

TORONTO DISTRICT SCHOOL BOARD
NORTH TORONTO COLLEGIATE INSTITUTE REDEVELOPMENT STUDY

RENOVATION & ADDITION OPTIONS

Architects

Crang & Boake

Teeple Architects ^{INC.}

GOALS AND OBJECTIVES

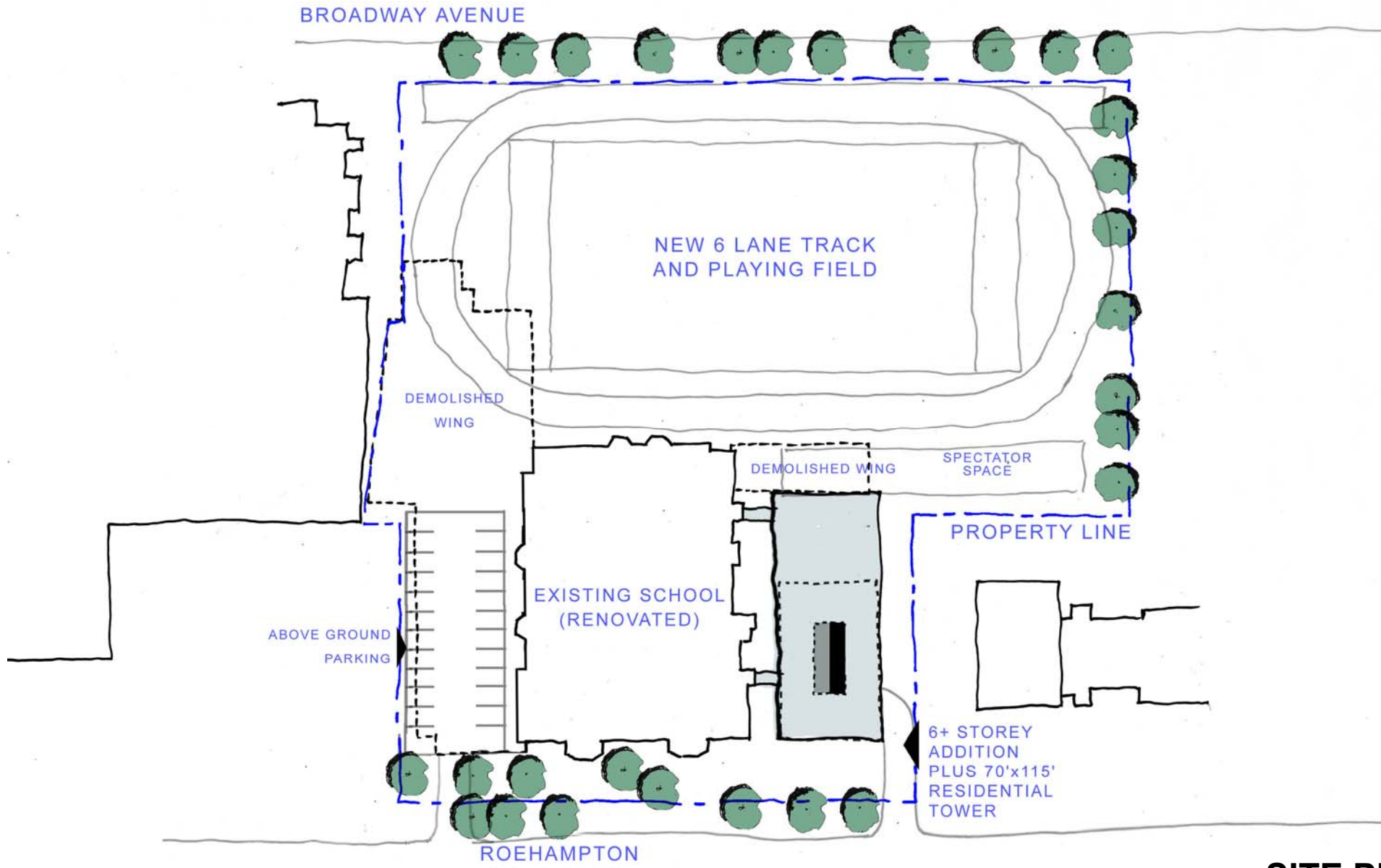
- **Address insufficient space and facilities for contemporary and future curriculum**
- **Support specialized programs of NTCI**
- **Accommodate an additional 300 students**
- **Create regulation size track and field**
- **Provide ample parking**
- **Retain significant portion of existing building**
- **Provide barrier-free access**

EXISTING SPACE INADEQUACIES

- **Insufficient teaching space**
- **Inadequate space for music and drama programs**
- **Inadequate gymnasium space and change rooms**
- **Insufficient library space**
- **Insufficient computer labs**
- **Inadequate track and playing field**
- **Insufficient staff and visitor parking**

REQUIRED ADDITIONAL PROGRAM AREAS

- **3 regular classrooms @ 2250 sq. ft.**
- **3 science labs @ 4800 sq. ft.**
- **4 seminar rooms @ 1600 sq. ft.**
- **1 special education room @ 500 sq. ft.**
- **1 music room @ 1600 sq. ft.**
- **1 drama room @ 1700 sq. ft.**
- **1 double gym @ 8000 sq. ft.**
- **spectator space – indoor and outdoor**
- **proper change rooms**
- **additional 1300 sq. ft. library space with windows**
- **2 computer labs @ 2000 sq. ft.**
- **regulation size track and field**
- **additional parking spaces**



