2007 District Wide Building Evaluation
Building Assessment Report

Noble Elementary School

1293 Ardoon Road, Cleveland Heights

prepared for:

Cleveland Heights University Heights City School District

2155 Miramar Blvd, University Heights, Ohio

prepared by:

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Introduction

Building Assessment Report Objectives
The Building Assessment Report objectives are as follows:

- To provide a descriptive and photographic inventory of existing conditions.
- To provide a prioritized budget for repairs and renovations of existing conditions.

Building Assessment Approach
The assessment approach proceeded as follows:

- The District's original drawings were reviewed. Computer drawings were created based on these original drawings and verified on site.
- Each building was visited by a team of architects and engineers. Existing conditions were observed and recorded.
- These observations and records became the basis for the final Building Assessment documents. A Building Assessment Report was produced for each of the District's eleven active school facilities: (1) High School, (3) Middle Schools, and (7) Elementary Schools.

Building Assessment Organization
The Building Assessment is divided into three Components:

- Narrative
- Cost Assessment
- Photos

Each of these three Components is further subdivided into the following Categories:

A. Hazardous Materials
B. Site
C. Building Structure
D. Building Envelope
E. Building Interior
F. Equipment and Furnishings
G. Fire Protection
H. Plumbing and Fixtures
I. Heating, Ventilating and Air Conditioning
J. C.E.I. Service
K. Main Power Distribution Equipment
L. Emergency Power Distribution Equipment
M. Branch Circuit Panels and Wiring
N. Kitchen Lighting and Power
O. Exterior Lighting
P. Interior Lighting
Q. Gymnasium Lighting
R. Exit Signs and Emergency Egress Lighting
S. Fire Alarm System
T. Security System
U. Public Address System
V. Cable TV System
W. Data and Telephone Systems
X. Clocks and Programs Bell

Narrative

The primary purpose of the Narrative is to provide a description of the existing conditions observed during visits to each of the District's fourteen facilities. The Narrative also serves as a general guide to the history of additions and renovations to the building, and describes the general construction of each addition.

Cost Assessment

The primary purpose of the Cost Assessment is to provide preliminary budget information for repairs and renovations of existing conditions.

Within each Category of the Cost Assessment, the following Priorities were identified:

- Priority 1: work recommended to occur within the next 1-2 years
- Priority 2: work recommended to occur within the next 3-4 years
- Priority 3: work recommended to occur within the next 5-6 years

Photos

During the building assessment, photos were taken to visually record the existing condition of each building and site. These Photos have been organized into the Categories outlined above.

Assessment Limitations and Assumptions

The following limitations and assumptions should be noted:

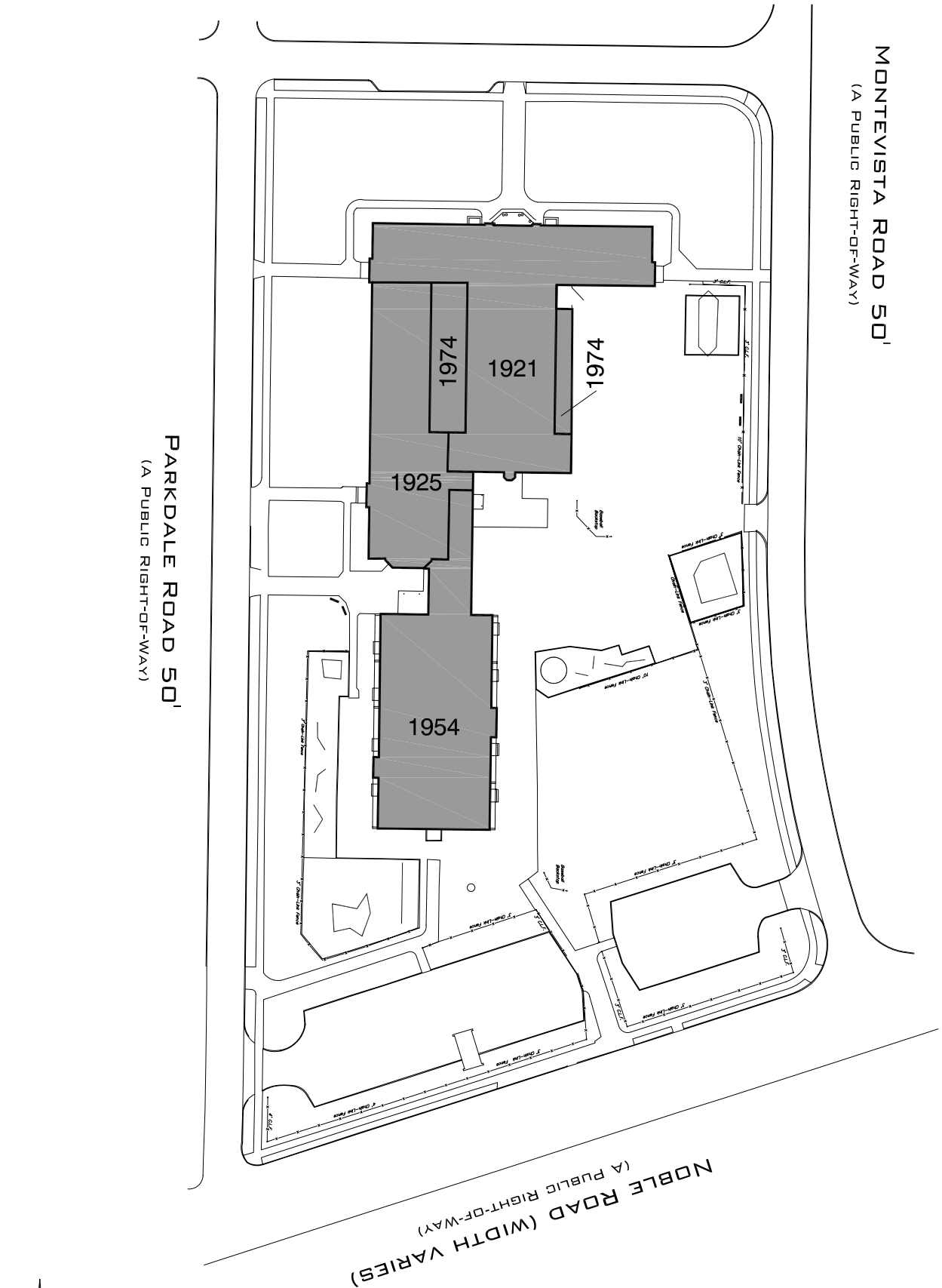
- This Facilities Assessment identifies building systems repair and renovation needs. Existing facilities do not always meet current program needs. Identifying and recommending needed space reconfigurations or building additions is beyond the scope of this report.
- The Cost Assessments provide estimated costs to replace or repair building finishes, components and systems that are damaged, missing, hazardous, inaccessible or approaching the end of useful life. The Cost Assessments do not generally provide costs to replace items which are merely aesthetically poor – but otherwise still functional and serviceable.
- The Cost Assessment is an assessment of Construction Cost. Add soft costs of 18-20% for Project Cost.
- Cost Assessment numbers are in current year dollars. An escalation / inflation factor needs to be applied at 3.5 to 4 percent for every year after 2007. Final cost estimating needs to be performed at the time the specific scope of a project is identified.
- Costs for items such as cleaning, painting, or other routine maintenance have not been included in the Cost Assessments.
- All assessments are visual and did not include physical tests, instrumentation or metering measurements, sampling or monitoring, unless otherwise noted.
- Buildings and components are inspected for condition and general safety and general accessibility requirements. The assessment does not include a complete OSHA, energy or ADA access study.

