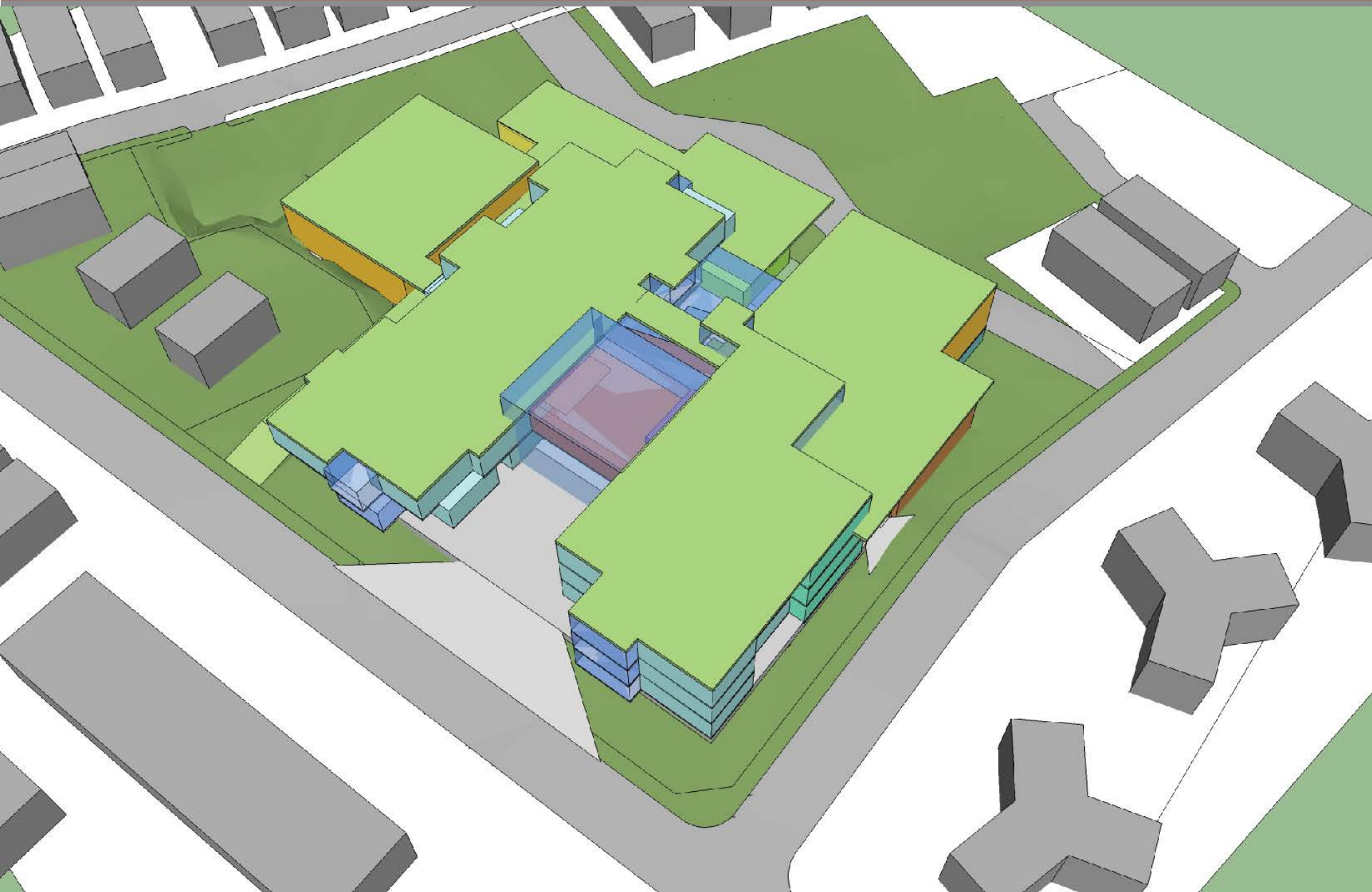
Clover Scheme

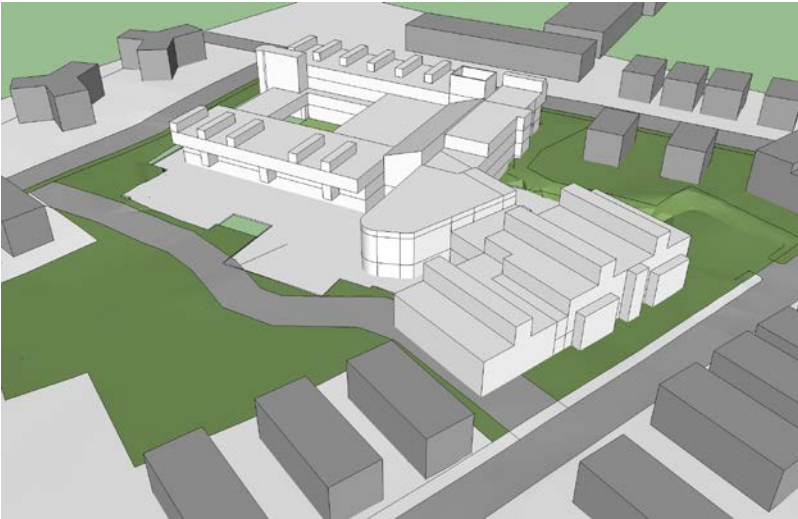












Existing



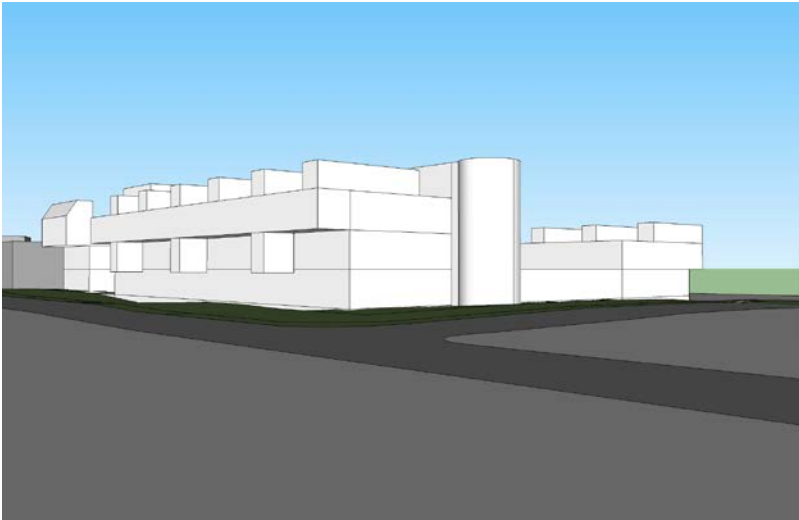
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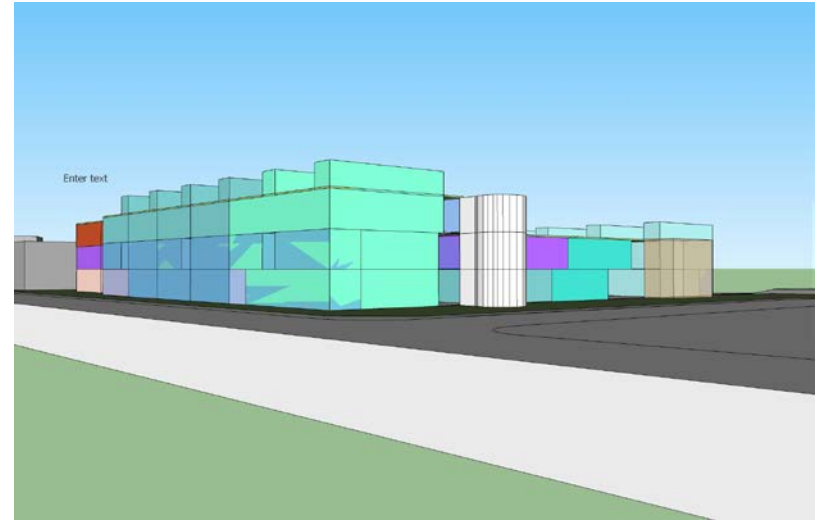
Pi



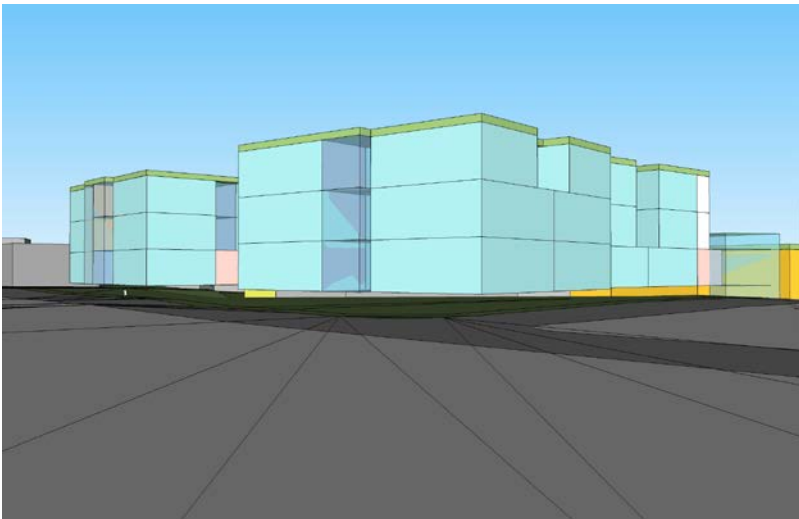
Clover



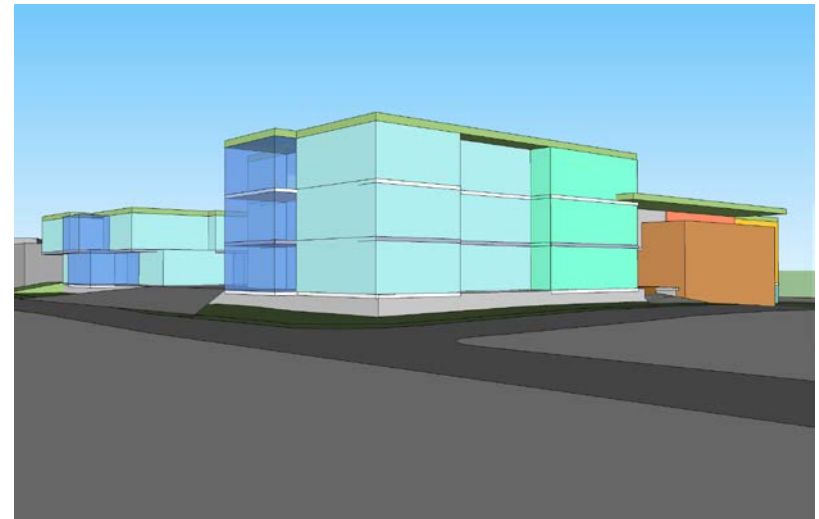
Existing



Existing-Modified



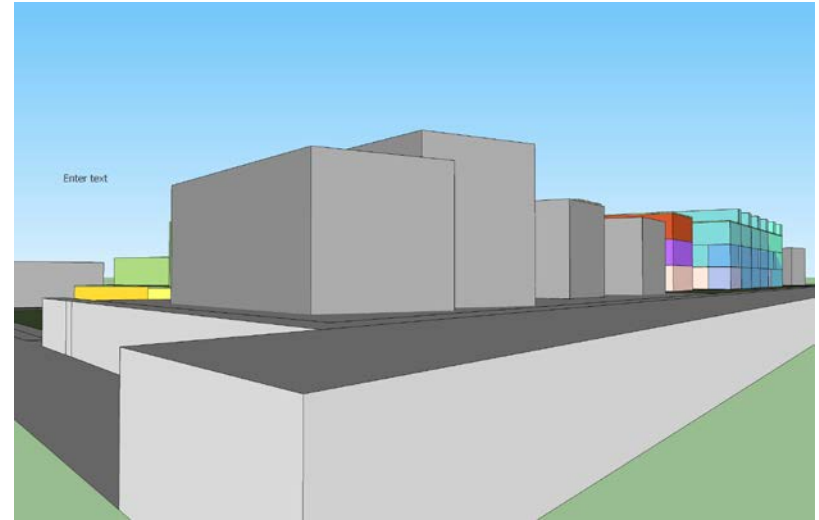
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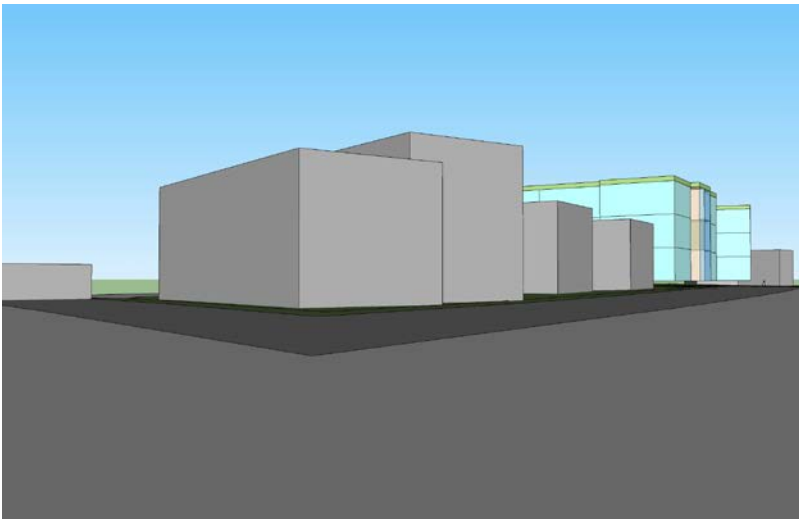
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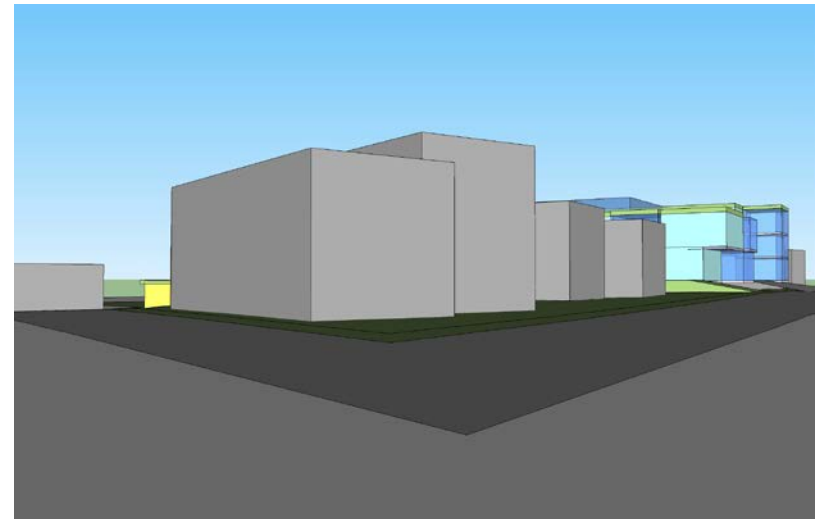
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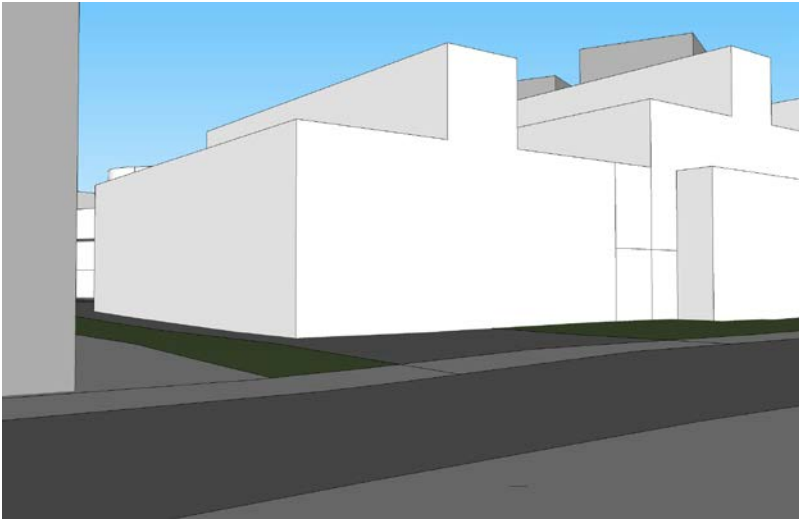
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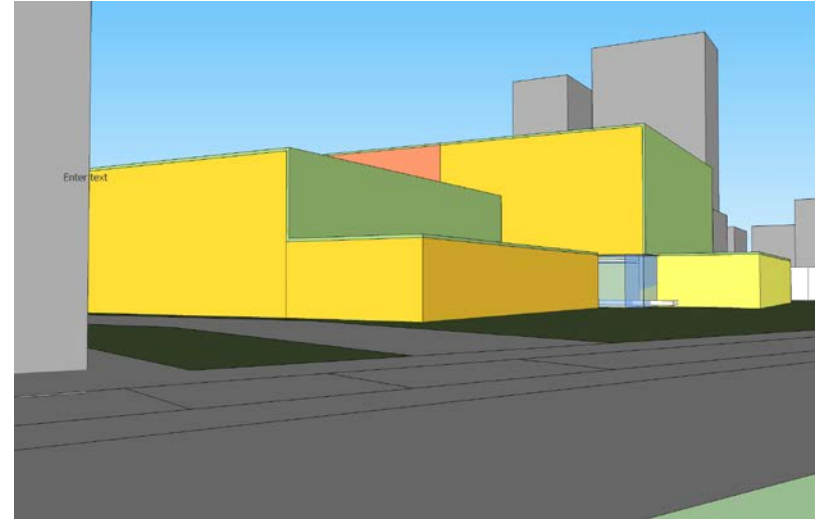
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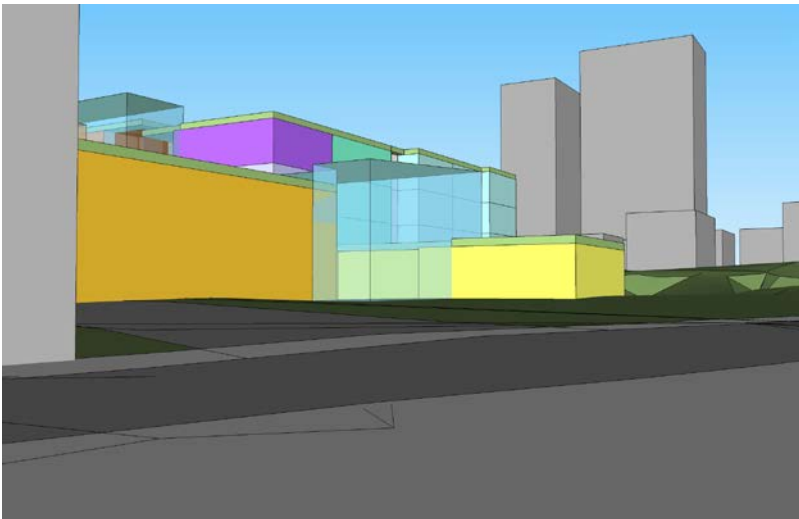
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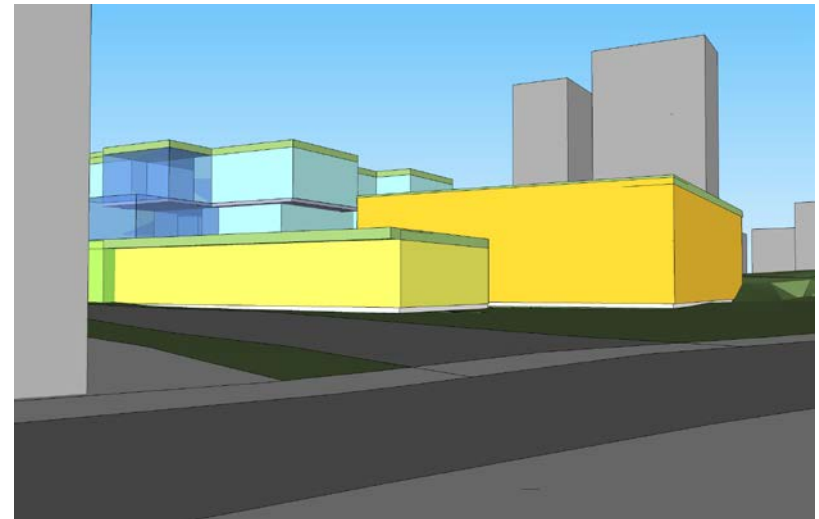
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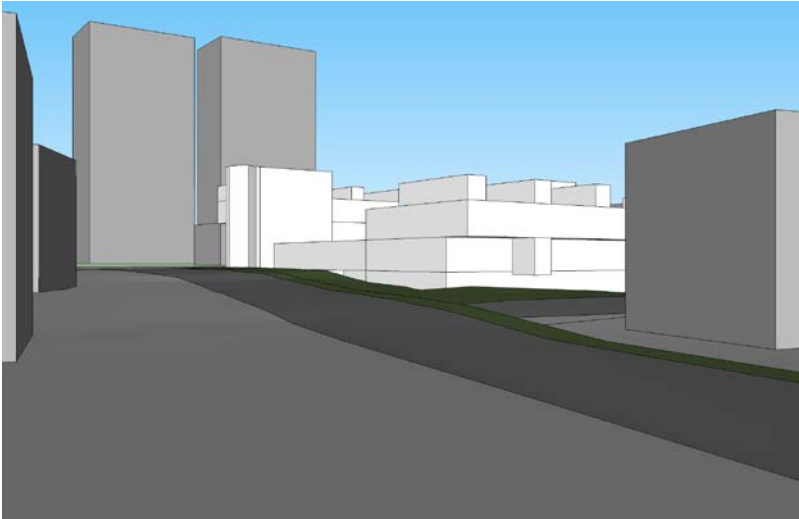
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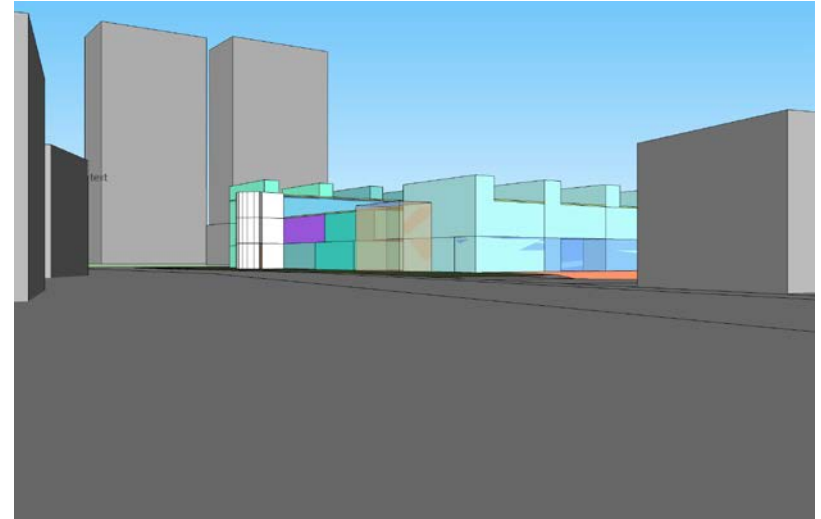
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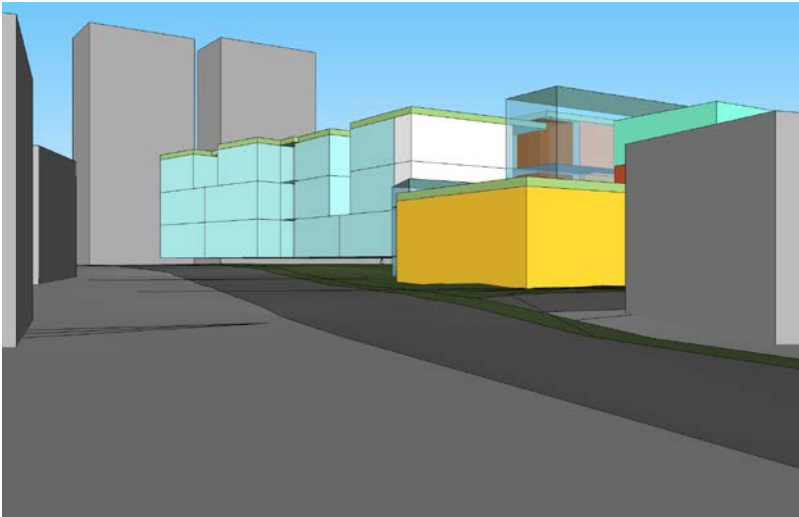
Clover