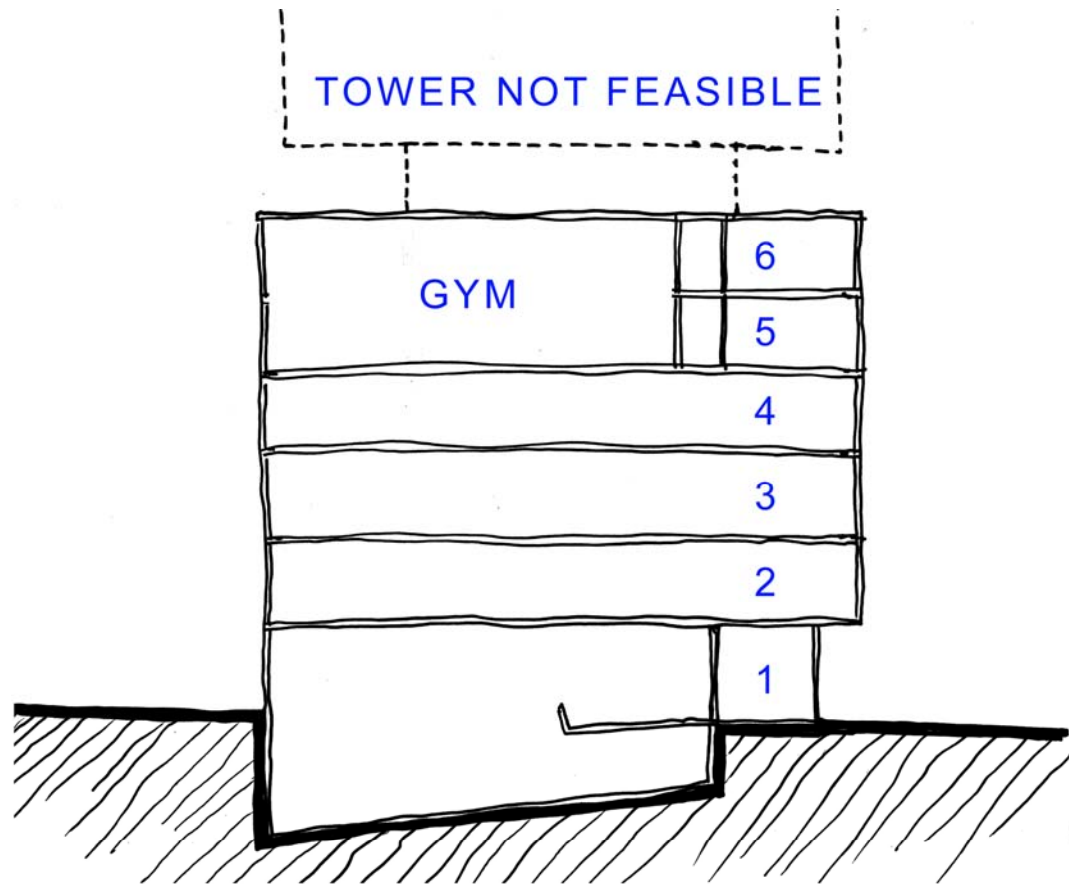
**SITE PLAN
OPTION A
RENOVATION PLUS ADDITION**



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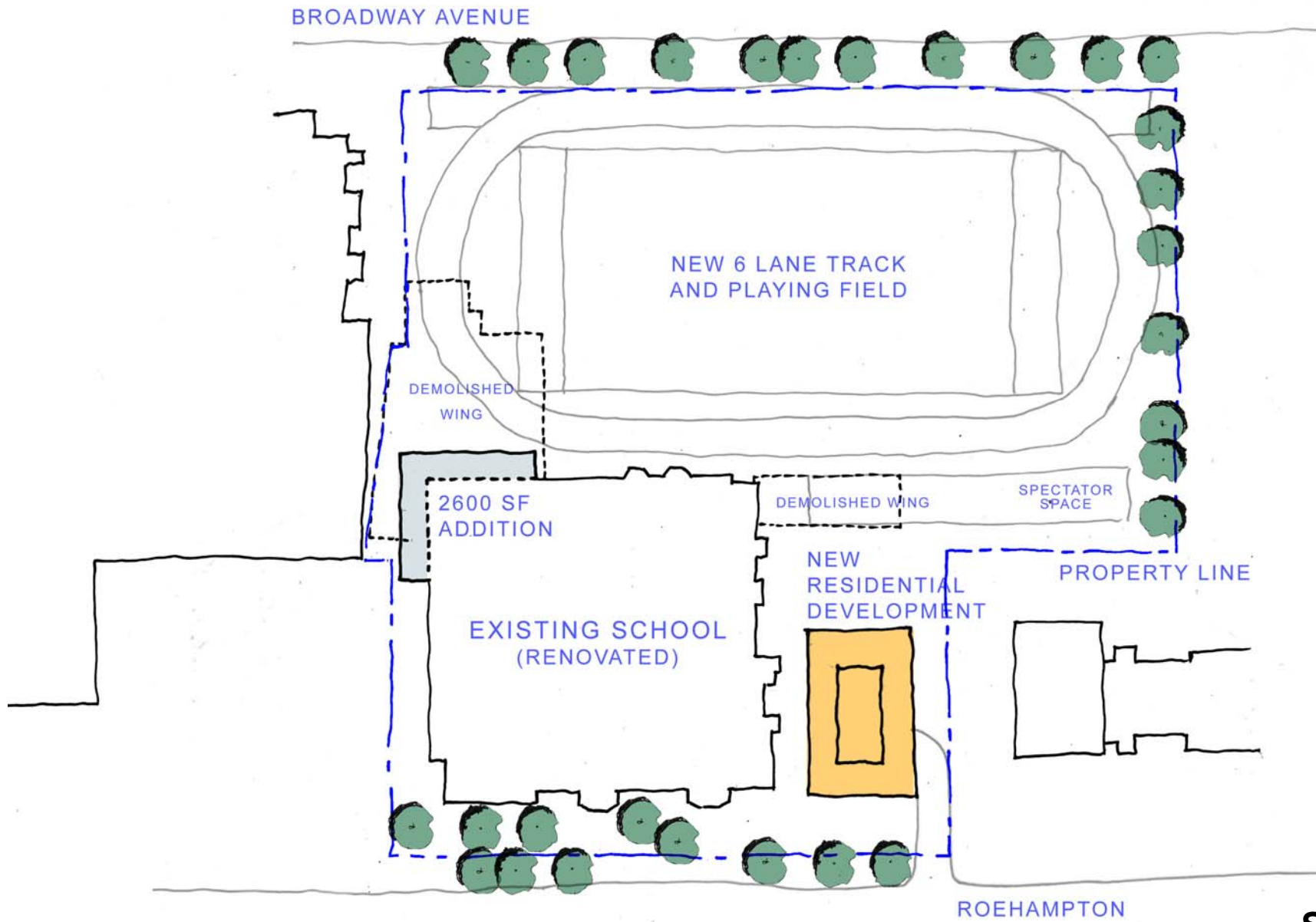
N-S SECTION

**SECTION
OPTION A
RENOVATION PLUS ADDITION**

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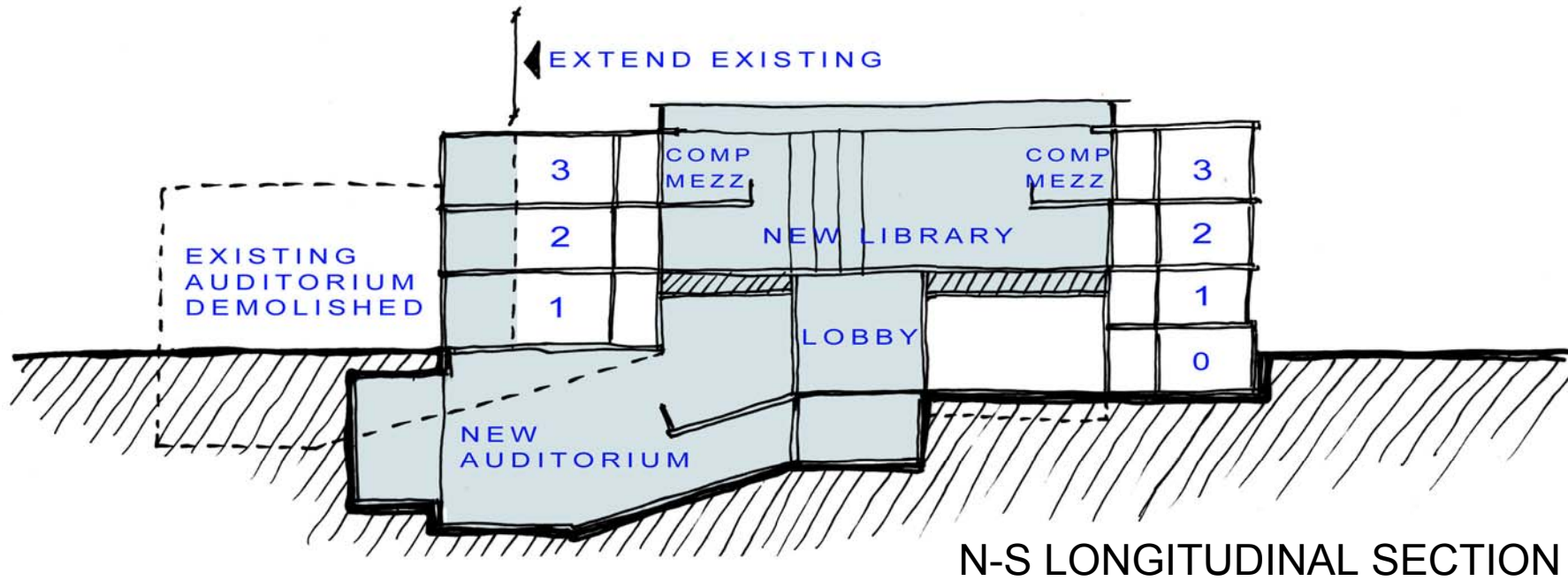
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**SITE PLAN
OPTION B
RENOVATION PLUS ADJACENT ADDITION**