History

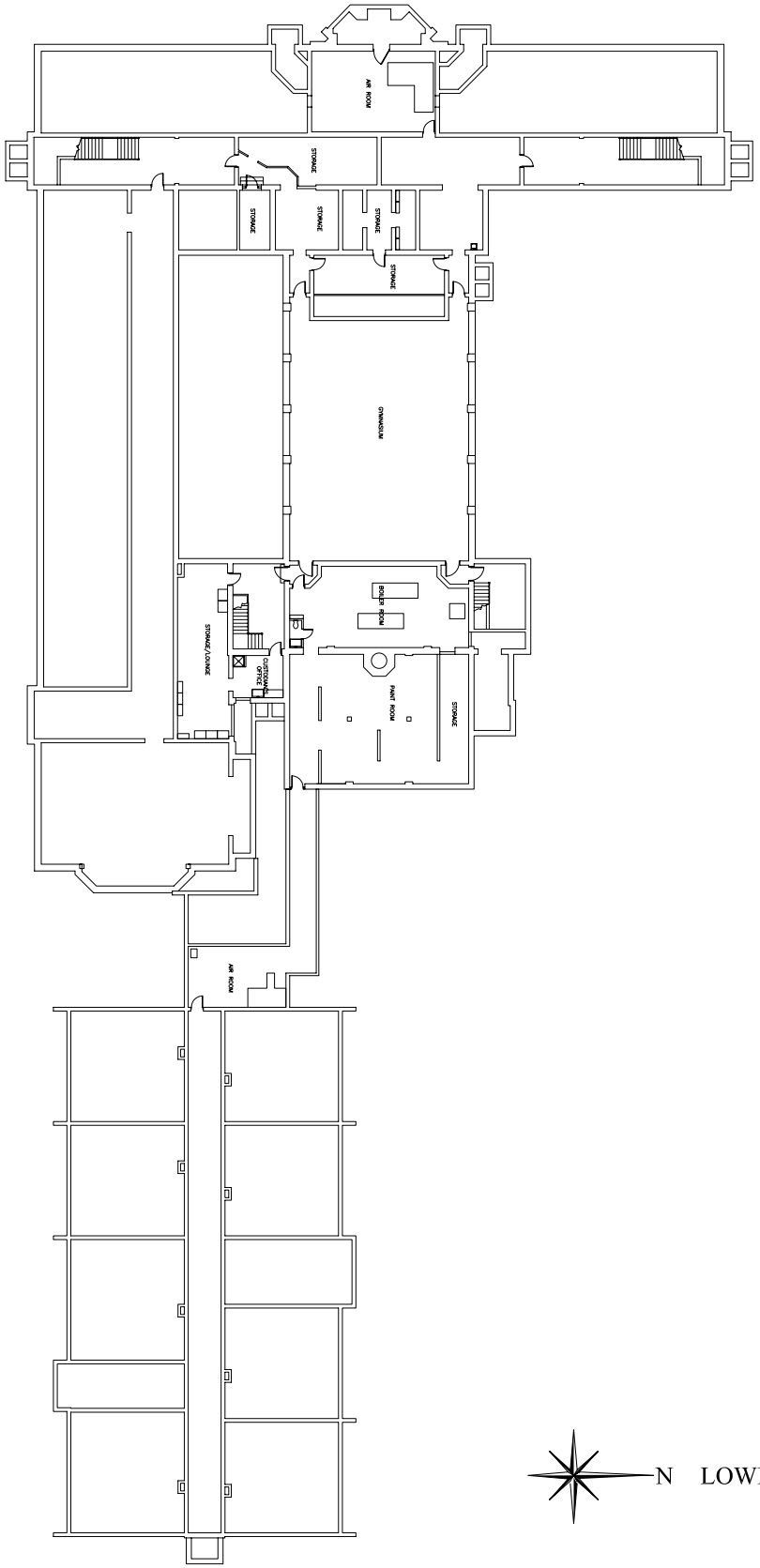
- Noble Elementary School is a 77,370 gross square foot K-5 school located at 1293 Ardoon Street in Cleveland Heights, Ohio. The original building was designed by Franz C. Warner Architect. Drawings are dated 1921. Major additions, renovations and repairs to the school are listed below.

Date	Architect/Engineer	Description
1925	John H. Graham & Co. Architects	2-story classroom addition
1954	Spahn and Barnes Architects	Single story classroom addition
1958	Charles L. Knight Landscape Architect	Site development
1974	Richard Fleischman Architects	Additions and renovations, window replacement
1980	Barber & Hoffman	Roof, gutter and wall repairs
1983	D.T. Levigne Associates	Roof repair and replacement
1986	D.T. Levigne Associates	Roof repair and replacement
1987	D.T. Levigne Associates	Roof repair and replacement
1996	Technical Assurance	Envelope restoration
1999	Burgess & Niple, Ltd.	Fire alarm upgrade
2001	Technical Assurance	Roof renovation
2001	Technical Assurance	Paving and waterproofing
2002	TEC Inc.	Technology upgrades
2002	TEC Inc.	Fire alarm system upgrade

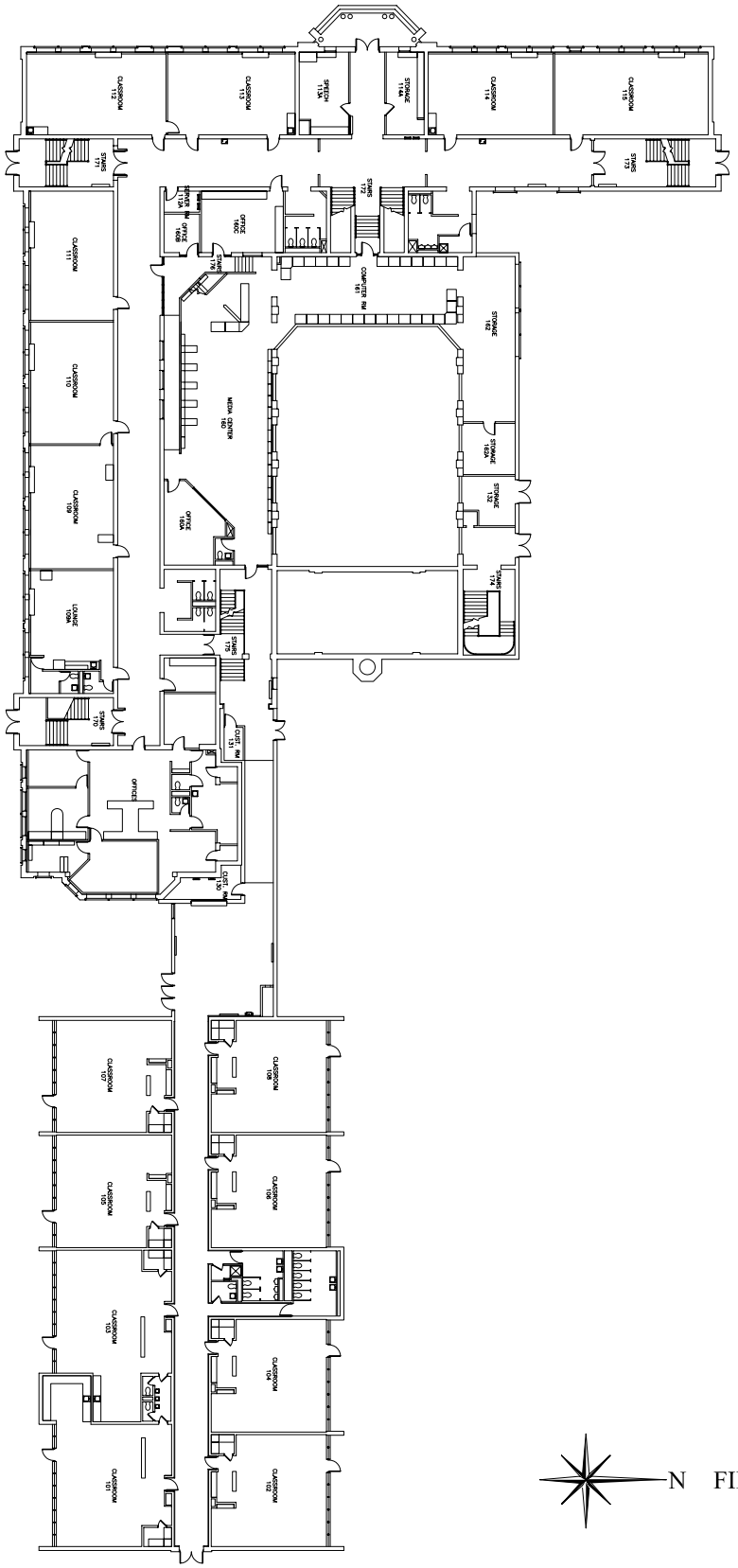
Note: Additions, renovations and repairs listed above are from CHUH original drawings. Some minor renovations and repairs may not have been listed.


