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REH&A ARCHITECTS

Facility Condition Report

December 2016

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NORTHERN KENTUCKY COOPERATIVE FOR EDUCATIONAL SERVICES

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MICHAEL BRENT BISHOP
R. EHMET HAYES
JOSEPH AHRENS HAYES
RYAN THOMAS FICKE

Condition Report

The following report is based on the previous report from February 2004, a recent walk through performed by Robert Ehmet Hayes & Associates, and technical information provided by KLH Engineers.

The existing facility is a combination of five separate construction projects – the original three-story building constructed in 1922, the two additions to the east constructed in 1953 and 1955, the two-story addition to the south constructed in 1959, and a single story addition on the far east constructed in 1989 (a total of five timeframes).

The facility was owned by Campbell County Schools, sold to the Cooperative, and used since the purchase, with most areas being grandfathered, thus allowing occupancy while not meeting current building codes.

There is a recent asbestos report from October 2016 which identifies a moderate amount of hazardous materials in the floor tile mastic, window putty, plaster, etc. This has been taken into consideration in this report and budget.

Building Envelope: The building envelope has remained with little or no change since construction of the numerous areas with the exception of the original 1922 building which has since received a new high performance window system with reduced sized window openings. The remainder of the facility should have the original single pane aluminum windows replaced with double pane, thermal resistant aluminum windows with reduced sized windows as well. With the newer energy requirements and HVAC systems, the large window walls of glass are no longer recommended. This would be a significant savings of not only energy, but initial cost. The estimate indicates replacement of these with associated cost. This is a piece of the project which can usually be phased. There is nothing catastrophic with the windows which would consider them unusable. It is just a large energy loss and would require some annual maintenance for operation.

Masonry: The masonry repairs ongoing on the west wall of the 1922 original building appear to being implemented this winter and it is my understanding that these repairs to the north side will go through the winter and into spring. Two main areas of concern are the parapet areas and lintels, as many of these steel lintels are at the end of their lifespans. The remaining part of the building could use a small amount of tuckpointing, but there doesn't appear to be any major structural issues or repairs warranted.

Roof: The roof consists of numerous systems. The 3-story 1922 facility has a two ply SBS roof which is a modified asphalt based system. It appears to have years of service life remaining. It is the best roof area of the entire facility. There may need to be some work done around the parapets and edge transitions after the masonry repairs are complete. However, we believe this would be somewhat minimal. The remainder of the roofing consists of an asphalt based roof with the small ballast integrated. These are excellent roofing systems that have long life spans. However, due to the age of these roofs, they should be at the end of their life spans. I will note that there does not appear to be any leakage problems and, with the nature of these types of roofs, they usually give some indication of impending failures. That being said, we have provided numbers for reroofing the remainder of the building and for providing additional insulation. However, we do not consider it an urgent item and there would be the

opportunity to later phase in a piece of the building. If possible, we prefer to replace rooftop equipment and roofing at the same time due to required roofing penetrations.

Interior: Existing doors and hardware are still operating and serviceable. However, they do not meet current ADA or life safety requirements that are set forth in the current building code. Later in this report, we do recommend installing sprinklers in the building as we move forward with a phased renovation. Overall finishes of the interior are indicative of a building of this age. The 1922 section, which we are aware has been recently renovated, still remains in excellent condition. However, the remaining four sections of the building could stand a total renovation of new ceilings, wall paint, floor finishes, etc. We provided data for all of these items in the budget.

Mechanical and Electrical:
The complex consists of five separate but attached structures, built in 1922, 1953, 1955, 1959 and 1989. From a mechanical and electrical viewpoint, no new work has been undertaken since these buildings have been built. Repair and upgrades have taken place but those appear to have been on an as needed basis and at minimal capital costs.

HVAC – Heating: The heating plant consists of a mixture of steam and hot water boilers. The terminal equipment, (cast iron radiators, hot water fin tube and unit ventilators) is in disrepair as the piping system serving these units are continually being repaired due to leaks and breaks. The boilers are at or near the end of their useful life. Maintenance and repair cost will continue to increase due to the deteriorated state of this equipment. The system is also not equipped with any standby capacity for the boilers or pumps. The boilers utilize natural gas. We recommend the demolition of the existing system.

We recommend the implementation and installation of an all new Variable Refrigerant Flow (VRF), Heat Pump system. This system allows for heating and cooling via the same installed equipment and allows for phasing of these systems over time. They are energy efficient and of high quality. This system should only be installed with the upgrading of the wall, window and roof systems in order to right size the equipment. Heat Pumps, refrigerant piping systems, terminal equipment, and controls for the VRF system range from $18 to $22 per sq. ft.

HVAC – Ventilation: The large majority of spaces rely upon natural ventilation (open the windows) in order to meet the fresh air requirements. Some classrooms have unit ventilators though it is doubtful that these units remain operational in terms of fresh air ventilation.

Ventilation (dehumidification and treatment of outdoor air) is the driving factor as it relates to the quality of air and overall comfort. These systems cost on average, $8 to $10 sq. ft. over and above the air conditioning costs (heat pump) as noted above.

We recommend that during the upgrading of the window façade, the new windows be installed with 4% operable window area as it relates to the floor area of the room, (the 4% rule). Utilizing this code allowance will allow the later phasing of the ventilation system, (the VRF system can heat and cool the building without the need for a mechanical ventilation system per code). Due to budget constraints with this building, the ventilation system can be installed as the last phase.

HVAC – Controls: The control system still utilizes the old pneumatic lines and actuators though the front end control system has been converted to a newer direct digital control system, (Metasys). This system is in need of upgrades. This new control upgrade will naturally occur when the VRF system is installed because the manufacturer of this system requires built in controls factory installed. This cost is covered within the heating and cooling costs as listed above.

Electric: The electric service has been modified and added to over the years as expansions have occurred. The service is currently at or near maximum capacity. No additional breaker space is likewise available in order to add power outlets, window air conditioners or other types of new power.

A new electric service would typically cost about $30,000 to $40,000. This would allow expansion. This upgrade is highly recommended to be within the first phase of construction. The electric service, distribution and branch circuit wiring needs to be replaced. As further expansion occurs due to computer use or the need for improved air conditioning, the need for improved electrical infrastructure will become more obvious. Electrical distribution cost ranges from $4 to $5/sq. ft., depending upon complexity of phasing. We recommend that a portion of this distribution be installed within the first phase in order to minimize future re-work. Branch circuit wiring, (wiring to the end user devices), would add another 4 to 5 dollars/sq. ft.

Currently the number of computers located in the classrooms is below the state requirements. On average 1 data outlet is currently in each classroom, the state requirement is 4. Additional power would be required for this increase in computer use. In general only a minimal amount of technology is available within this school, upgrades in the cable plant, data rooms and distribution are required. Complete new data and communications wiring range in cost from $5 to $7/sqft., again, depending upon complexity and quantity of items needed. We recommend that front end equipment be allocated to the first phase.

The lighting systems are original to the buildings, they are fluorescent. The systems should be upgraded to newer more efficient systems, though this is not as critical of an item as HVAC or power. New lighting systems typically range in cost from $3 to $4/sq. ft.

Systems: The telephone, PA and security systems are old and need of replacement. The Fire alarm system is circa 1990 and is one of the newer systems within the building, but that too is in need of upgrades. A new fire alarm system will be required. New fire alarm systems typically cost about $3/sq. ft. Systems such as PA and security are quoted within the data and computer number above. That break out number would typically be in the range of $2/sq. ft.

Communications Technology: Refer to above statements about computer and data. In general the technology needs to be upgraded in order to meet current KET standards.

Plumbing: The plumbing systems are original to the building and some upgrades are required. The over-riding factor in terms of cost, is the need to upgrade to ADA compliance. Fixture replacement and upgrades cannot take place without substantial improvement as it relates to ADA. This will require new spacing and clearances between fixtures and therefore will require a substantial modification to the existing toilet rooms. New plumbing systems with associated piping and fixtures range in cost of about $4,000 per fixture or $7 to $8/sq. ft in terms of total building.