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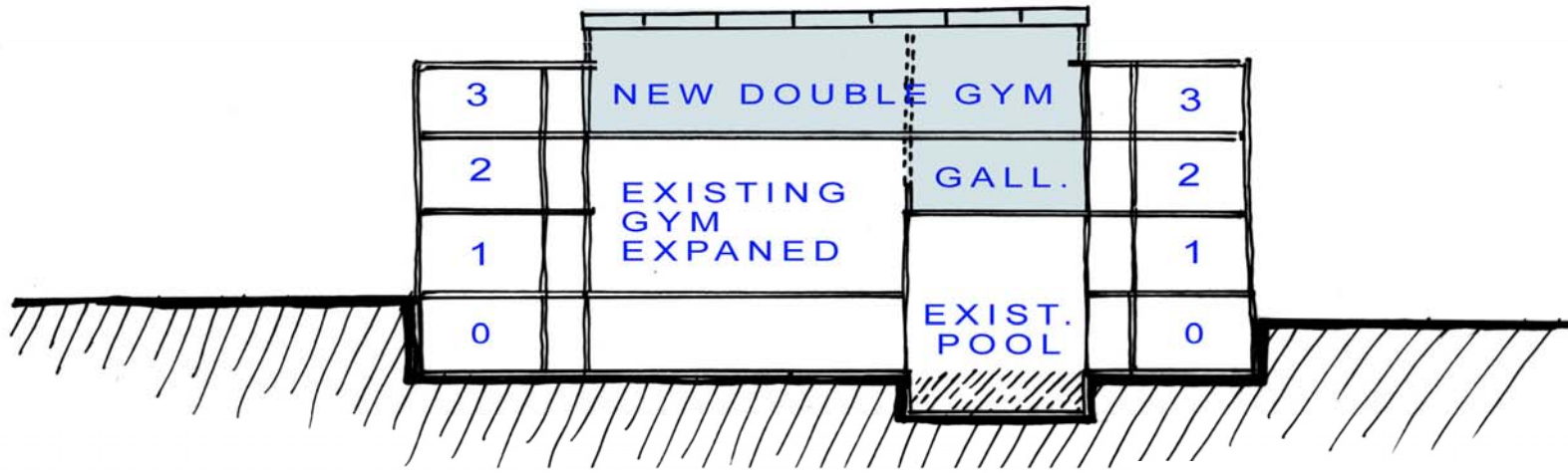
- Demolish upper gym
- Build new double gym over existing @ 9000 sf
- Build roof over existing courtyard to accommodate new library @ 4000 sf
- Build third floor over existing west wing

**SECTION
OPTION B
RENOVATION PLUS ADDITION**

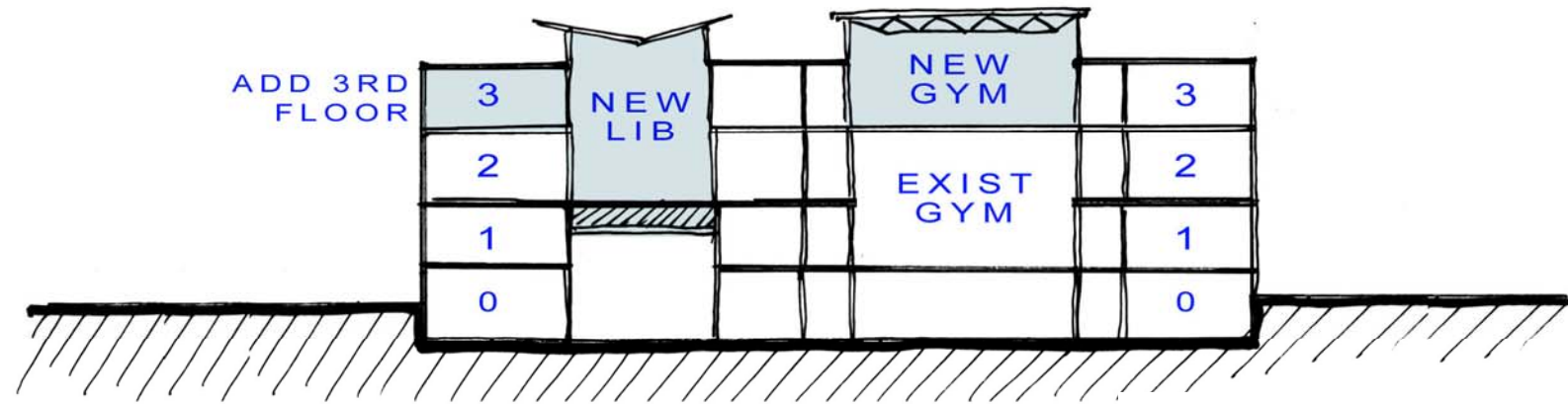
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N-S CROSS SECTION