MONTEVISTA ROAD 50'
(A PUBLIC RIGHT-OF-WAY)
PARKDALE ROAD 50'
(A PUBLIC RIGHT-OF-WAY)
NOBLE ROAD (WIDTH VARIES)
(A PUBLIC RIGHT-OF-WAY)
1974
1921
1974
1925
1954

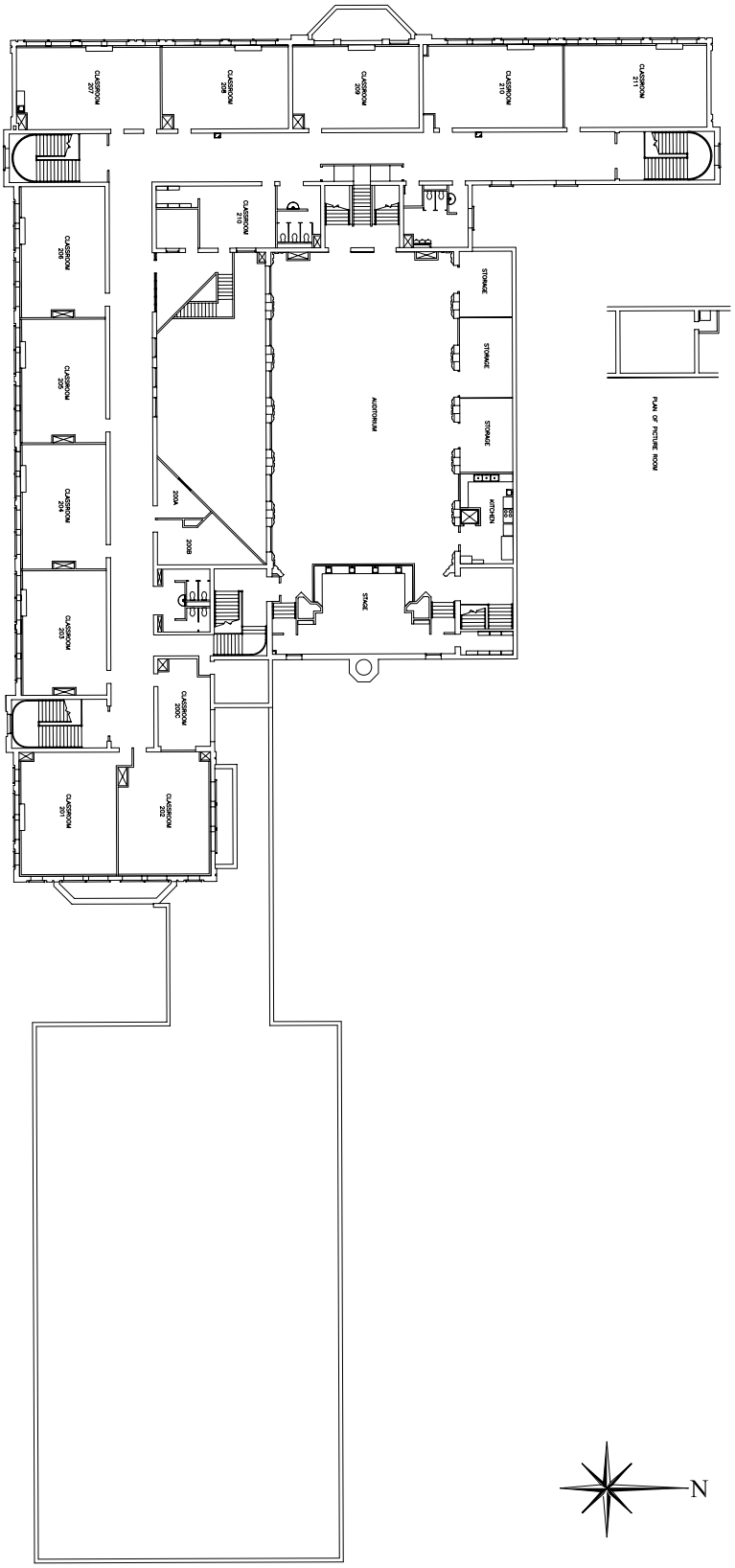
N SITE PLAN



LOWER LEVEL PLAN



N FIRST FLOOR PLAN


CLASSROOM 207
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CLASSROOM 202C
CLASSROOM 202A
CLASSROOM 202B
CLASSROOM 212
AUDITORIUM
STORAGE
STORAGE
STORAGE
KITCHEN
STAGE
PLAN OF PICTURE ROOM
N
SECOND FLOOR PLAN

A: Hazardous Material

CHUH has provided a copy of the Asbestos Containing Material (ACM) report dated July 3, 1998. The following types of ACM were identified at Noble Elementary School:

- Thermal Systems
- Miscellaneous

An updated ACM report will be conducted by a CHUH Hazmat Consultant in the Fall of 2007. The updated ACM report will locate, quantify and assign costs for removal/abatement of ACM throughout the school.

During interior building evaluations, some existing materials were identified as likely containing asbestos. These materials have been listed, and costs have been assigned for removal/replacement in Section E: Building Interior of both the Narrative and the Cost Assessment.

B:Building Site

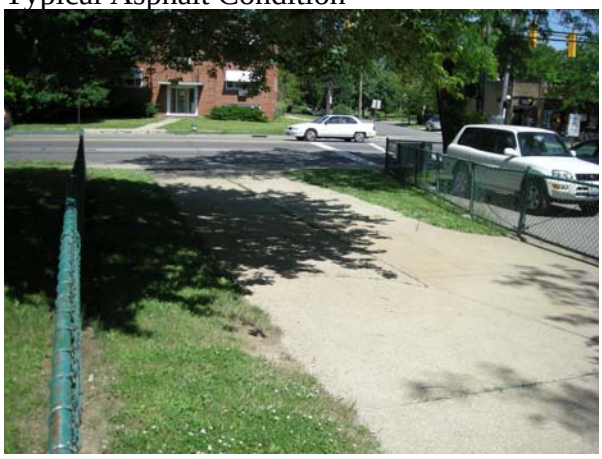

Benches Needing Replacement


Typical Condition of Site Fence


Typical Playground Equipment


Typical Asphalt Condition


Backstop


Concrete Needing Replacement

B: Site

ADA

- The existing parking lot has 50 spaces, 2 of which are accessible. One of the spaces is van accessible, and all have proper signage. They are located appropriately and supplied with a curb cut. Signage exists to direct people to an accessible entrance, but the entrance itself is not marked.

Site Furnishing

- There are three main playground areas at Noble Elementary, and two auxiliary areas. The age of equipment varies considerably, but all of it appears safe and in good or better condition. Metal equipment should be repainted. Landscape timbers around all playgrounds need to be replaced.
- Site fencing is extensive and basically sound. Typical repairs needed are: intermittent post resetting or replacement, replacement of chain link mesh, and repainting. Backstops should be replaced.
- Benches outside of the main entrance should be replaced. Benches for adults are absent from most playgrounds.

Site Pavement

- Concrete pavements (walks) are generally in good condition, with selective repair needed. Walks between the parking lots and along the staff parking lot should be replaced.
- Concrete curbs are generally in good condition.
- Asphalt pavement is extensive, and in fair condition. A new wear layer should be applied, and markings repainted. Asphalt in the parking lots is in good condition.
- Bike racks need to be replaced and anchored into the pavement.

Landscaping

- Planting beds are typical at the South and West sides of the 1921 and 1925 buildings. Landscape timbers need to be replaced, and the beds replanted. Large shrubs appear healthy and maintained, and should be retained.

C: Building Structure

Foundation

- The building foundation at the original building and all additions consists of concrete spread footings at concrete and masonry foundation walls.

Walls/Chimneys

- Masonry walls at the 1921 original building and all additions are typically bearing wall construction.