Sprinklers: No sprinkler system currently exists within the building. It is very likely that any upgrades to this building will require the installation of new sprinklers. Sprinklers systems typically cost in the range of $3/sq. ft and in additional the water service upgrade and sprinkler pit typically cost about $30,000.

Mechanical and Electrical Planning Outlook: The long term goal in terms of effective planning is to install the back bone systems first and those systems associated with code compliance, (i.e. life safety) and then methodically expand outward. These back bone systems would consist of piping, electrical service, distribution to new circuit panels, data closets and interconnecting wiring, sprinklers, fire alarm and ADA compliant toilets, etc. This represents a substantial investment, but, once installed, expansion and upgrades at the room level become much easier. These costs are very much in line with the cost to construct new. Typically the cost to replace old systems cost slightly more than the cost to install within a new building. This is because of the demolition costs and the increased labor to work around existing structures.

Conclusions: After formulating this condition report we present the following information for review:

We have provided a detailed plan of renovation of the entire facility with numerous ways that the facility can be phased to meet your needs and budget. It is obviously a fluid document and one that can be crafted as our discussions ensue.

Scenario 1 starts the phasing in the Lower Level of the 1959 Addition, converting this area to a training room, improving the overall backbone in Phase 1A with main electric service and bringing the sprinkler mains into the building. The recommended VRF HVAC system would be one that could co-exist with the existing HVAC system and as the building is being renovated, the existing systems can be decommissioned in these areas, allowing them to exist in the remaining portions of the building. This would be especially efficient with regard to phasing of physical construction, as well as the initial cost. This would also be the mind set for ancillary systems, such as fire alarm, telecom, data cabling, etc.

Phase 1B could be included with Phase 1A if the budget allows, continuing through to Phases 2A and 2B on the Upper Levels of the 1953, 1955 and 1989 sections.

The most aggressive part of the project, and the one which we are most excited about, would be converting the existing lower level activity area into a multi-media training room. It is currently barely adequate for basketball and serves little or no other use. By converting the lowest level of the 1922 building into this training room we believe this square footage can be more efficiently utilized.

The idea would be to, in these later phases, tear down the locker rooms on the south side of the 1922 building, create a large hallway with a new entry facing US 27, and have a congregation area that would also be the entry hallway and an entry to the activity or multi-purpose room that would be constructed to the south. You would then have a congregation area with a training room on one side with carpeted floors, nicely finished, a high level of technology on one side with the other side more of an open room that could be used for activities of the students or, potentially, even as curriculum or training area that would need a hard surface environment.

We would also like to include an elevator which could be efficiently placed to provide access through a double door cab to provide access to the three floors of the 1922 building and two levels of the 1959 building. This would provide handicapped assessibility.

The overall zoning of this masterplan would be one where the students would occupy the entire upper levels of the 1953, 1955, 1959 and 1989 additions and merely use the stairwell down in to the activity area. The entire lower level of the1959 addition, as well as all the lower level of the 1922 building would be for training and the upper levels of 1922 would remain as staff, etc.

If feel this would be an excellent zoning as it would provide restrooms in all of these areas independently.

Scenario 2 is constructing the masterplan phased in reverse order where the first phase would be to construct the renovated training room and the new multi-purpose room. This, potentially, is the best solution; however, it would be larger dollar wise than Phase 1 and is slightly more aggressive. This warrants additional conversations with the stakeholders to develop the appropriate phasing plan. Long term, it would be our desire to provide an entire looped circulation around the building, as we believe there needs to be a greater separation from the buses and vehicular traffic, and properly define the three entry points to the building.

Long term the mobile classrooms would no longer be required. We have provided numerous photos of the multiple areas of the building, as well as the two detailed phasing plan scenarios and the initial approximate costs of the phases.

Northern Kentucky Cooperative Extension Service

Phasing Cost Estimate

December 13, 2016

Phase 1A (9,600 +/- sf)

Includes demo of existing and installation of a new roof (above a portion of 1B). The full height glass facade will be removed. New exterior walls will be framed with metal studs and sheathed. New windows will be installed. This work will also encompass part of phase 1B since it extends full height.

On the interior, the existing partitions will be removed to create a large meeting room where indicated on the attached Drawing. The restrooms will be renovated. New ceilings, flooring, rubber base, stair treads, paint, and visual display boards will be installed. New doors and hardware, both interior and exterior. Windows will be replaced.

Architectural - $778,000

Includes electrical distribution, branch wiring, new lighting, fire alarm, C/T front and equipment, C/T network, water service upgrade, sprinkler pit, and sprinkling of this phase (balance to be completed over subsequent phases). New restroom fixtures. Remove existing mechanical system and replace with new VRF (variable refrigerant flow) and ventilation systems.

Mechanical, Electrical, Plumbing, C/T - $560,500

Asbestos Abatement- $48,000

The following will be included in whichever phase is performed first:

New Electric Service - $40,000

New Sprinkler Pit and Water Service Upgrade - $50,000

Total Construction: $1,476,500

20% Soft Costs (fees, contingencies, permits, etc.): $295,300

Total Project: $1,771,800

Phase 1B (7,000 +/- sf)

Includes demo of existing and installation of new roof not covered under Phase 1A. Includes demo and replacement of windows, new flooring, ceilings, doors, rubber base, paint, signage, and visual display boards. Facade work is included in 1A since it is full height.

Architectural - $425,350

Includes new electrical distribution and wiring from new service (included in Phase 1A), new lighting, fire alarm, C/T network, sprinkler (water service upgrade and sprinkler pit included in Phase 1A). Demo of existing mechanical system(s) and replace with new VRF and ventilation systems.

Mechanical, Electrical, Plumbing, C/T - $399,000

Asbestos Abatement - $35,000

Total Construction: $859,350

20% Soft Costs (fees, contingencies, permits, etc.): $171,870

Total Project: $1,031,220

Phase 2A/4A (9,600 +/- sf)

Includes demo of existing and installation of new roof. The full height glass facade will be removed. New exterior wall will be framed with metal studs and sheathed. New windows will be installed.

The restrooms will be renovated. New ceilings, flooring, rubber base, stair treads, paint, and visual display boards will be installed. New doors and hardware, both interior and exterior. Windows will be replaced.

Architectural - $830,350

Includes new electrical distribution and wiring from new service (included in Phase 1A), new lighting, fire alarm, C/T network, sprinkler (water service upgrade and sprinkler pit included in Phase 1A). Demo of existing mechanical system(s) and replace with new VRF and ventilation systems.

MEP - $547,200

Asbestos Abatement - $48,000

Total Construction: $1,425,550

20% Soft Costs (fees, contingencies, permits, etc.): $285,110

Total Project: $1,710,660

Phase 2B/4B (3,475 +/- sf)

Includes demo of existing and installation of new roof. Includes demo and replacement of windows. New flooring, ceilings, doors, rubber base, paint, signage, and visual display boards.

Architectural - $199,895

Includes new electrical distribution and wiring from new service (included in Phase 1A), new lighting, fire alarm, C/T network, sprinkler (water service upgrade and sprinkler pit included in Phase 1A). Demo of existing mechanical system(s) and replace with new VRF and ventilation systems.

MEP - $198,075

Asbestos Abatement - $19,000

Total Construction: $416,970

20% Soft Costs (fees, contingencies, permits, etc.): $83,394

Total Project: $500,364

Phase 2/3 (3,500 +/- sf)

Includes demo of existing and installation of new roof. Converting existing gym into meeting/assembly room.

Work includes demolition of existing interior. New metal stud and drywall framing of exterior walls, new flooring, ceilings, rubber base, paint, and signage. New doors to be cut into exterior wall to connect to Phase 4 Addition. Existing windows assumed to remain.