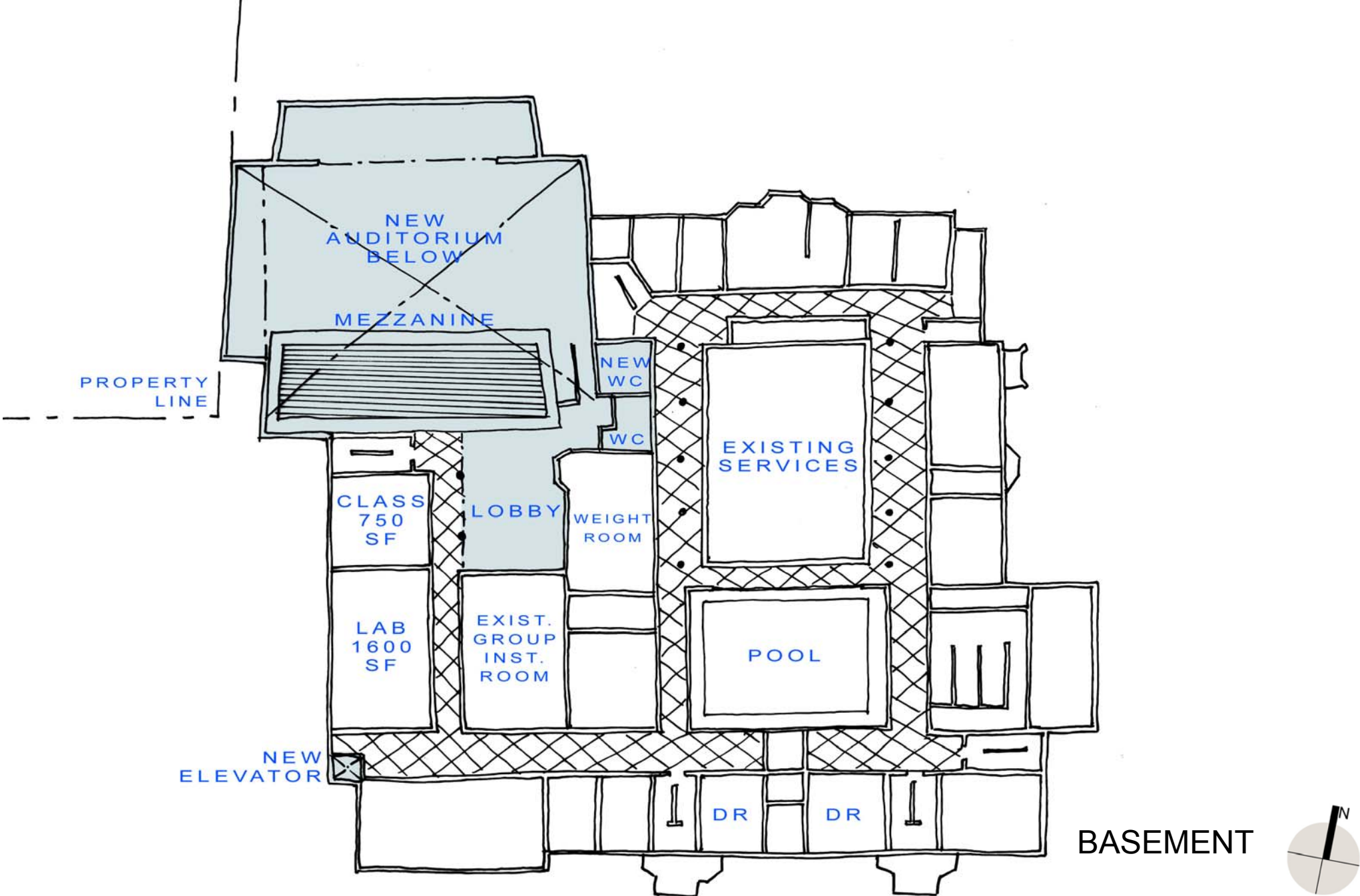
E-W CROSS SECTION

**SECTION
OPTION B
RENOVATION PLUS ADDITION**

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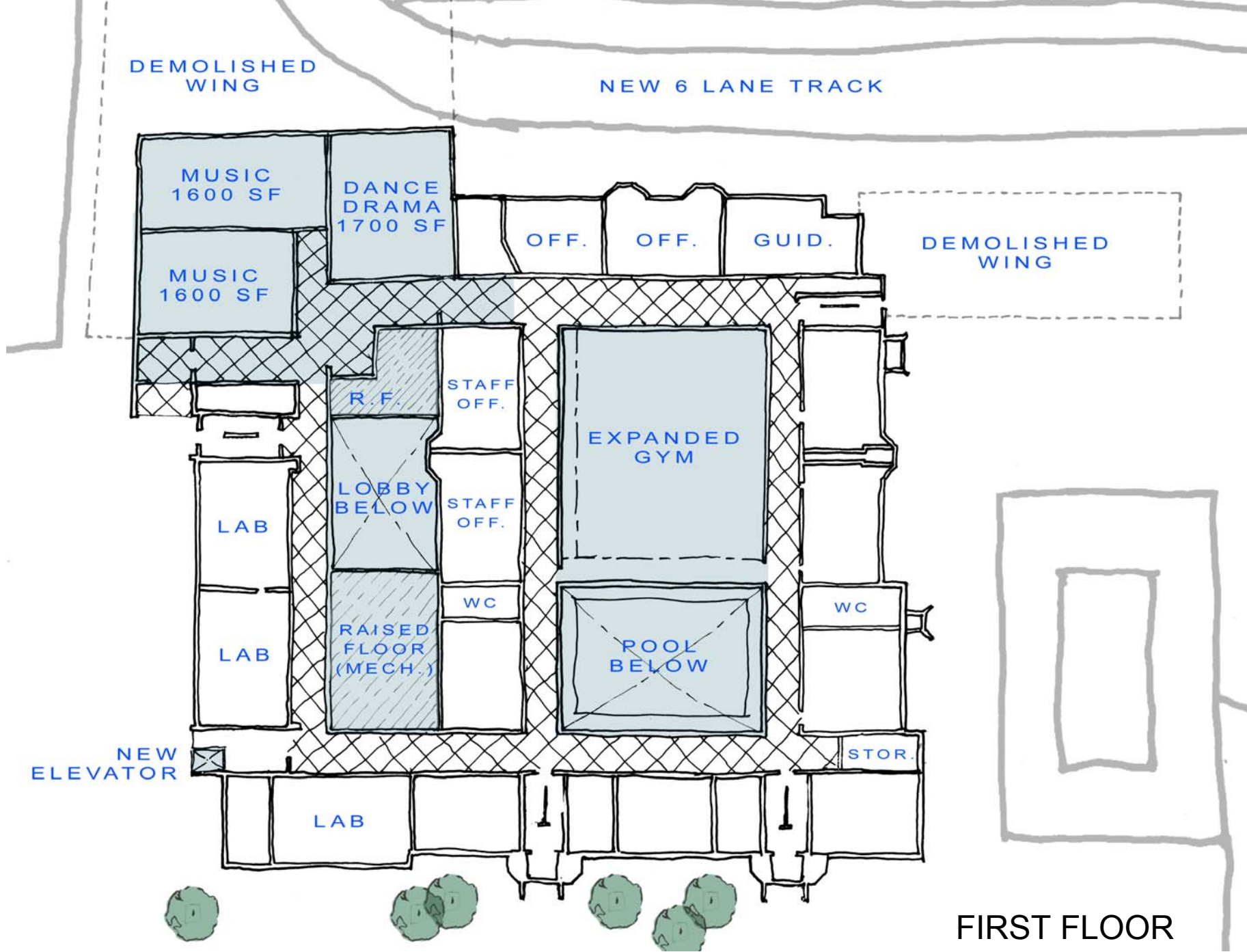
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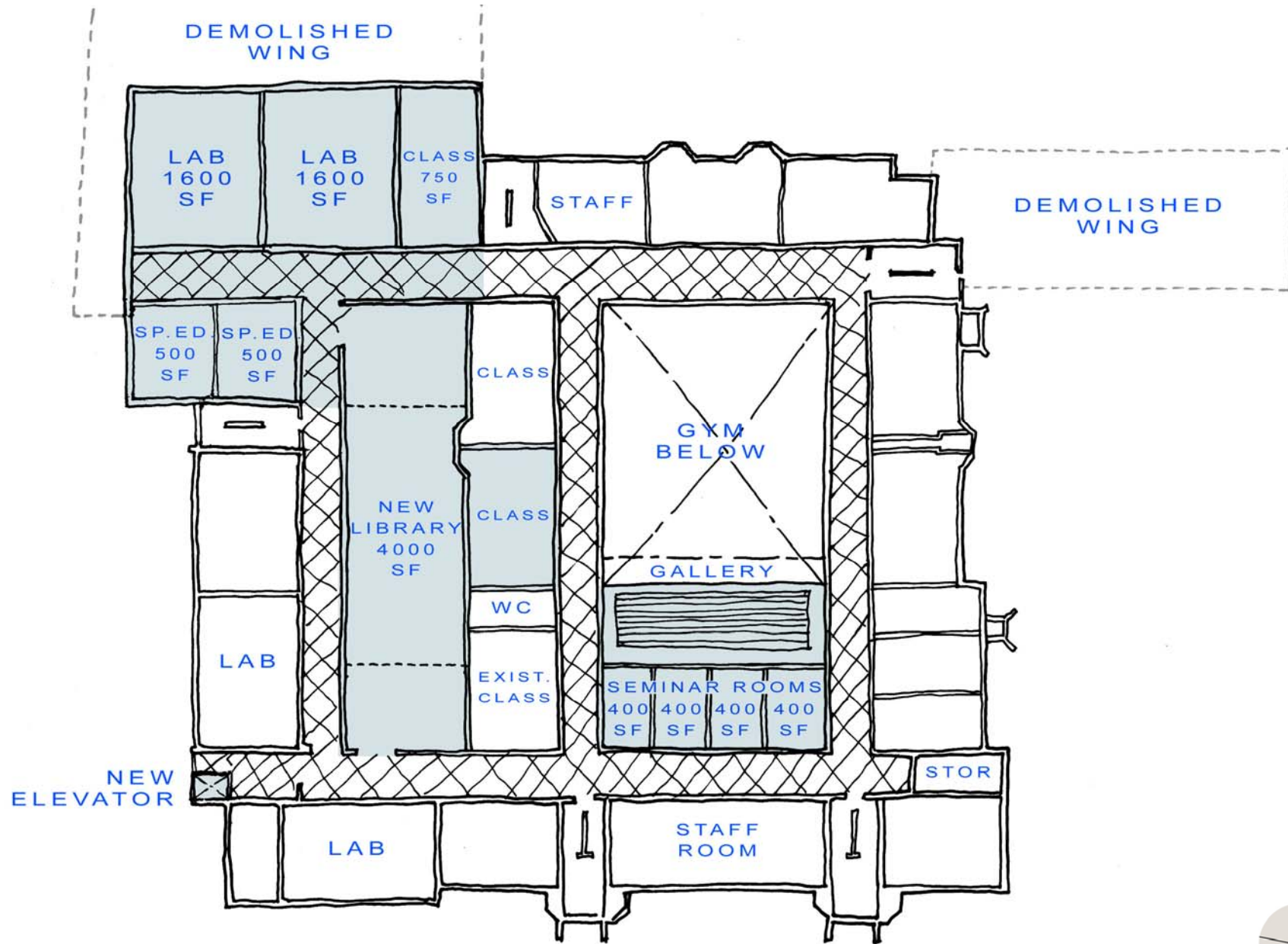
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FIRST FLOOR