Floors/Roofs

- The lower level/basement of the 1921 original building and the 1925 and 1954 additions is slab-on-grade.
- The first floor structure of the 1921 original building and the 1925 addition consists of joist slabs supported by masonry bearing walls and concrete beams. Concrete columns provide interior support at the east end of the 1925 addition (former kindergarten, current offices). The first floor structure of the 1954 addition is 4" slab-on-grade, with a 4" slab spanning a plenum tunnel at the corridor. The first floor of the 1974 addition is slab-on-grade, with a small section of 2-1/2" concrete slab on 2" metal deck over the former concrete bleachers.
- The second floor structure of the 1921 original building and the 1925 addition consists of joist slabs supported by masonry bearing walls and concrete beams. Concrete-encased steel beams support joist slabs at the floor of the auditorium in the 1921 original building. Concrete-encased steel beams supported by steel columns and masonry bearing walls provide support of the joist slabs at the east end of the 1925 addition (former cafeteria, current classrooms). The 1974 addition second floor structure consists of 2-1/2" concrete slab on 2" metal deck, supported by steel framing.
- The flat roof area of the 1921 original building consists of joist slabs supported by masonry bearing walls. Concrete-encased steel beams support joist slabs at the roof of the auditorium in the 1921 original building. The flat roof of the 1954 addition is min. 3" perlite over steel bar joists, supported by masonry bearing walls. A canopy at the south entry of the 1954 addition is wood frame supported by steel pipe columns. The 1974 addition flat roof is metal deck over steel bar joists, supported by masonry bearing walls.
- Sloped roof framing occurs at the 1921 original building penthouse, and is joist slab construction supported by masonry bearing walls.
- The original 1921 building contained a lower level coal storage room, with a “roof” consisting of a grade level reinforced slab on concrete beams. This slab has deteriorated significantly, with portions of rebar exposed due to interior spalling. Cracks in the concrete beams were also observed. This structural issue was addressed in a project by Barber & Hoffman (1977), which added support beams and walls in the former coal storage room and a new waterproofing membrane and 4” wear slab over the existing reinforced slab. The Cost Assessment provides an estimate of cost to repair the bottom (coal storage room “ceiling”) of the deteriorated concrete slab.

D:Building Envelope

D: Building Envelope

ADA

- Power assisted doors need to be provided.

Masonry

- Exterior masonry typically consists of clay brick over a CMU backup wall. Tuckpointing is required at the upper section of the chimney at the 1921 building, lower portions of the 1954 Addition, and minor spot tuckpointing at all elevations. Lintels at north and south entry of the 1921 building have expanded causing masonry displacement - lintels need to be replaced.
- Stonework: deterioration of decorative stonework at entries, cornices and copings needs to be stabilized and repaired.

Exterior Doors/Frames

- Exterior doors are generally in fair condition but are recommended for replacement within the next 5-6 years with FRP doors and aluminum frames. Some door replacement with FRP/aluminum frames has been initiated.

Windows

- Windows were replaced in 1974 at the 1921 building. These single glazed windows are recommended for replacement due to air / water infiltration and difficulty of operation.
- Most exterior louvers are rusted and/or broken and need to be replaced.

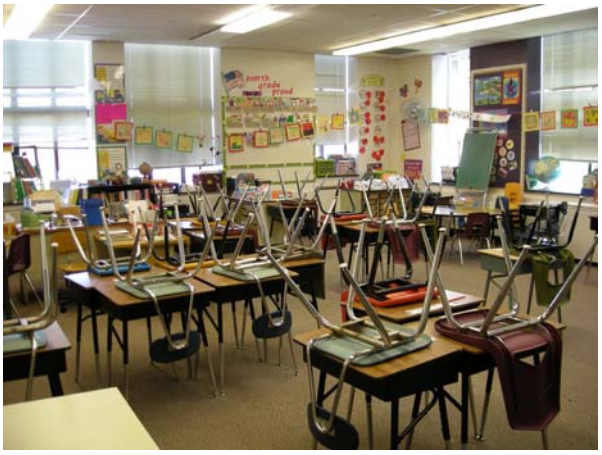
Soffits

- Soffits on the 1954 addition are housing bee populations. They should be sealed and painted.

Roofing

- Most roofs are in fair to good condition. Roofing was replaced at the 1954 addition and at roof areas at the 1974 Media Center addition in 2001. The west portico (roof, stonework, stairs and structure below stairs /landing) was renovated in 2006. Immediate roof repair (roof leaks) is required over the Kitchen. Roof drain replacement is required at the 1925 building. Roof ladders should be installed to allow movement between the 1921, 1974 & 1954 roofing areas. The roof access panel to the 1921 roof needs replacement.
- Older modified bitumen and gravel surfaced built –up roof areas, currently in fair condition and serving well, are recommended for replacement within the next 5-6 years. A small area of sloped roofing (roofing at west pediment) requires replacement within a similar timeframe.
- Roof drains need to be added to entry canopies.

E:Building Interior


Elementary Classroom


Kindergarten Classroom


Gymnasium


Restroom Fixtures and Accessories


Plaster Damage in Cafeteria


Plaster Damage in Basement

Retrofitted Door

Retrofitted Frame

Obsolete Casework - Kindergarten

Damaged Terrazzo and Access Panel

Vinyl Base

Staircase Corrosion

E: Building Interior

ADA

- Note: The Americans with Disabilities Act (ADA) Title II requires that public school systems comply with the ADA in all of their services, programs, or activities, including those that are open to parents or to the public. During the Building Assessment, a limited visual observation for ADA compliance was conducted. A copy of the ADA compliance checklist is attached to the assessment for reference. It is understood that this review does not constitute a comprehensive survey of all required ADA compliance items.
- Interior signage is not mounted at ADA height, and does not have Braille or raised text.
- A ramp in the 1954 addition connects the first floor level of this addition with the "lower" first floor of the 1925 addition. A ramp in the 1974 addition connects the first floor of this addition (which is at the same level as the "lower" first floor of the 1925 addition) with the "upper" first floor level of the 1925 addition.
- There is no elevator at Noble Elementary School. The lower level/basement (gymnasium) and the second floor of the school are not accessible by wheelchair. The former stage is likewise inaccessible.
- There are no ADA-compliant toilet stalls in Noble Elementary School.
- Group sinks are inaccessible semi-circular wash fountains. These sinks are typically in poor to fair condition, with significant staining and rusting at metal bottoms.
- Drinking fountains at the school are not handicapped accessible.
- Many of the original wood doors within Noble Elementary School have been retrofitted with accessible lever type hardware. This work included installation of new strike plates at existing wood frames. Hardware is in good condition, though some doors and frames were aesthetically damaged during this retrofit.

Egress/Life Safety

- Note: Interior egress/life safety items need only to be compliant with the building code in force when these items were originally constructed or renovated. As such, some items may not be in compliance with current egress/life safety components of the OBC. This assessment does not attempt to identify all work required to achieve said compliance.
- There are four enclosed stairwells at Canterbury Elementary School. These stairwells have magnetic door hold-opens installed in 2002. The main entry stair is open at the first floor, with magnetic door hold-opens installed in 2002 at the second floor. The stair hall at the 1925 addition also has magnetic door hold-opens installed in 2002 at first and second floor doors. Stair doors have operational panic hardware.
- Guardrails at the stairwells are typically 36" high, with steel pickets at 3-1/2" on center. The northeast stair in the 1921 original building has a 2-line rail (without pickets) 37" high.
- Panic hardware generally appears to be in good-to-fair condition.

Floor

- Carpet in the school is typically in fair condition – showing some wear, with mild to moderate staining. Some areas exhibit more excessive wear and/or staining, and these should be replaced.

