

Building Information - Shaker Heights City (44750) - Shaker Heights High School

Program Type	Classroom Facilities Assistance Program (CFAP) - Regular
Setting	Urban
Assessment Name	Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)
Assessment Date (on-site; non-EEA)	2015-02-09
Kitchen Type	Full Kitchen
Cost Set:	2016
Building Name	Shaker Heights High School
Building IRN	34108
Building Address	15911 Aldersyde Dr
Building City	Shaker Heights
Building Zipcode	44120
Building Phone	(216) 295-4200
Acreage	17.70
Current Grades:	9-12
Teaching Stations	125
Number of Floors	4
Student Capacity	2012
Current Enrollment	1735
Enrollment Date	2014-04-23
Enrollment Date is the date in which the current enrollment was taken.	
Number of Classrooms	95
Historical Register	NO
Building's Principal	Michael Griffith
Building Type	High

[Next Page](#)

Building Pictures - Shaker Heights City(44750) - Shaker Heights High School (34108)

North elevation photo:



East elevation photo:



South elevation photo:



West elevation photo:



GENERAL DESCRIPTION

324,956 Total Existing Square Footage
1930,1930,1952,1954,1961,1969,1998,2007 Building Dates
9-12 Grades
1,735 Current Enrollment
125 Teaching Stations
17.70 Site Acreage

PROBABLE INFLATION COST SUMMARY FOR SUMMER 2022

The building assessment costs in this report are based on OFCC Assessment Cost Guidelines 2021. Based on current market conditions, the following cost projections have been made for Summer 2022 construction. Cost years beyond 2022 have been calculated with a 3.5% inflation rate.

Facility Cost Assessment Adjusted for Inflation through Summer 2022		Estimated 2022 Assesment Cost	Cost/sf.
A	Heating System	\$13,211,805.46	\$40.66
B	Roofing	\$2,173,182.25	\$6.69
C	Ventilation / Air Conditioning	\$0.00	\$0.00
D	Electrical Systems	\$5,480,836.92	\$16.87
E	Plumbing and Fixtures	\$2,615,444.68	\$8.05
F	Windows	\$156,967.72	\$0.48
G	Structure: Foundation	\$0.00	\$0.00
H	Structure: Walls and Chimneys	\$0.00	\$0.00
I	Structure: Floors and Roofs	\$0.00	\$0.00
J	General Finishes	\$6,745,303.19	\$20.76
K	Interior Lighting	\$1,852,249.20	\$5.70
L	Security Systems	\$1,061,631.25	\$3.27
M	Emergency / Egress Lighting	\$348,596.55	\$1.07
N	Fire Alarm	\$522,894.82	\$1.61
O	Handicapped Access	\$1,266,860.46	\$3.90
P	Site Condition	\$588,371.36	\$1.81
Q	Sewage Systems	\$0.00	\$0.00
R	Water Supply	\$0.00	\$0.00
S	Exterior Doors	\$54,516.00	\$0.17
T	Hazardous Material	\$668,245.60	\$2.06
U	Life Safety	\$1,650,277.78	\$5.08
V	Loose Furnishings	\$1,617,757.50	\$4.98
W	Technology	\$2,119,183.41	\$6.52
X	Construction Contingency / Non-Construction Cost	\$10,201,308.30	\$31.39
ESCALATED OFCC GUIDELINE BUDGET (2021) - OME		\$52,335,432.45	\$161.05

OFCC 2021 COST GUIDELINES BUDGET

\$45,859,334.05

VARIANCE

\$6,476,098.40

VARIANCE %

14.12%

UNIT PRICE CONCERNS

Total

\$1,605,802.64

REV OFCC GUIDELINE UNIT PRICE BUDGET - OME

\$53,941,235.09

\$166.00

OFCC 2021 COST GUIDELINES BUDGET

\$45,859,334.05

VARIANCE

\$8,081,901.04

VARIANCE %

17.62%

LOCALLY FUNDED INITIATIVES

Total		\$0.00	
REV OFCC GUIDELINE UNIT PRICE BUDGET - OME		\$53,941,235.09	\$166.00
OFCC 2021 COST GUIDELINES BUDGET		\$45,859,334.05	
VARIANCE		\$8,081,901.04	
VARIANCE %		17.62%	

2022 Costs	\$53,941,235.09
2023 Costs with 3.5% inflation	\$55,829,178.32
2024 Costs with 3.5% inflation	\$57,783,199.56
2025 Costs with 3.5% inflation	\$59,805,611.54
2026 Costs with 3.5% inflation	\$61,898,807.95