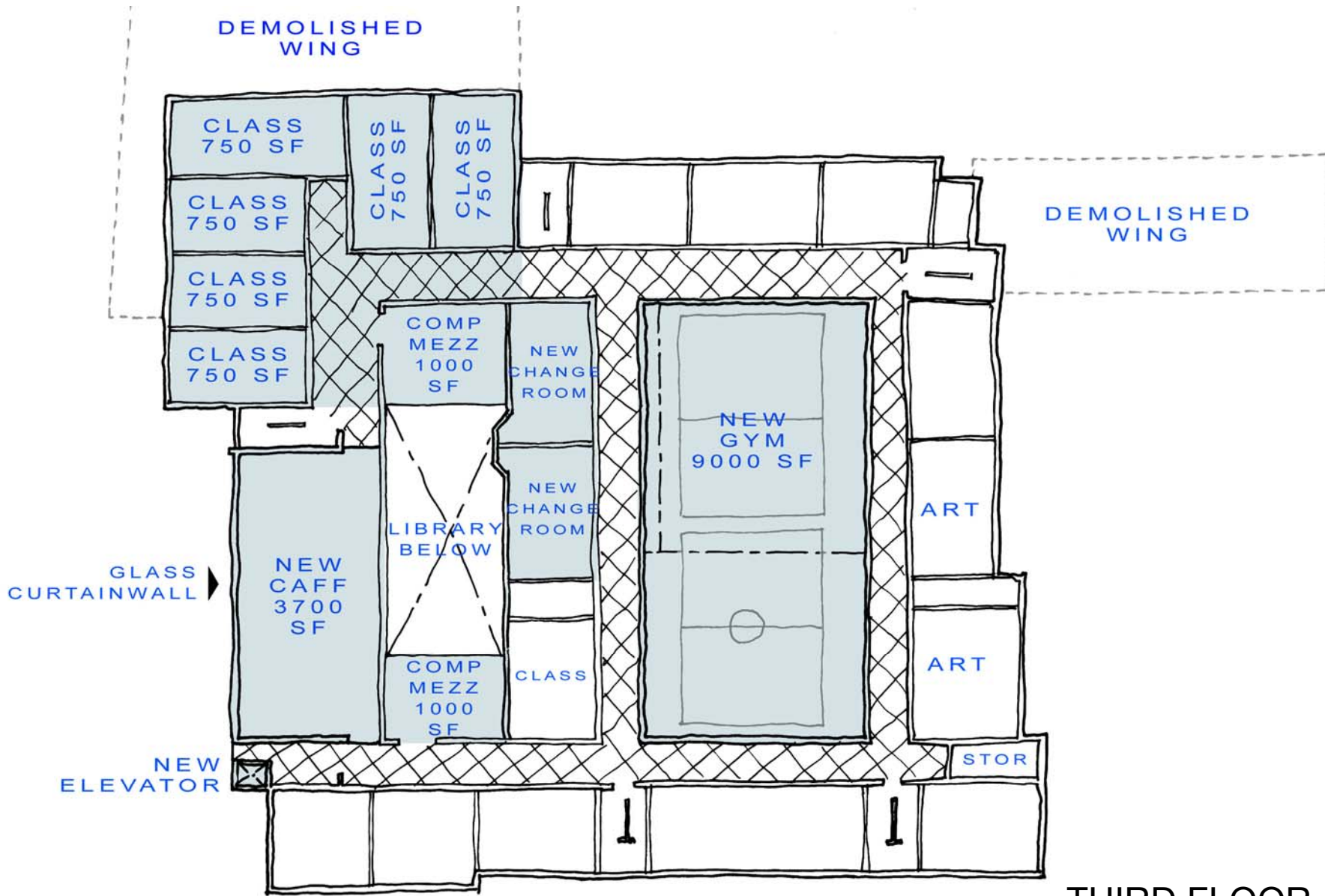
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SECOND FLOOR





THIRD FLOOR



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COSTS – OPTION A

Renovations and Additions	\$ 32.6 million
Revenue from TDSB	None approved
Revenue from Development	\$ 0
NET SHORTFALL	\$ 32.6 million