- VCT is generally in fair-to-good condition, with some areas somewhat scuffed but serious problems uncommon. Minor patching should occur as noted. A significant exception exists at the second floor lunchroom, where the existing VCT is in poor condition and should be replaced. VCT flooring in the gymnasium is very discolored, but sound.
- Ceramic tile floors are typical at toilet rooms. This tile is generally in good-to-fair condition, with general cleaning and routine maintenance required.
- Rubber tile occurs at the 1925 addition stair hall landing. This tile is very discolored, and should be replaced, along with adjacent rubber stair treads and risers, from the first to second floor. Rubber tile in fair condition also occurs at the 1954 addition corridor, and requires cleaning.
- Rubber stair treads and risers occur at most stairwells. These are generally in fair condition with moderate to severe discoloration and cleaning required, though there are some areas where replacement is warranted. Rubber nosing at the main entry stair in the 1921 building (with carpet treads) is in fair-to-poor condition – dirty and discolored, but securely attached.
- Terrazzo flooring occurs at the 1954 addition corridor and toilet rooms. Terrazzo flooring has significant discoloration at some areas of the toilet rooms (adjacent to some fixtures, beneath radiators) and at the floor/base intersection at corridors, but the floor itself is structurally sound with minimal cracking. Terrazzo flooring also occurs in the basement of the north and south stairwells of the 1921 original building. The floor at the south stairwell has many cracks and some holes, and should be repaired. The north stairwell basement floor is in better shape, but still has some cracks. Both of these floors are very discolored.
- Epoxy paint occurs at many basement areas, and at the northeast stairwell. Concrete substrate is generally in fair condition, with some repainting required.

Base

- Wood base at the 1921 original building and 1925 addition is generally in fair condition - sound, but dented with some scraped paint.
- Much of the existing vinyl base is in fair condition. However, vinyl base at first floor corridors, the gymnasium and some stairwell locations is in poor condition and should be replaced.
- Carpet base is generally in good condition. Carpet base at the second floor corridor requires some reattachment and spot repair.
- Ceramic tile base occurs at toilet rooms. Some of this base is cracked and should be replaced.

Walls

- Plaster walls occur within the 1921 original building and the 1925 addition. The plaster is generally in good-to-fair condition.
- Where exposed at the interior, concrete block or brick walls are generally in good condition. Many masonry walls at the basement have peeling paint, which requires refinishing. A brick wall in the boiler room is badly gouged but appears structurally sound - due to its location, it may not require patching.
- Ceramic wall tile typically occurs at group toilet rooms, and is in fair-to-good condition. Wall tile patching is required at some locations.

- Structural glazed tile walls occur at the 1954 addition corridor and group toilet rooms. This wall tile is typically in fair-to-good condition, with some patching required.
- Wood paneling occurs in the 1954 addition classrooms. This paneling is in fair-to-poor condition, requiring refinishing typically and some repair/replacement. Perforated, painted wood paneling also occurs in these classrooms. This perforated paneling is in good-to-fair condition.
- Some wood frame walls exist in the basement, at the music storage room and another small general storage room. These walls are in poor condition and should be replaced with new metal stud/gypsum board walls. Doors to these rooms should also be replaced.

Ceilings

- Plaster ceilings occur in a few areas of the 1921 original building and the 1925 addition. The plaster is typically in good condition, but some areas require scraping and painting.
- Acoustical tile ceilings occur throughout the building. The condition of these ceilings varies by location, but is generally in the fair-to-good range. Tile replacement should occur where damage exists, and grid should be repaired or replaced where noted.
- Concealed spline ceilings occur in the 1954 building classrooms. These ceilings are generally in fair condition, but some areas are in poor condition and require replacement.
-

Interior Doors

- Many of the original wood doors within Noble Elementary School have been retrofitted with accessible lever type hardware. This work included installation of new strike plates at existing wood frames. Some doors and frames were aesthetically damaged during this retrofit, but doors and frames typically were functional. Some doors in the basement are in poor condition and should be replaced.

Visual Display Boards

- Visual display boards consist of chalkboards and tackboards in good condition. Even though they are old, they are still functional and show little serious deterioration.

Toilet Partitions

- Metal partitions are typical at group toilet rooms. These partitions are in poor condition and should be replaced.
- A toilet/sink occurs in the boiler room. The “partition” enclosure of these fixtures is in poor condition, and should be replaced if these fixtures are to remain.

Toilet Fixtures

- Toilet fixtures are in fair to good condition typically. No serious problems (leaks, cracking) were observed.

Toilet Accessories

- Toilet accessories are in fair to good condition typically.

Casework

- Lower level casework should be replaced at the bottom of the main stairwells and at some storage rooms.
- At the first floor 1954 addition, cubbies and shelving should be replaced, as well as sink base cabinets and other casework as noted. Other areas of the first floor should have casework replaced as noted.
- Second floor casework should be replaced at the former stage, the kitchen and at other miscellaneous areas.
- The condition of modular tan-colored casework also varies by location, but is generally in the fair-to-good range.

Window treatments

- Horizontal mini-blinds occur at most window openings. These blinds appear to be in fair condition.

Other

- Corrosion was observed at some stair treads, risers and stringers at the 1921 original building. Surface corrosion should be cleaned, primed and painted. More extensive rusting of these stair components should be repaired.
- Painted steel at stairs (treads, risers, stringers, pickets, etc.) is chipped and should be repainted.

F:Equipment and Furnishings


Kindergarten Classroom


Teachers Lounge


Media Center


Custodial Breakroom


Kindergarten Wing Lobby


Kindergarten Classroom

F: Equipment and Furnishings

Student Furniture

- Many of the student desks are in poor condition. There is extensive chipping of tops and sides where chairs are stored on top of desk, and some failure of tops where desks have been overfilled and forced shut.

Teacher Furniture

- Many teacher desks are in poor-to-fair condition. Though serviceable, they seem to be nearing the end of their useful life.

Other Furniture

- Generally, most of the remaining furniture is in fair condition. This includes the newer computer tables and general tables. Chairs are typically plastic with metal legs in fair condition.

Gymnasium/Stage Equipment and Furnishings

- The stage at Noble Elementary School has been enclosed and turned into an instructional space. There are no stage curtains or equipment at this school.
- There is no operable partition in the gymnasium.
- The dividing curtain in the gymnasium is very dirty and worn, and should be replaced.
- Gymnasium equipment (backstops, ropes, etc.) is generally in fair condition – old, but serviceable.

Media Center Furniture

- Steel library shelving is in fair condition, and does not appear to require significant repair/replacement.
- Computer tables in the media center computer room were in good-to-fair condition.

Kitchen Equipment

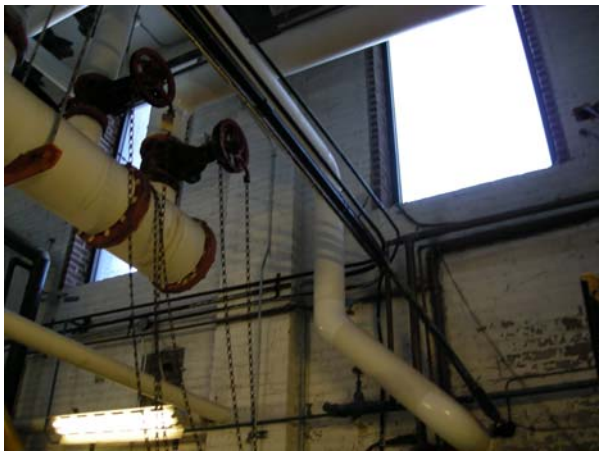
- Kitchen equipment consists of a milk cooler, and a residential quality stove and refrigerator. The stove appears to be at the end of its useful life and should be replaced. Other items appear to be in good condition and do not require replacement.

I: Heating, Ventilation and Air Conditioning


Rooftop Vents


Boiler Room


Boilers


Boiler Piping


Unit Ventilator in Corridor


Ceiling Fans in Media Center

G: Fire Protection

- None of the building is currently sprinkled. To fully sprinkle the building, a dedicated fire line with a double detection check valve assembly in an outdoor pit would be required. Cost estimates include this work to sprinkle the building.
- Add fire dampers at existing shafts and seal openings not utilized.