Existing



Existing-Modified



Pi



Clover



Existing-Modified 136,500 sf



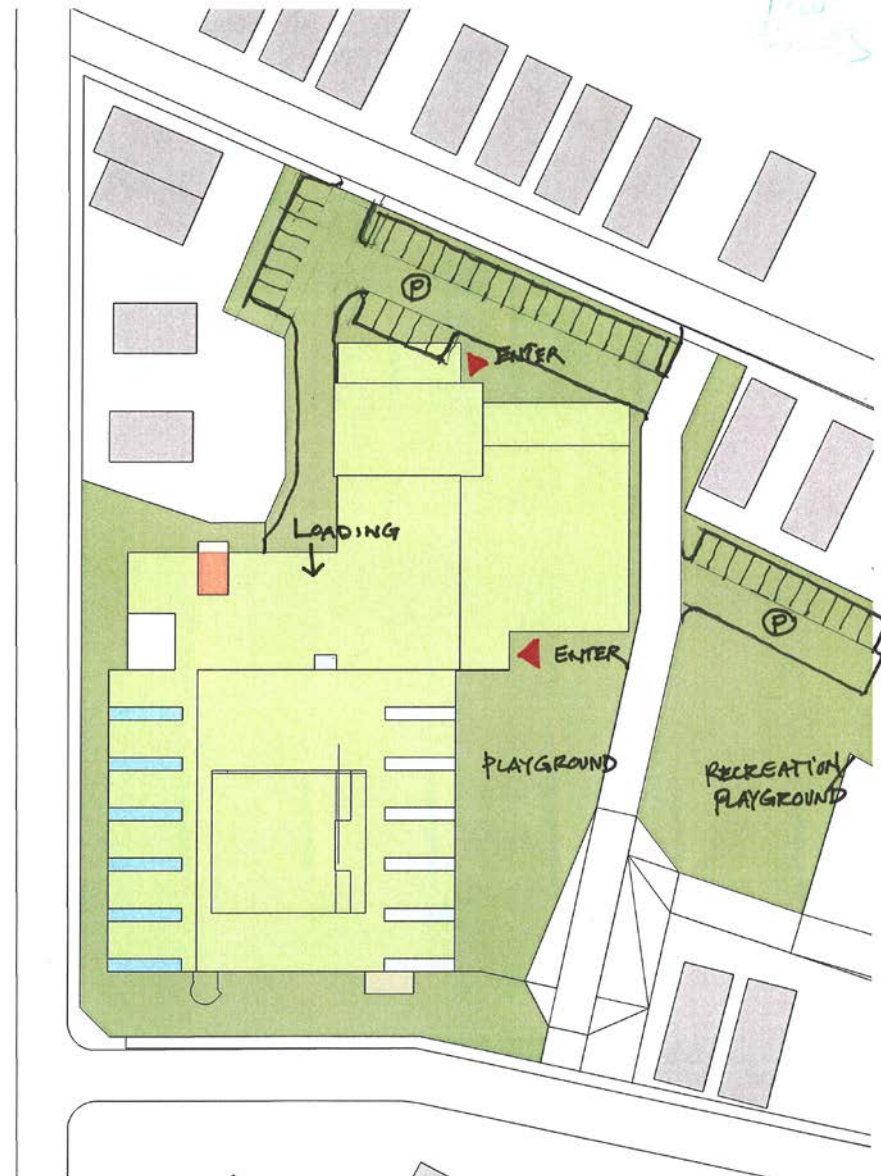
Pi 151,000 sf



Clover 137,000 sf

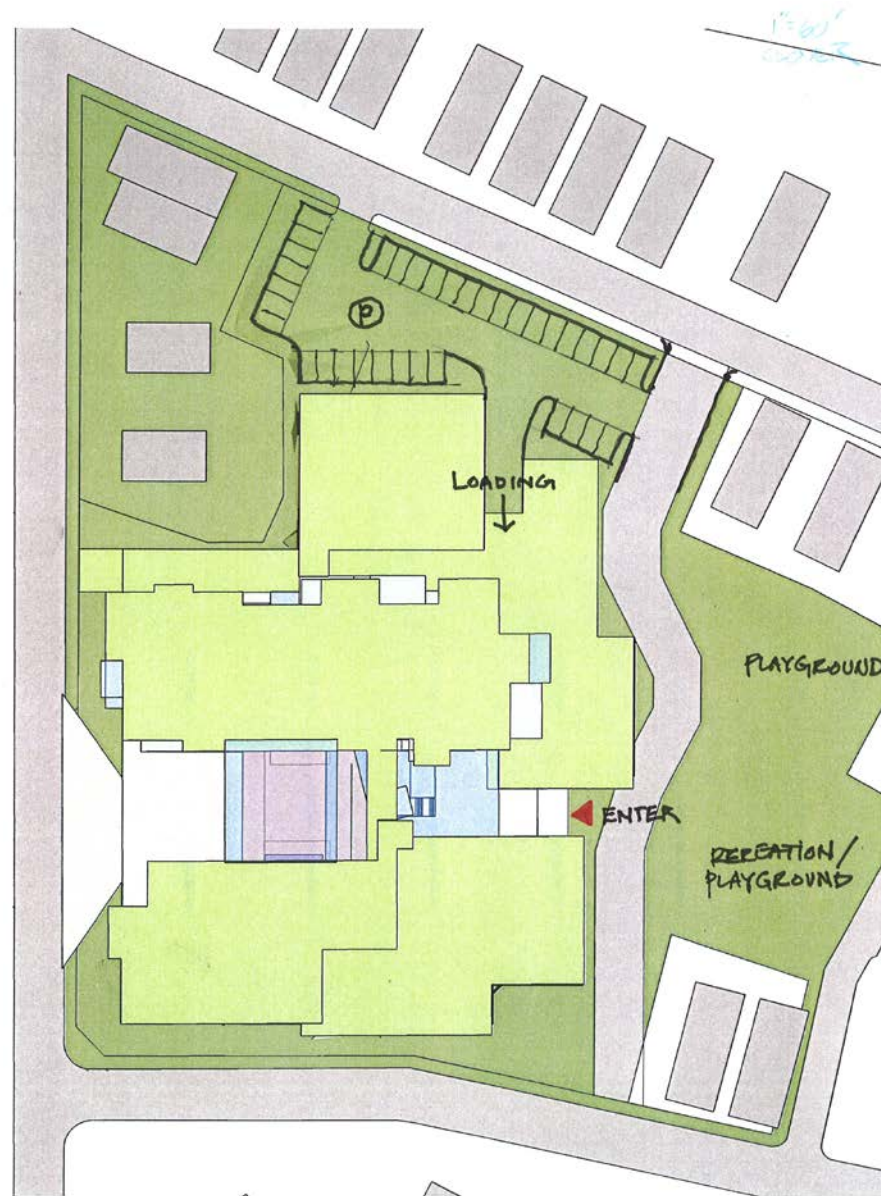
Green Roof Options





Existing Modified



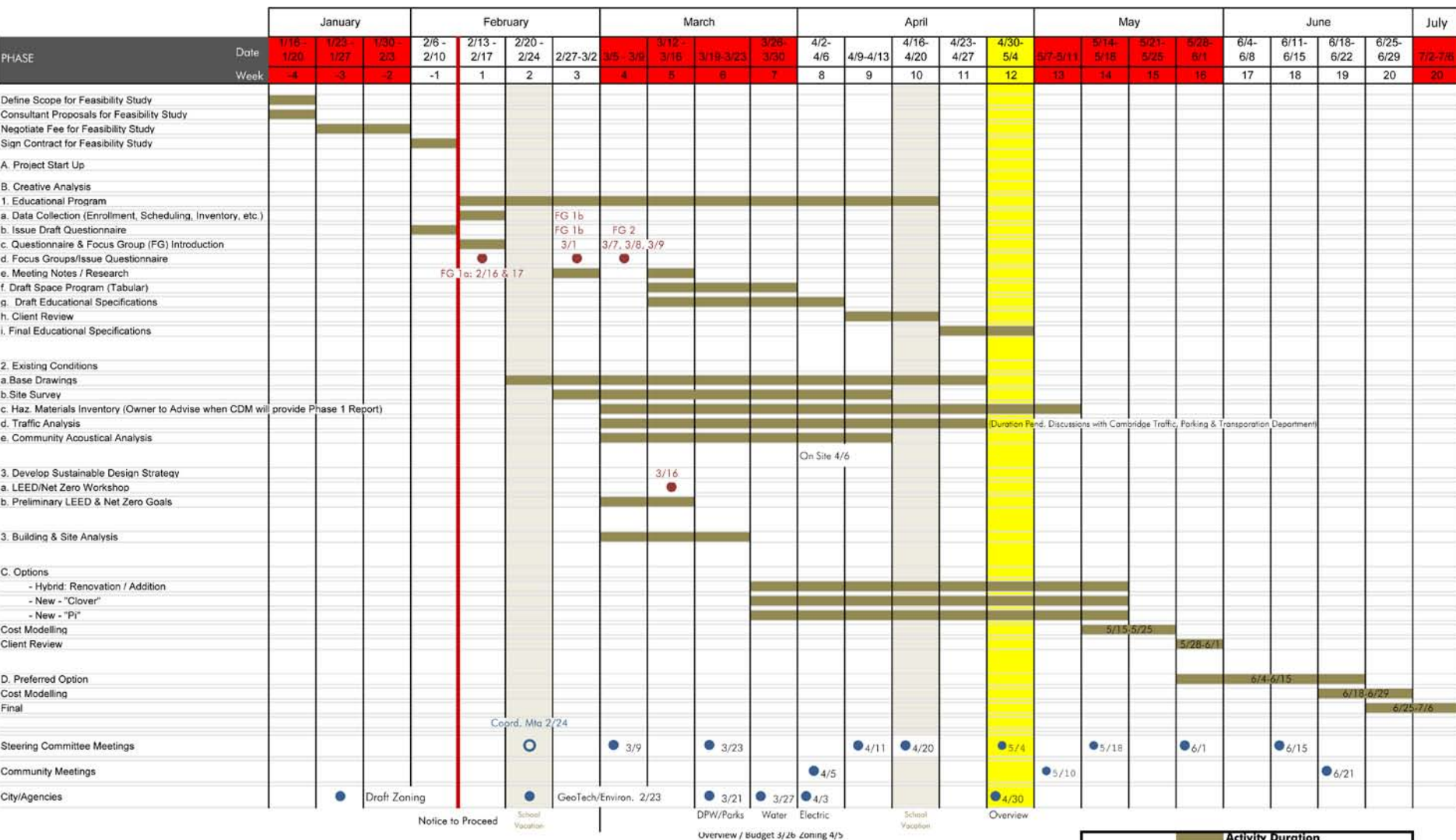


Clover

- 5/7/12 – Review three concept schemes and test energy performance for each with conceptual energy models
- By 5/10/12 - Review three concept schemes and develop impact of each on NZE goals – review will primarily consist of an analysis of how each scheme impacts the placement of the renewable energy systems and geothermal well field – particularly as it impacts the cost of each system.
- By 5/14/12 - Provide guidance to cost estimator on overall size of renewable energy system and differences in installation requirements between the three schemes – this will primarily consist of where and how PV would need to be mounted in each scheme and the cost impacts for different installation conditions.
- By 5/23/12 – Provide analysis of variations in relative annual energy performance for the three schemes. (we expect that the differences while noticeable, will not vary by more than 5-10% across the schemes assuming the building square footages are comparable).
- First week of June – WebX meeting with owner and team to discuss preferred scheme and integration of NZE.
- Month of June – further refine NZE impact for preferred scheme including better understanding of integration of PV and geothermal.

Perkins Eastman

4/30/2012



Legend:

- Activity Duration
- Meetings
- User Group Meetings

Perkins Eastman

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WWW.PERKINSEASTMAN.COM



Existing-Modified



Pi



Clover



Existing



Existing-Modified



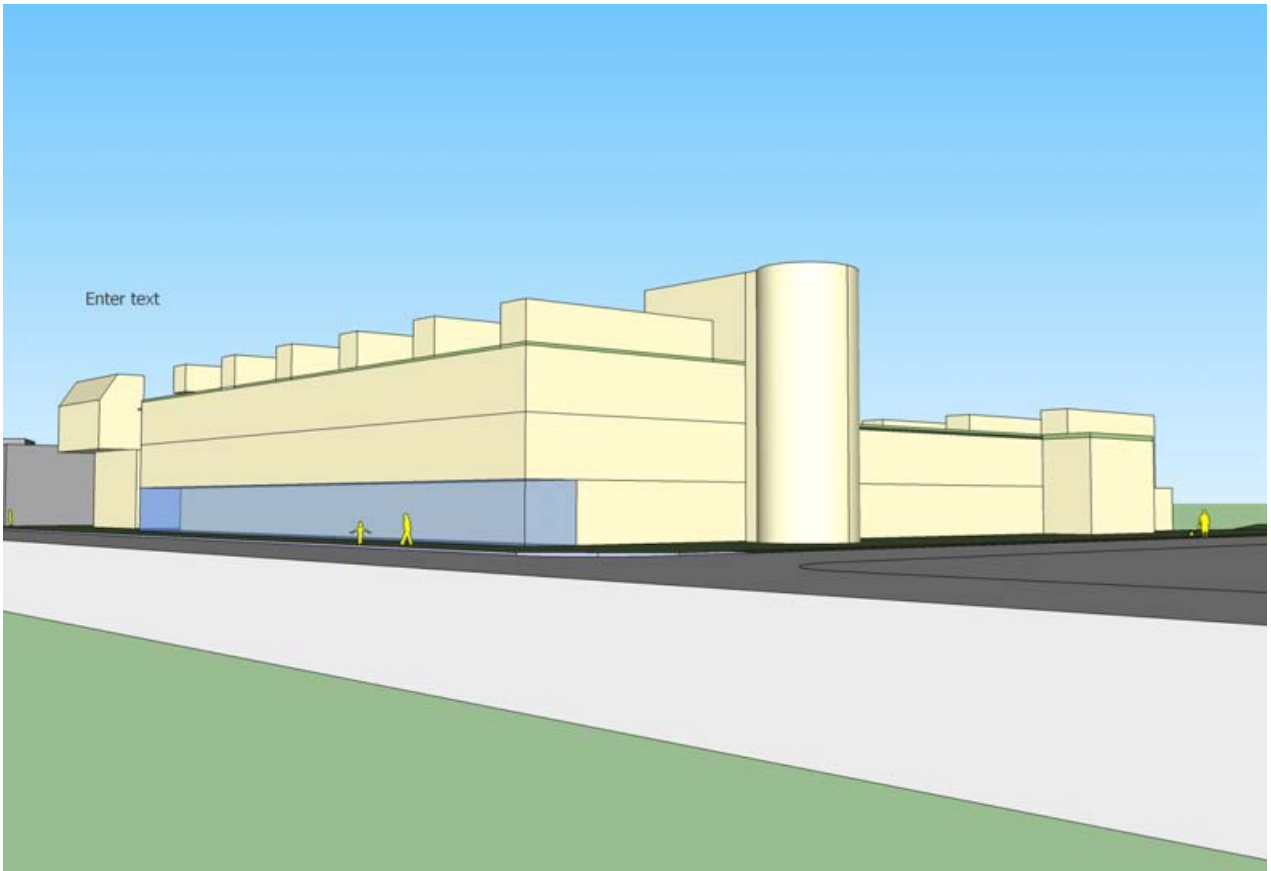
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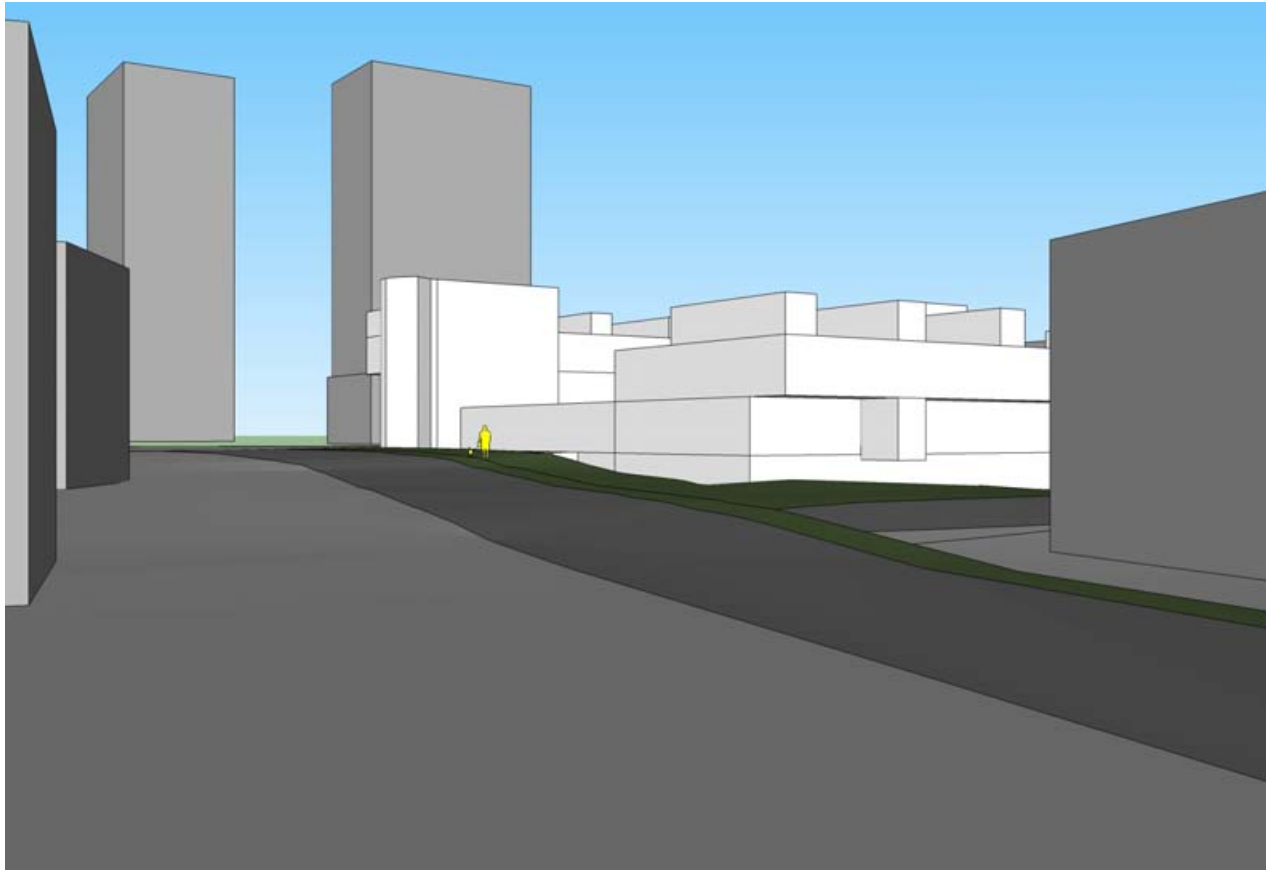
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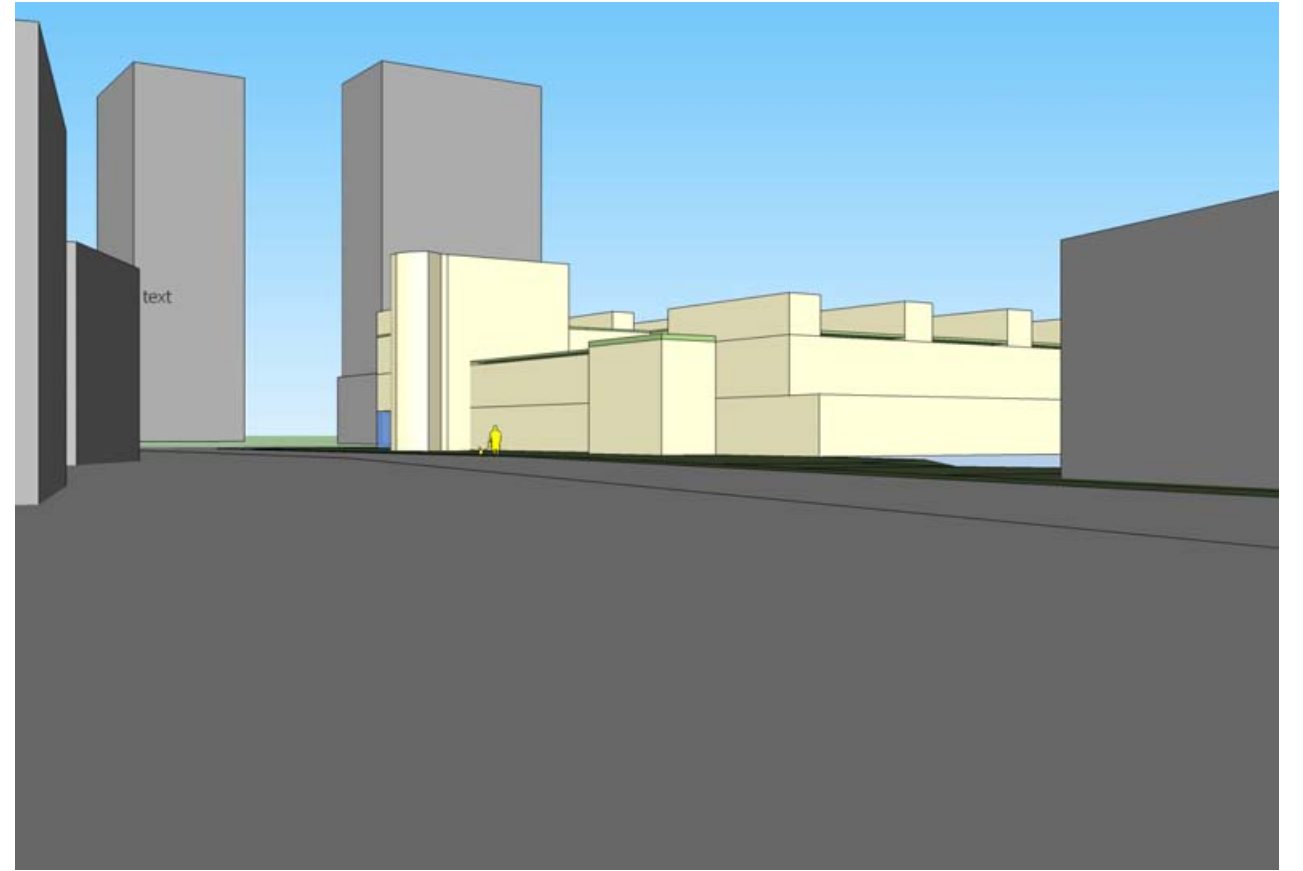
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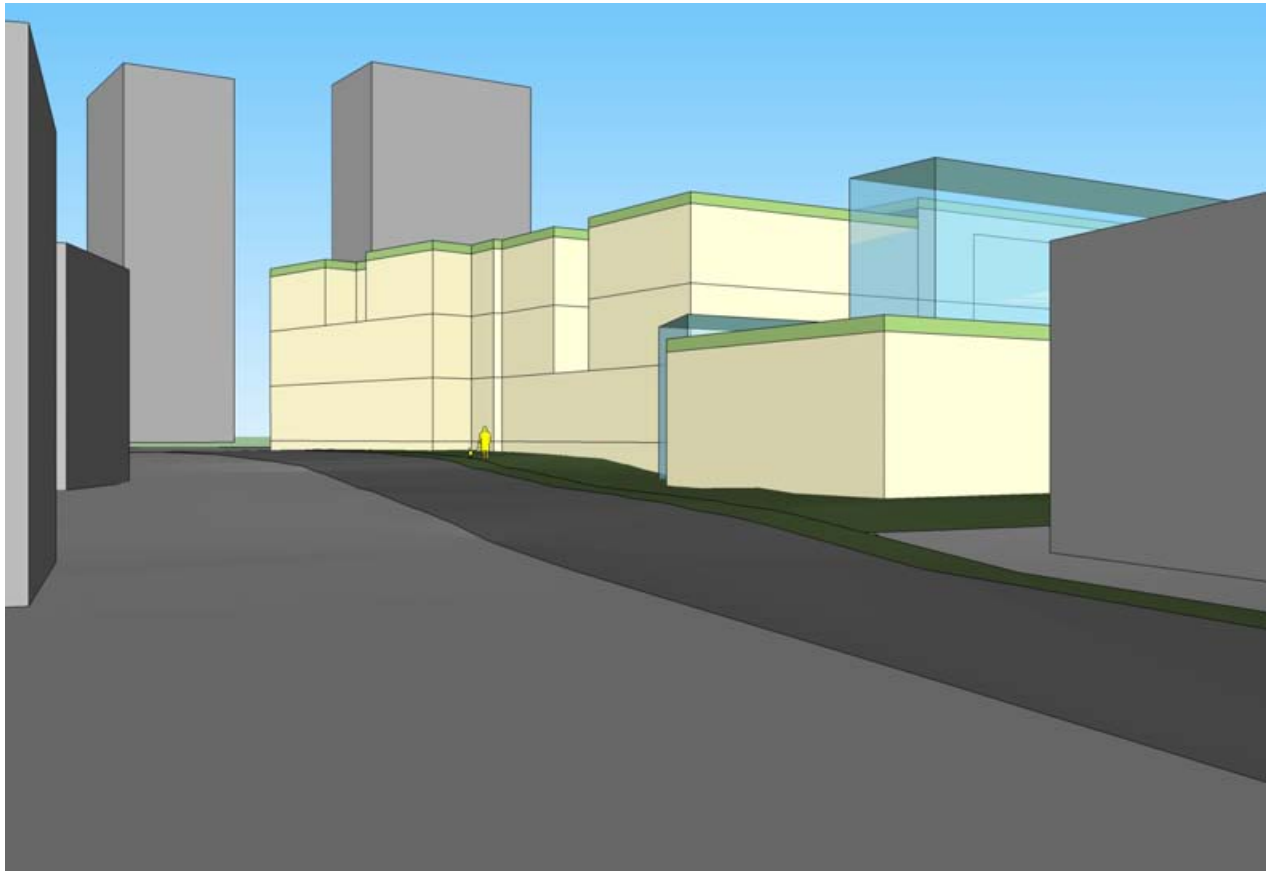
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Existing



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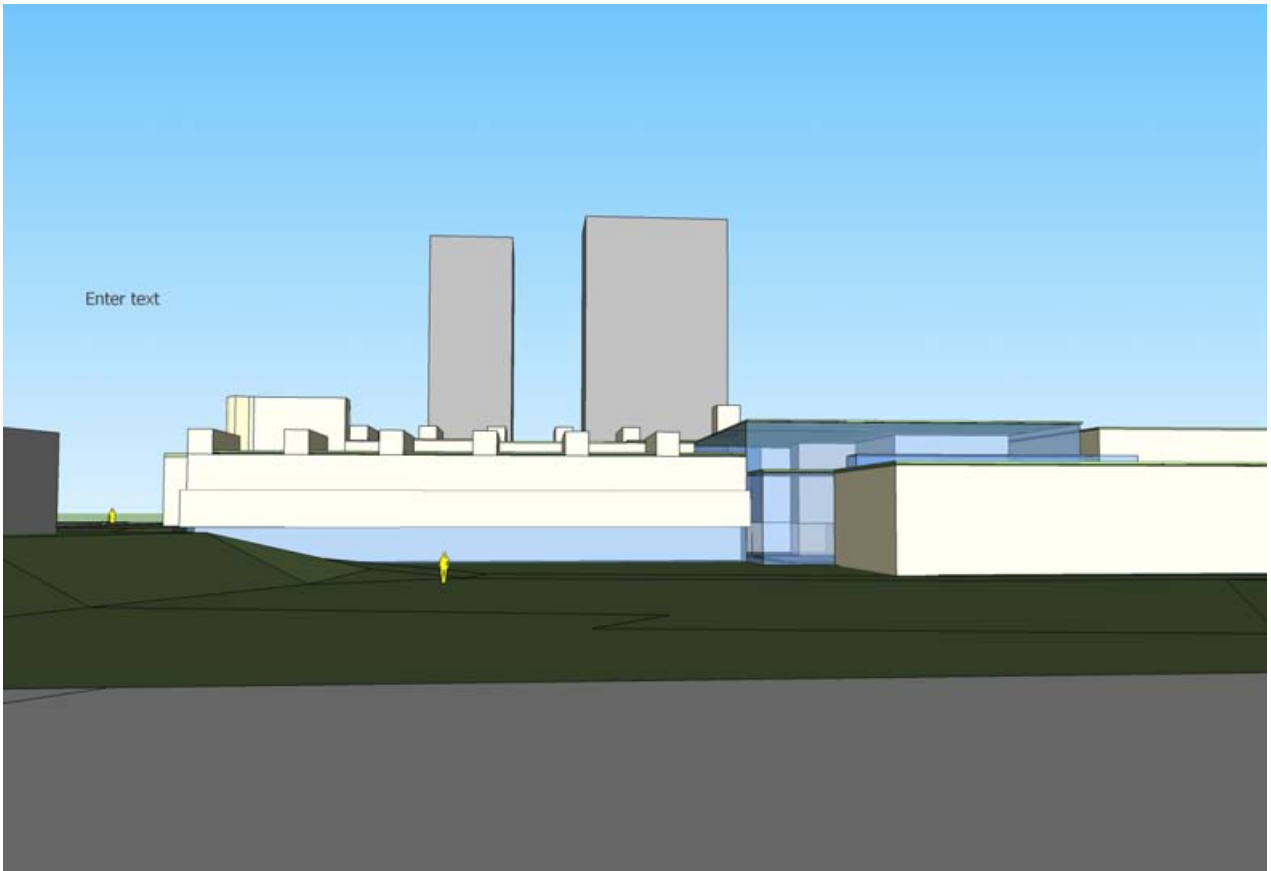
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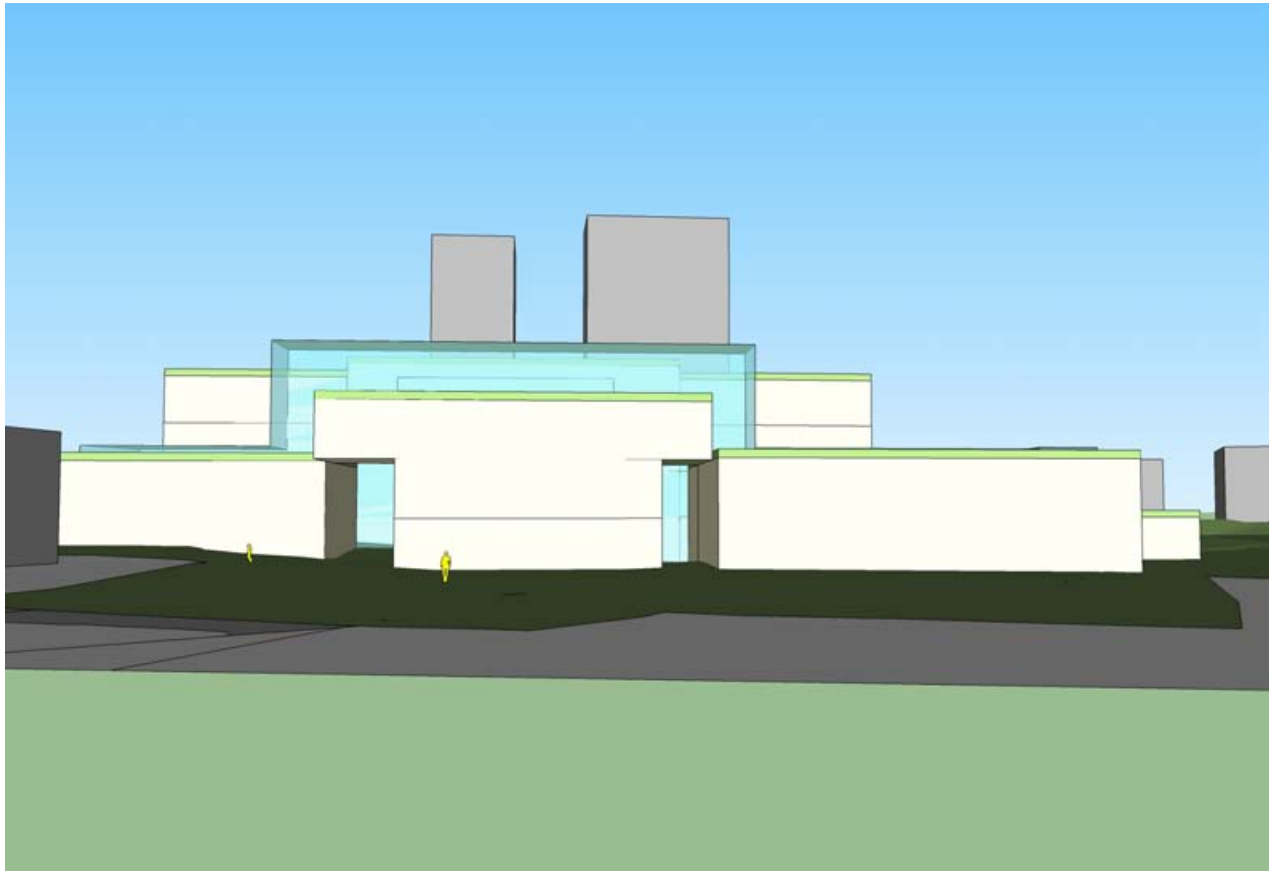
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Existing-Modified