Architectural - $197,500

Includes new electrical distribution and wiring from new service (included in Phase 1A), new lighting, fire alarm, C/T network, sprinkler (water service upgrade and sprinkler pit included in Phase 1A). Demo of existing mechanical system(s) and replace with new VRF and ventilation systems.

Mechanical, Electrical, Plumbing, C/T - $199,500

Asbestos Abatement - $17,500

Total Construction: $414,500

20% Soft Costs (fees, contingencies, permits, etc.): $82,900

Total Project: $497,400

Phase 4

Demo existing locker rooms, exterior egress stairs, retaining walls, and other improvements at addition

Demolition - $40,000

Gym, elevator, stairs, and restroom addition (10,000 sf) at $250/sf

New Construction - $2,500,000

Asbestos Abatement - $5,000

Total Construction :$2,545,000

20% Soft Costs (fees, contingencies, permits, etc.): $509,000

Total Project: $3,054,000

Exterior Paving

Study 1: Includes additional drive connector and parking	**$53,000**
Study 2: Includes new loop and parking	**$85,000**

Total Construction: $138,000

20% Soft Costs (fees, contingencies, permits, etc.): $27,600

Total Project: $165,600

Total Construction Costs

Phase 1A.....$1,476,500

Phase 1B.....$859,350

Phase 2A/4A.....$1,425,550

Phase 2B/4B.....$416,970

Phase 2/3.....$414,500

Phase 4.....$2,545,000

Exterior Paving.....$138,000

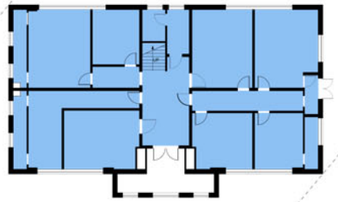
Total Construction: $7,255,870

Soft Cost Totals: $1,455,174

Total Project Cost: $8,731,044

Lower Level "B" Floor Plan

Upper Level "3" Floor Plan



Upper Level "2" Floor Plan

Main Level "1" Floor Plan

Total Gross Sq' 41,300
Total Footprint Sq' 24,850

1922 Original Building	10,500 Gross Sq'	4,700 Sq' Footprint/Roof
1953 Addition	5,200 Gross Sq'	4,500 Sq' Footprint/Roof
1955 Addition	7,100 Gross Sq'	5,050 Sq' Footprint/Roof
1959 Addition	13,900 Gross Sq'	7,000 Sq' Footprint/Roof
1989 Addition	3,600 Gross Sq'	3,600 Sq' Footprint/Roof
		58,200 Sq' Asphalt Paaving

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Overall Floor Plans

REH&A ARCHITECTS

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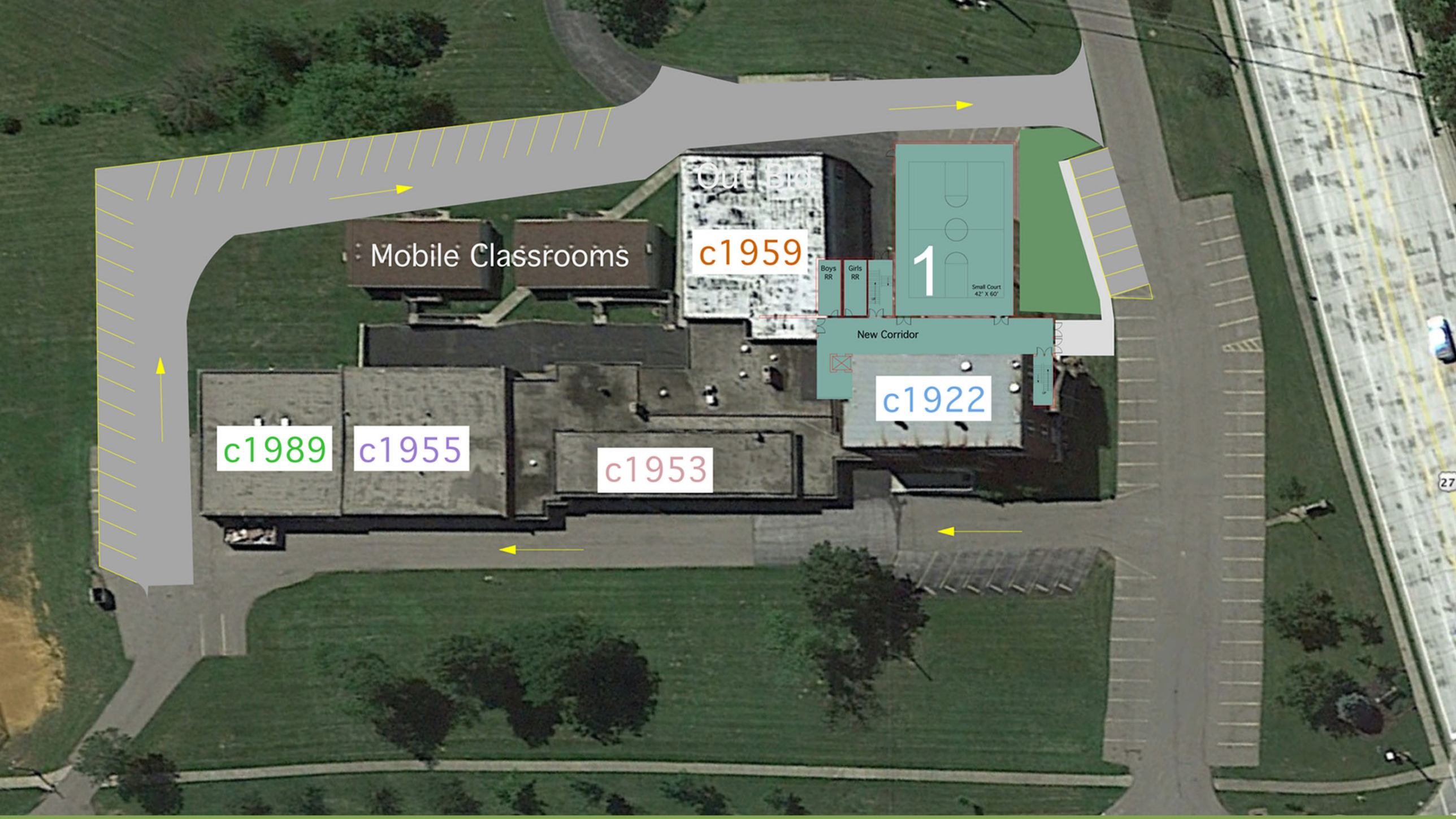
Site Plan Study #1