H: Plumbing and Fixtures

- The plumbing fixtures appear to be original but in fair condition. Many flush valves and hose bibb connections do not have vacuum breakers. Cost estimates are provided for one-for-one flush valve and faucet replacement.
- Add a reduced pressure backflow preventer to the domestic cold water main entering the building.
- Most potable water pipe is copper.
- Sanitary sewer pipe is cast iron hub and spigot with lead joints.
- The small amount of storm sewer pipe that is visible was cast iron hub and spigot pipe with lead joints. The condition of this pipe and roof drains is unknown. Repair/replacement of this pipe was not included in the estimate.
- A domestic hot water storage tank and heater are located in the boiler room. The water heater (200 MBH, 80 gallon) was replaced in 1995. This domestic hot water heater is oversized for an elementary school building with no showers. This storage tank should be replaced with a smaller tank. The estimate does not include a new domestic hot water storage tank and heater. The building has a domestic hot water recirculating pump.

I: Heating and Ventilating and Air Conditioning

- The building is heated by two steam boilers, which replaced the original boilers in 1982. Steam heating coils are located in all air handling units and unit ventilators. A steam-to-hot water heater exchanger located in the basement mechanical room appears to still be active, serves underground radiant heat in some 1954 addition classrooms.
- Add a vacuum breaker to the main steam header.
- Investigate and locate the cause of the steam line water hammer problem.
- The original 1921 building had cast iron radiators in the classrooms and one central ventilation fan (100% outside air) and one central classroom exhaust fan. The central classroom ventilation fan was removed in 1974 and classroom unit ventilators were installed One central fan was dedicated for toilet exhaust. One supply fan and one exhaust fan each served the Gym and Auditorium. Both the Gym and Auditorium are still heated and ventilated by these same fans utilizing 100% outside air. Return air should be designed for both of these areas to save energy.

- Replace the original building fans and coils that serve the gym and auditorium with a separate air handling unit serving each area. The air handling units will fit in the basement mechanical room and would reuse the original outside air intake.
- As part of this retrofit, return air should be ducted back to the new air handling units with new return fans and the penthouse exhaust fans eliminated. Carbon Dioxide demand controlled ventilation should be controlling the amount of outside air into each area.
- The 1954 classroom addition is ventilated by a basement air handling unit which discharges air into a crawl-space plenum. Individual steam reheat coils within the plenum condition each classroom. Asbestos pipe insulation within the plenum appears to have been abated. Return air to the air handling unit is routed from the classrooms via the corridor, which violates current code requirements.
- Investigate/repair 1954 building air handling unit's control dampers that don't control properly.
- The outside air ventilation rates designed into the 1982 unit ventilators is close to current code requirements, but the unit ventilators exceed 30 years old and warrant replacement.. Cost estimates are included to replace the unit ventilators.
- The exhaust ventilation for many of the restrooms falls short of current code requirements. Cost estimates are included to replace restroom exhaust systems.
- The Media Center and some surrounding rooms are the only occupied areas of the building that are air conditioned. The multizone rooftop unit that serves these areas was replaced in 2004.
- The Media Center ceiling diffusers are not the correct type of diffuser to throw the air down from the ± 20 foot high ceiling and should be replaced.
- One old office was converted to a server room. A split DX air conditioning unit air conditions this room with the condensing unit located on the roof. A second server room also has a split DX air conditioning room. The cost estimates do not include any modifications for this room.
- The building has "Traditional Building" Building Automation System (BAS). Because the extent of the automated components of the building are not known, the cost estimates do not include any proposed modifications to these controls.
- Replace the controls air compressor. The existing compressor has a bad oil leak.

	Building Access	Yes	No	N/A	Comments
1.	Is there an adequate number of wheelchair accessible parking spaces?	✓			
2.	Is there one wheelchair accessible van parking space for every 8 standard accessible spaces?	✓			
3.	Are accessible parking spaces located on the shortest accessible route of travel from an accessible building entrance?	✓			
4.	Does signage exist directing users to a wheelchair accessible parking and an accessible building entrance?	✓			
5.	Is there a ramp or curb cut from the parking to an accessible building entrance?	✓			
6.	If the main entrance is inaccessible, are there alternate accessible entrances?	✓			
7.	Is the accessible entrance doorway at least 32" wide?	✓			
8.	Is the door handle easy to open? (Lever/push type knob, no twisting required, no higher than 48" above floor)	✓			
	Building Corridors and Elevators	Yes	No	N/A	Comments
1.	Is the path of travel free of obstructions and wide enough for a wheelchair (at least 60" wide)?	✓			
2.	Are floor surfaces firm, stable and slip resistant?	✓			
3.	Do obstacles (phones, fountains, etc.) protrude no more than 4" into walkways or corridor?	✓			
4.	Are elevator controls low enough to be reached from a wheelchair (48" front approach/54" side approach)?			✓	
5.	Are there raised elevator markings in Braille and Standard alphabet for the blind?			✓	

6.	Are there audible signals inside cars indicating floor changes?			✓	
7.	Do elevator lobbies have visual and audible indicators of the cars arrival?			✓	
8.	Does the elevator interior provide sufficient wheelchair turning area?			✓	
9.	Is at least one wheelchair accessible public phone available?			✓	
10.	Are wheelchair accessible facilities (restrooms, exits, etc.) identified with signage?			✓	
	Restrooms	Yes	No	N/A	Comments
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			
3.	Are access doors wheelchair accessible (at least 32" wide)?	✓			
4.	Are public restrooms large enough for wheelchair turnaround (60" diameter)?		✓		
5.	Are stall doors wheelchair accessible (at least 32" wide)?		✓		
6.	Are grab bars provided in toilet stalls (33"-36" above floor)?		✓		
7.	Do sinks provide clearance for a wheelchair to roll under (29" clearance)?		✓		
8.	Are sink handles operable with one hand without grasping, pinching or twisting?		✓		
9.	Are exposed pipes under sink sufficiently insulated against contact?		✓		
10.	Are soap dispensers, towel, etc. reachable (48" from floor for frontal approach, 54" for side approach)?		✓		
11.	Is the base of the mirror no more than 40" off floor?		✓		

Cost Summary of Noble Elementary

1. The Cost summary is an estimate of Construction Cost

2. Add soft costs of 18-20% for Project Cost.

3. Add an escalation/inflation factor of 3.5-4% for every year after 2007.

Priority 1: next 0-2 years	$930,794
Priority 2: next 3-4 years	$1,587,284
Priority 3: next 5-6 years	$776,847
Total Priority 1-3 next 6 years	**$3,294,924**

Note: Some electrical Categories within the Cost Assessment contain Priority 4 items, with action required in the next 7-10 years. These items are not identified in the total cost for Priority 1-3 noted above. Please review the attached Cost Assessment for Categories which contain Priority 4 items.	
Priority 4: next 7-10 years	No items

A: Hazardous Materials

Total Priority 1-3: next 6 years

To be determined

An updated ACM report will be conducted by a CHUH Hazmat Consultant in the Fall of 2007. The updated ACM report is to locate, quantify and assign costs for removal/ abatement of ACM throughout the school.

B: Site

Total Priority 1-3: next 6 years

$274,689

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

Priority 2: next 3-4 years

Item		*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Selective replacement of concrete pavement	s.f.	3,742	$ 5.00	$ 18,710.00	Cracks, chips
Replant bed	lump	1	$ 1,750.00	$ 1,750.00	
Asphalt new wear layer	s.f.	49,746	$ 1.25	$ 62,182.50	Damage to top layer only
Restripe Pavement	lump	1	$ 5,200.00	$ 5,200.00	Faded striping, recoated asphalt
Repair fence	l.f.	1,620	$ 5.00	$ 8,100.00	Reset/replace posts, painting
Replace chain link panel	s.f.	6,407	$ 3.00	$ 19,221.00	
Replace backstop	l.f.	60	$ 2,500.00	$ 150,000.00	Baseball backstop rusted, leaning
Replace landscape timber	l.f.	1,065	$ 5.00	$ 5,325.00	Deteriorated, out-of-place
Subtotal Priority 2:				$270,489	

Priority 3: next 5-6 years

Item		*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace bench	each	4	$ 800.00	$ 3,200.00	
Replace bike rack	s.f.	2	$ 500.00	$ 1,000.00	
Subtotal Priority 3:				$4,200	