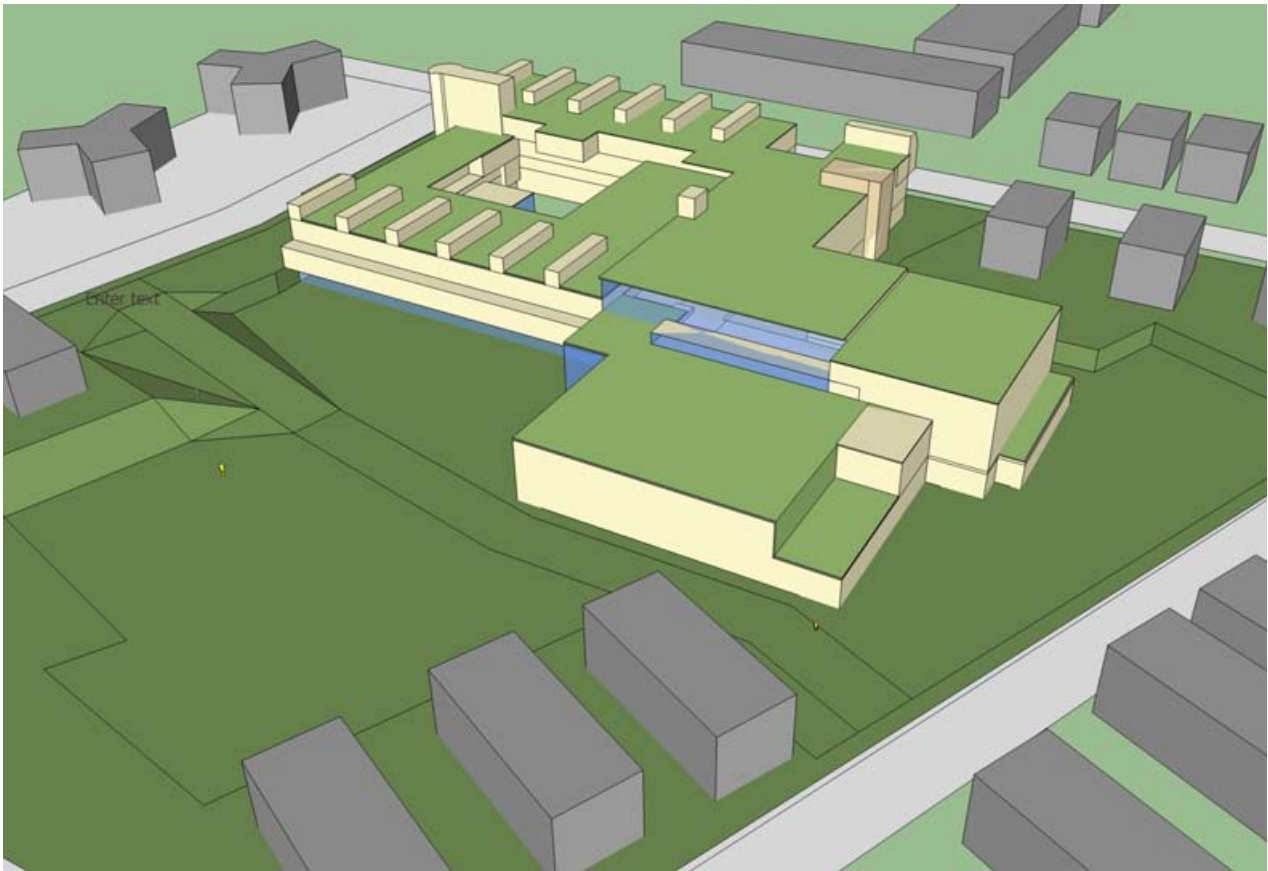
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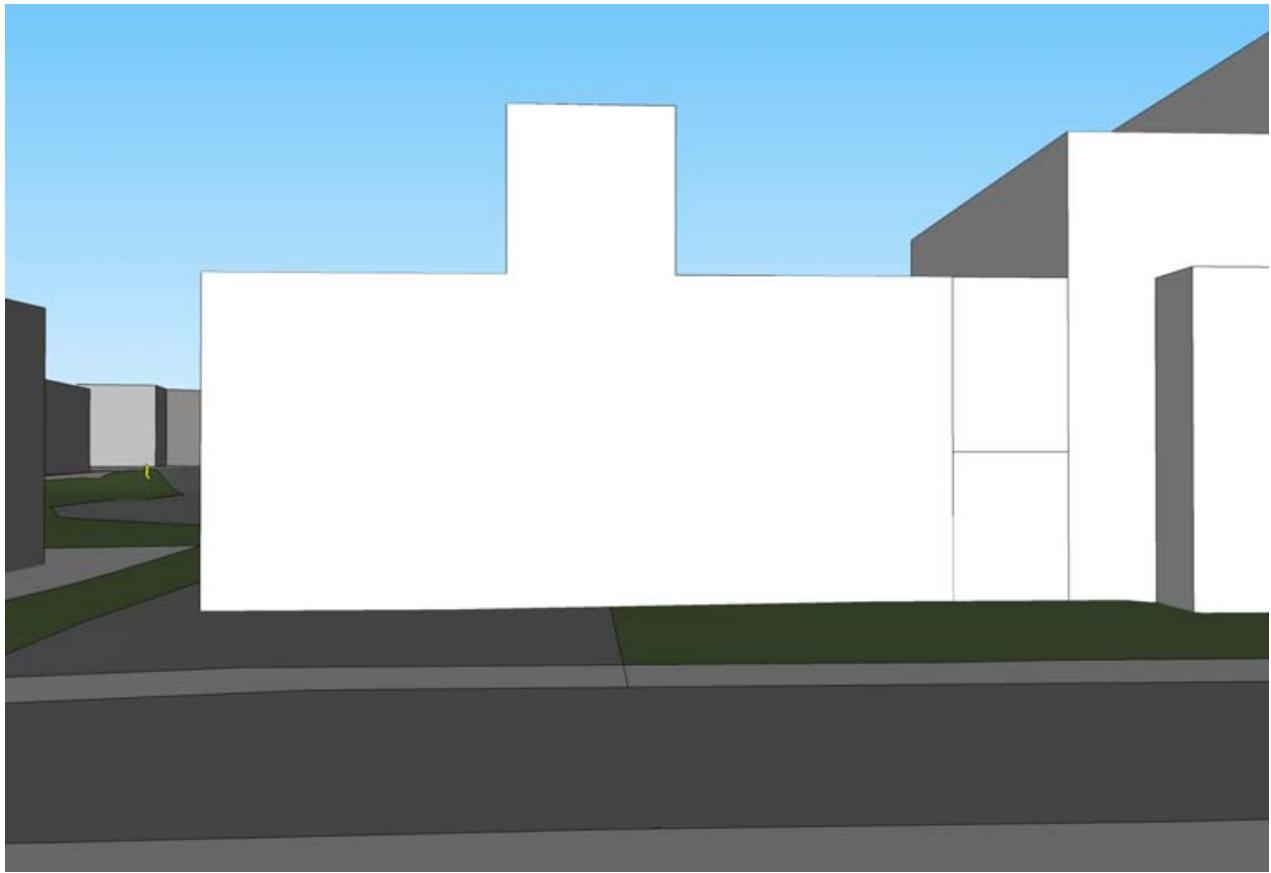
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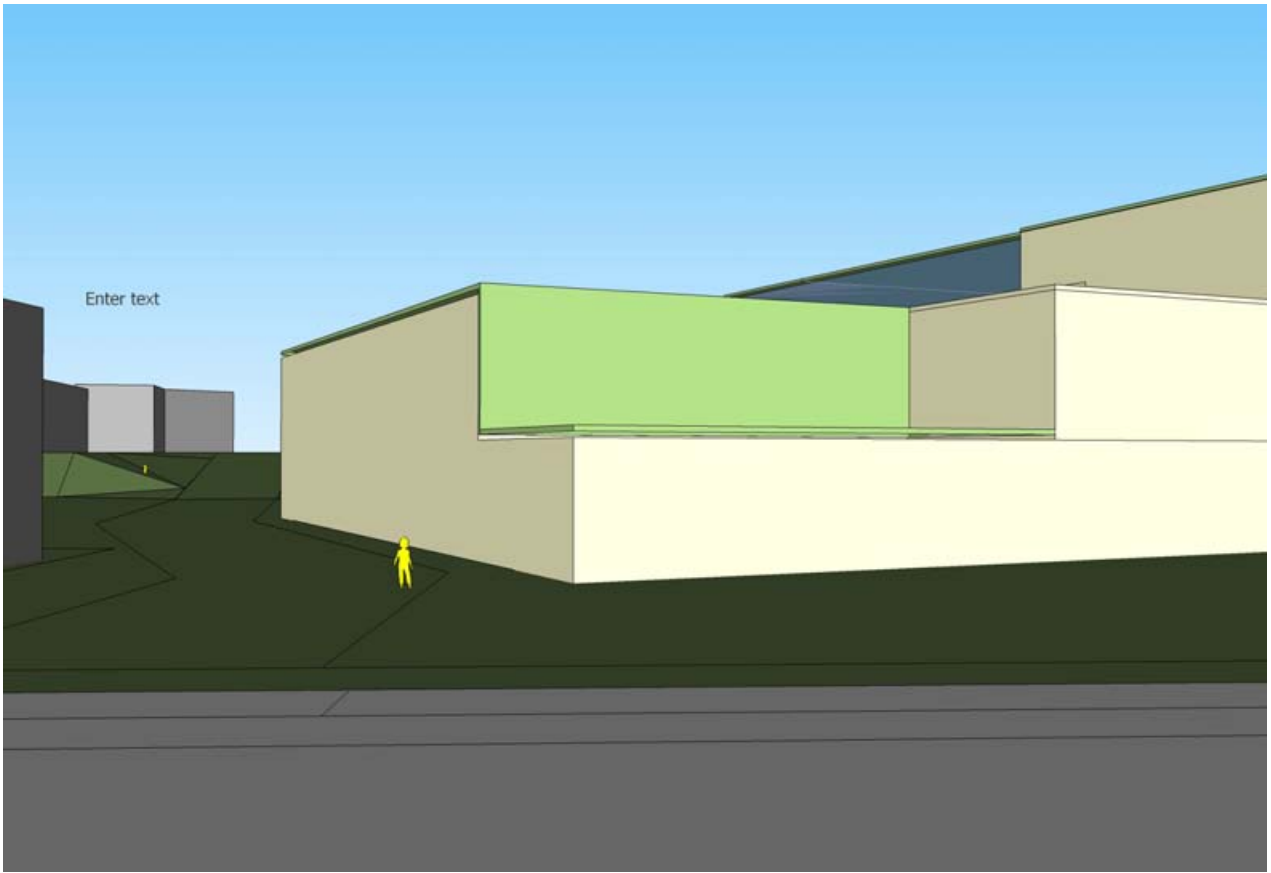
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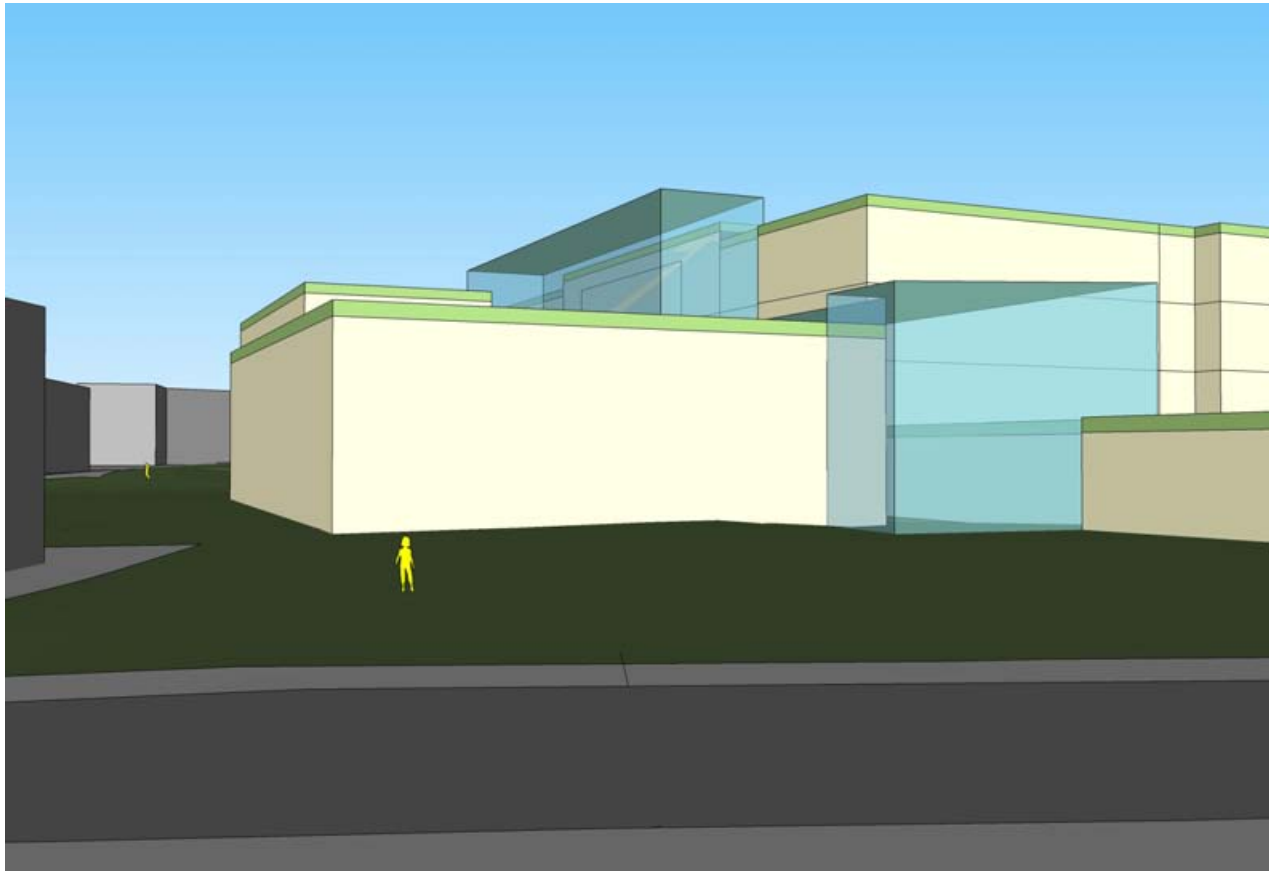
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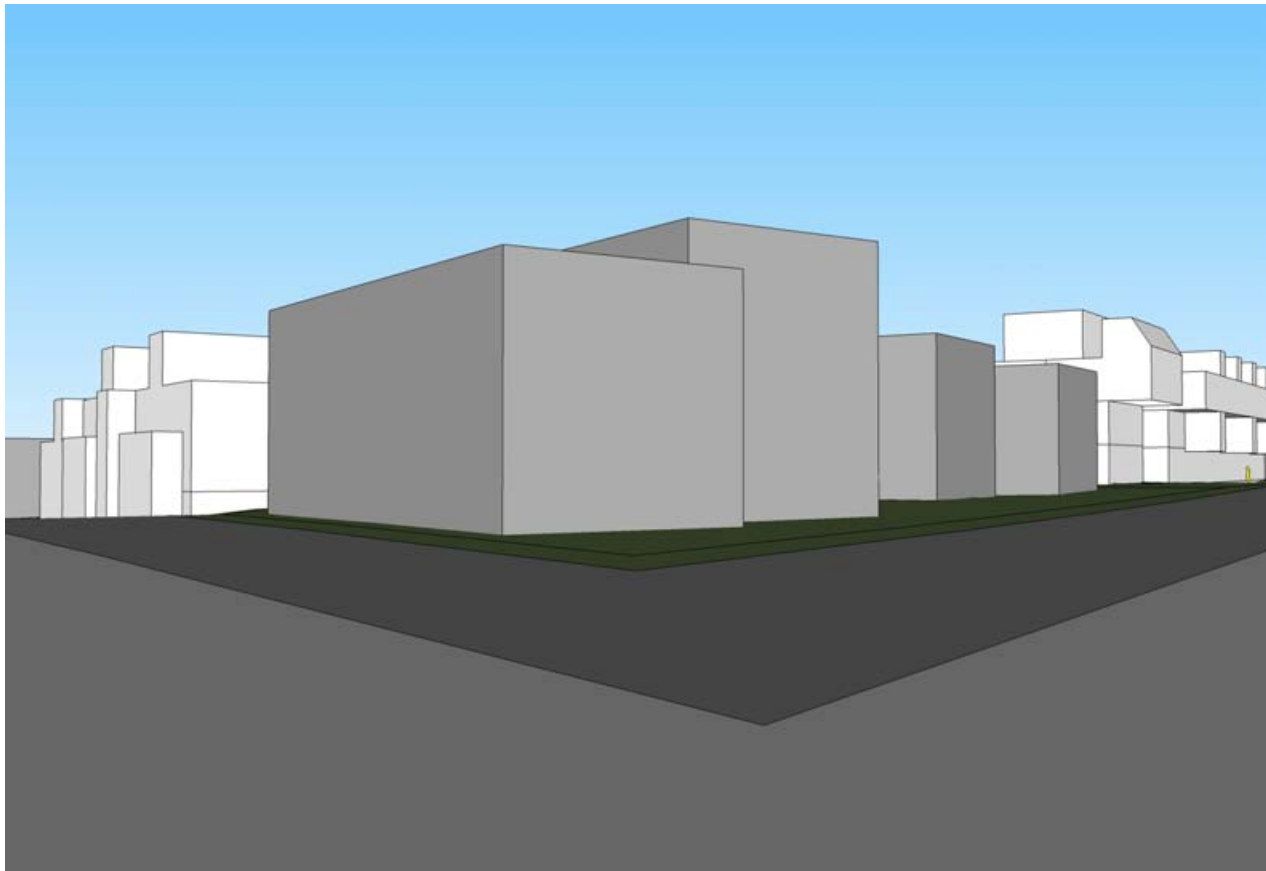
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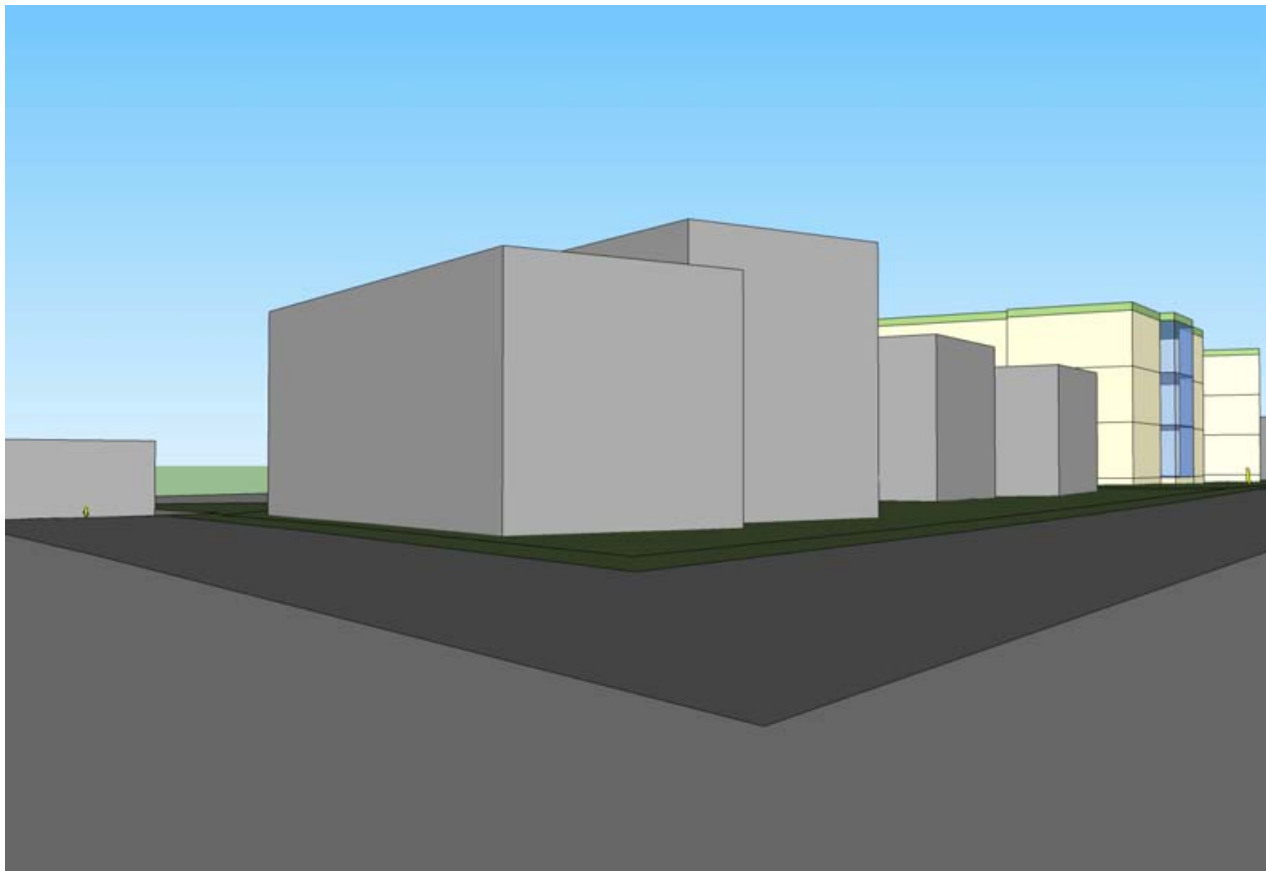
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Existing



Existing-Modified



Pi



Clover



Perkins Eastman

The City of Cambridge

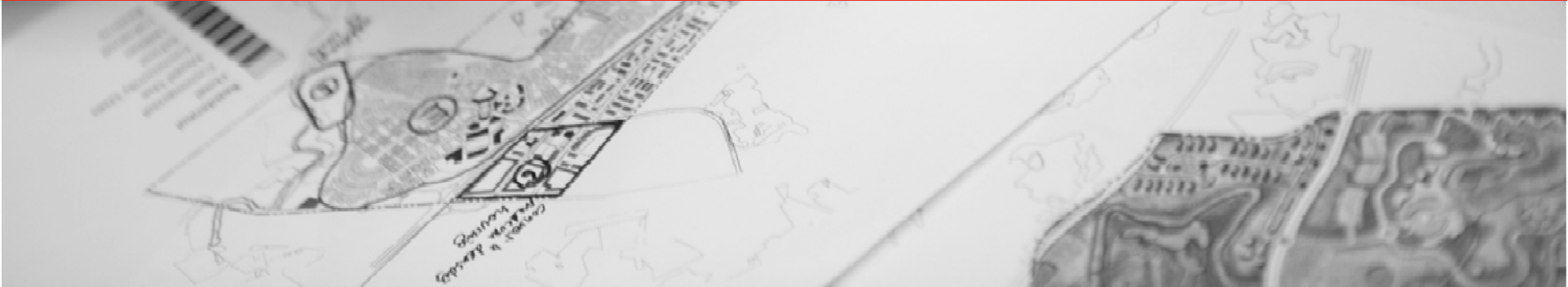
Martin Luther King, Jr. School

May 10, 2012



Perkins Eastman

DRAFT Organizational Principles



Principle:

- The Upper, Lower and Pre-Schools each have a distinct entrance and identity.

Principle:

- The campus is zoned into community/school and school-dedicated areas organized around a campus commons.

Principle:

- Each school administration controls the front door(s) and the campus commons.

Principle:

- The Pre-School has its own entry but is also integrated into the campus-community commons.

Principle:

- The learning commons is the heart of each school.

Principle:

- The Lower School is organized into two teams: JK-2; 3-5.

Principle:

- The Upper School is organized into three grade-level teams.

Principle:

- Each school is organized to build a professional community.

Principle:

- The garden, dining, server, kitchen and food lab combine to foster a comprehensive experience and education about healthy eating and an active lifestyle.

Principle:

- The experience of dining is smaller scaled, less institutional and more family-style.

Principle:

- Natural Light should be pervasive throughout the campus.

Principle:

- Education should flow seamlessly from indoors to outdoors.

Principle:

- The school fosters “subtle security.”

Principle:

- Administrators should be dispersed throughout the building and have “open doors.”

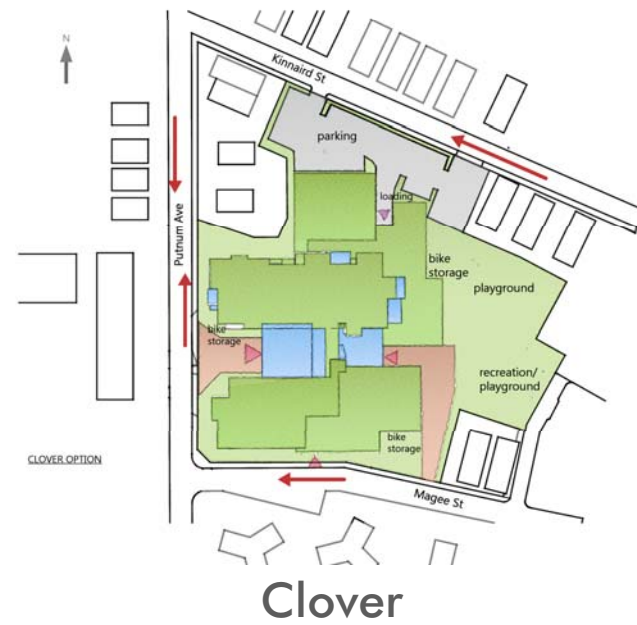
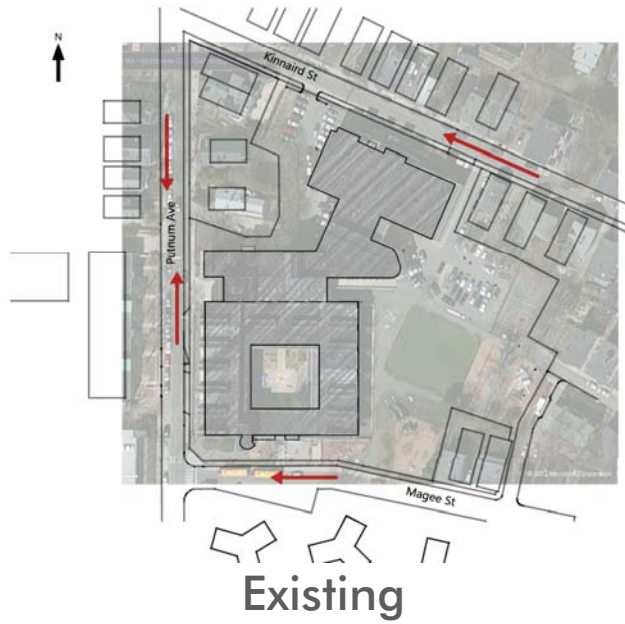


Perkins Eastman

Preliminary Options



Site Plans



Aerial Views from Putnam Avenue



Existing



Existing-Modified



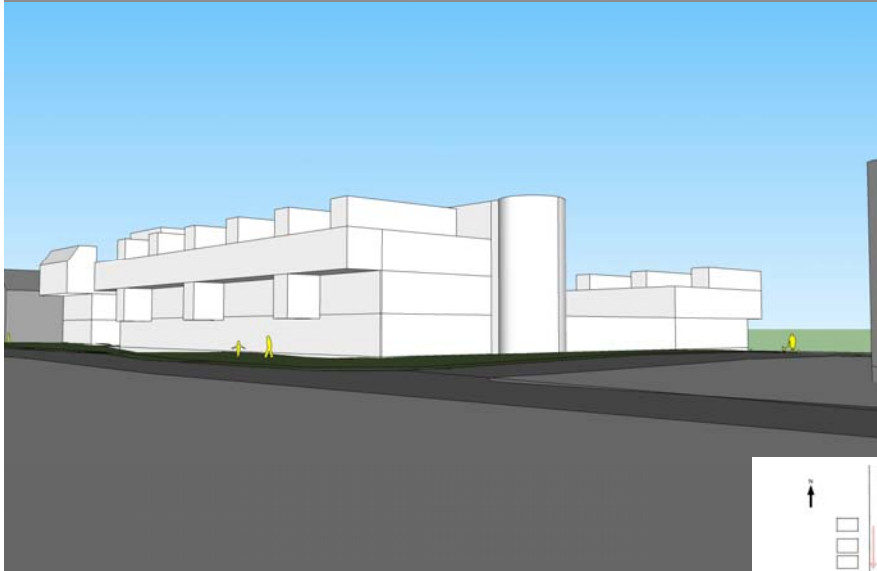
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Clover