REH&A ARCHITECTS



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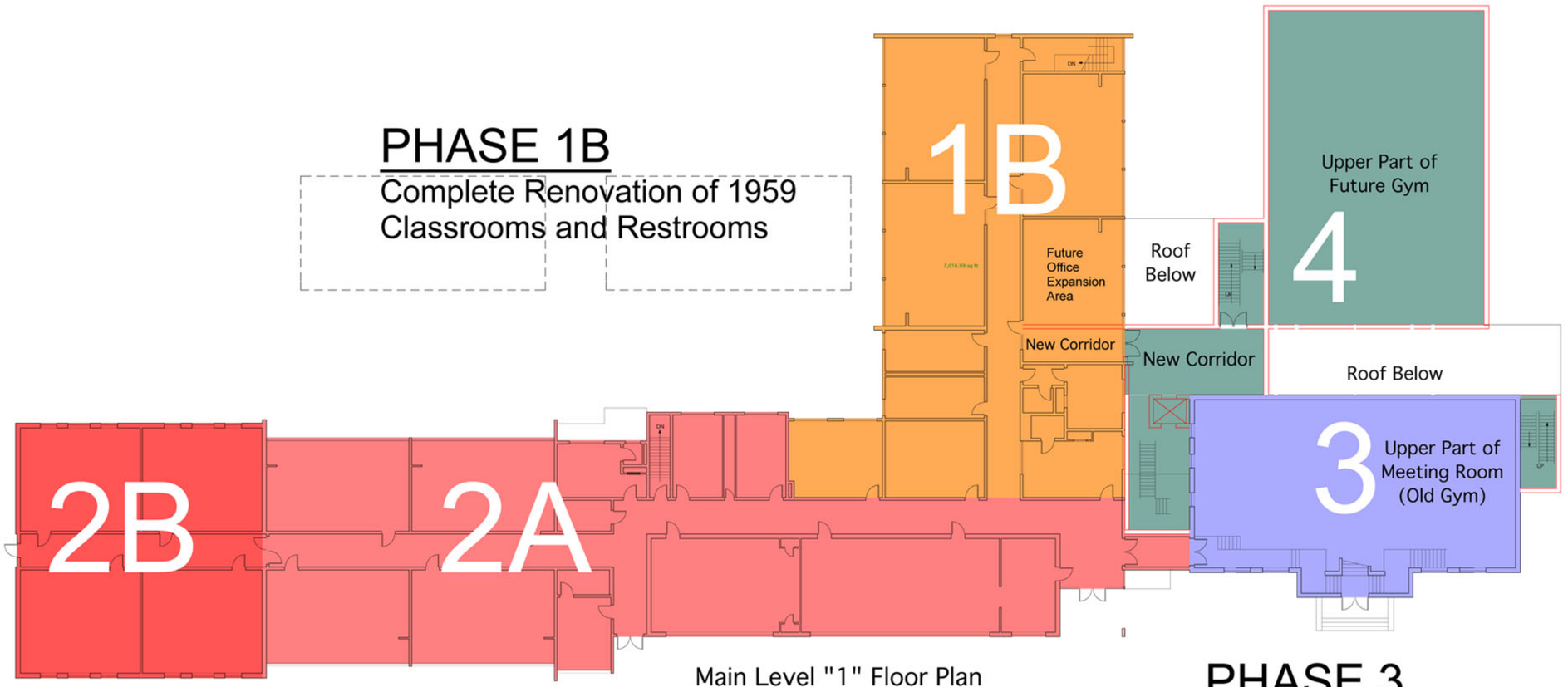
Site Plan Study #2

REH&A ARCHITECTS

PHASE 4
Gym, Elevator, Stairs, and
Restroom Addition

PHASE 1B
Complete Renovation of 1959
Classrooms and Restrooms



Main Level "1" Floor Plan

PHASE 2B
Complete Renovation
of 1989 Classrooms

PHASE 2A
Complete Renovation of 1953 &
1955 Classrooms and Restrooms

PHASE 3
Renovation of 1922 Building;
convert Gym into Large Assembly

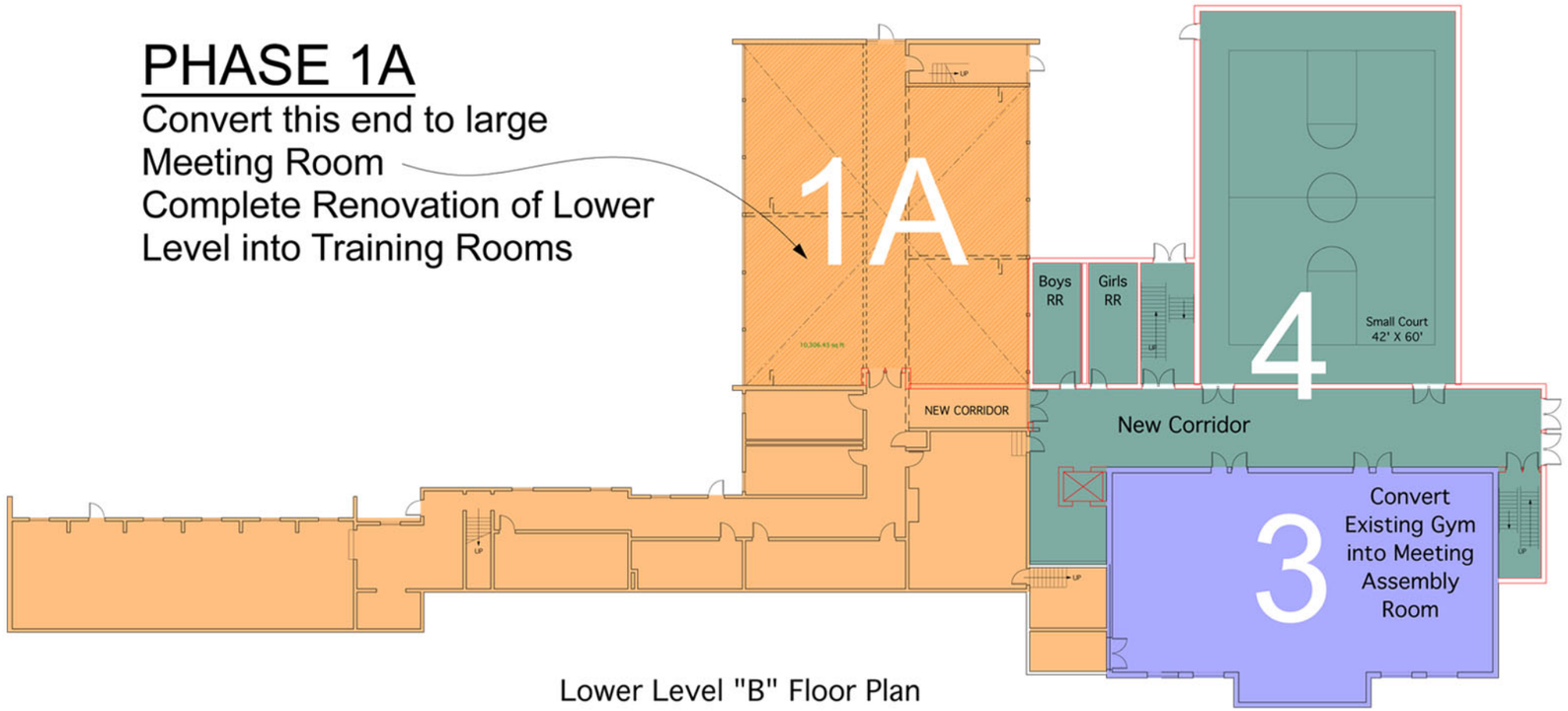
Total Gross	Sq'	41,300
Total Footprint	Sq'	24,850

PHASE 4

Gym, Elevator, Stairs, and Restroom Addition

PHASE 1A

Convert this end to large Meeting Room
Complete Renovation of Lower Level into Training Rooms