COSTS – OPTION B

Renovations and Additions	\$ 31.6 million
Revenue from TDSB	None approved
Revenue from Development (1 Tower)	\$ 7.4 million
NET SHORTFALL	\$ 24.2 million

BUILDING AREAS TO MAINTAIN

Existing Building	174,000 sf
New Building	154,000 sf
Renovation & Addition A	200,000 sf
Renovation & Addition B	180,000 sf

Note : due to building greater area, lack of insulation in existing envelope etc., ongoing costs (for cleaning, heating, cooling between 50% and 70% greater than new construction)

CONCLUSIONS

- **Renovation and addition is more expensive than new construction**
- **Students required to leave site during construction and renovation**
- **Additional area created is expensive to maintain**
- **Minimum of 2 residential towers required to finance the renovation and additional area**
- **Neither option works on TDSB lands only**
- **Older infrastructure is less energy efficient**

PRO'S

- **All historic facades retained in situ - restored**
- **Embedded materials and energy retained**
- **Good quality existing construction wide halls, high ceilings, natural light**

CON'S

- **Field is not improved without demolishing and rebuilding existing auditorium at great expense**
- **Students need to leave the site during construction (1 year minimum)**
- **Both new and existing gym is still less wide and long than ideal**
- **Ongoing mechanical costs of a larger less efficient building**
- **Not economically feasible – insufficient funding**

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NEW SCHOOL OPTION

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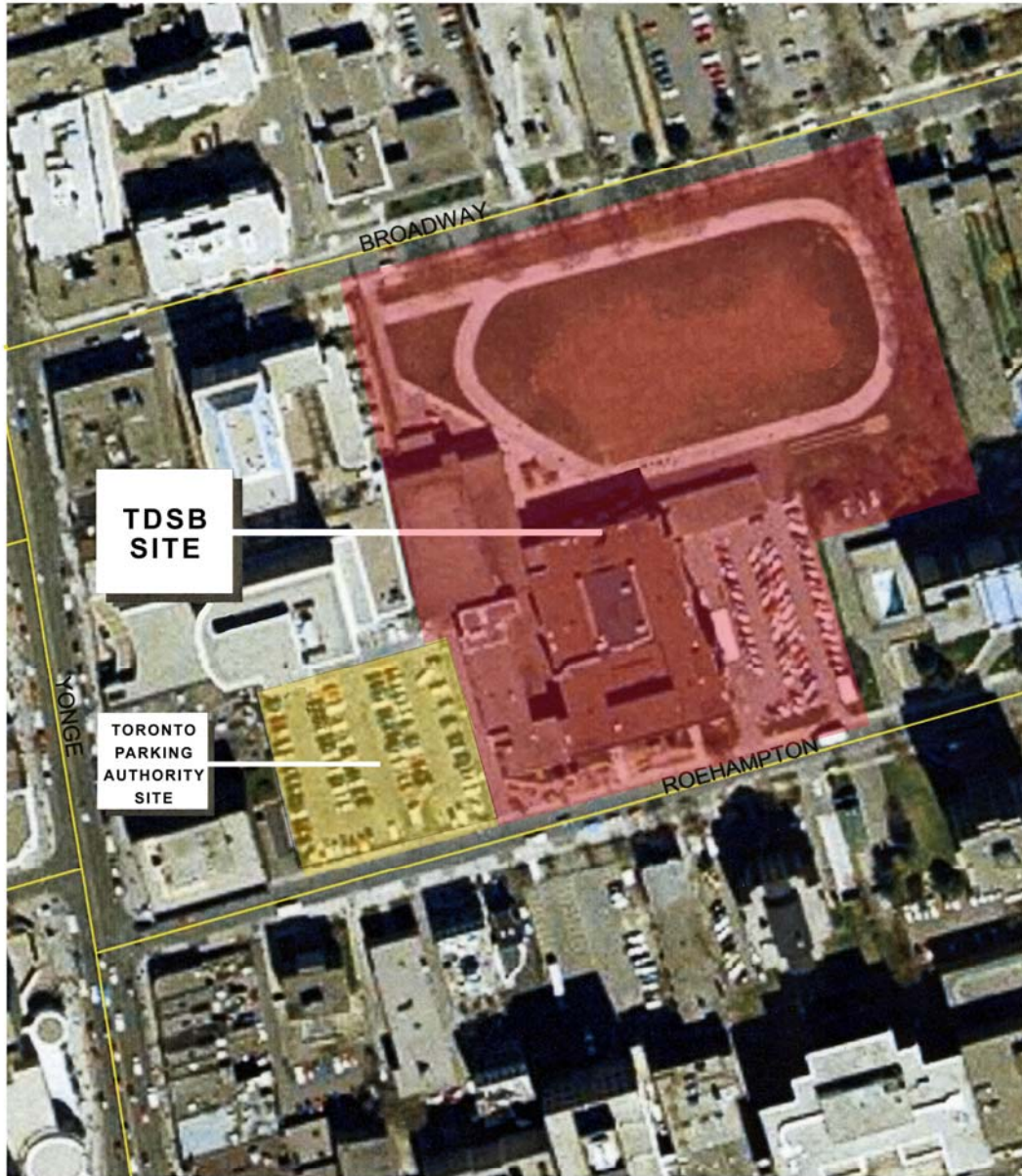
LAND-USE “ TEST FIT “ PROCESS

- **Purpose – to study ways to replace NTCI with enough residential development on the site to make up the funding shortfall**
- **To do this in a manner that meets the goals and objectives of the school and the community**
- **Workshop process involving students, teachers, alumni, community members, board representatives and the design team**
- **Defined goals and objectives**
- **Look at a wide range of options as a group and suggest a land-use concept plan which best meets the objectives**
- **Early feasibility stage**

GOALS AND OBJECTIVES

- A clear sense of identity for each school
- Access to natural light and view for the school and residential buildings
- A full playing field and track
- Facilities that fully support the needs of the students
- Public access to the schools public spaces including the playing field, gym and auditorium
- Ample green space
- Limit overshadowing of playing field and neighbourhood
- **Key objective:**

The excellence of the school's programs should be reflected through the excellence of the design



Produced by Facility Services, Planning Section
Toronto District School Board, March, 2003

Source:
Base Map - Land Information Toronto
Facility Data - Facility Services, TDSB

40 0 40 80 Meters

AERIAL VIEW

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SITE OPTIONS

- **A wide range of siting options were studied**
- **Group selected the one that best met the established goals and objectives**