Views from Putnam Avenue



Existing



Existing-Modified



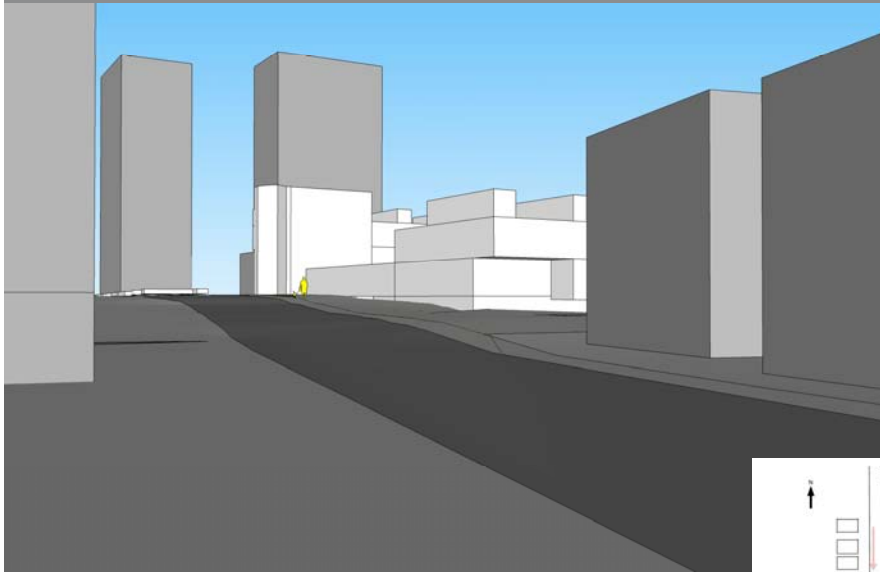
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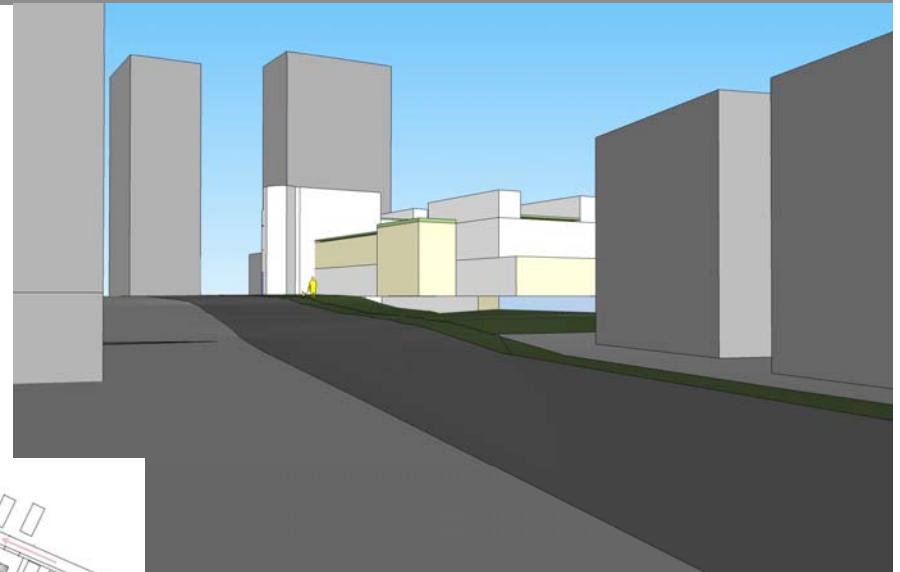
Clover



Views from Magee Street



Existing



Existing-Modified



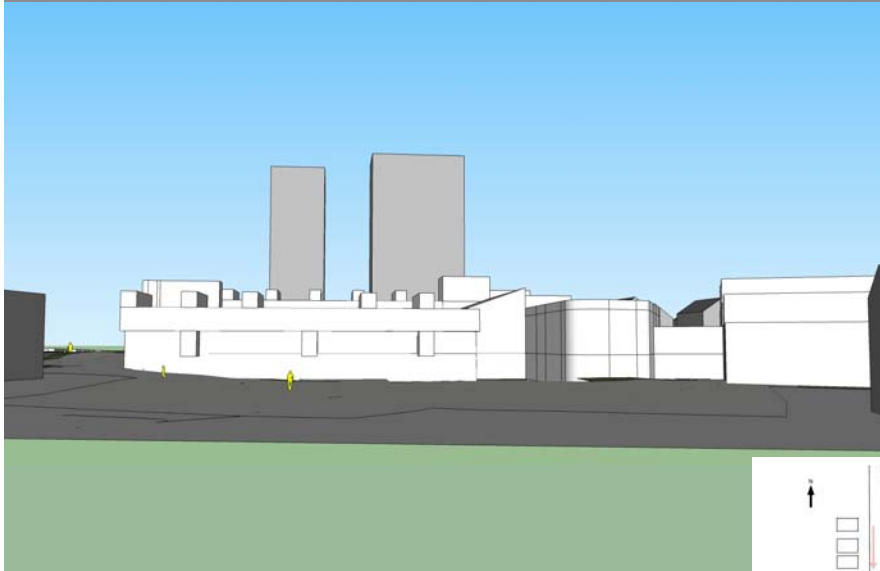
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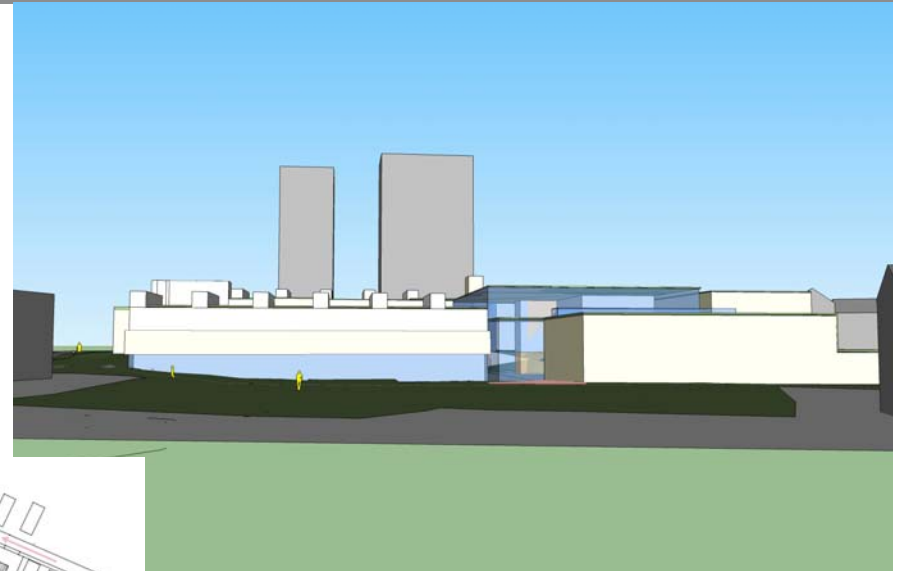
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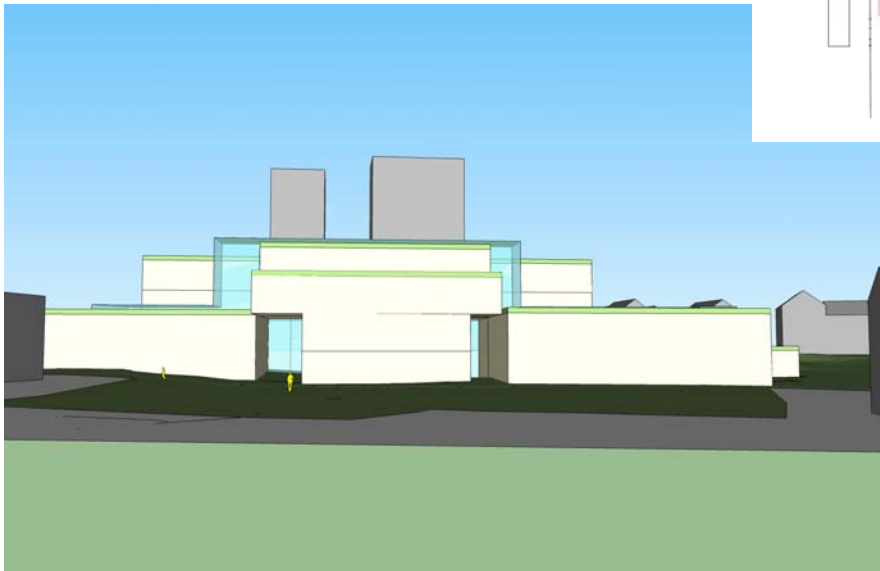
Views from Hayes Street



Existing



Existing-Modified



Pi



Clover



Aerial Views from Kinnaird Street



Existing



Existing-Modified



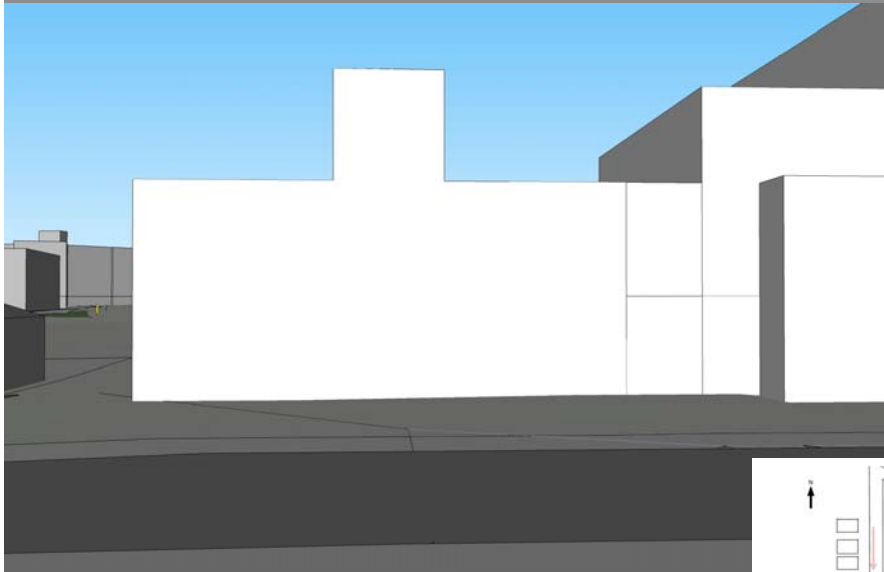
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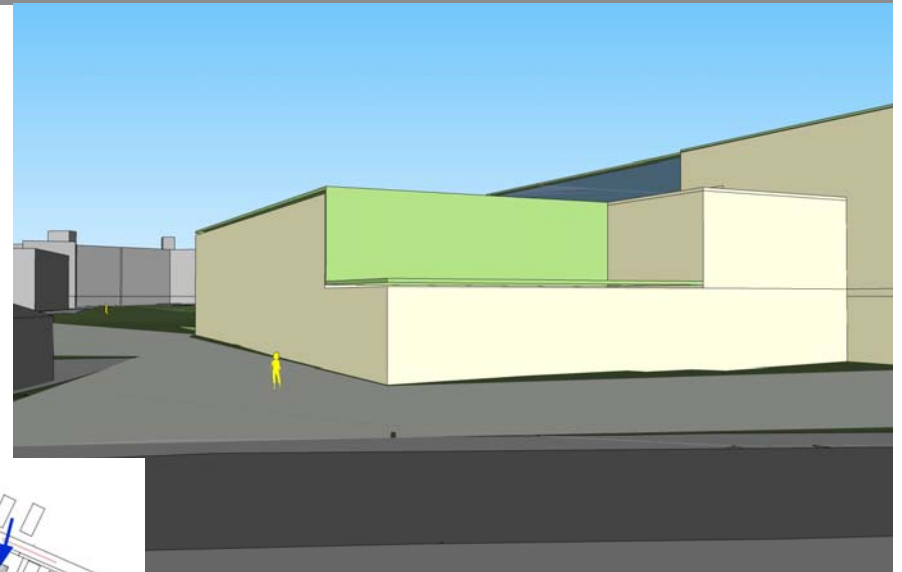
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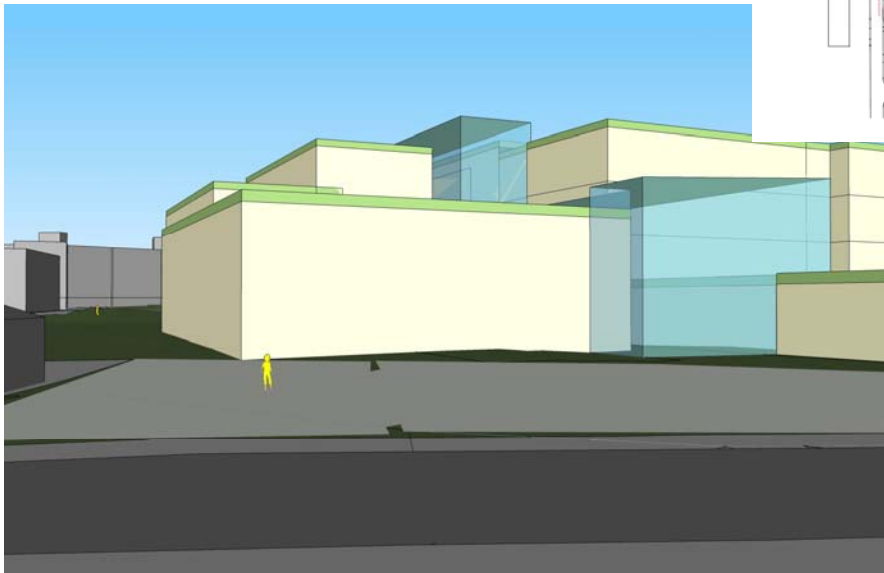
Views from Entry Drive at Kinnaird Street



Existing



Existing-Modified



Pi



Clover



Views from Putnam Avenue looking South



Existing



Existing-Modified



Pi



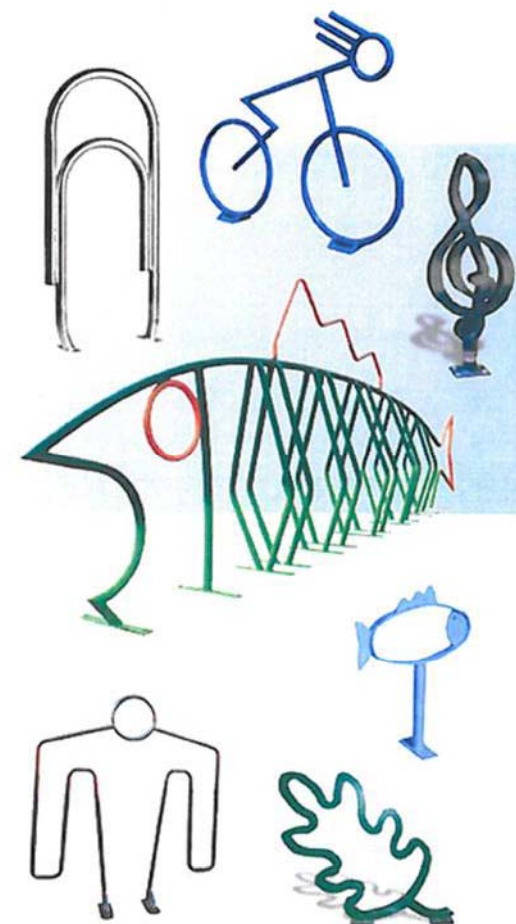
Clover



Bicycle Concerns

Proposed Changes to Cambridge Zoning Ordinance Bicycle Parking Requirements

City of Cambridge
Community Development Department
Draft Report – May, 2012

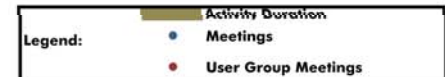
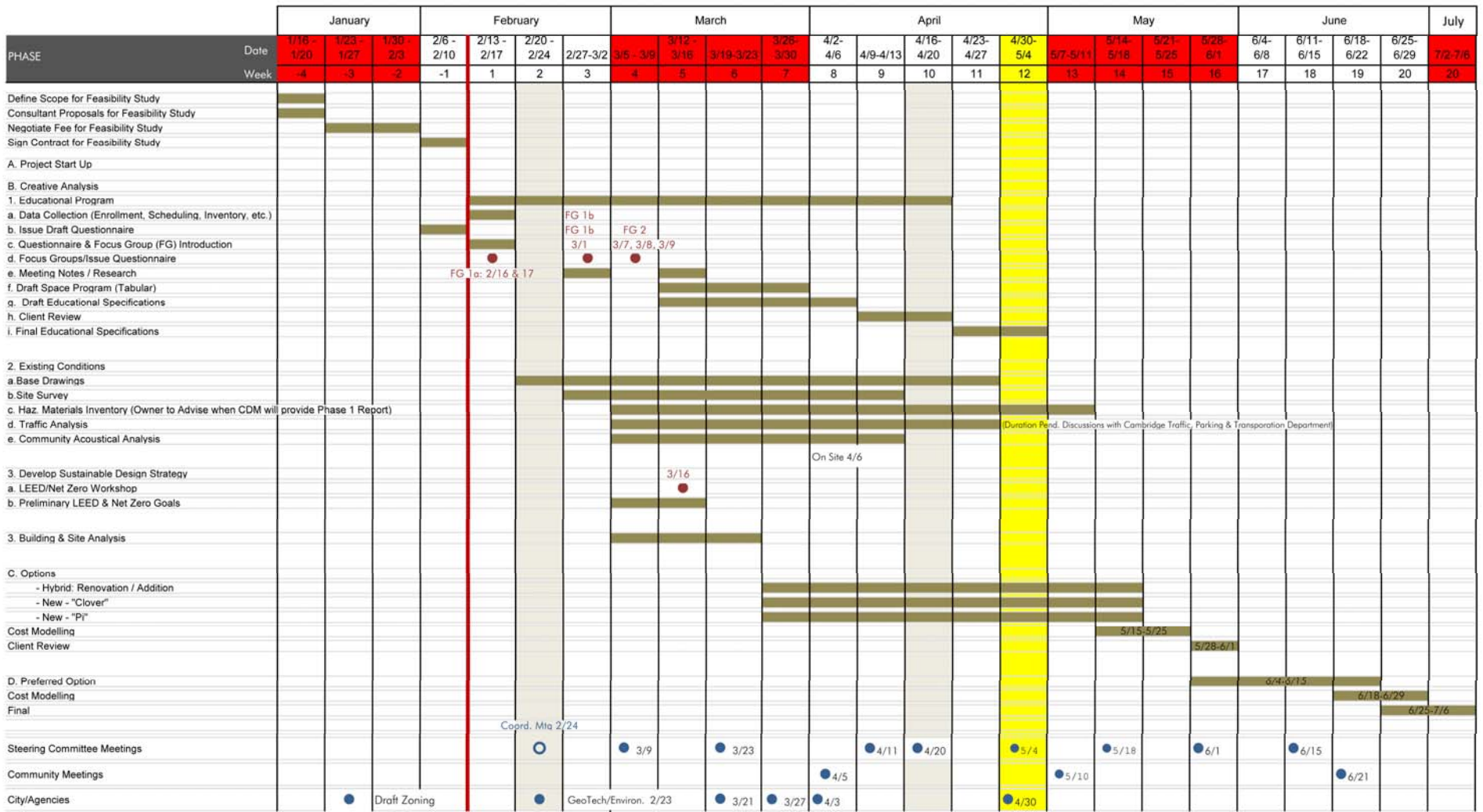


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- First week of June – WebX meeting with owner and team to discuss preferred scheme and integration of NZE.
- Month of June – further refine NZE impact for preferred scheme including better understanding of integration of PV and geothermal.

Schedule

MARTIN LUTHER KING JR. SCHOOL

Perkins Eastman
4/30/2012



Perkins Eastman

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Perkins Eastman

The City of Cambridge

Martin Luther King, Jr. School

May 18, 2012

Draft Education Specification

Design Options / PV's

***Schedule Meeting to Review
Utilization Drama / Music***





Perkins Eastman

Options



























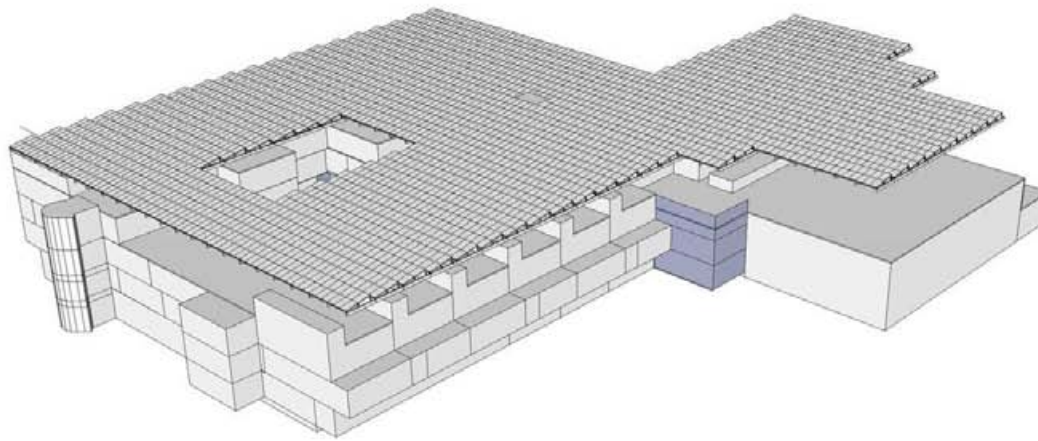


Perkins Eastman

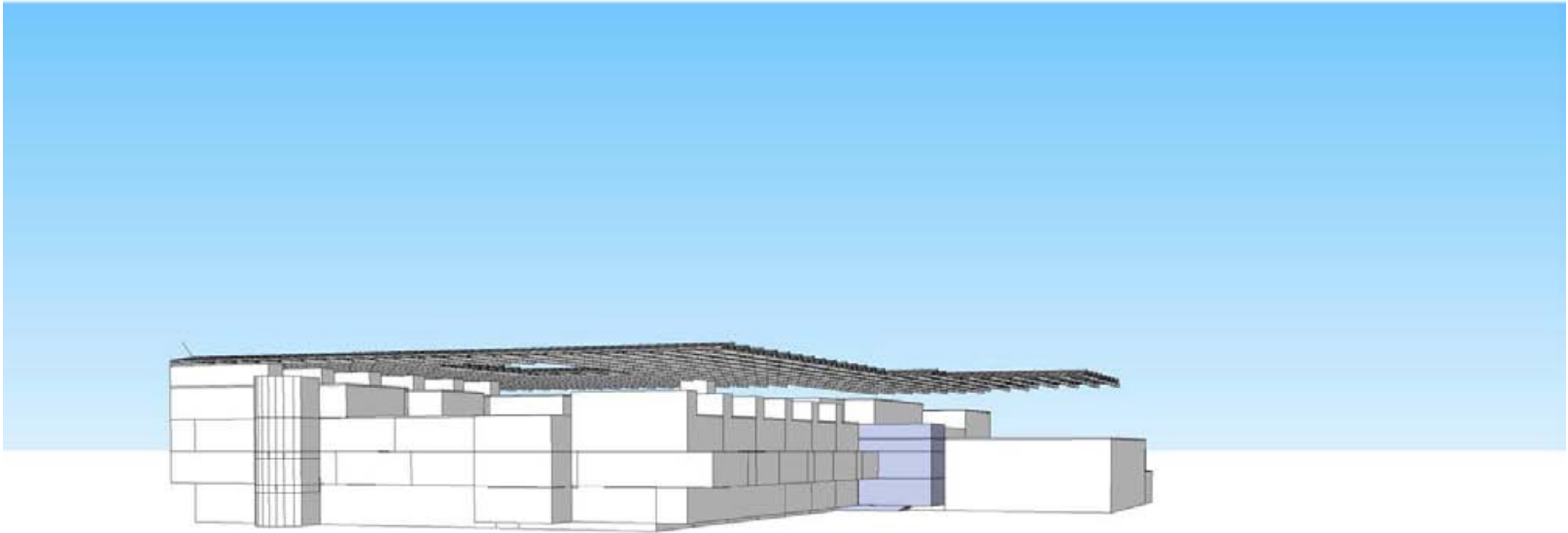
Photovoltaics



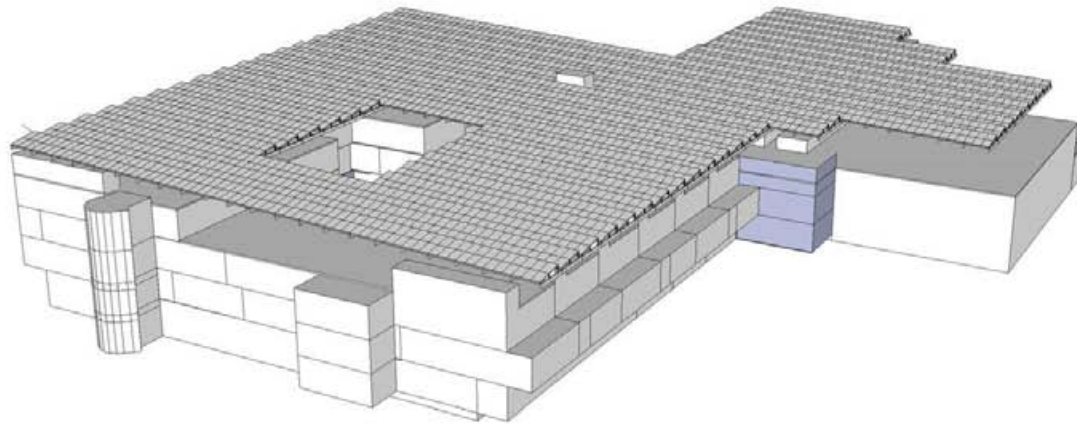
Photovoltaics Existing Modified Option 1 - Flat | Aerial



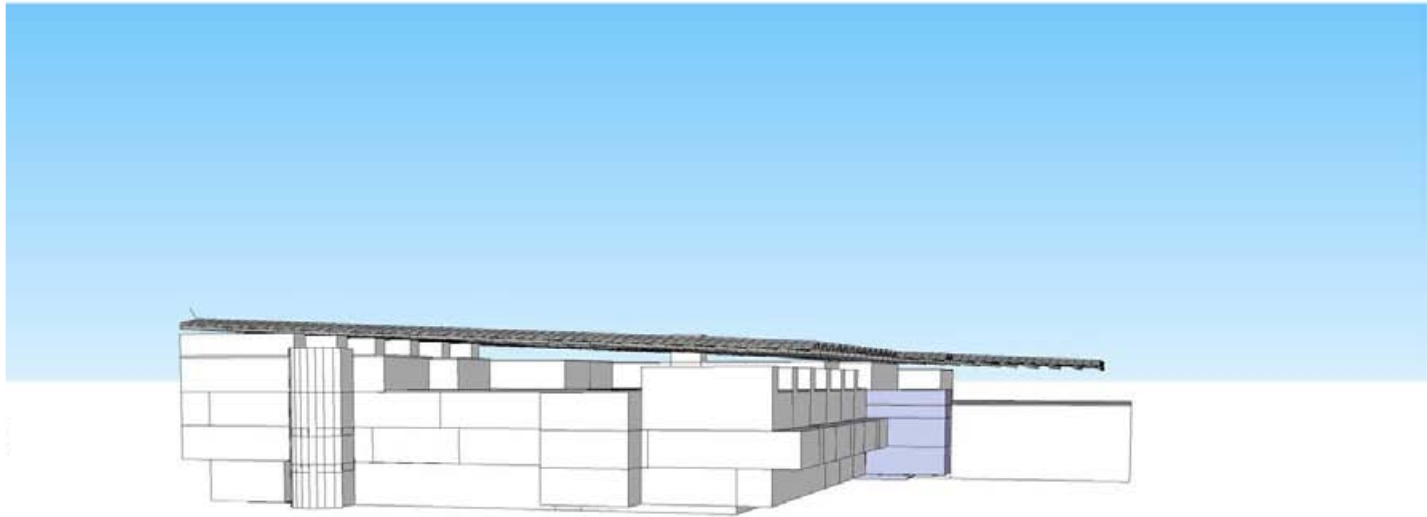
Photovoltaics Existing Modified Option 1- Flat | View at Magee