Lower Level "B" Floor Plan

PHASE 3

Renovation of 1922 Building;
convert Gym into Large Assembly

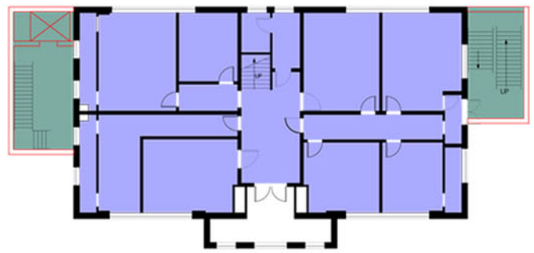
Upper Level "3" Floor Plan

PHASE 3

Renovation of 1922 Building;
convert Gym into Large Assembly

PHASE 4

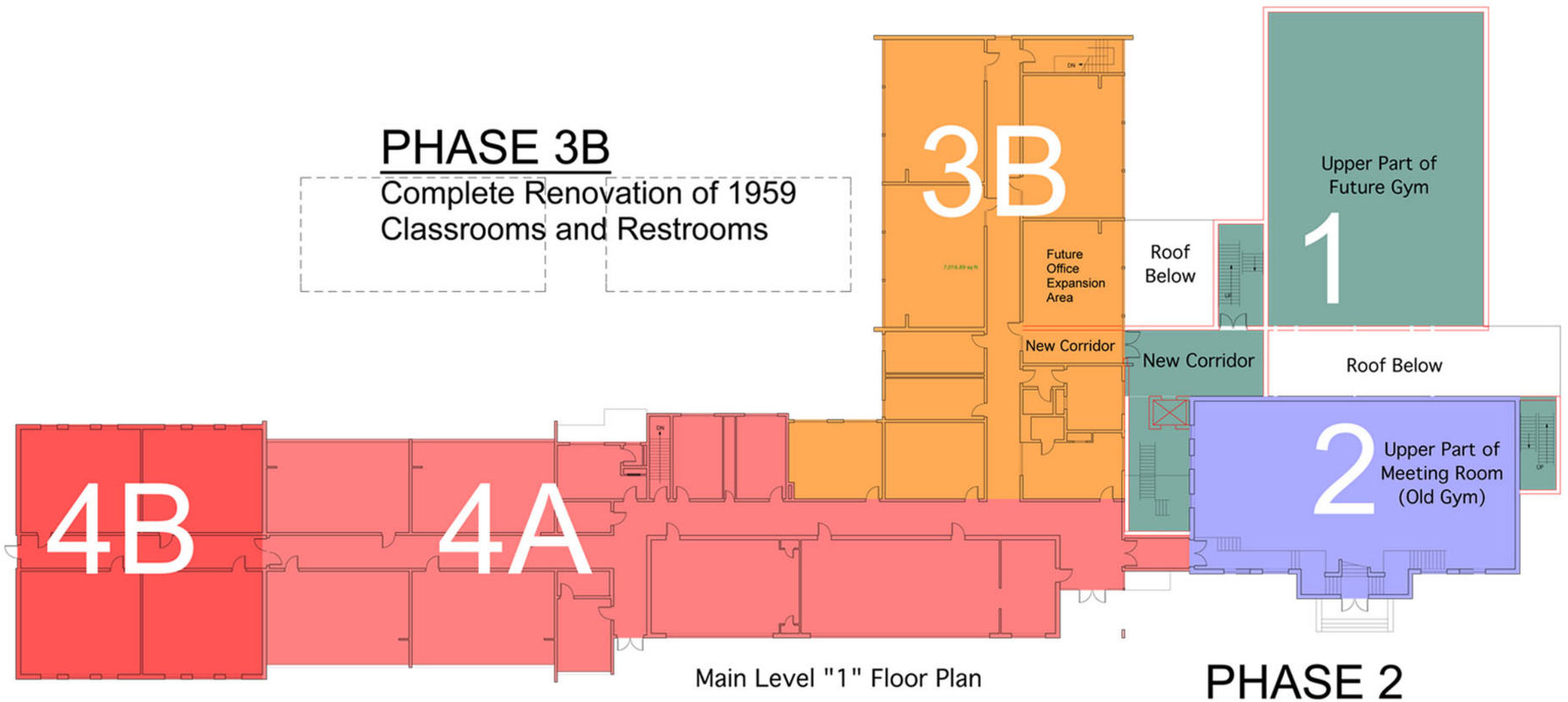
Gym, Elevator, Stairs, and
Restroom Addition



Upper Level "2" Floor Plan

PHASE 1
Gym, Elevator, Stairs, and
Restroom Addition

PHASE 3B
Complete Renovation of 1959
Classrooms and Restrooms



Main Level "1" Floor Plan

PHASE 4B
Complete Renovation
of 1989 Classrooms

PHASE 4A
Complete Renovation of 1953 &
1955 Classrooms and Restrooms

PHASE 2
Renovation of 1922 Building;
convert Gym into Large Assembly

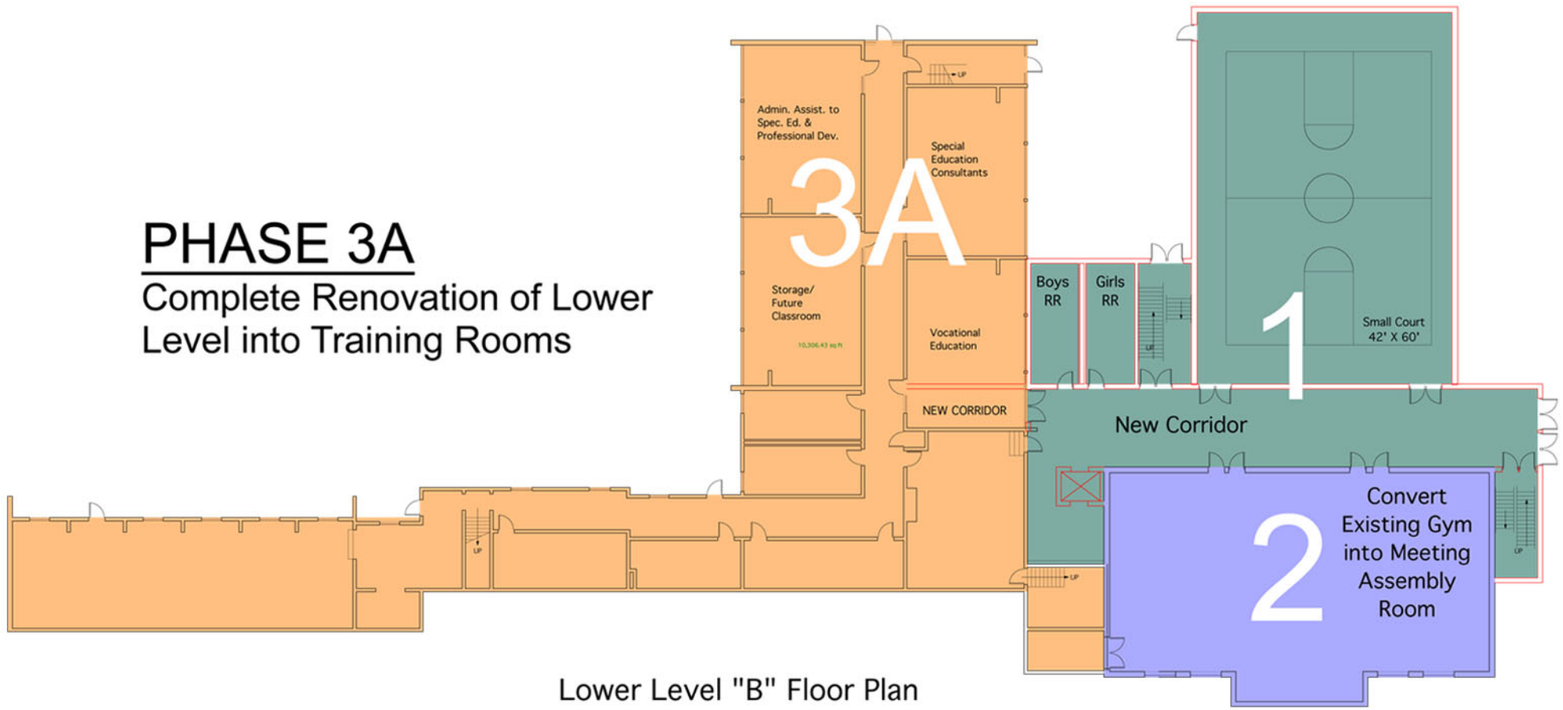
Total Gross	Sq'	41,300
Total Footprint	Sq'	24,850