YONGE

BROADWAY

ROEHAMPTON

POSSIBLE FUTURE
DEVELOPMENT
ON ADJACENT
PROPERTY

NTCI

NTCI

0 10m 30m

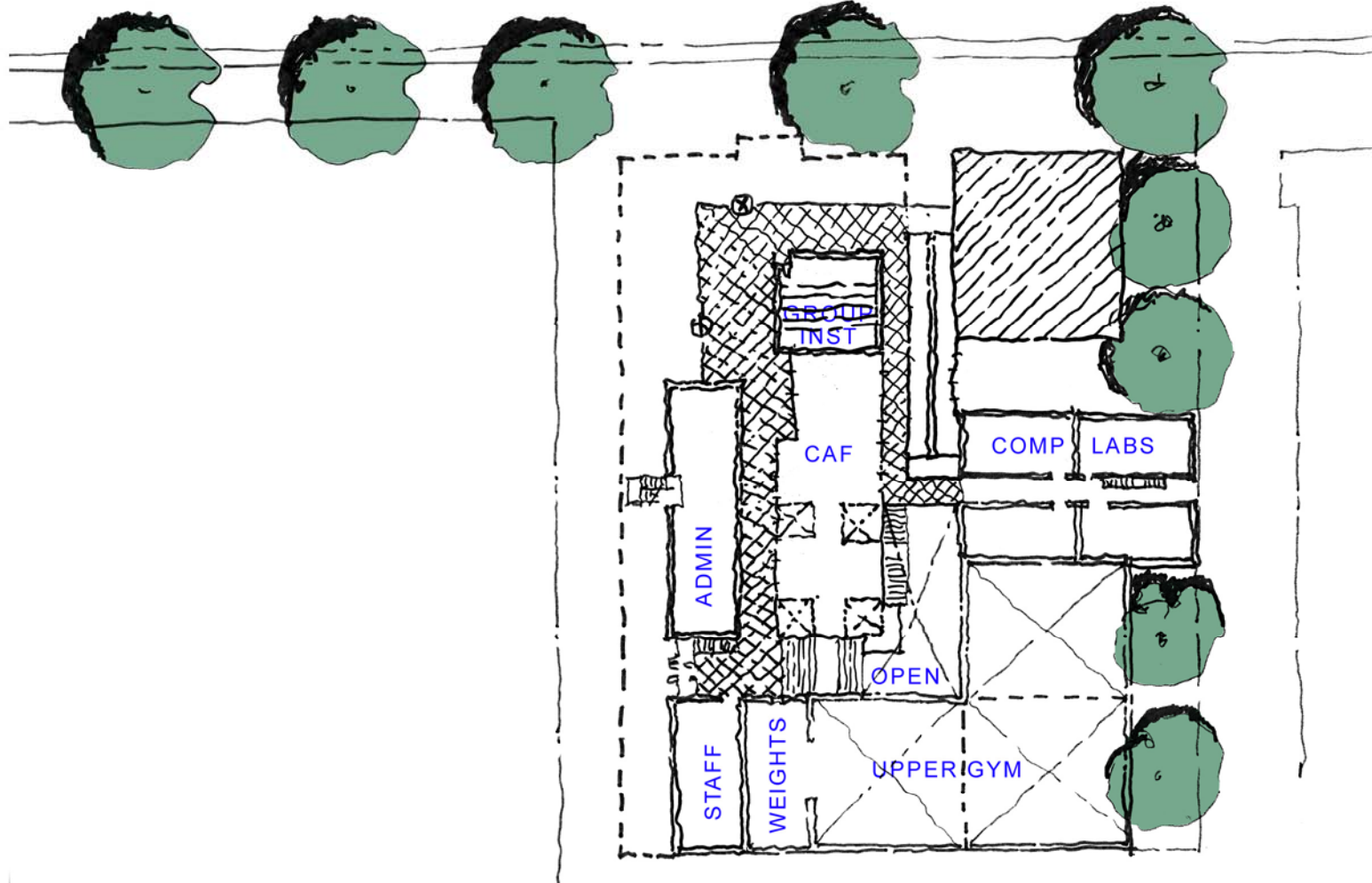


SITE PLAN

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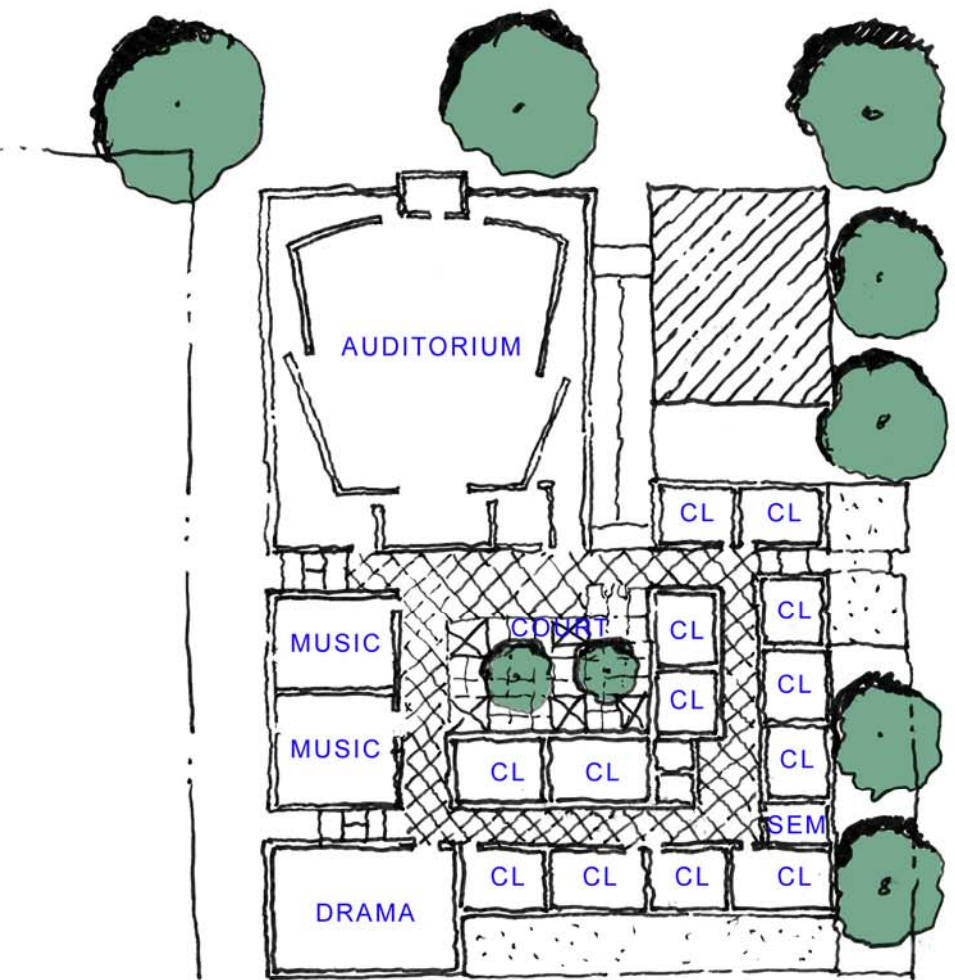