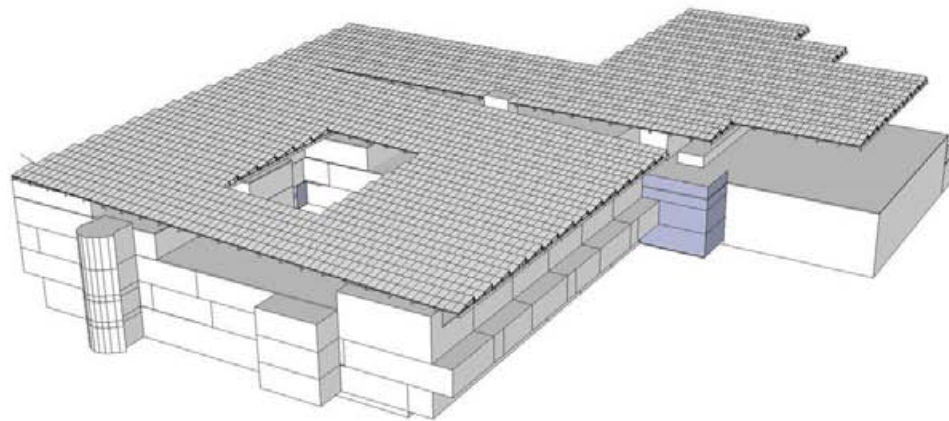


Photovoltaics Existing Modified Option 2- Sloped | Aerial

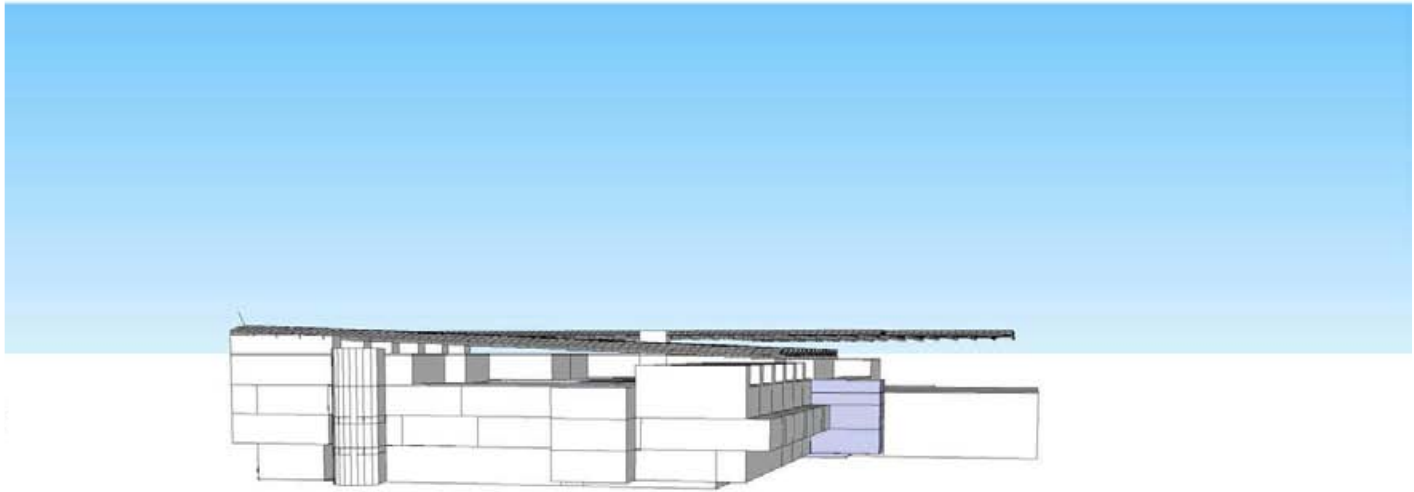


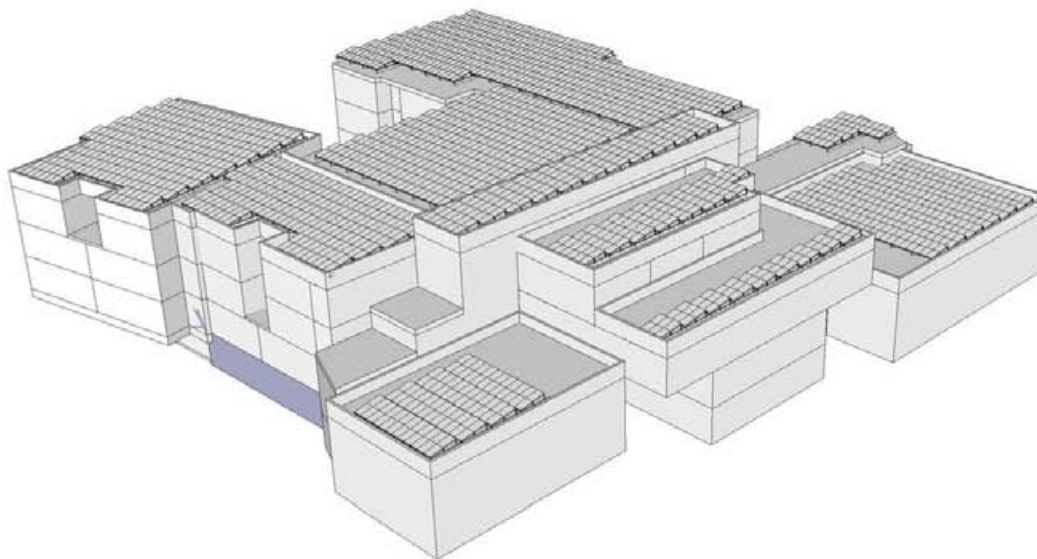
Photovoltaics Existing Modified Option 2- Sloped | View at Magee

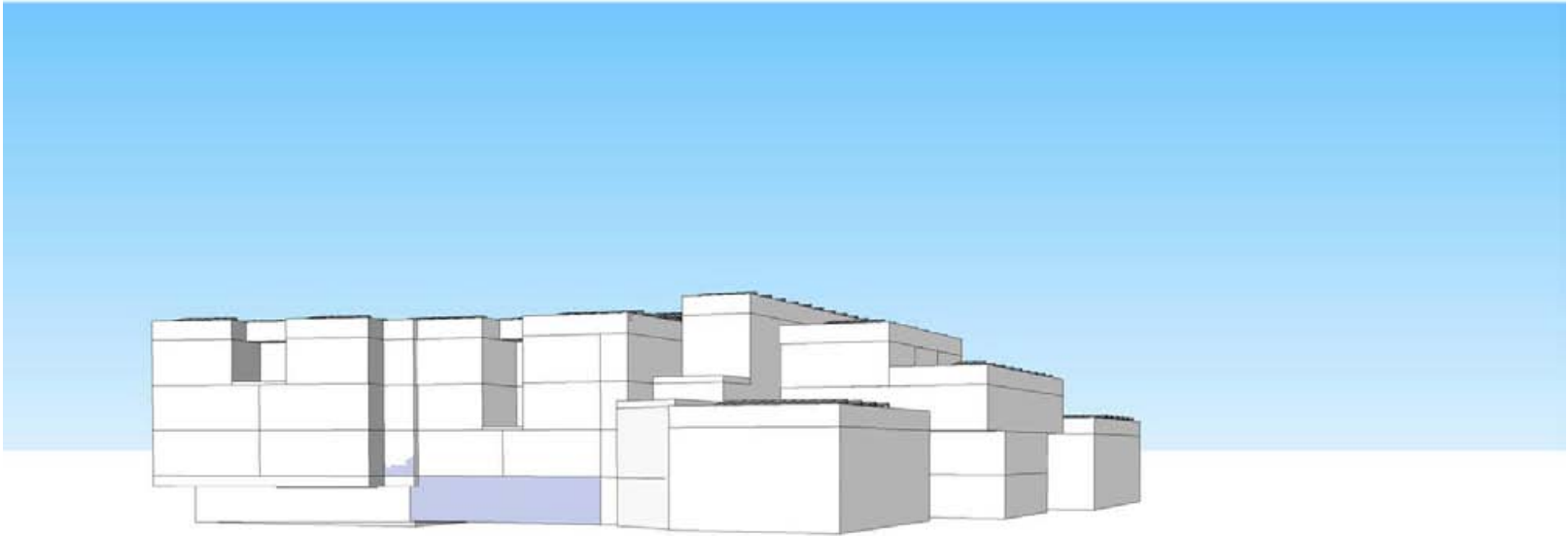


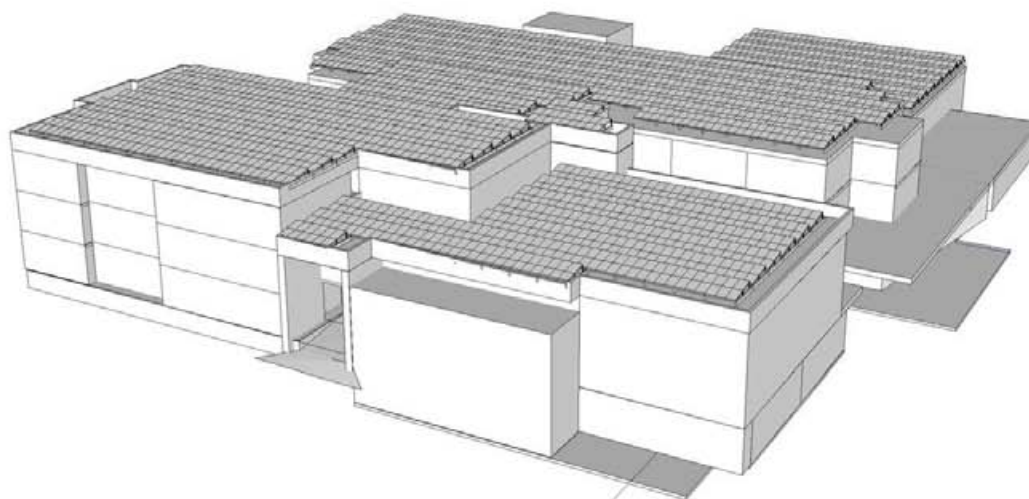


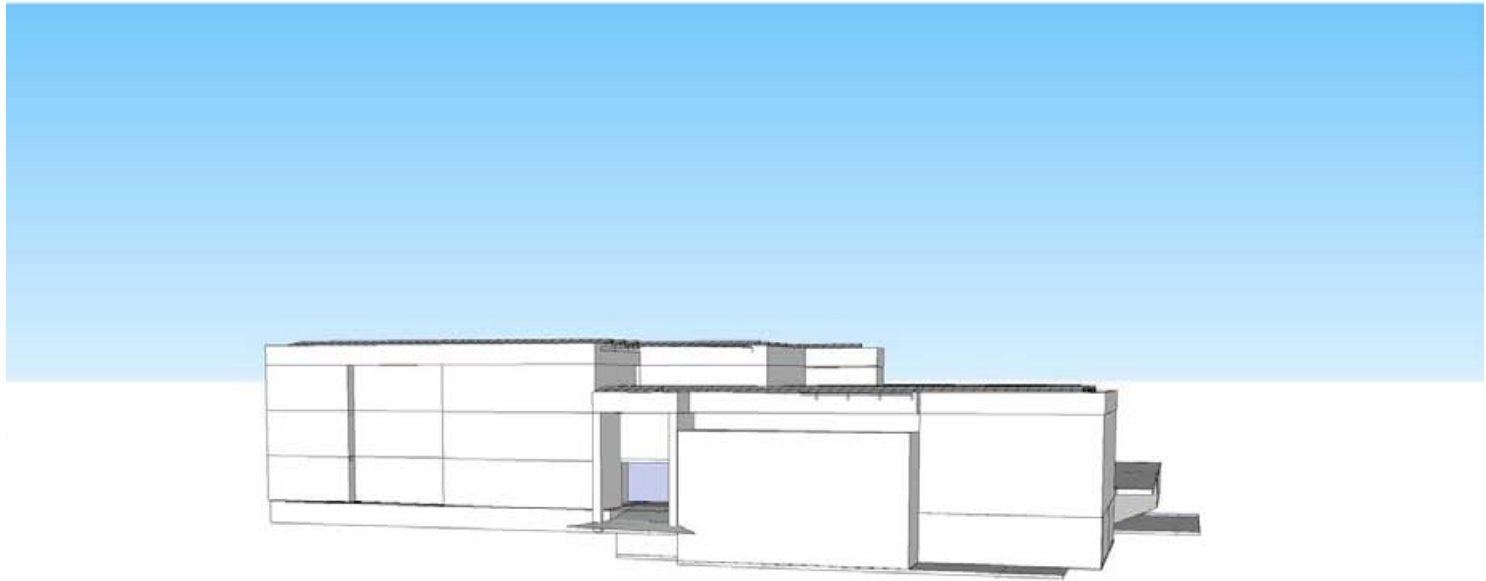
Photovoltaics Existing Modified Option 3- Sloped/Flat | View at Magee











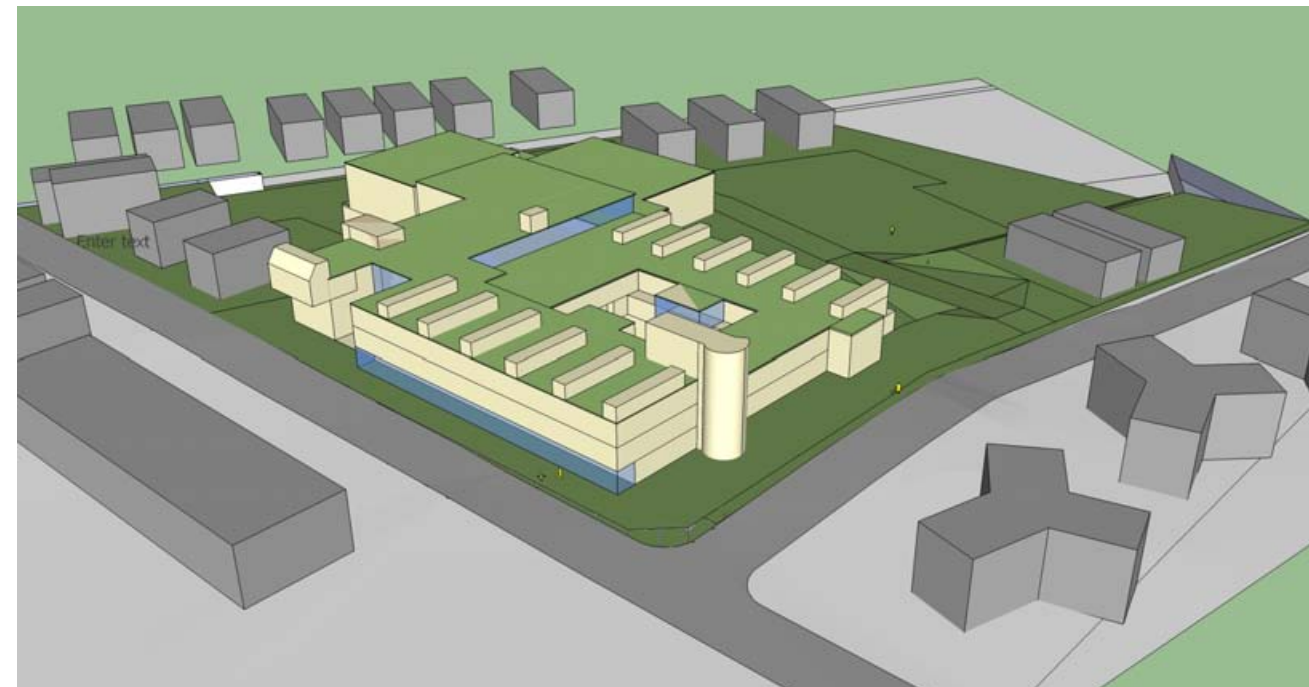
Perkins Eastman

50 FRANKLIN STREET, SUITE 402
BOSTON, MA 02110
T. 617 . 449 . 4000
F. 617 . 449 . 4049

WWW.PERKINSEASTMAN.COM



EXISTING



EXISTING MODIFIED



CLOVER



Pi

OVERALL SUMMARY

		Existing Modified	Clover Option	Pi Option
A10 FOUNDATIONS		\$1,384,000	\$2,646,000	\$2,209,000
A20 BASEMENT CONSTRUCTION		\$0	\$264,000	\$179,000
B10 SUPERSTRUCTURE		\$4,881,000	\$5,117,000	\$5,053,000
B20 EXTERIOR CLOSURE		\$5,621,000	\$4,955,000	\$5,628,000
B30 ROOFING		\$1,987,000	\$3,227,000	\$2,600,000
C10 INTERIOR CONSTRUCTION		\$2,739,000	\$2,919,000	\$2,719,000
C20 STAIRCASES		\$268,000	\$229,000	\$310,000
C30 FINISHES		\$3,935,000	\$3,897,000	\$3,846,000
D10 CONVEYING SYSTEMS		\$317,000	\$317,000	\$317,000
D20 PLUMBING		\$1,738,000	\$1,733,000	\$1,721,000
D30 HVAC		\$6,554,000	\$6,545,000	\$6,524,000
D40 FIRE PROTECTION		\$711,000	\$708,000	\$703,000
D50 ELECTRICAL		\$3,950,000	\$3,937,000	\$3,909,000
E10 EQUIPMENT		\$573,000	\$573,000	\$573,000
E20 FURNISHINGS		\$1,181,000	\$1,155,000	\$1,157,000
F10 SPECIAL CONSTRUCTION		\$0	\$0	\$0
F20 SELECTIVE BUILDING DEMOLITION		\$3,202,000	\$0	\$0
Total Building Construction		\$39,041,000	\$38,222,000	\$37,448,000
G10 SITE PREPARATION		\$506,000	\$2,895,000	\$2,895,000
G20 SITE IMPROVEMENTS		\$790,000	\$849,000	\$838,000
G30 SITE MECHANICAL UTILITIES		\$345,000	\$280,000	\$280,000
G40 SITE ELECTRICAL		\$55,000	\$55,000	\$55,000
G90 OTHER SITE CONSTRUCTION		\$0	\$0	\$0
Total Site Construction		\$1,696,000	\$4,079,000	\$4,068,000
TOTAL BUILDING & SITE		\$40,737,000	\$42,301,000	\$41,516,000
MARKUPS		\$5,883,000	\$6,104,000	\$5,990,000
General conditions and project requirements	10.0%	\$4,073,513	\$4,226,521	\$4,148,187
Bond and Insurance	1.5%	\$672,130	\$697,376	\$684,451
Building Permit		Excluded	excluded	excluded
General contractor's head office overhead and profit	2.5%	\$1,137,019	\$1,179,728	\$1,157,863
SUBTOTAL		May-12	\$46,620,000	\$48,405,000
SUBTOTAL			\$47,506,000	
CONTINGENCIES/ESCALATION		\$11,465,000	\$10,838,000	\$10,642,000
Design Contingency	14-12%	\$6,526,492	\$5,804,261	\$5,696,684
GMP Contingency	3.00%	\$1,594,329	\$1,625,193	\$1,595,071
Escalation	6.12%	\$3,343,970	\$3,408,705	\$3,350,299
SUBTOTAL		Dec-13	\$58,085,000	\$59,243,000
SUBTOTAL			\$58,148,000	
OTHER COSTS				
Audiovisual systems		\$2,342,270	\$2,342,270	\$2,342,270
Hazardous Material Abatement***		\$2,240,000	\$2,240,000	\$2,240,000
ESTIMATED CONSTRUCTION COST			\$62,667,270	\$63,825,270
ESTIMATED CONSTRUCTION COST			\$62,730,270	
	GFA	157,960	157,425	156,298
	\$/sf	\$396.73	\$405.43	\$401.35
ALTERNATES				
Photovoltaics		\$8,993,500	\$8,132,750	\$8,369,000
Parking Structure		\$0	\$665,000	\$665,000

*** Worse case senario the hazardous material abatement according to the "Visual" report could be \$5,700,000

FEASIBILITY STUDY DESIGN OPTIONS COMPARATIVE MATRIX

CRITERIA	EXISTING MODIFIED	CLOVER	PI
COST	3	1	2
ENERGY EFFICIENCY	2	2	2
NET ZERO	1	3	2
OPEN SPACE	2	1	3
PARKING	1	2	3
PERMITTING	-	-	-
SCHEDULE	2	2	2
URBAN DESIGN / ZONING	1	2	3
PEDAGOGY / ORGANIZATIONAL PRINCIPLES:			
LOWER, UPPER AND PRE-SCHOOLS EACH HAVE A DISTINCT ENTRANCE AND IDENTITY.	1	2	3
THE CAMPUS IS ZONED INTO COMMUNITY / SCHOOL AND SCHOOL-DEDICATED AREAS ORGANIZED AROUND A CAMPUS COMMONS.	1	2	3
EACH SCHOOL ADMINISTRATION CONTROLS THE FRONT DOOR(S) AND THE	1	2	3
THE PRE-SCHOOL HAS ITS OWN ENTRY BUT IS ALSO INTEGRATED INTO THE CAMPUS-COMMUNITY COMMONS.	1	2	3
THE LEARNING COMMONS IS THE HEART OF EACH SCHOOL.	1	3	2
THE LOWER SCHOOL IS ORGANIZED INTO TWO TEAMS: JK-2, 3-5.	2	3	2
THE UPPER SCHOOL IS ORGANIZED INTO THREE GRADE-LEVEL TEAMS.	3	3	3
EACH SCHOOL IS ORGANIZED TO BUILD A PROFESSIONAL COMMUNITY.	2	2	2
THE GARDEN, DINING, SERVERY, KITCHEN AND FOOD LAB COMBINE TO FOSTER A COMPREHENSIVE EXPERIENCE AND EDUCATION ABOUT HEALTHY EATING AND AN ACTIVE LIFESTYLE.	2	2	2
THE EXPERIENCE OF DINING IS SMALLER SCALED, LESS INSTITUTIONAL AND MORE FAMILY-STYLE.	*	*	*
NATURAL LIGHT SHOULD BE PERVASIVE THROUGHOUT THE CAMPUS.	2	1	3
EDUCATION SHOULD FLOW SEAMLESSLY FROM INDOORS TO OUTDOORS.	1	2	2
THE SCHOOL FOSTERS "SUBTLE SECURITY".	*	*	*
ADMINISTRATORS SHOULD BE DISPERSED THROUGHOUT THE BUILDING AND HAVE "OPEN DOORS".	*	*	*
TOTAL	29	37	45

* To be defined in subsequent design phase



49 TOTAL PARKING SPACES ON-GRADE

Martin Luther King, Jr. School, Cambridge, MA

June 6, 2012

Perkins Eastman



20 ON-GRADE PARKING SPACES
+/- 40 UNDERGROUND PARKING SPACES
+/- 60 TOTAL PARKING SPACES

CLOVER OPTION
GROUND FLOOR PLAN W/
UNDERGROUND PARKING



Martin Luther King, Jr. School, Cambridge, MA

June 6, 2012

Perkins Eastman



20 ON-GRADE PARKING SPACES
+/- 60 UNDERGROUND PARKING SPACES
+/- 80 TOTAL PARKING SPACES

Pi OPTION
GROUND FLOOR PLAN W/
UNDERGROUND PARKING



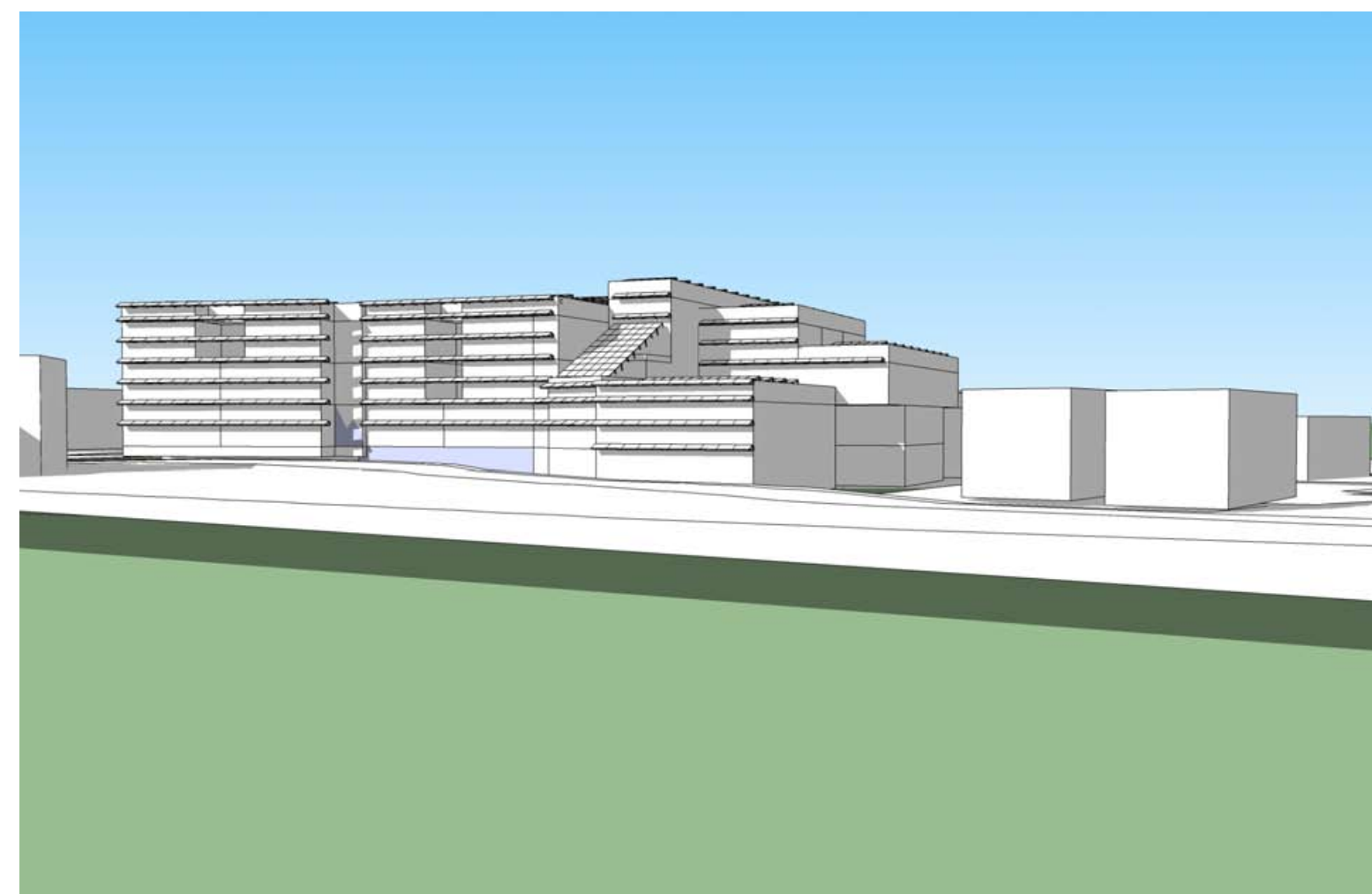
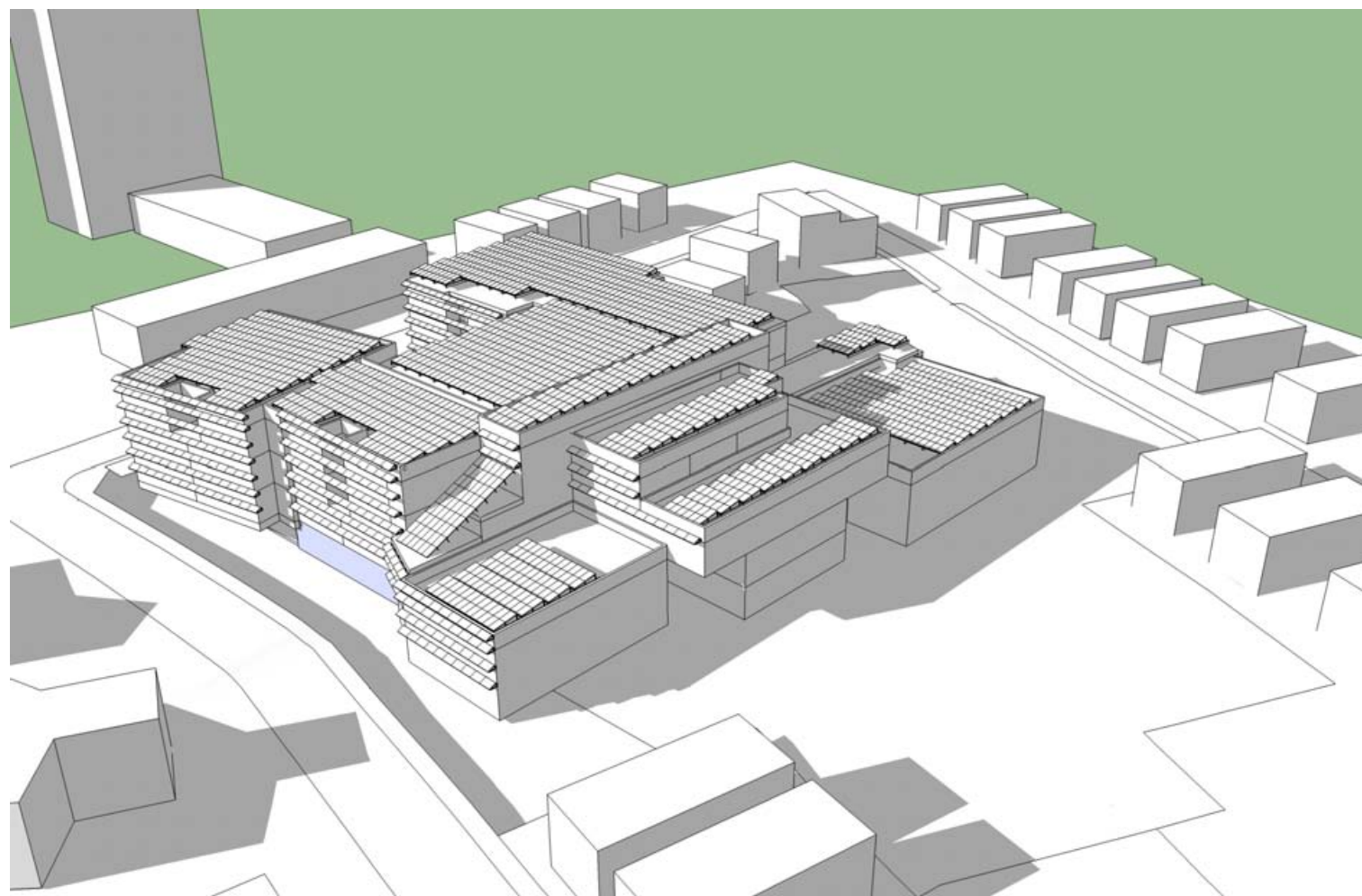
Martin Luther King, Jr. School, Cambridge, MA