PHASE 1

Gym, Elevator, Stairs, and Restroom Addition

PHASE 3A

Complete Renovation of Lower Level into Training Rooms



Lower Level "B" Floor Plan

PHASE 2

Renovation of 1922 Building; convert Gym into Large Assembly

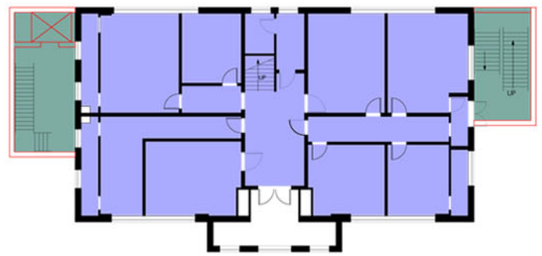
PHASE 1

Gym, Elevator, Stairs, and
Restroom Addition

PHASE 2

Renovation of 1922 Building;
convert Gym into Large Assembly

Upper Level "3" Floor Plan



Upper Level "2" Floor Plan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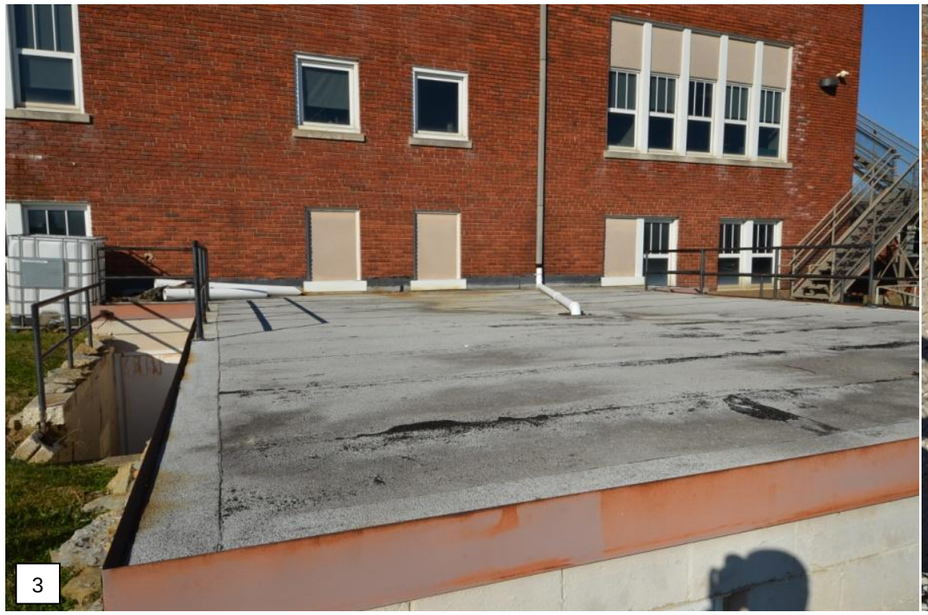
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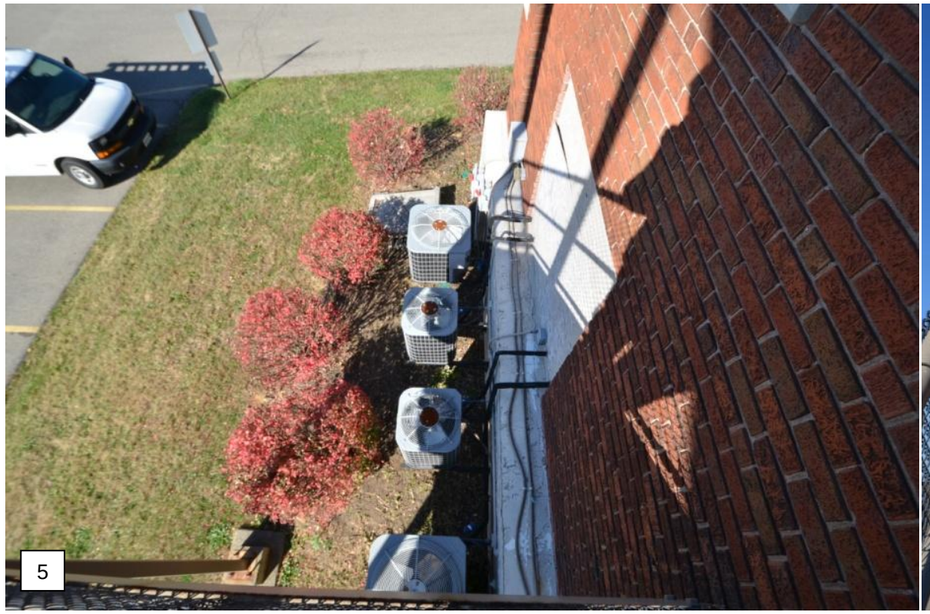
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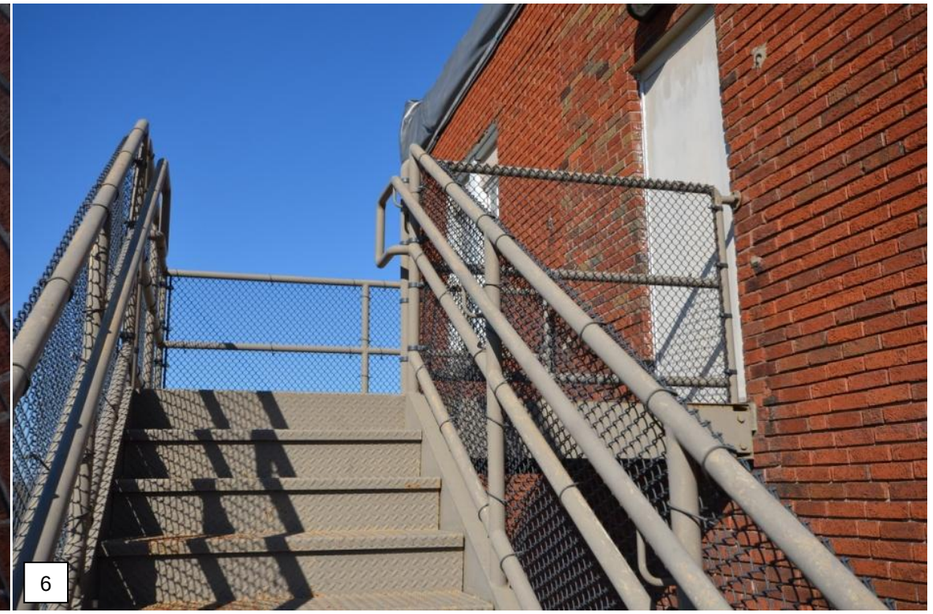
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EXIT

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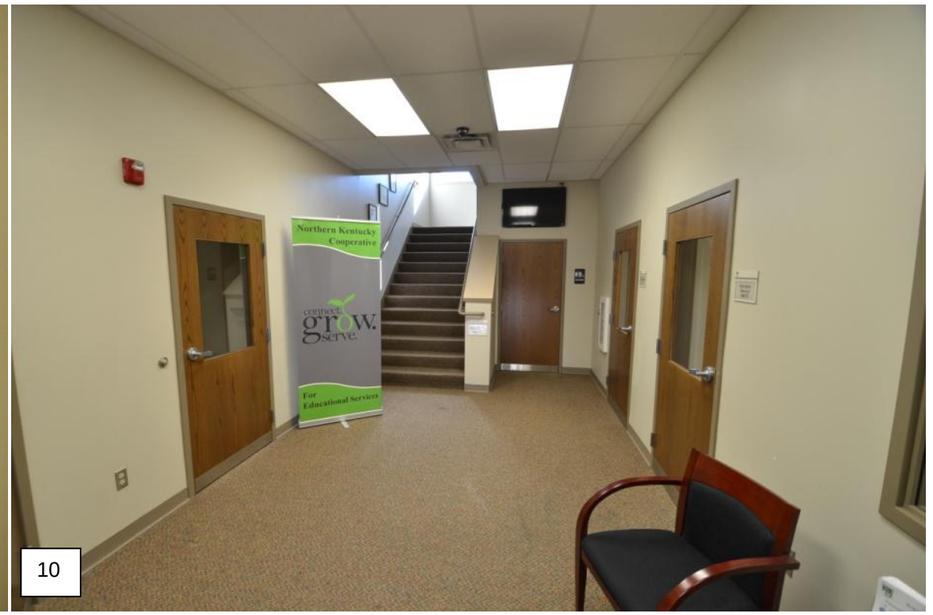
Northern Kentucky Cooperative
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serve.
For Educational Services