FIRST FLOOR

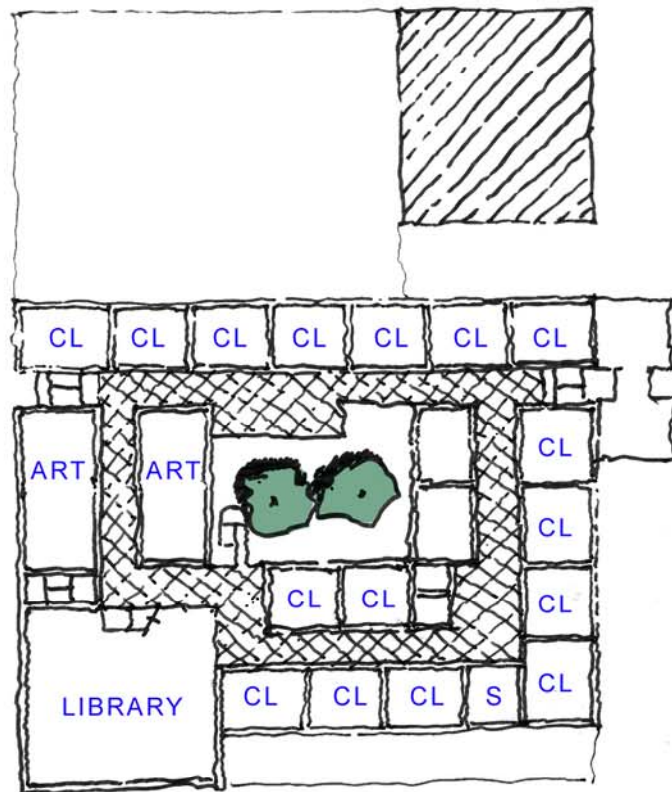
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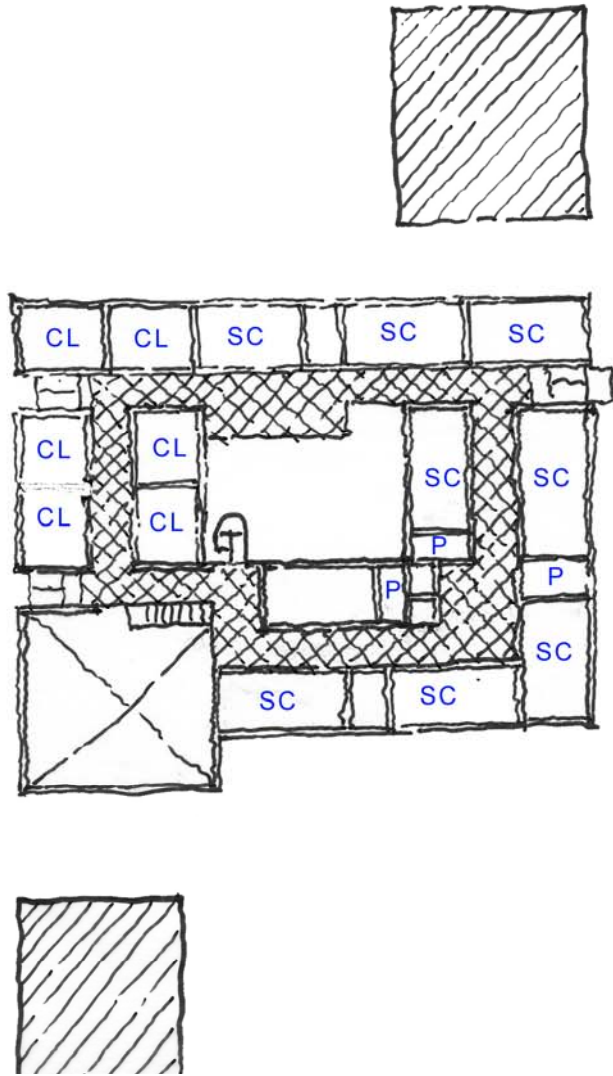
SECOND FLOOR NTCI



THIRD FLOOR NTCI



SECOND & THIRD FLOORS



FOURTH FLOOR

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ACADEMIC DESIGN RATIONAL

- **A building with “ public presence “**
- **Regulation size track and field**
- **North /south orientation of field**
- **Increased parking for each school – improved traffic flow**
- **Sustainable design – energy efficient construction, day lighting, living roofs, storm water retention**
- **Phased construction so NTCl may remain on site**

ACADEMIC DESIGN RATIONAL CONT'D

- **Improved facilities:**
 - **triple gymnasium**
 - **state of the art auditorium accessible to the public**
 - **full size library**
 - **improved change room and weight room facilities**
 - **fully wired classrooms with latest technology**
 - **additional music rooms and drama space**
 - **additional science labs**
 - **access to swimming pool**
 - **additional computer rooms**
- **Design quality:**
 - **high quality building which reflects the excellence of the academic program of the school**
- **Heritage preservation:**
 - **elements of existing building will be incorporated into the design of the new school**

COMMUNITY DESIGN RATIONAL

- **Maximum green space preserved at grade**
- **Green space is connected to both Broadway and Roehampton**
- **Accessible and safe**
- **Public arcade connection north / south through site**
- **Low overall density (less than 3 times coverage)**
- **Increased parking provided on the site**
- **Removal of unsightly on grade parking lots and garbage pick up**
- **Thinner buildings preserve light and view**

COMMUNITY DESIGN RATIONAL CONT'D

- **Residential buildings expressed as neighbours, not placed on top of the school**
- **Amenity space provided for each residential building on its own site – roof garden, pool**
- **Limits future site development to potentially 2 residential buildings**
- **Well defined public spaces – including street and open spaces**

PRO'S

- **Full size track and field open to both streets**
- **Well defined public space**
- **Clear identity for all components**
- **High quality facilities for students**
- **Rentable facilities – auditorium, gym, field**
- **Double height library**
- **Triple gym possible with moveable partitions**
- **High quality auditorium – view to court**
- **Wired environment – latest technology**
- **Sustainable design – energy efficiency, living roofs, storm water retention, daylighting (less energy and maintenance costs)**
- **Well organised w/ centrally focussed plan**
- **Generous lobby space and spaces for student gathering**
- **Design can be customised to address needs of NTCl's students**
- **Access to natural light and ventilation**

CON'S

- Loss of existing building
- Some new classrooms smaller than old classrooms

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QUALITATIVE & QUANTITATIVE ANALYSIS

CRITERIA	Status Quo	Renovation	Renov. Plus Addition	Renov. & Addition	New Construction
			Option A	Option B	
Quantitative					
Cost	5 mil over 5 yrs	\$18.4 mil	\$32.6 mil	\$31.6mil	\$28.6 mil
Residential Development Funding Possible	No	No	No	\$7.4 mil	\$14.6 mil
TDSB Funding Available	Maintenance Fund.	Req. Board Approval	Req. Board Approval	Req. Board Approval	YES, \$14.0
Net Other Funding Required	N/A	\$18.4 million	\$32.6 million	\$24.2 million	0
Total Building Area to Maintain	174,200 s.f.	174,200 s.f.	200,000 s.f.	180,000 s.f.	153,000 s.f.
Future Operating Costs	14% more +	14% more	30% more	18% more	typical
Qualitative					
Students Remain During Construction	Yes,w. disruption	No	No	No	Yes
Retains Historic Façade	Yes	Yes	Yes	Yes	Yes, Relocated
Retains Historic Classrooms	Yes	Yes	Yes	Yes	No
Barrier Free Access	No	Yes, 80%	Yes, 80%	Yes	Yes, 100 %
New Programme Accomodated	No	No	Yes	Yes, gym too narrow	Yes
Full Track and Field	No	No	Yes	Yes	Yes
N/S Orientation to Field	No	No	No	No	Yes
Access to Swimming Pool	Yes	Yes	Yes	Yes	Yes
Parking Available (NIC TPA)	65 surface	65 surface	370 per floor	220 per floor	440 per floor