C: Building Structure

Total Priority 1-3: next 6 years

$10,000

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Structural concrete slab repair	sf	400	$ 25.00	$ 10,000.00	At former coal room; includes cleaning of structural concrete slab and reinforcing steel and spot patch of structural concrete slab
No items				$10,000	

D: Building Envelope

Total Priority 1-3: next 6 years

$787,810

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
ADA					
Install power door operators	each	2	$7,500.00	$15,000.00	Provide exterior door & vestibule door with assisted operation
Roofing					
Roof ladders & roof access door	lump	1	$ 4,000.00	$ 4,000.00	Replace deteriorated wood roof access door & Install ladders-roof to roof for access & maintenance
1954 addition Entry canopies - east & north	lump	1	$ 5,000.00	$ 5,000.00	Install roof drain & storm leaders to drain canopies to grade.
Roof drain	each.	1	$ 3,500.00	$ 3,500.00	Replace damaged roof drain in graveled Built-Up roof of 1925 building.
Roof repair	lump	1	$ 5,000.00	$ 5,000.00	Granulated Modified Bitumen roof - in good condition. Investigate and repair leaks above kitchen. Ref. Tremco roof area B designation
Subtotal Priority 1:				$32,500	

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Soffits					
1954 addition soffits at north & south	s.f.	1,400	$ 5.00	$ 7,000.00	Paint soffit board, seal joints between masonry and board to eliminate bee nesting.
Masonry					

Chimney Tuck-point	s.f.	250	$ 20.00	$ 5,000.00	Top 12 ft.+/- of chimney - 90 ft. above grade.
Walls/brick Tuck-point 1921, 1925, 1971	s.f.	300	$ 9.00	$ 2,700.00	Various locations
Walls/brick Tuck-point	lump	250	$ 9.00	$ 2,250.00	Typical at lower wall of 1954 addition
Expansion Joint Seal	lump	1	$ 1,500.00	$ 1,500.00	Minor joint back-up / seal
Replace Lintels	l.f.	40	$300.00	$ 12,000.00	Lintels at north & south entries are rusted and expanding. Replace with galvanized and rebuild associated masonry.
Wall Openings					
Replace Windows	s.f.	8,760	$ 55.00	$ 481,800.00	1974 replacement windows, single glazed - air & water infiltration.
Replace misc exterior wall louvers	lump	1	$ 4,000.00	$ 4,000.00	Small misc. louvers all elevations
Replace doors & Hardware	each	10	$ 1,500.00	$ 15,000.00	
Subtotal Priority 2:				$531,250	

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Masonry					
Stone repair	s.f	150	$ 100.00	$ 15,000.00	Refurbish / Replace decorative stone at entries, cornices and copings -
Stone stabilization / protection	s.f.	1,000	$ 25.00	$ 25,000.00	Protect scaling cornice stone @ 1921 & 1925 buildings
Wall Openings					
Replace doors & hardware	each	20	$ 1,500.00	$ 30,000.00	
Roofing					

Replace MB sloped roofing	s.f	800	$	11.00	$	8,800.00	Sloped roof section at west elevation pediment, within Tremco roof area A.
Replace Built-Up roofing. Includes spot deck repair or replacement	s.f	5,360	$	15.00	$	80,400.00	Gravel covered BU roofs - currently in fair condition. Refurbish / replace corroded metal decking. Reference Tremco roof area D- Replace 2011 +/-
Recoat, repair Built-Up roofing	s.f	16,215	$	4.00	$	64,860.00	1996 Gravel covered BU roof - currently in fair condition. Reference Tremco roof area A.
Subtotal Priority 3:						$224,060	

E: Building Interior

Total Priority 1-3: next 6 years

$769,516

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
ADA- Provide accessible toilet stalls	each	10	$ 1,200.00	$ 12,000.00	All Group Restrooms.
ADA - Provide accessible restroom sinks	each	10	$ 750.00	$ 7,500.00	Where accessible stalls are provided
ADA - Provide accessible drinking fountains	each	4	$ 2,500.00	$ 10,000.00	Minimum 1 per floor. Locate central to student areas.
ADA - Provide accessible toilet room	each	9	$ 17,000.00	$ 153,000.00	At existing noncompliant toilet room
ADA - Replace interior signage	bldg s.f.	77,612	$ 0.11	$ 8,537.32	At all rooms. Rehang existing egress diagrams
ADA - Provide new elevator and hoistway	each	1	$ 165,000.00	$ 165,000.00	Access lower and second floors
ADA - Install platform lift	each	1	$ 18,000.00	$ 18,000.00	At stage
ADA - Replace inaccessible door hardware	each	11	$ 450.00	$ 4,950.00	Knobs and thumb levers
Replace VCT	s.f.	9,030	$ 2.50	$ 22,575.00	Scuffed, discolored, broken
Remove linoleum, replace with VCT	s.f.	34	$ 3.50	$ 119.00	Cracks, spalling, general surface deterioration
Refinish wood floor	s.f.	170	$ 3.00	$ 510.00	Complete loss of finish
Correct wood substrate issues	s.f.	725	$ 5.00	$ 3,625.00	Buckling, loose boards
Replace wood partition wall	s.f.	92	$ 5.50	$ 506.00	Basement storage

Replace ACT Poor condition	s.f.	4,375	$ 2.75	$ 12,031.25	Tiles or grid damaged/missing
Repair plaster ceiling - poor condition (4)	s.f.	1,330	$ 12.50	$ 16,625.00	Peeling paint, holes, water damage
Replace metal toilet partitions	each	84	$ 1,000.00	$ 84,000.00	Restrooms
Replace base cabinet	l.f.	84	$ 350.00	$ 29,400.00	Wet areas, chipped countertops
Replace wall cabinet	l.f.	298	$ 200.00	$ 59,600.00	Loose, damaged doors, loss of finish
Replace tall cabinet	l.f.	21	$ 450.00	$ 9,450.00	Loose, damaged doors, loss of finish
Replace shelving	l.f.	45	$ 5.00	$ 225.00	Damaged, sagging
Replace freestanding cubbies	each	6	$ 350.00	$ 2,100.00	Damaged, loss of finish
Replace vinyl stair treads	l.f.	6	$ 15.00	$ 90.00	Cracked, dirty, loose
Clean and repair corrosion on stair stringer and risers	each per floor	2	$ 750.00	$ 1,500.00	Repair and prime corrosion, paint stringers
Replace access panel	each	2	$ 350.00	$ 700.00	Corroded
Subtotal Priority 1:				$622,044	

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace carpet	s.y.	426	$ 27.00	$ 11,490.00	Stained, frayed
Repair and Refinish terrazzo	s.f.	920	$ 11.00	$ 10,120.00	Small cracks/chips, dulled finish
Repair and repaint/reseal concrete floor - fair condition	s.f.	3,250	$ 1.50	$ 4,875.00	Small cracks/chips, loss of finish
Repair and repaint/reseal concrete floor - poor condition	s.f.	2,430	$ 7.00	$ 17,010.00	Cracks, spalling, general surface deterioration
Spot repair ceramic tile base	l.f.	70	$ 11.00	$ 770.00	All toilet rooms

Spot repair ceramic tile wall	s.f.	16	$	12.00	$	192.00	All toilet rooms
Repair plaster and gypsum board walls - poor condition	s.f.	200	$	7.50	$	1,500.00	Specific areas of damage
Repair and repaint masonry wall - fair condition	floor area s.f.	5,045	$	2.50	$	12,612.50	Hairline cracks, peeling paint
Repair and repaint masonry wall - poor condition	floor area s.f.	2,615	$	6.00	$	15,690.00	Media Center
ACT spot grid repair	s.f.	104	$	1.50	$	156.00	Bent and missing elements
Repair plaster ceiling - fair condition (3)	s.f.	1,050	$	3.00	$	3,150.00	Peeling paint, minor damage
Spot replace ACT tiles	each	132	$	1.50	$	198.00	Water damage, vandalism, wear and tear
Refinish wood paneling	s.f.	2,386	$	6.50	$	15,509.00	Addition classrooms
Paint exposed structure	s.f.	3,185	$	7.50	$	23,887.50	Peeling paint, minor cracking
Remove unused frame and install cased opening	each	2	$	200.00	$	400.00	First floor corridor
Repair minor damage to wood doors	each	4	$	50.00	$	200.00	Broken glass, loose or missing muntins.
Replace wood door	each	2	$	750.00	$	1,500.00	Gouges, poor retrofitting
Replace metal frame and metal door	each	2	$	765.00	$	1,530.00	Gouges, dents, poor retrofitting
Replace metal frame and wood door.	each	3	$	865.00	$	2,595.00	Gouges, denting, poor retrofitting
Subtotal Priority 2:						$123,385	