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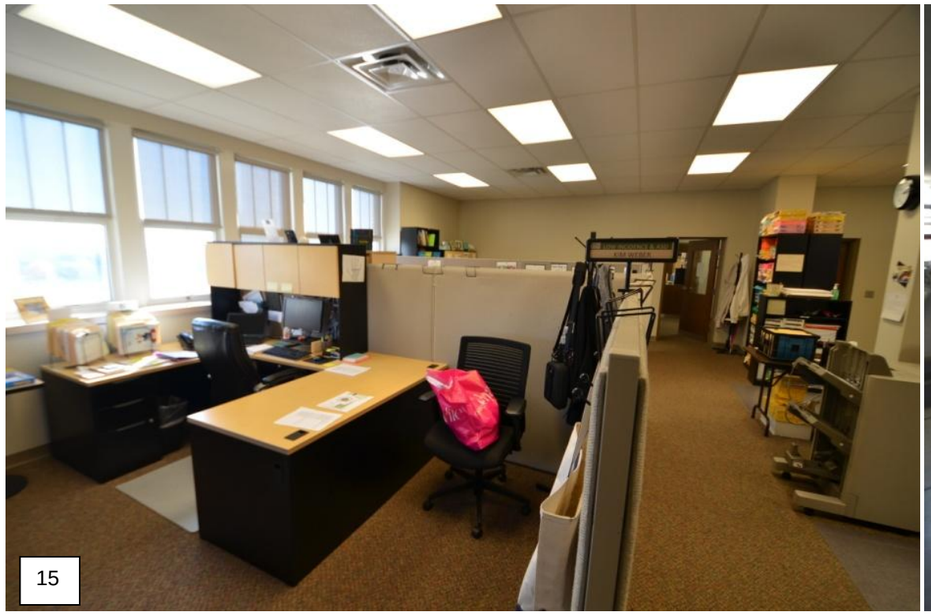

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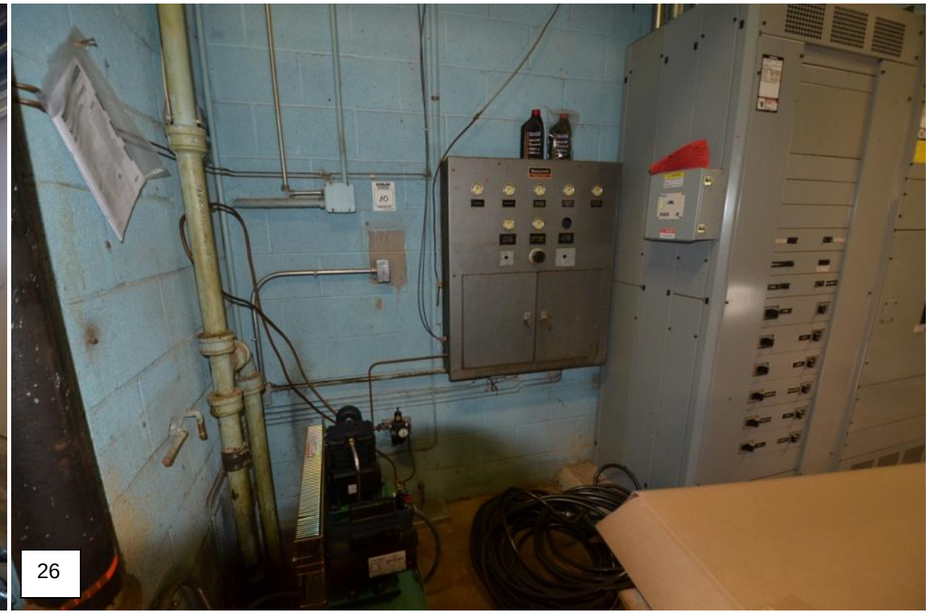

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CAUTION: ASBESTOS HAZARD IN THIS AREA
DO NOT DISTURB ASBESTOS WITHOUT PROPER TRAINING AND EQUIPMENT

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CAUTION
RESPIRATORS MUST BE WORN IN THIS AREA

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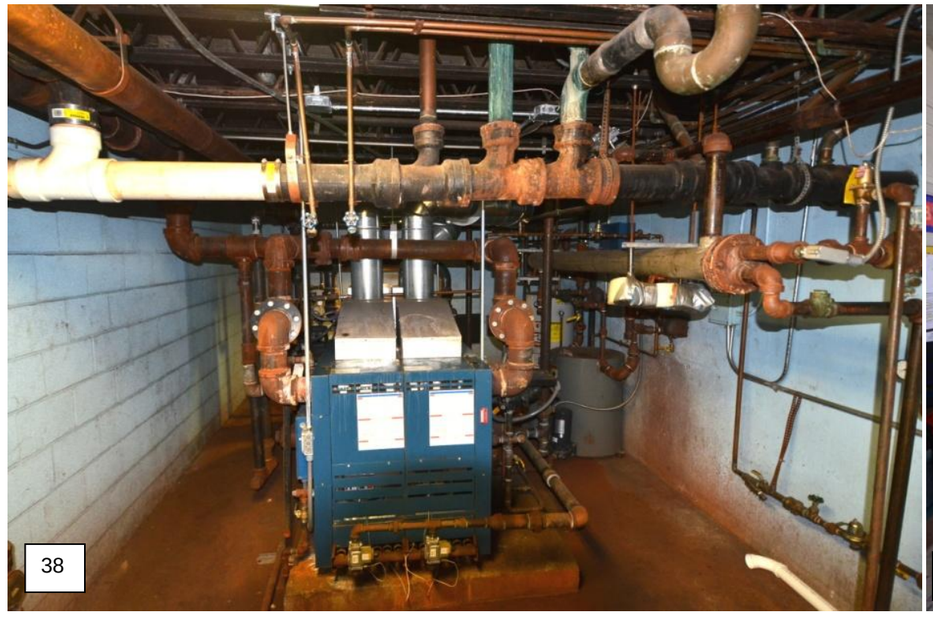

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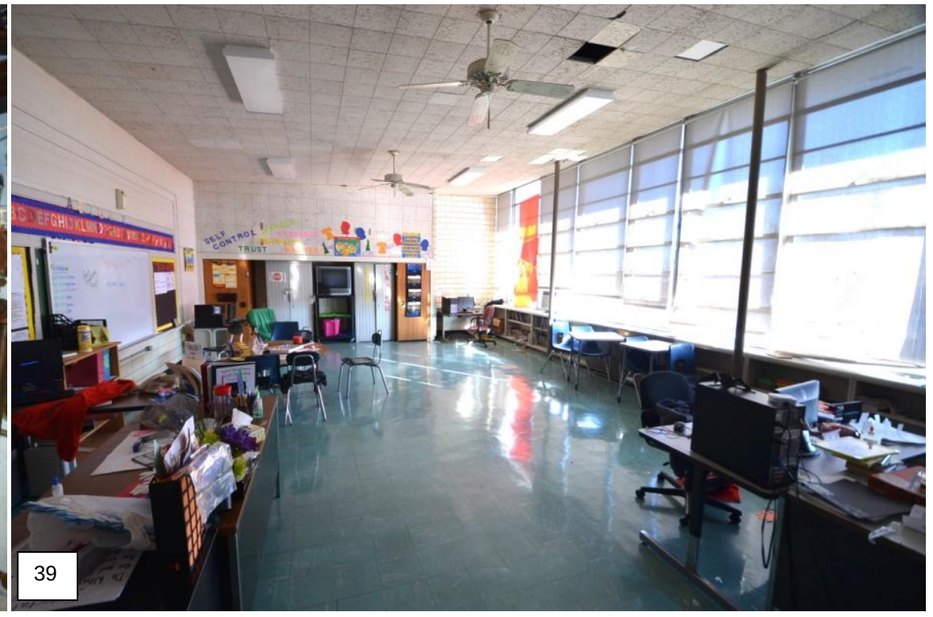