June 6, 2012

Perkins Eastman

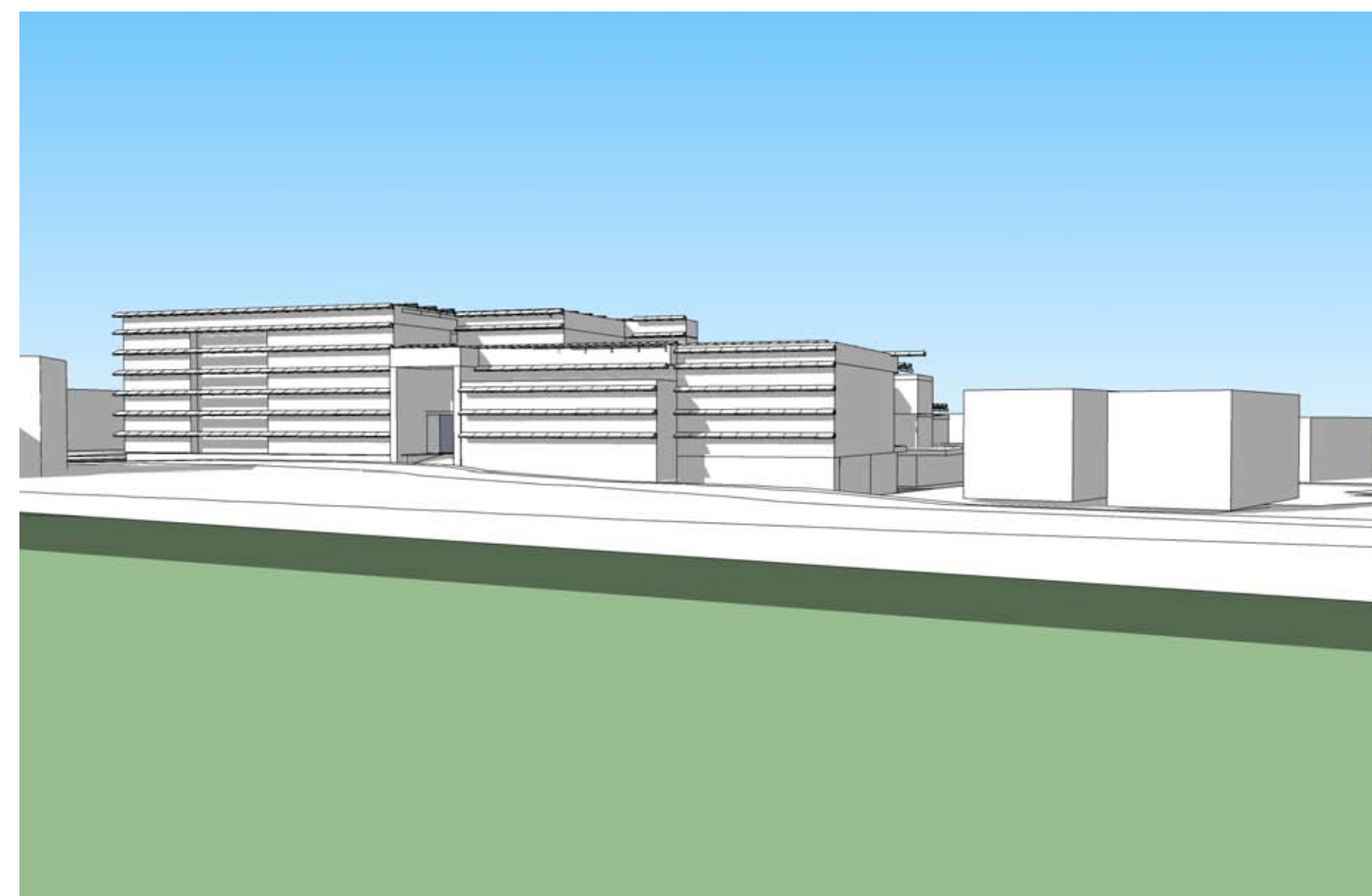
Solar Power Options

	Power Purchase Agreement	Outright Ownership
First Cost	Little or no first cost	Significant first cost (\$5 to \$9 million depending on type of system and mounting details)
Transaction costs	Can be significant	None
Operating & maintenance cost	Included in PPA	Paid by owner
Replacement of components at end of useful life	Can be accounted for in agreement and included in cost of electricity	Owner must pay for replacement if/when required
Responsibility for design & construction	Third Party is responsible	Owner is responsible
Ownership of system	Third Party	Owner
Monetization of tax incentives	Included	Not possible for non-profit owner
Sale of solar renewable energy credits (SRECs)	Typically part of the deal	Optional
Purchase of regular RECs required to achieve net zero energy	Yes - can be bundled into PPA	Maybe – only if SRECs are sold to reduce cost of system
Access to site by third parties	Access must be granted to third party for required operation & maintenance	None required except as controlled and managed by owner
Cost of electricity	Fixed cost with annual escalation	No cost for life of system
Future flexibility	None- locked into long term agreement	Retain flexibility by owning system



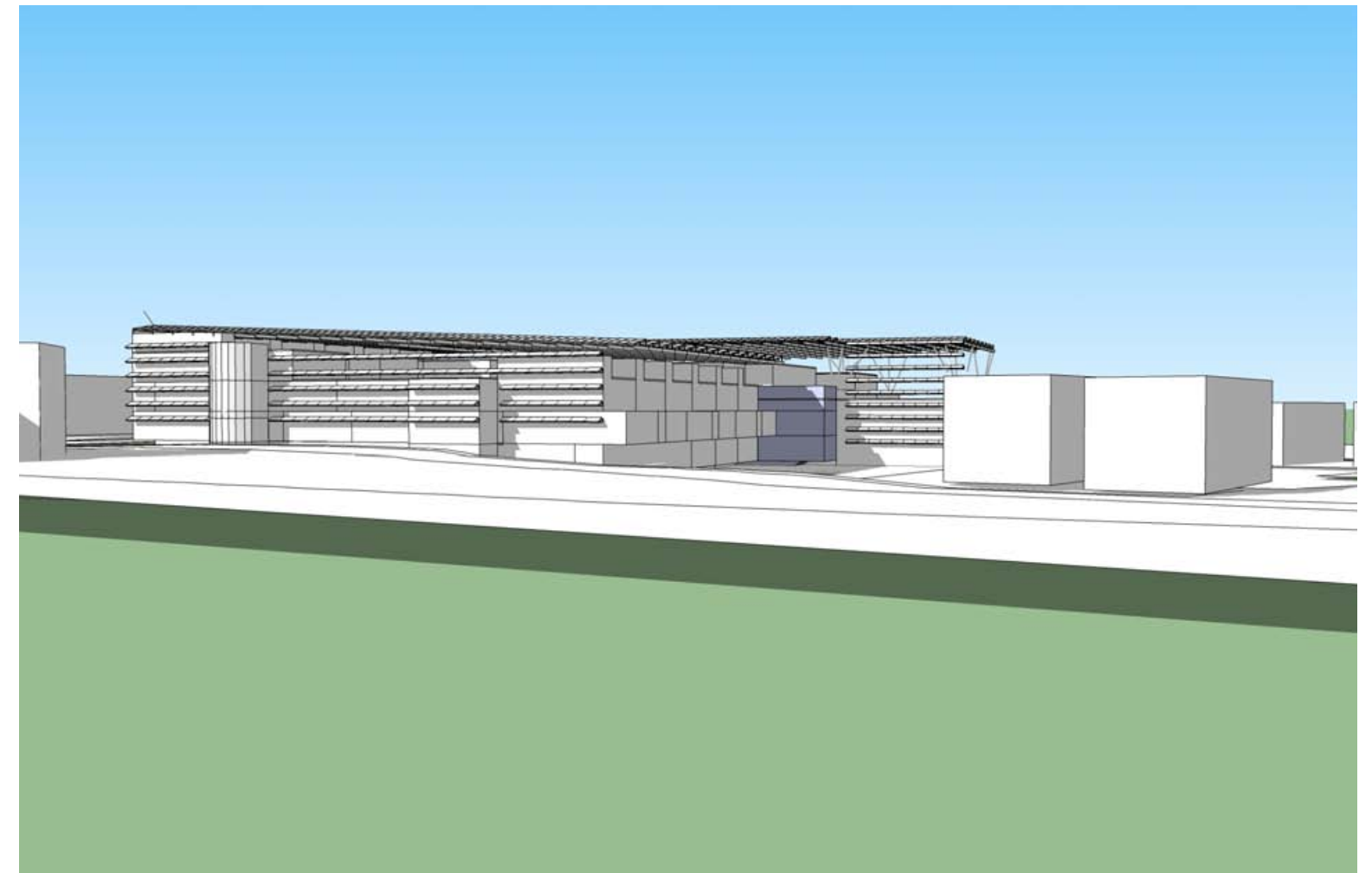
Martin Luther King, Jr. School, Cambridge, MA
June 6, 2012

Perkins Eastman



Martin Luther King, Jr. School, Cambridge, MA
June 6, 2012

Perkins Eastman





Perkins Eastman

The City of Cambridge

Martin Luther King, Jr. School Construction Project

June 21, 2012

- Team Introduction & Feasibility Study Process Re-Cap
- Selection of Preferred Option
- Sustainable Opportunities
- Summary / Next Steps



Feasibility Study Process Re-Cap

- **Iterative Process February to June 2012**
- **Met with School Groups, Community Groups and City Groups**
 - Three neighborhood meetings during Feasibility Study (4/5/12, 5/10/12 & 6/21/12)
 - More than 60 Meetings / Conference Calls that included: School Focus Groups, City Agencies, & City and School Administration
 - Parent Surveys
- **Analyzed and Documented Existing Conditions**
- **Created Education Specification**
 - How will Teachers teach
 - What spaces are needed, how big & how many (Program)
 - What features & character are desired
 - What sustainable goals are desired
 - How should three schools relate to each other and the outside community
- **Created & Evaluated Options**
 - Criteria of Educational Specifications
 - Fit within Community
 - Cost
- **Developed Preferred Option**
 - Concept Plans
 - Concept Images
 - Concept Scope & Budget
- **Just the Beginning...**
 - After Feasibility Study, 1 Year of Design & Permitting and 2 Years of Construction



Neighborhood Concerns

Feasibility Study:

- ❑ Parking
- ❑ Traffic
 - ❑ Safety
 - ❑ Drop-Off / Pick-Up
 - ❑ Truck Loading
- ❑ Bicycles
- ❑ Landscaping & Trees
- ❑ Setbacks
 - ❑ Maintain Urban Street Edge
 - ❑ Neighbors
- ❑ Height
- ❑ Solar Orientation
- ❑ Natural Light
- ❑ Sustainability / Net Zero
- ❑ Separate Identities for Schools
- ❑ Encourage Community Use
- ❑ 21st Century School – Push Best Practices
 - ❑ Design Principles
- ❑ Parent Input / Student Input
- ❑ Wayfinding
- ❑ Old vs. New

Future Phases

(Schematic Design - Construction):

- ❑ Useable Outdoor Space
 - ❑ Pervious / Impervious
 - ❑ Playgrounds
 - ❑ Basketball Court
 - ❑ Gardens / Healthy Food
- ❑ Existing Image: Not welcoming, scary-ugly, no curb-appeal
- ❑ Balance Transparency vs. Privacy
- ❑ Energy
 - ❑ Life Cycle Costs will be considered
- ❑ Indoor Air Quality
- ❑ Security
- ❑ Art / History
- ❑ Utilization of Roof
- ❑ Precedents: Visit NuVu School
- ❑ Construction Mitigation Plan:
 - ❑ meetings w/ abutters & DPW: schedule, storm water, rodents, noise/ disruption/dust



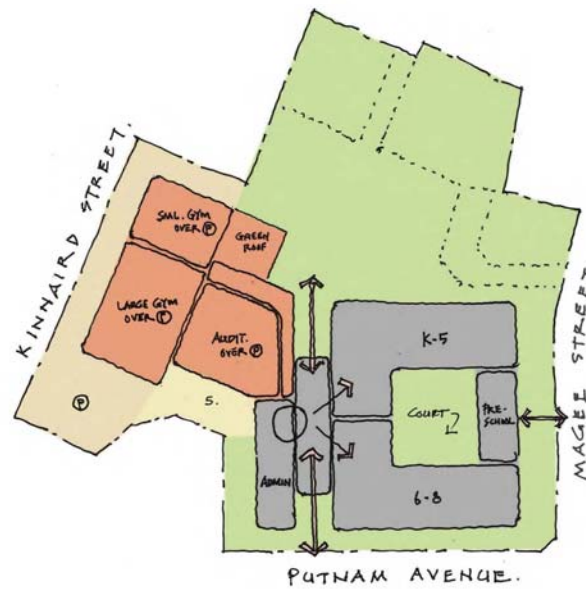
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Selection of Preferred Option

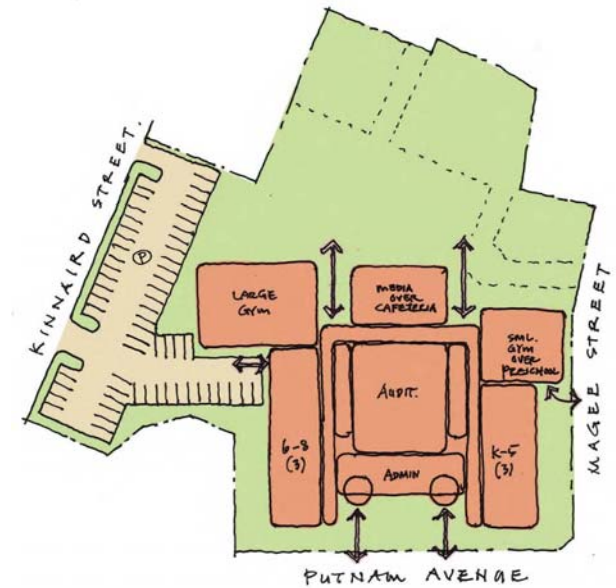
Three Original Strategies



Renovation



**Hybrid:
Modernization/
Addition**



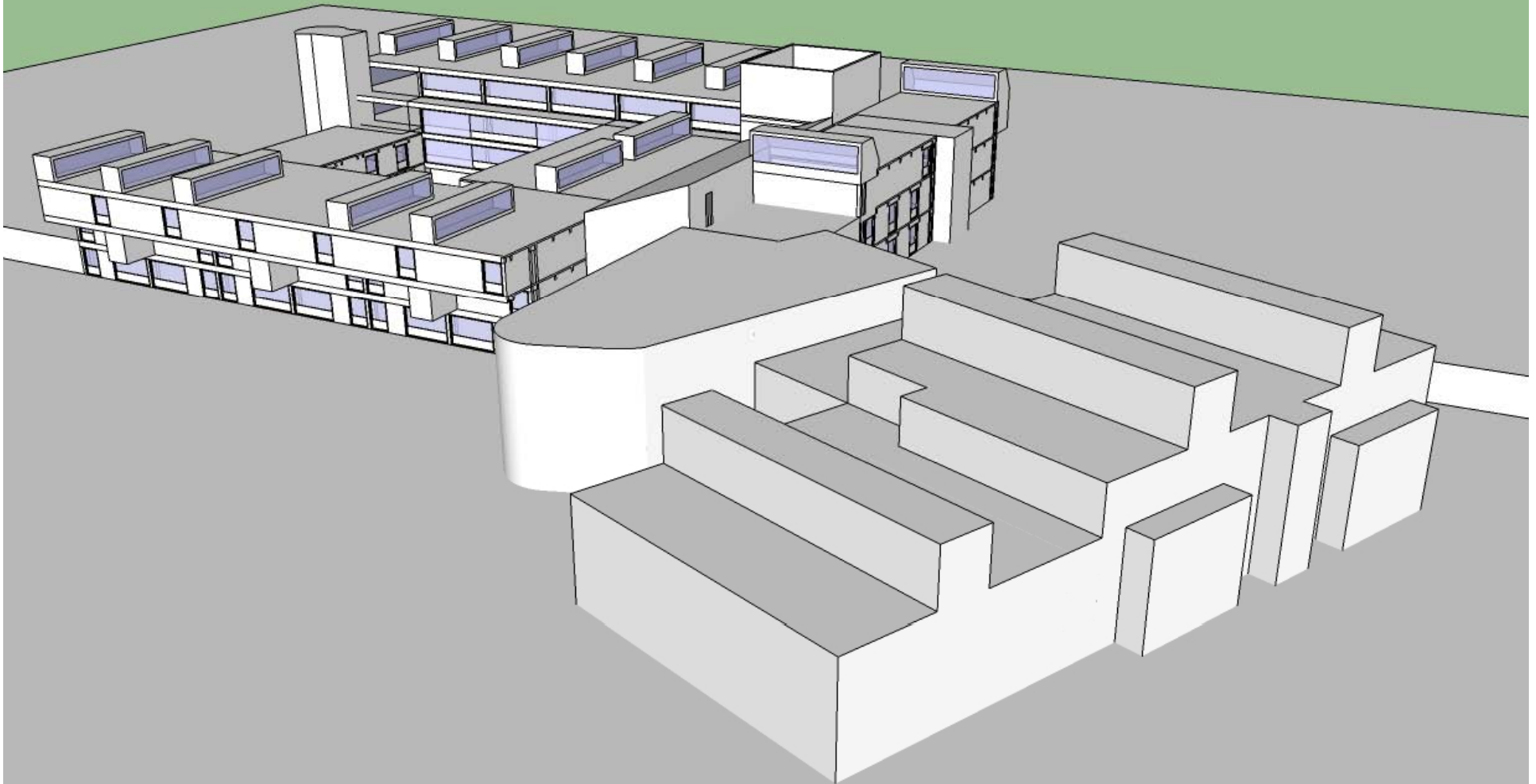
New

Why Not Renovate the Existing Building?

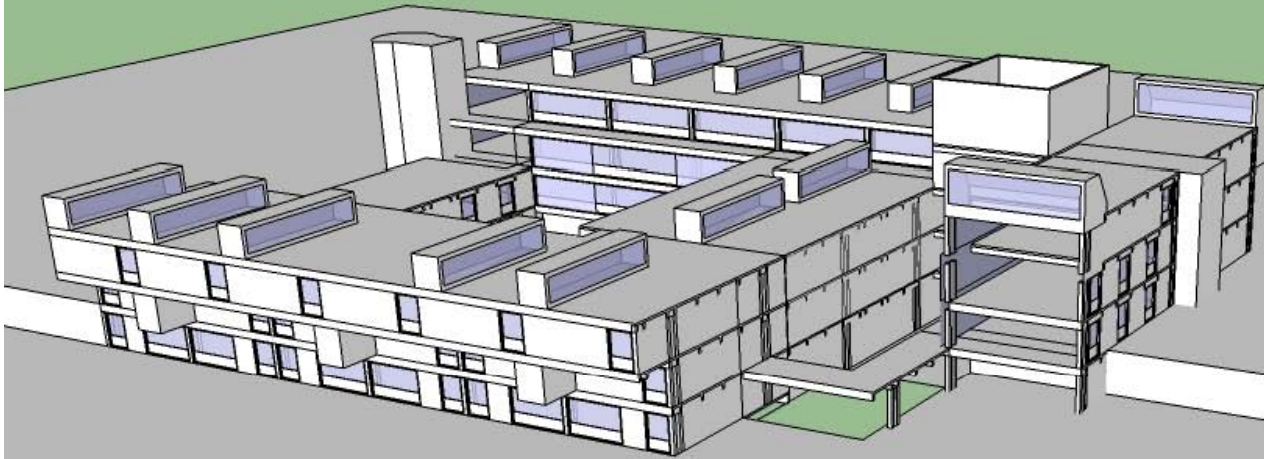
- Does not comply with Seismic Codes.
- Exterior Envelope is neither code-compliant nor High-Performance.
- Does not allow for underground parking.
- Does not meet criteria for Education Specification.



Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



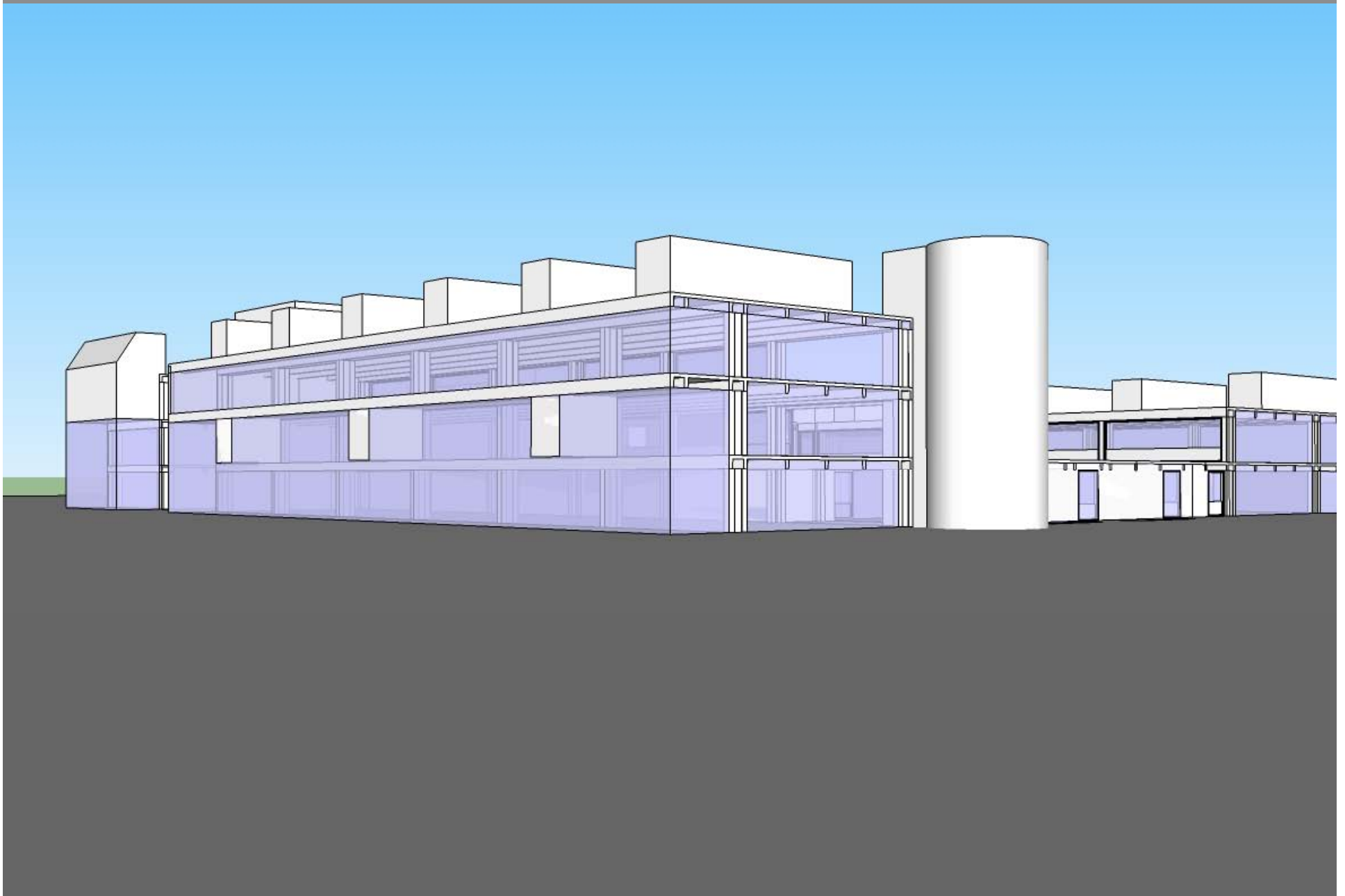
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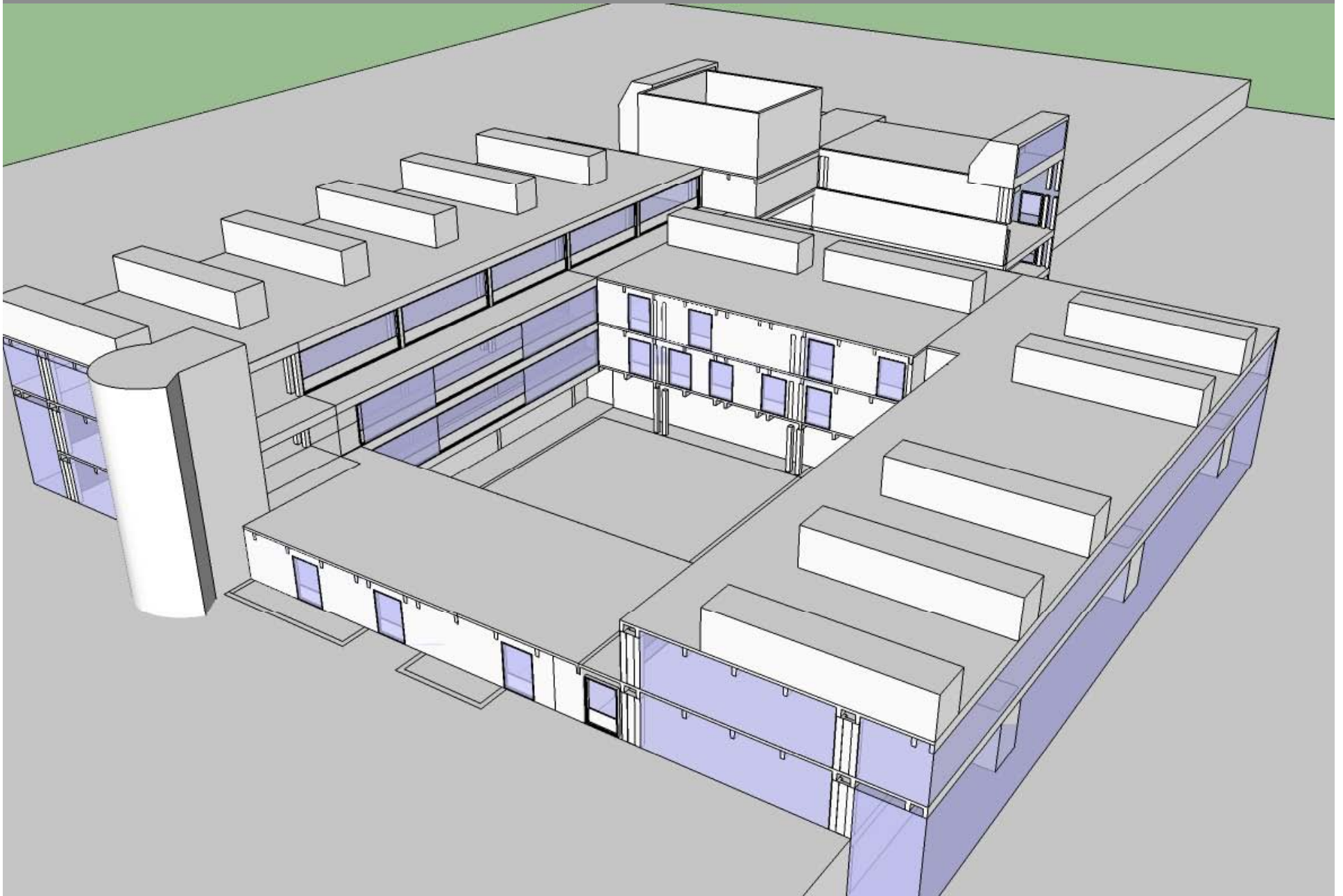
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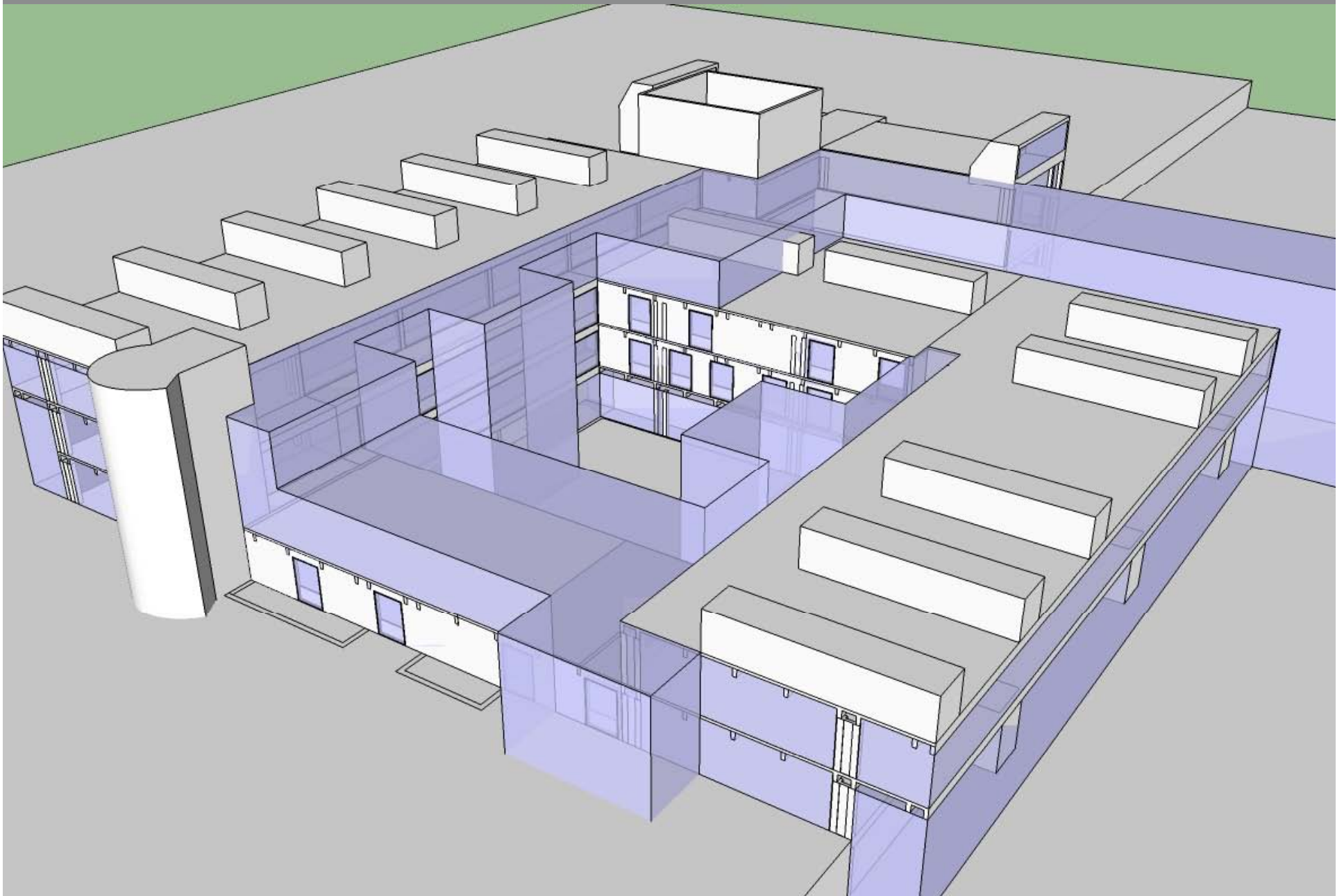
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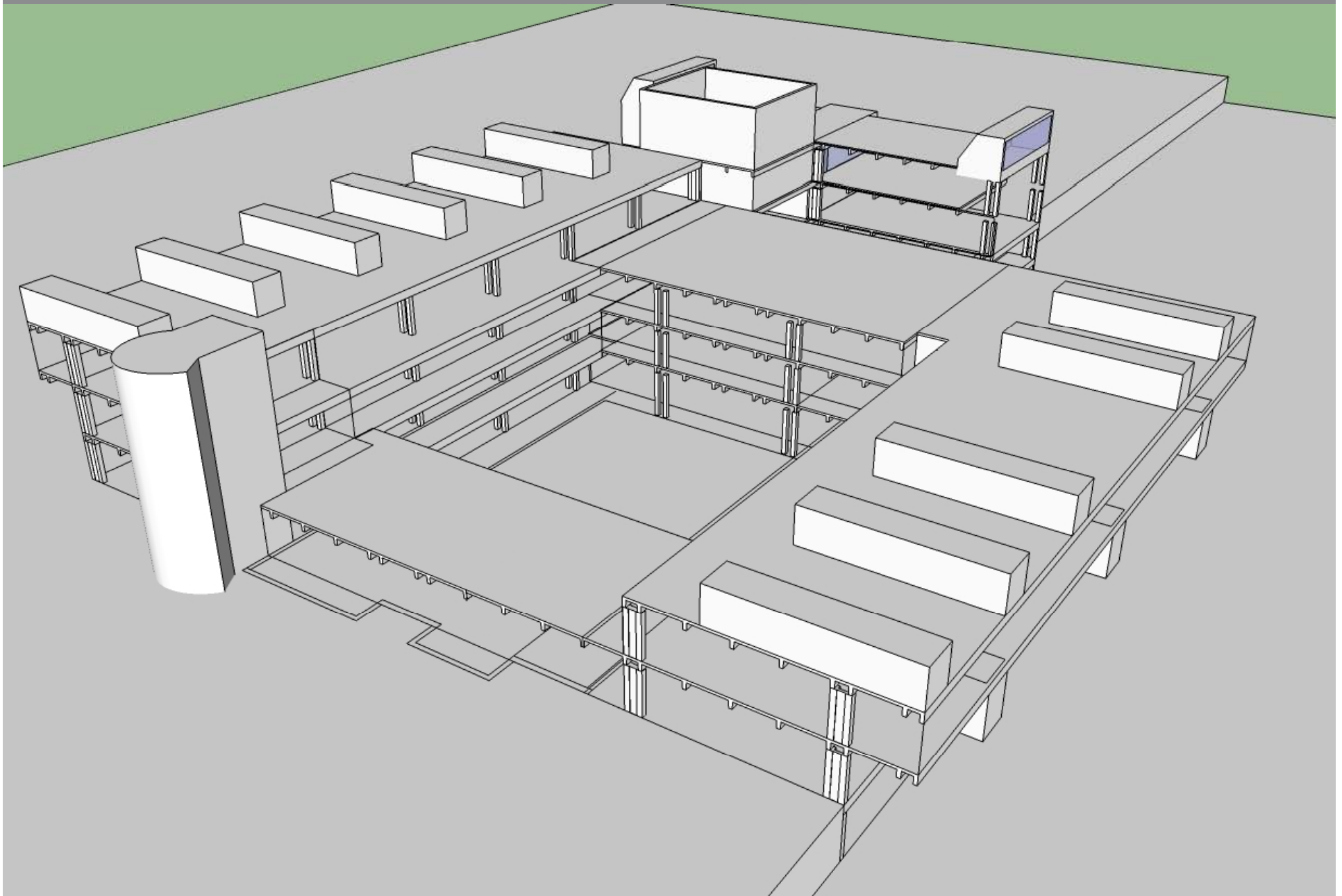
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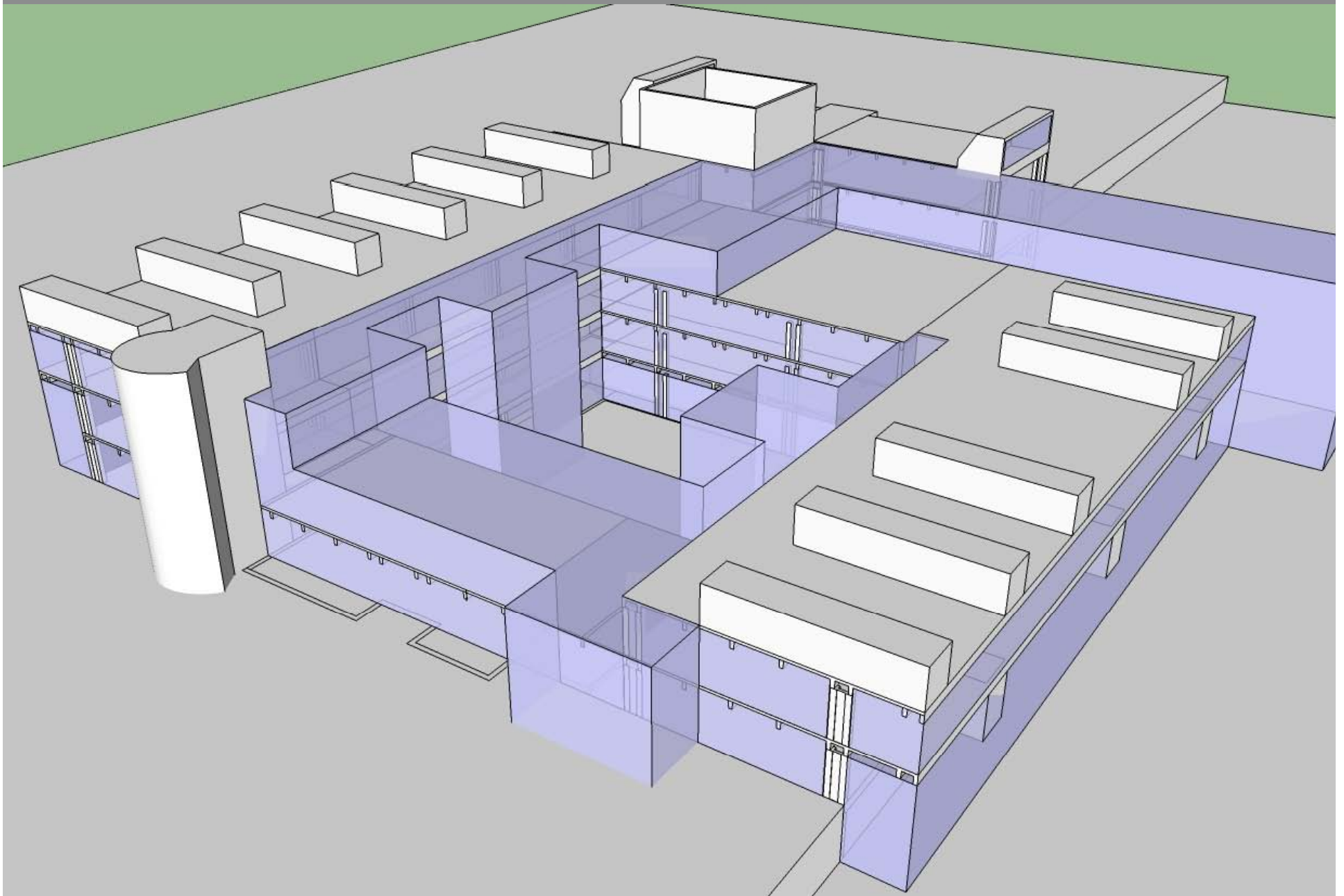
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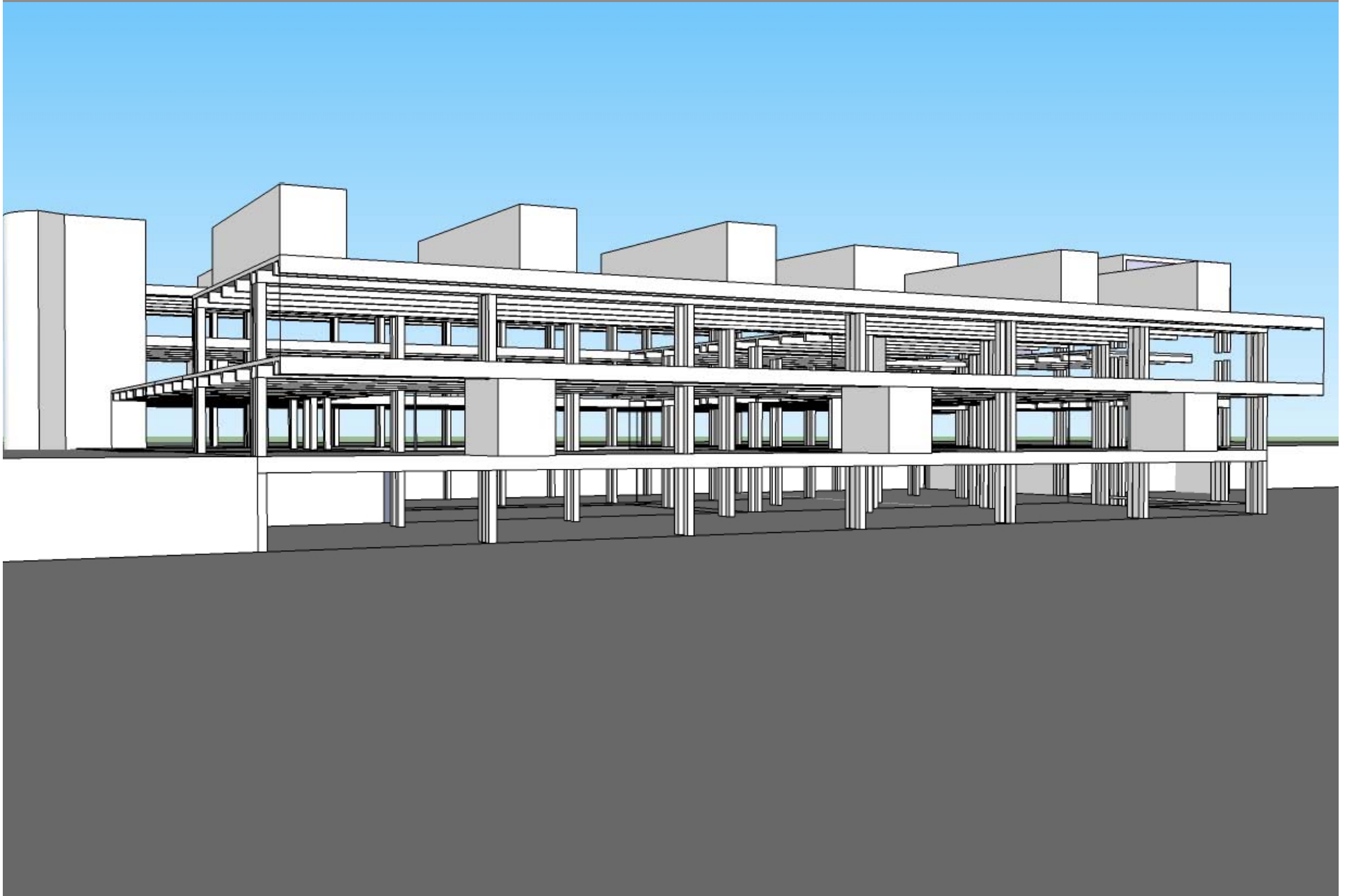
Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



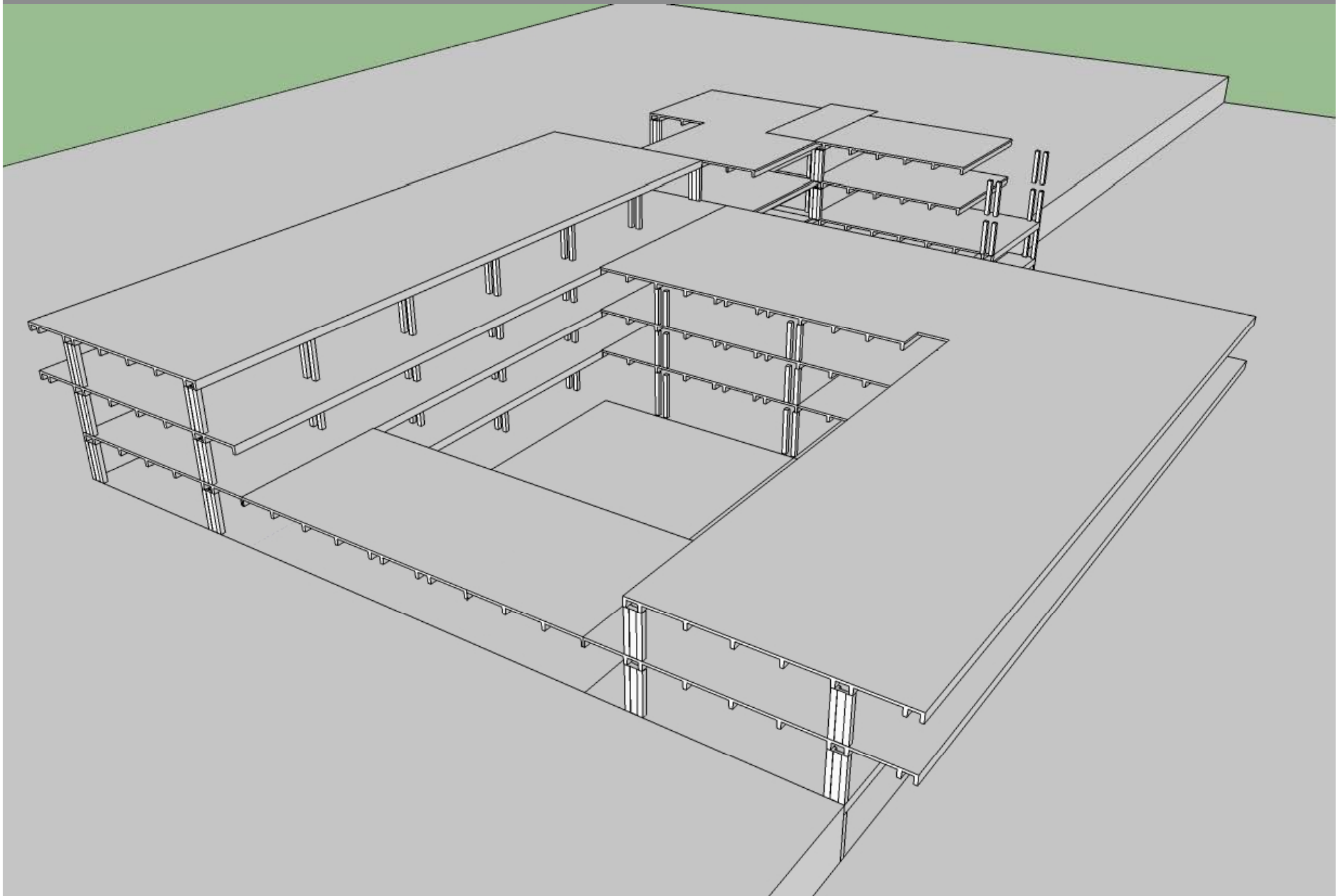
Why Not Renovate the Existing Building?



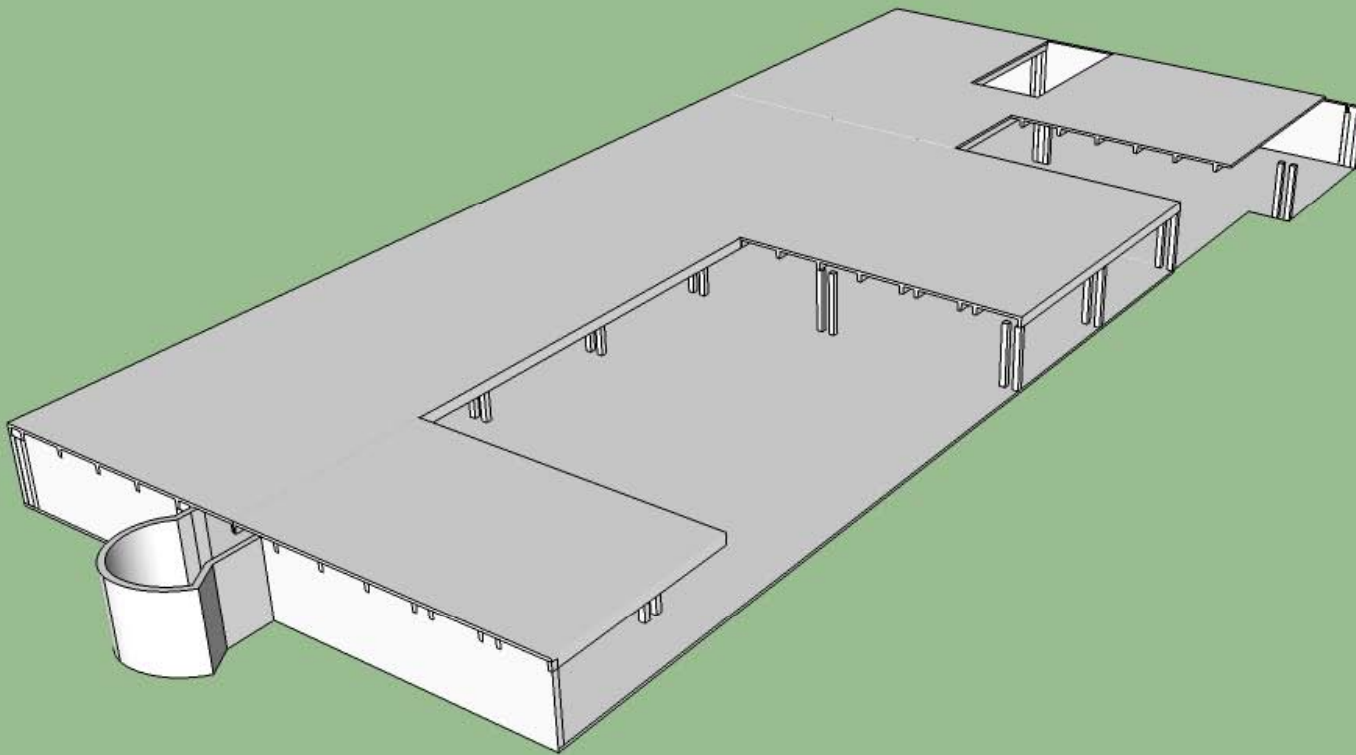
Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



Why Not Renovate the Existing Building?



Response to Neighborhood Concerns

Feasibility Study:

- ❑ Parking
- ❑ Traffic
 - ❑ Safety
 - ❑ Drop-Off / Pick-Up
 - ❑ Truck Loading
- ❑ Bicycles
- ❑ Landscaping & Trees
- ❑ Setbacks
 - ❑ Maintain Urban Street Edge
 - ❑ Neighbors
- ❑ Height
- ❑ Solar Orientation
- ❑ Natural Light
- ❑ Sustainability / Net Zero
- ❑ Separate Identities for Schools
- ❑ Encourage Community Use
- ❑ 21st Century School – Push Best Practices
 - ❑ Design Principles
- ❑ Parent Input / Student Input
- ❑ Wayfinding
- ❑ Old vs. New

Future Phases

(Schematic Design - Construction):

- ❑ Useable Outdoor Space
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- ❑ Art / History
- ❑ Utilization of Roof
- ❑ Precedents: Visit NuVu School
- ❑ Construction Mitigation Plan:
 - ❑ meetings w/ abutters & DPW: schedule, storm water, rodents, noise/ disruption/dust

Design Options: Comparative Matrix



Existing-Modified



Clover



Pi

CRITERIA	EXISTING MODIFIED	CLOVER	PI
COST	2	2	2
OVERALL SUSTAINABILITY	2	2	3
NET ZERO	1	3	2
OPEN SPACE	2	1	3
PARKING	1	2	3
SCHEDULE	2	2	2
URBAN DESIGN / ZONING	1	2	3
PEDAGOGY / ORGANIZATIONAL PRINCIPLES:			
LOWER, UPPER AND PRE-SCHOOLS EACH HAVE A DISTINCT ENTRANCE AND IDENTITY.	1	2	3
THE CAMPUS IS ZONED INTO COMMUNITY / SCHOOL AND SCHOOL-DEDICATED AREAS ORGANIZED AROUND A CAMPUS COMMONS.	1	2	3
EACH SCHOOL ADMINISTRATION CONTROLS THE FRONT DOOR(S) AND THE CAMPUS COMMONS.	1	2	3
THE PRE-SCHOOL HAS ITS OWN ENTRY BUT IS ALSO INTEGRATED INTO THE CAMPUS-COMMUNITY COMMONS.	1	2	3
THE LEARNING COMMONS IS THE HEART OF EACH SCHOOL.	1	3	2
THE LOWER SCHOOL IS ORGANIZED INTO TWO TEAMS: JK-2, 3-5.	2	3	2
THE UPPER SCHOOL IS ORGANIZED INTO THREE GRADE-LEVEL TEAMS.	3	3	3
EACH SCHOOL IS ORGANIZED TO BUILD A PROFESSIONAL COMMUNITY.	2	2	2
THE GARDEN, DINING, SERVERY, KITCHEN AND FOOD LAB COMBINE TO FOSTER A COMPREHENSIVE EXPERIENCE AND EDUCATION ABOUT HEALTHY EATING AND AN ACTIVE LIFESTYLE.	2	2	2
THE EXPERIENCE OF DINING IS SMALLER SCALED, LESS INSTITUTIONAL AND MORE FAMILY-STYLE.	*	*	*
NATURAL LIGHT SHOULD BE PERVASIVE THROUGHOUT THE CAMPUS.	2	1	3
EDUCATION SHOULD FLOW SEAMLESSLY FROM INDOORS TO OUTDOORS.	1	2	2
THE SCHOOL FOSTERS "SUBTLE SECURITY".	*	*	*
ADMINISTRATORS SHOULD BE DISPERSED THROUGHOUT THE BUILDING AND HAVE "OPEN DOORS".	*	*	*
TOTAL	28	38	46

* To be defined in subsequent design phase

Site Plan: Existing Compared to Preferred Option



Existing Building



Preferred Option

Site Plan: Preferred Option



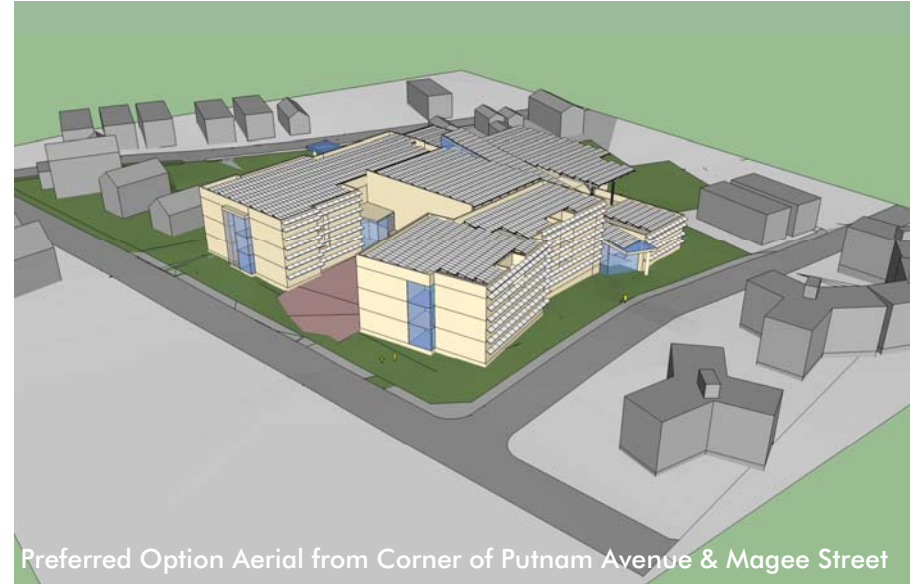
Ground Floor Plan w/ Parking: Preferred Option



Massing : Existing Compared to Preferred Option Views from Corner of Putnam Avenue & Magee Street



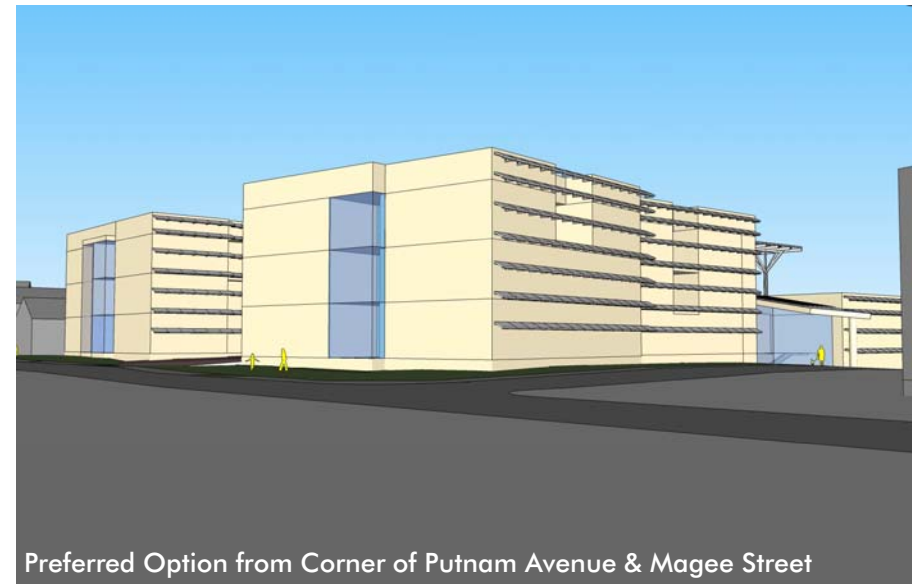
Existing Building Aerial from Corner of Putnam Avenue & Magee Street