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace vinyl base (3-4)	l.f.	1,362	$ 2.50	$ 3,405.00	Scuffed, discolored, delaminating
Replace carpet base	l.f.	1,578	$ 4.00	$ 6,312.00	Fraying, delamination
Repair terrazzo base	l.f.	233	$ 30.00	$ 6,990.00	Cracks, chips, loss of finish
Repair concrete base	l.f.	492	$ 15.00	$ 7,380.00	Cracks, chips, loss of finish
Subtotal Priority 3:				$24,087	

F: Equipment & Furnishings

Total Priority 1-3: next 6 years

$225,160

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace loose furnishings	bldg s.f.	77,612	$ 2.50	$ 194,030.00	
Replace window blinds	elev s.f.	6,076	$ 5.00	$ 30,380.00	
Kitchen equipment replacement	lump	1	$ 750.00	$ 750.00	Includes stove replacement
Subtotal Priority 2:				$225,160	

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

G: Fire Protection

Total Priority 1-3: next 6 years

$279,250

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Sprinkler System	S.F.	74000	$ 3.50	$ 259,000.00	
Fire Service Line	L.F.	150	$ 35.00	$ 5,250.00	
Fire Valve Vault	Lump	1	$ 15,000.00	$ 15,000.00	
Subtotal Priority 3:				$279,250	

H: Plumbing

Total Priority 1-3: next 6 years
61,700

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Add Building Backflow Preventer	Lump	1	$ 5,000.00	$ 5,000.00	
Replace Faucets, Hose Bibbs and Flush Valves	Each	126	$ 450.00	$ 56,700.00	
Subtotal Priority 1:				$61,700	

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
No items					

I: Heating, Ventilating & A/C

Total Priority 1-3: next 6 years
460,000

Priority 1: next 0-2 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Add Fire Dampers at Existing Shafts	Each	126	$ 500.00	$ 63,000.00	
Replace Controls Air Compressor	Lump	1	$ 6,000.00	$ 6,000.00	
Duct Return Air in 1954 Addition	S.F.	11500	$ 3.50	$ 40,250.00	
Subtotal Priority 1:				$109,250	

Priority 2: next 3-4 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace Gym & Auditorium AHUs & Add Return Air	Lump	1	$ 166,000.00	$ 166,000.00	
Replace Unit Ventilators	Each	24	$ 7,000.00	$ 168,000.00	
Replace Toilet Exhaust	Each	10	$ 1,500.00	$ 15,000.00	
Subtotal Priority 2:				$349,000	

Priority 3: next 5-6 years

Item	*Unit*	*Qty.*	*Unit Cost*	*Assessed Cost*	*Comments*
Replace Media Center Ceiling Diffusers	Each	7	$ 250.00	$ 1,750.00	
Subtotal Priority 3:				$1,750	

J: C.E.I. Service

Total Priority 1-3: next 6 years

$25,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Consolidate and Upgrade	$25,000.00	Must Package With Items "K" & "L"
Subtotal Priority 3:	$25,000	

K: Main Power Distribution Equipment

Total Priority 1-3: next 6 years

$90,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Consolidate and Upgrade	$90,000.00	Must Package with Items "J" & "L" (Several NEC violations)
Subtotal Priority 3:	$90,000	

L: Emergency Power Distribution and Wiring

Total Priority 1-3: next 6 years

$20,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Expand and Automate	$20,000.00	Must Package With Items "J" & "K"
Subtotal Priority 3:	$20,000	

M: Branch Circuit Panels and Wiring

Total Priority 1-3: next 6 years

$25,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Replace Obsolete Boiler Room Panels	$8,000.00	
Replace 4 Obsolete Branch Panels	$17,000.00	
Subtotal Priority 3:	$25,000	

N: Kitchen Lighting and Power

Total Priority 1-3: next 6 years

$300

Priority 1: next 0-2 years

Item	*Assessed Cost*	*Comments*
Retrofit with GFCI Receptacles	$300.00	For Public Safety
Subtotal Priority 1:	$300	

O: Exterior Lighting

Total Priority 1-3: next 6 years

$7,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
1 Additional Wallpack	$1,000.00	
5 Canopy Lighting Retrofits	$5,000.00	
1 Additional Canopy Fixture/Wiring	$1,000.00	
Subtotal Priority 3:	$7,000	

P: Interior Lighting

Total Priority 1-3: next 6 years

$127,000

Priority 1: next 0-2 years

Item	*Assessed Cost*	*Comments*
Restore and Wash Classroom Fixtures (14 rms)	$15,000.00	
Replace all Classroom Light Switches	$5,000.00	
Replace all Twin-Tube Fixtures	$12,000.00	
Upgrade Lighting in 2 CR's & Salvage Lenses	$10,000.00	
Subtotal Priority 1:	$42,000	

Priority 2: next 3-4 years

Item	*Assessed Cost*	*Comments*
Install Motion Detectors in 8 Classrooms	$5,000.00	
Upgrade Lighting in 3 CR's & Salvage Lenses	$15,000.00	
Replace Lighting in 8 Restrooms	$12,000.00	
Upgrade Boiler Room & Fan Room Lighting	$15,000.00	
Subtotal Priority 2:	$47,000	

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Upgrade Auditorium Lighting	$15,000.00	
Auditorium Fluorescent Walk-thru Lighting	$4,000.00	
Upgrade Media Center Lighting	$14,000.00	
Media Center Fluorescent Walk-thru Lighting	$5,000.00	
Subtotal Priority 3:	$38,000	

Q: Gymnasium Lighting

Total Priority 1-3: next 6 years

$23,500

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Replace with Pulse Start Metal Halide Fixtures	$20,000.00	Mercury Vapor lamps are Obsolete
Fluorescent Walk-thru Lighting	$3,500.00	
Subtotal Priority 3:	$23,500	

R: Exit Signs and Emergency Egress Lighting

Total Priority 1-3: next 6 years

$51,000

Priority 1: next 0-2 years

Item	*Assessed Cost*	*Comments*
Emergency Power Exit Signs	$4,000.00	
Emergency Egress Lighting	$47,000.00	
Subtotal Priority 1:	$51,000	

S: Fire Alarm System

Total Priority 1-3: next 6 years

$0

Satisfactory

T: Security System

Total Priority 1-3: next 6 years

$38,500

Priority 2: next 3-4 years

Item	*Assessed Cost*	*Comments*
New IP Based CCTV Surveillance System	$38,500.00	Does not include the Central Office (BOE) equipment (1x cost of $40K for all sites).
Subtotal Priority 2:	$38,500	

U: Public Address System

Total Priority 1-3: next 6 years

$2,000

Priority 1: next 0-2 years

Item	*Assessed Cost*	*Comments*
Retrofit with Best-Grade UPS Module	$2,000.00	
Subtotal Priority 1:	$2,000	

V: Cable TV System

Total Priority 1-3: next 6 years

$0

Satisfactory

W: Data and Telephone Systems

Total Priority 1-3: next 6 years

$2,500

Priority 2: next 2-4 years

Item	*Assessed Cost*	*Comments*
Replace UPS System Batteries	$2,500.00	Required every 4-5 years
Subtotal Priority 2:	$2,500	

X: Clocks and Program Bells

Total Priority 1-3: next 6 years

$15,000

Priority 3: next 5-6 years

Item	*Assessed Cost*	*Comments*
Wireless Clock System	$15,000.00	With P.A. System Interface
Subtotal Priority 3:	$15,000	