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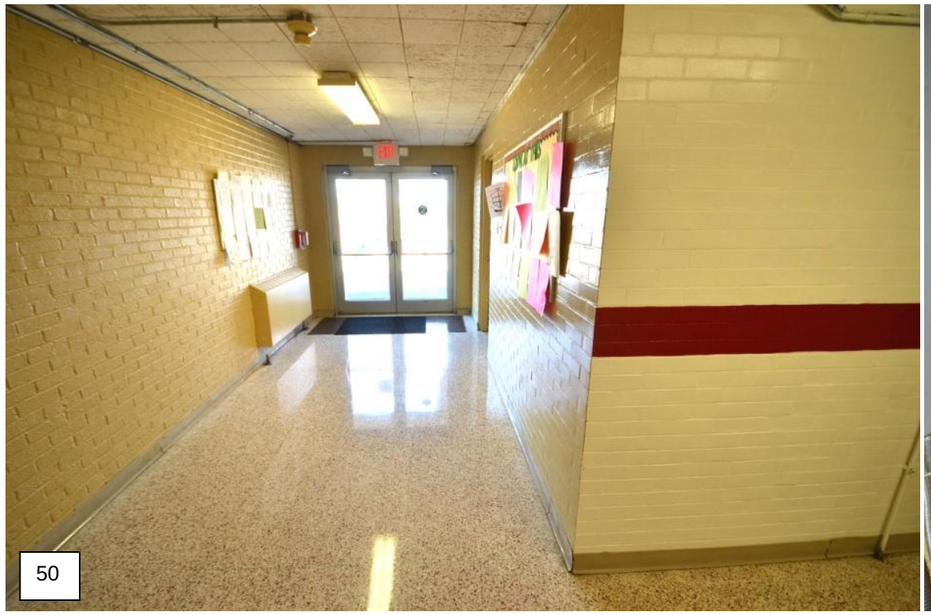

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REH&A
ARCHITECTS


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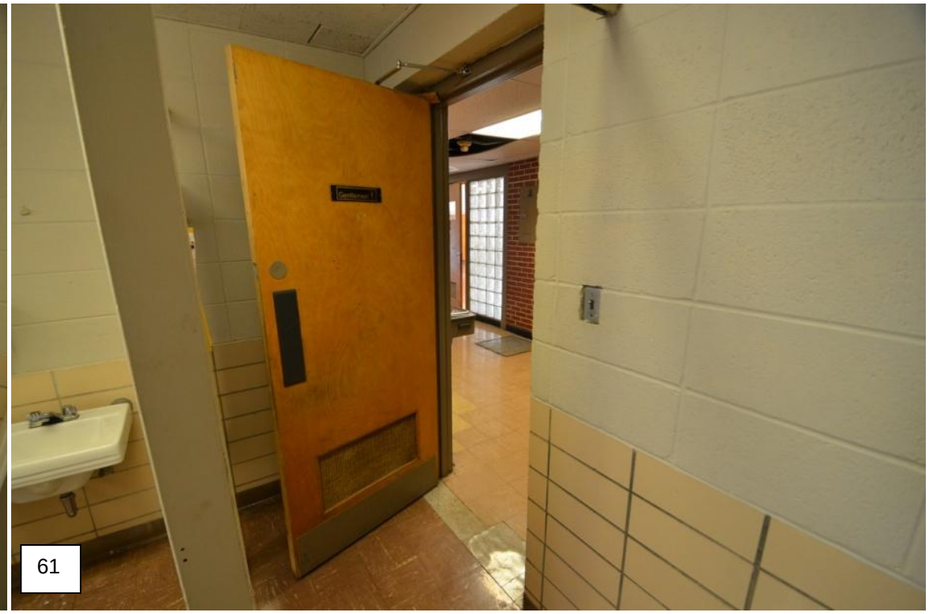
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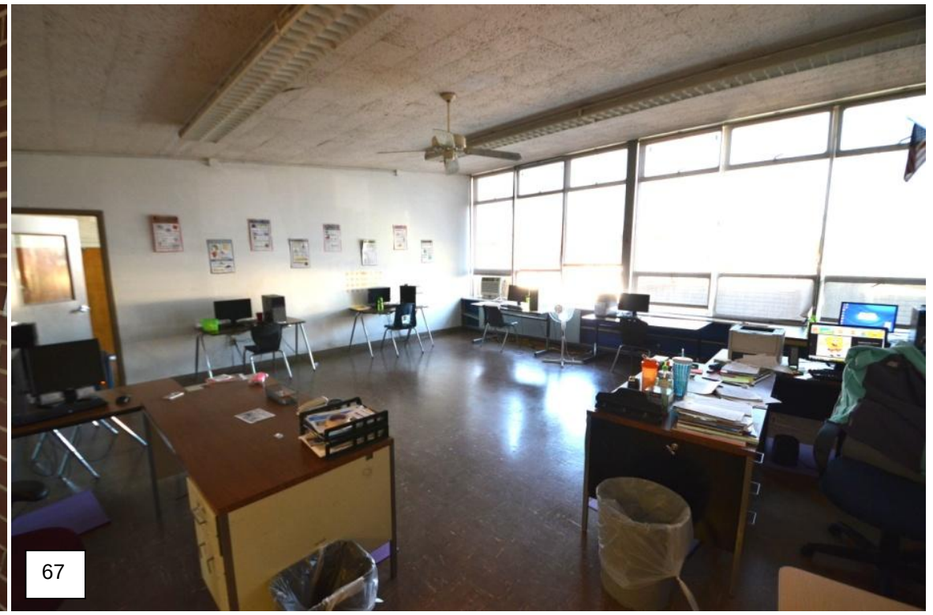

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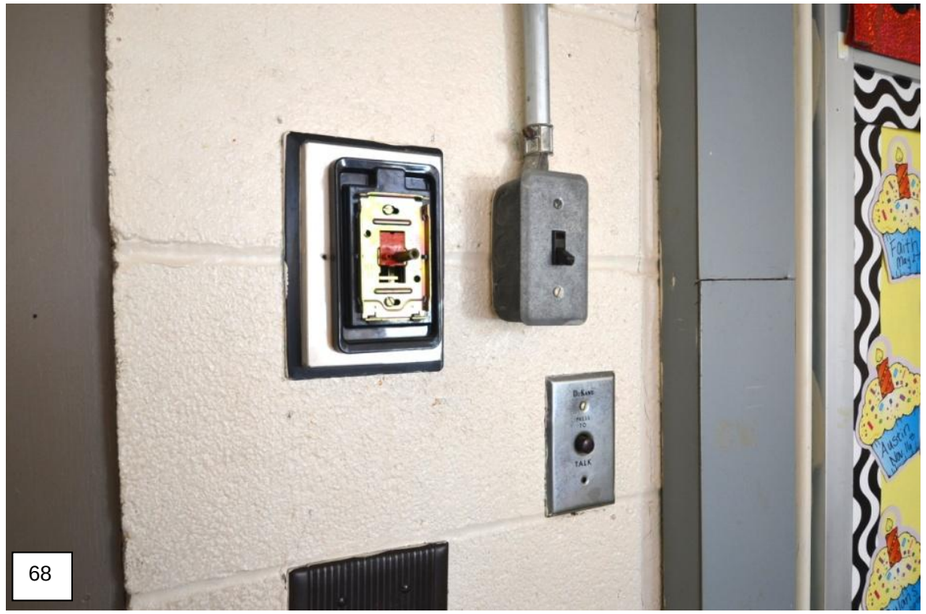
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TALK


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