Preferred Option Aerial from Corner of Putnam Avenue & Magee Street

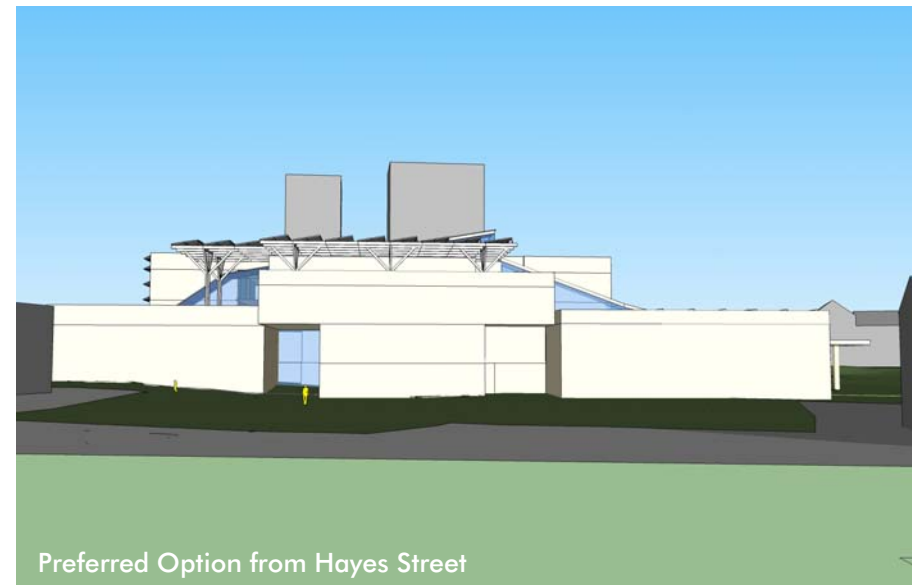
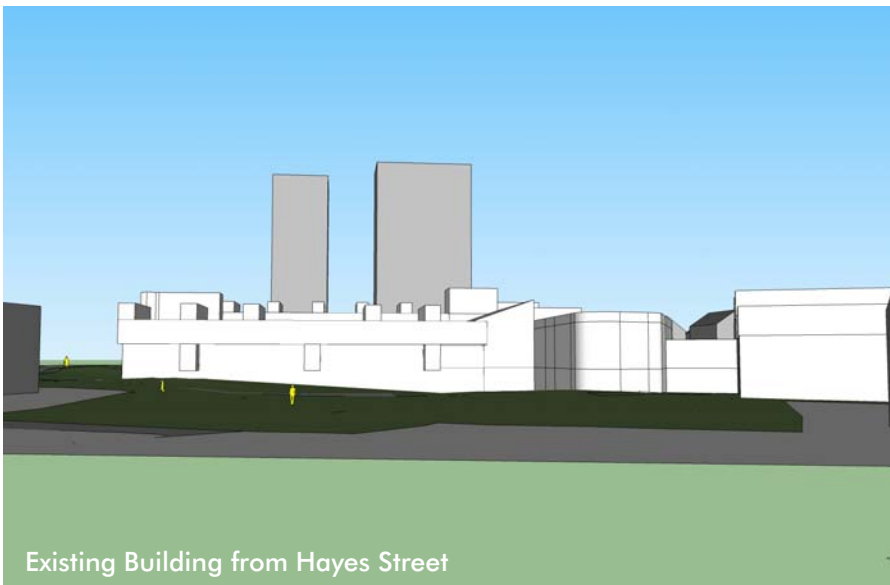


Existing Building from Corner of Putnam Avenue & Magee Street



Preferred Option from Corner of Putnam Avenue & Magee Street

Massing : Existing Compared to Preferred Option Views from Magee Street & Hayes Street



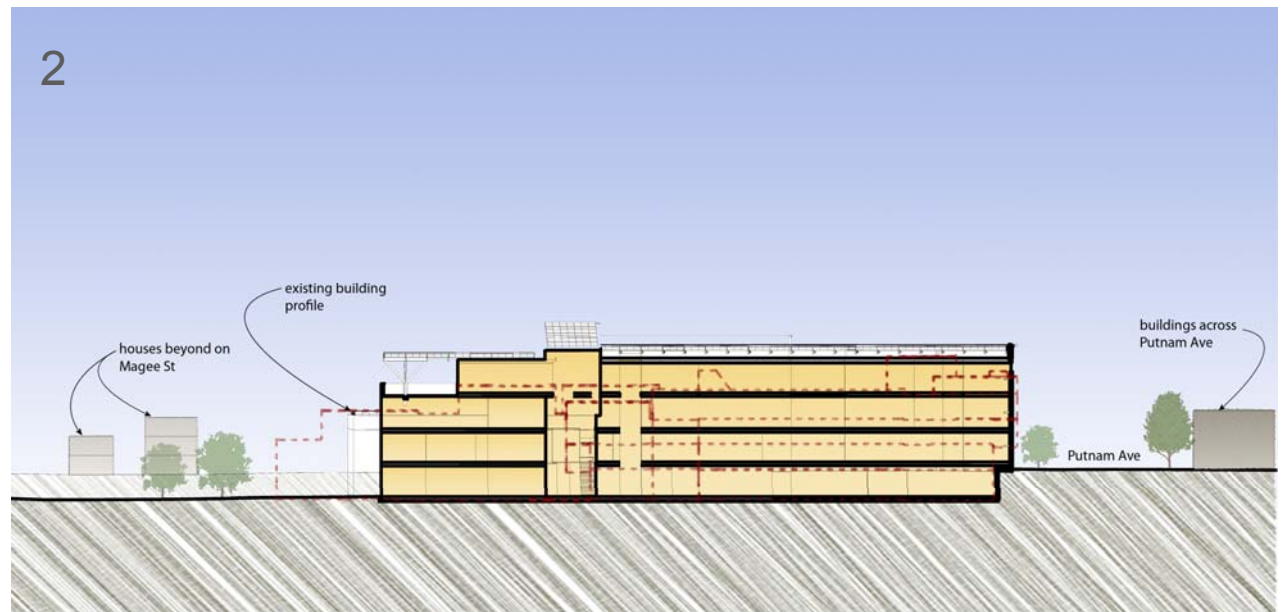
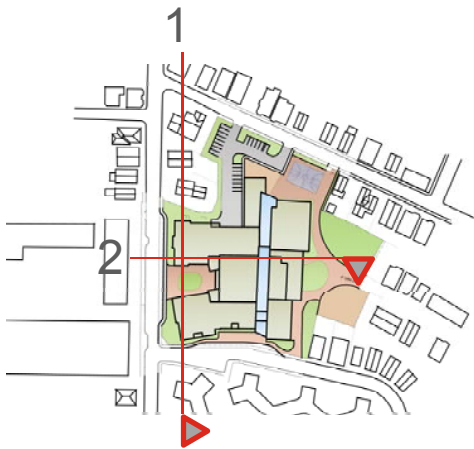
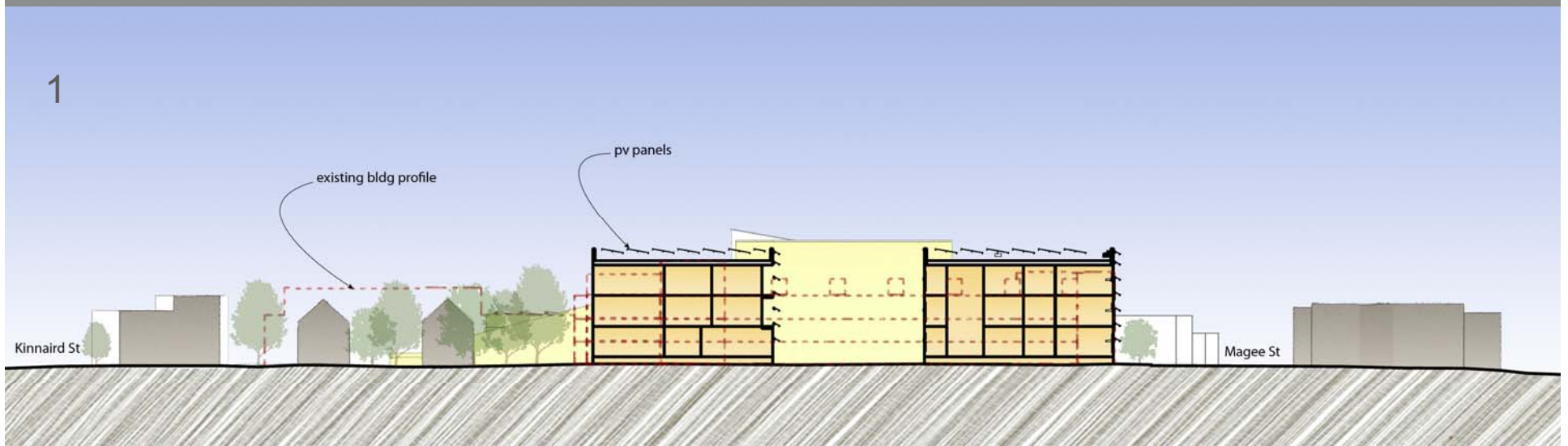
Massing : Existing Compared to Preferred Option Views from Kinnaird Street



Massing : Existing Compared to Preferred Option Views from Corner of Kinnaird Street & Putnam Avenue



Height : Existing Compared to Preferred Option





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Sustainable Opportunities

Sustainability Massing Study Summary



Existing-Modified



Clover



Pi

Massing Study Summary													
Scheme	Building Envelope		Daylight	Glare	Solar Radiation (kBtu/sf)			Natural Ventilation	PV Potential (annual kWh)		Energy Intensity (kBtu/sf/yr)		Overall Score
	Rank	Ratio	Rank	Rank	Rank	Summer	School	Rank	Rank	kWH	Rank	EUI	
Ex Mod	3	86%	3	1	1	138	190	3	1	673,387	1	30.9	13
Clover	1	90%	2	1	2	116	155	1	3	896,577	3	30.2	13
Pi	2	88%	3	2	2.5	121	156	2	2	726,949	2	30.7	15.5



Perkins Eastman

Summary / Next Steps

The Martin Luther King Jr. School Construction P...



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City Manager's Office > MLK School Construction Project

The Martin Luther King Jr. School Construction Project

The Cambridge Public Schools' [Innovation Agenda](#) will result in the creation of four new upper school campuses serving students in grades 6 to 8. The Martin Luther King Jr. School located at 100 Putnam Avenue, Cambridge, will be the first school to be redesigned to include a JK-5 Program, an Upper School Program, Community School and Afterschool programs.

[Link to Cambridge Public Schools](#)

The City of Cambridge has contracted Perkins Eastman to perform a Feasibility Study to help determine if the existing building can support the new programming needs or if it will be necessary to construct a new building.

As part of the Feasibility Study, the City and Perkins Eastman have met with various School Department staff, City departments, some abutters and parents. The interviews with staff were required to develop the program needs for the Innovation Agenda. The meeting with parent and abutters is divided in three components of information: Creative Analysis, Existing Conditions Analysis and Design Options.

Meetings will be at Martin Luther King Jr. School Auditorium, 100 Putnam Ave., from 6-7:30 p.m.

Meeting 1: April 5, 2012 - Topic: Creative Analysis

Meeting 2: May 10, 2012 - Topic: Design Options

Meeting 3: June 21, 2012 - Topic: preferred Design Option

During the Schematic Design Phase, there will be additional Community informational meetings presenting design progress and how comments made by the residents have been addressed in the design.

[Schedule](#) [Documents](#)

Complete programming and issue Feasibility Study - June 2012

Approval of Construction Management at Risk by Office of the Inspector General - June 2012

Negotiate design contract with Perkins Eastman - July 2012

QUICK LINKS

- [City Telephone Directory](#)
- [Boards & Commissions](#)
- [Biotech in Cambridge](#)
- [City Ordinances](#)
- [Unclaimed City Checks Notice](#)
- [CPI Wifi Access Points](#)
- [Construction and Traffic](#)
- [Library](#)
- [MLK School Construction Project](#)
- [Mobile Applications](#)
- [Public Works](#)
- [Social Media Sites](#)

VISITING CITY HALL

HOURS OF SERVICE

Monday: 8:30am-8pm
Tuesday-Thursday: 8:30am-5pm
Friday: 8:30am-12pm

City Manager:
Robert W. Healy

Cambridge City Hall
795 Massachusetts Avenue
Cambridge, MA 02139

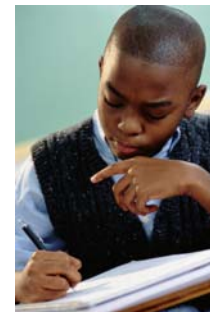
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■ Approvals Process

- It is anticipated that the redesigned school will require issuance of a special permit from the Planning Board.
- The formal approval process will occur after the building design takes shape.
- Submission to the planning board in 2013 that includes Special Permit under Planning Board jurisdiction with all associated public meetings.

■ Technical Review

- In the next phases the Design Team will continue to consult the following city agencies to ensure compliance with City of Cambridge requirements:
 - Community Development Department and Planning Board: Overall design and compatibility with the neighborhood.
 - Department of Public Works: Storm water, sewer, streets and sidewalks, other utilities.
 - Traffic Department: Vehicle, bicycle and pedestrian circulation, safety and management. Bus pick-up and drop-off.
 - Inspectional Services & Fire Department and : Building Codes, Life Safety, fire fighting access.



Schedule

[illegible]

Perkins Eastman

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9.0 DETAILED SCHEDULING ANALYSIS

8:00-4:00	Time Allocations Daily									
480/360	PK	K	1	2	3	4	5	6	7	8
MM		20	20	20	20	20	20	15	15	15
LA/R		135	135	120	120	105	105	50	50	50
Math		75	75	75	75	75	75	50	50	50
SS								50	50	50
SC								50	50	50
SS/SC		30	30	45	45	60	60			
Encore		90	90	90	90	90	90	80	80	80
L/R		90	90	90	90	90	90	30	30	30
I/E		30	30	30	30	30	30	30	30	30
HR		10	10	10	10	10	10	5	5	5
Total		480	480	480	480	480	480	360	360	360

Elementary Encore 6-Day Rotations						Middle School Core and Encore					
Subject	X6	Period	Mins per 6 Day	X180	HRS Yea	Subject	X6	Period	Mins per 6 Day	X180	HRS Year
PE	3	45	135	90	67.5	LA	6	50	300	180	150
Chinese	3	45	135	90	67.5	Math	6	50	300	180	150
Music	2	45	90	60	45	SC	6	50	300	180	150
Art	1	45	45	30	22.5	SS	6	50	300	180	150
Library	1	45	45	30	22.5	IE	6	30	180	180	90
IT	1	45	45	30	22.5	PE	3	40	120	90	60
Guidance	1	45	45	30	22.5	WL	3	40	120	90	60
Elementary Encore 4-Day Rotations						Music	6	40	240	45	30
Subject	X4	Period	Mins per 4 Day	X180	HRS Yea	IT	6	40	240	45	30
PE	2	45	90	90	67.5	Art	6	40	240	45	30
Chinese	2	45	90	90	67.5	Drama	6	40	240	45	30
Music	2	45	90	90	67.5						
Art	1	45	45	45	33.75						
Library/Guidance	1	45	45	45	33.75						

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MLK Jr. Grades K-8 Idea #1 Elementary PE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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MLK Jr. Grades K-8 Idea #1 Elementary Guidance	
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MLK Jr. Grades 6-8 Idea #1 Grade 6									
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MLK Jr. K-5 PE 4-Day Rotation																																																																																																		
		8:00 AM	8:05 AM	8:10 AM	8:15 AM	8:20 AM	8:25 AM	8:30 AM	8:35 AM	8:40 AM	8:45 AM	8:50 AM	8:55 AM	9:00 AM	9:05 AM	9:10 AM	9:15 AM	9:20 AM	9:25 AM	9:30 AM	9:35 AM	9:40 AM	9:45 AM	9:50 AM	9:55 AM	10:00 AM	10:05 AM	10:10 AM	10:15 AM	10:20 AM	10:25 AM	10:30 AM	10:35 AM	10:40 AM	10:45 AM	10:50 AM	10:55 AM	11:00 AM	11:05 AM	11:10 AM	11:15 AM	11:20 AM	11:25 AM	11:30 AM	11:35 AM	11:40 AM	11:45 AM	11:50 AM	11:55 AM	12:00 PM	12:05 PM	12:10 PM	12:15 PM	12:20 PM	12:25 PM	12:30 PM	12:35 PM	12:40 PM	12:45 PM	12:50 PM	12:55 PM	1:00 PM	1:05 PM	1:10 PM	1:15 PM	1:20 PM	1:25 PM	1:30 PM	1:35 PM	1:40 PM	1:45 PM	1:50 PM	1:55 PM	2:00 PM	2:05 PM	2:10 PM	2:15 PM	2:20 PM	2:25 PM	2:30 PM	2:35 PM	2:40 PM	2:45 PM	2:50 PM	2:55 PM	3:00 PM	3:05 PM	3:10 PM	3:15 PM	3:20 PM	3:25 PM	3:30 PM	3:35 PM	3:40 PM	3:45 PM	3:50 PM	3:55 PM	4:00 PM
Day 1	MM 20	5A		Plan		4A		3A		KA		LUNCH		KC		2A		1A		Plan		H R																																																																												
Day 2	MM 20	5B		Plan		4B		3B		KB		LUNCH		KD		2B		1B		Plan		H R																																																																												
Day 3	MM 20	5A		Plan		4A		3A		KA		LUNCH		KC		2A		1A		Plan		H R																																																																												
Day 4	MM 20	5B		Plan		4B		3B		KB		LUNCH		KD		2B		1B		Plan		H R																																																																												
MLK Jr. K-5 Chinese 4-Day Rotation																																																																																																		
		8:00 AM	8:05 AM	8:10 AM	8:15 AM	8:20 AM	8:25 AM	8:30 AM	8:35 AM	8:40 AM	8:45 AM	8:50 AM	8:55 AM	9:00 AM	9:05 AM	9:10 AM	9:15 AM	9:20 AM	9:25 AM	9:30 AM	9:35 AM	9:40 AM	9:45 AM	9:50 AM	9:55 AM	10:00 AM	10:05 AM	10:10 AM	10:15 AM	10:20 AM	10:25 AM	10:30 AM	10:35 AM	10:40 AM	10:45 AM	10:50 AM	10:55 AM	11:00 AM	11:05 AM	11:10 AM	11:15 AM	11:20 AM	11:25 AM	11:30 AM	11:35 AM	11:40 AM	11:45 AM	11:50 AM	11:55 AM	12:00 PM	12:05 PM	12:10 PM	12:15 PM	12:20 PM	12:25 PM	12:30 PM	12:35 PM	12:40 PM	12:45 PM	12:50 PM	12:55 PM	1:00 PM	1:05 PM	1:10 PM	1:15 PM	1:20 PM	1:25 PM	1:30 PM	1:35 PM	1:40 PM	1:45 PM	1:50 PM	1:55 PM	2:00 PM	2:05 PM	2:10 PM	2:15 PM	2:20 PM	2:25 PM	2:30 PM	2:35 PM	2:40 PM	2:45 PM	2:50 PM	2:55 PM	3:00 PM	3:05 PM	3:10 PM	3:15 PM	3:20 PM	3:25 PM	3:30 PM	3:35 PM	3:40 PM	3:45 PM	3:50 PM	3:55 PM	4:00 PM
Day 1	MM 20	2A		Plan		1A		Lunch		KC		3A		KA		4A		5A		Plan																																																																														
Day 2	MM 20	2B		Plan		1B		Lunch		KD		3B		KB		4B		5B		Plan																																																																														
Day 3	MM 20	2A		Plan		1A		Lunch		KC		3A		KA		4A		5A		Plan																																																																														
Day 4	MM 20	2B		Plan		1B		Lunch		KD		3B		KB		4B		5B		Plan																																																																														
MLK Jr. K-5 Music 4-Day Rotation																																																																																																		
		8:00 AM	8:05 AM	8:10 AM	8:15 AM	8:20 AM	8:25 AM	8:30 AM	8:35 AM	8:40 AM	8:45 AM	8:50 AM	8:55 AM	9:00 AM	9:05 AM	9:10 AM	9:15 AM	9:20 AM	9:25 AM	9:30 AM	9:35 AM	9:40 AM	9:45 AM	9:50 AM	9:55 AM	10:00 AM	10:05 AM	10:10 AM	10:15 AM	10:20 AM	10:25 AM	10:30 AM	10:35 AM	10:40 AM	10:45 AM	10:50 AM	10:55 AM	11:00 AM	11:05 AM	11:10 AM	11:15 AM	11:20 AM	11:25 AM	11:30 AM	11:35 AM	11:40 AM	11:45 AM	11:50 AM	11:55 AM	12:00 PM	12:05 PM	12:10 PM	12:15 PM	12:20 PM	12:25 PM	12:30 PM	12:35 PM	12:40 PM	12:45 PM	12:50 PM	12:55 PM	1:00 PM	1:05 PM	1:10 PM	1:15 PM	1:20 PM	1:25 PM	1:30 PM	1:35 PM	1:40 PM	1:45 PM	1:50 PM	1:55 PM	2:00 PM	2:05 PM	2:10 PM	2:15 PM	2:20 PM	2:25 PM	2:30 PM	2:35 PM	2:40 PM	2:45 PM	2:50 PM	2:55 PM	3:00 PM	3:05 PM	3:10 PM	3:15 PM	3:20 PM	3:25 PM	3:30 PM	3:35 PM	3:40 PM	3:45 PM	3:50 PM	3:55 PM	4:00 PM
Day 1	MM 20	5B		Plan		4B		3B		KB		LUNCH		KD		2B		1B		Plan		H R																																																																												
Day 2	MM 20	2A		Plan		1A		LUNCH		KC		3A		KA		4A		5A		Plan		H R																																																																												
Day 3	MM 20	2B		Plan		1B		LUNCH		KD		3B		KB		4B		5B		Plan		H R																																																																												
Day 4	MM 20	5A		Plan		4A		3A		KA		LUNCH		KC		2A		1A		Plan		H R																																																																												

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MLK Jr. Grades 6-8 Idea #1 Grade 6																													
LA 6 (6A)																													
SS 6 (6B)																													
Math 6 (6C)																													
SC 6 (6D)																													
MLK Jr. Grades 6-8 Idea #1 Grade 7																													
LA 7 (7A)																													
SS 7 (7B)																													
Math 7 (7C)																													
SC 7 (7D)																													
MLK Jr. Grades 6-8 Idea #1 Grade 8																													
LA 8 (8A)																													
SS 8 (8B)																													
Math 8 (8C)																													
SC 8 (8D)																													

Elementary Encore							MIDDLE SCHOOL PE/WL (Spanish and Chinese split sections)			MIDDLE SCHOOL PE/WL (Art,GM,DR, & IT Quarters) Days 1 & 4				
8:20-9:05	D1	D2	D3	D4	D5	D6	9:15-9:55	D1	D2	12:45-1:25	Q1	Q2	Q3	Q4
5A	PE/H	Art	PE/H	Music	PE/H	IT	8A	PE/H	WL	7A	Art	DR	IT	Music
5B	IT	PE/H	Art	PE/H	Music	PE/H	8B	WL	PE/H	7B	Music	Art	DR	IT
2A	CH	IT	CH	Art	CH	Music				7C	IT	Music	Art	DR
2B	Music	CH	IT	CH	Art	CH	10:05-10:35	D1	D2	7D	DR	IT	Music	Art
9:05-9:50	PITan						8C	PE/H	WL					
9:50-10:35	D1	D2	D3	D4	D5	D6	8D	WL	PE/H	1:25-2:05	Q1	Q2	Q3	Q4
4A	PE/H	Art	PE/H	Music	PE/H	IT				8A	Art	DR	IT	Music
4B	IT	PE/H	Art	PE/H	Music	PE/H	11:55-12:35	D1	D2	8B	Music	Art	DR	IT
1A	CH	IT	CH	Art	CH	Music	6A	PE/H	WL	8C	IT	Music	Art	DR
1B	Music	CH	IT	CH	Art	CH	6B	WL	PE/H	8D	DR	IT	Music	Art
10:35-11:20	D1	D2	D3	D4	D5	D6								
3A	PE/H	Art	PE/H	Music	PE/H	IT	12:45-1:25	D1	D2	2:15-2:55	Q1	Q2	Q3	Q4
3B	IT	PE/H	Art	PE/H	Music	PE/H	6C	PE/H	WL	6A	Art	DR	IT	Music
11:20-12:05	D1	D2	D3	D4	D5	D6	6D	WL	PE/H	6B	Music	Art	DR	IT
KA	PE/H	Art	PE/H	Music	PE/H	IT				6C	IT	Music	Art	DR
KB	IT	PE/H	Art	PE/H	Music	PE/H	1:25-2:05	D1	D2	6D	DR	IT	Music	Art
KC	CH	IT	CH	Art	CH	Music	7A	PE/H	WL					
KD	Music	CH	IT	CH	Art	CH	7B	WL	PE/H					
12:05-12:50	D1	D2	D3	D4	D5	D6								
3A	CH	L	CH	G	CH	Music	2:15-2:55	D1	D2					
3B	Music	CH	L	CH	G	CH	7C	PE/H	WL					
12:50-1:35	D1	D2	D3	D4	D5	D6	7D	WL	PE/H					
KC	PE/H	G	PE/H	Music	PE/H	L								
KD	L	PE/H	G	PE/H	Music	PE/H								
KA	CH	L	CH	G	CH	Music								
KB	Music	CH	L	CH	G	CH								
1:35-2:20	D1	D2	D3	D4	D5	D6								
2A	PE/H	G	PE/H	Music	PE/H	L								
2B	L	PE/H	G	PE/H	Music	PE/H								
4A	CH	L	CH	G	CH	Music								
4B	Music	CH	L	CH	G	CH								
1:35-2:20	D1	D2	D3	D4	D5	D6								
1A	PE/H	G	PE/H	Music	PE/H	L								
1B	L	PE/H	G	PE/H	Music	PE/H								
5A	CH	L	CH	G	CH	Music								
5B	Music	CH	L	CH	G	CH								

Elementary Encore (4-Day)					MIDDLE SCHOOL PE/WL (Spanish and Chinese split sections)			MIDDLE SCHOOL PE/WL (Art,GM,DR, & IT Quarters)				
8:20-9:05	D1	D2	D3	D4	9:15-9:55	D1	D2	12:45-1:25	Q1	Q2	Q3	Q4
5A	PE/H	Art	PE/H	Music	8A	PE/H	WL	7A	Art	DR	IT	Music
5B	Music	PE/H	Art	PE/H	8B	WL	PE/H	7B	Music	Art	DR	IT
2A	CH	Music	CH	Art				7C	IT	Music	Art	DR
2B	Art	CH	Music	CH	10:05-10:35	D1	D2	7D	DR	IT	Music	Art
9:05-9:50	PITan				8C	PE/H	WL					
9:50-10:35	D1	D2	D3	D4	8D	WL	PE/H	1:25-2:05	Q1	Q2	Q3	Q4
4A	PE/H	Art	PE/H	Music				8A	Art	DR	IT	Music
4B	Music	PE/H	Art	PE/H	11:55-12:35	D1	D2	8B	Music	Art	DR	IT
1A	CH	Music	CH	Art	6A	PE/H	WL	8C	IT	Music	Art	DR
1B	Art	CH	Music	CH	6B	WL	PE/H	8D	DR	IT	Music	Art
10:35-11:20	D1	D2	D3	D4								
3A	PE/H	Art	PE/H	Music	12:45-1:25	D1	D2	2:15-2:55	Q1	Q2	Q3	Q4
3B	Music	PE/H	Art	PE/H	6C	PE/H	WL	6A	Art	DR	IT	Music
11:20-12:05	D1	D2	D3	D4	6D	WL	PE/H	6B	Music	Art	DR	IT
KA	PE/H	Art	PE/H	Music				6C	IT	Music	Art	DR
KB	Music	PE/H	Art	PE/H	1:25-2:05	D1	D2	6D	DR	IT	Music	Art
KC	CH	Music	CH	Art	7A	PE/H	WL					
KD	Art	CH	Music	CH	7B	WL	PE/H					
12:05-12:50	D1	D2	D3	D4								
3A	CH	Music	CH	L/G	2:15-2:55	D1	D2					
3B	L/G	CH	Music	CH	7C	PE/H	WL					
12:50-1:35	D1	D2	D3	D4	7D	WL	PE/H					
KC	PE/H	L/G	PE/H	Music								
KD	Music	PE/H	L/G	PE/H								
KA	CH	Music	CH	L/G								
KB	L/G	CH	Music	CH								
1:35-2:20	D1	D2	D3	D4								
2A	PE/H	L/G	PE/H	Music								
2B	Music	PE/H	L/G	PE/H								
4A	CH	Music	CH	L/G								
4B	L/G	CH	Music	CH								
1:35-2:20	D1	D2	D3	D4								
2A	PE/H	L/G	PE/H	Music								
2B	Music	PE/H	L/G	PE/H								
5A	CH	Music	CH	L/G								
5B	L/G	CH	Music	CH								



City of Cambridge

Perkins Eastman