The school is situated in a residential neighborhood of Shaker Heights. The site is a 17.7 acre oval wrapped mostly by residences and by a district school across the street. The structure of the building consists of poured-in-place concrete columns. The floors are framed with poured concrete deck. Walls sit atop poured concrete footers throughout and are backed up by CMU. The existing 1930 building and all subsequent additions consistently reflect Georgian style design. The entirety of the building's envelope is clad with reddish brown brick and punctuated with regularly spaced rectangular window openings having stone keystones and sills. The recently replaced windows reflect the original divided lights and have in interior wood finish with white painted frames on the exterior. Entrances to the building incorporate classical elements such as pediments and column-supported overhangs. Original sloped roof portions of the building are covered with slate. Most flat roof areas are covered with built-up systems that have been subsequently coated with a liquid applied reflective material. Portions of the flat roof with more recent work have been covered in a white adhered membrane. The domestic water supply system is galvanized and copper and is tied to the city system. There is no backflow preventer in the building, but there is a pressure reducing valve on the 6" incoming water service. The system provides adequate pressure and capacity for the facility's needs. The facility is not equipped with an automatic fire suppression system, and the existing water supply system will not provide adequate support for the future system. The overall electrical main equipment is in good condition. The panel board system is beyond the normal equipment life and should be replaced. The oldest areas of the building do not have any spare electrical capacity. About half of the classrooms do not meet OSDM requirements in supporting the current needs of the school and will be inadequate to meet the facility's future needs. The existing system for the overall facility consists of three, 1961 Titus-Atlas gas-fired steam boilers in fair condition considering their age. The capacity of each is 10,500 MBH. The steam boilers serve unit ventilators in each classroom and several air handling units that serve larger spaces except for the North Gym (1999), the main Office, and the East Science wing. The North Gym, main office and science wing each have a steam to hot water heat exchanger and associated pumps that provide hot water heat to these areas. The classrooms in these areas have unit ventilators with hot water heat. The steam unit ventilators are in poor condition. The boilers and air handling units are controlled with DDC controls and the rest of the controls are pneumatic and in poor condition. Each ventilator has an outside air grille at the exterior wall or outside air is ducted from the attic to an interior ventilator. Overall, the ventilators and the air handling units do not provide the required outside air delivery to meet OBC mechanical code. The DDC controls were added two years ago under an energy performance contract. The staff indicates the controls do not always work and they operate the equipment in "hand". On the day of the site visit, the staff turned off the boilers because the building was warm enough and no longer required the heating on. The pipe system does not provide a capacity for simultaneous heating and cooling operation which is not compliant with the OSDM requirements. The staff indicated that the site does not contain underground fuel tanks.

In the basement mechanical area, large vertical shearing cracks were observed on at least one concrete pier. One of the cracks is 1/4" wide and extends vertically several inches. This condition should be evaluated by a structural engineer. Additionally, during a large rainfall, the water backs up into the lower level boiler room through the floor drains.

[Previous Page](#)

[Next Page](#)

Building Construction Information - Shaker Heights City (44750) - Shaker Heights High School (34108)

Name	Year	Handicapped Access	Floors	Square Feet	Non OSDM Addition	Built Under ELPP
Auditorium	1930	yes	2	9,296	yes	no
Original Building	1930	yes	4	169,342	no	no
1952	1952	yes	2	8,556	no	no
1954	1954	yes	2	17,553	no	no
1961	1961	yes	2	53,399	no	no
1969	1969	yes	2	30,486	no	no
1998	1998	yes	1	27,042	no	no
2007	2007	yes	1	9,282	no	no

[Previous Page](#)

[Next Page](#)

Building Component Information - Shaker Heights City (44750) - Shaker Heights High School (34108)

Addition	Auditorium Fixed Seating	Corridors	Agricultural Education Lab	Primary Gymnasium	Media Center	Vocational Space	Student Dining	Kitchen	Natatorium	Indoor Tracks	Adult Education	Board Offices	Outside Agencies	Auxiliary Gymnasium
Auditorium (1930)	9296													
Original Building (1930)		30505					3307	2975						11664
1952 (1952)		219												
1954 (1954)		265												
1961 (1961)		8218			7477									1007
1969 (1969)		6541												
1998 (1998)		5874		13630										
2007 (2007)		324					3718							
Total	9,296	51,946	0	13,630	7,477	0	7,025	2,975	0	0	0	0	0	12,671
Master Planning Considerations		Major cracks were observed in on of the foundation piers in the mechanical level. The separation is approximately 1/4" wide and several inches deep.												

[Previous Page](#)

[Next Page](#)

Existing CT Programs for Assessment

[Next Page](#)

[Previous Page](#)

Program Type	Program Name	Related Space	Square Feet
No Records Found			

Legend:

Not in current design manual

In current design manual but missing from assessment

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

Building Summary - Shaker Heights High School (34108)

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
				Suitability Appraisal Summary			
				Section			
				Points Possible			
				Points Earned			
				Percentage			
				Rating Category			
				Cover Sheet			
				—			
				—			
				—			
				—			
1.0 The School Site				100			
				67			
				67%			
				Borderline			
2.0 Structural and Mechanical Features				200			
				146			
				73%			
				Satisfactory			
3.0 Plant Maintainability				100			
				89			
				89%			
				Satisfactory			
4.0 Building Safety and Security				200			
				142			
				71%			
				Satisfactory			
5.0 Educational Adequacy				200			
				142			
				71%			
				Satisfactory			
6.0 Environment for Education				200			
				150			
				75%			
				Satisfactory			
LEED Observations				—			
				—			
				—			
Commentary				—			
				—			
				—			
Total				1000			
				736			
				74%			
				Satisfactory			
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor			
				102.31%			
				Cost to Renovate (Cost Factor applied)			
				\$46,918,684.65			
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							
FACILITY ASSESSMENT							
Cost Set: 2016				Rating			
				Dollar			
				Assessment C			
A. Heating System				3			
				\$11,038,130.72			
B. Roofing				3			
				\$1,966,313.00			
C. Ventilation / Air Conditioning				1			
				\$0.00			
D. Electrical Systems				3			
				\$4,692,497.36			
E. Plumbing and Fixtures				3			
				\$2,272,052.00			
F. Windows				1			
				\$137,700.00			
G. Structure: Foundation				1			
				\$0.00			
H. Structure: Walls and Chimneys				1			
				\$0.00			
I. Structure: Floors and Roofs				1			
				\$0.00			
J. General Finishes				3			
				\$6,283,335.40			
K. Interior Lighting				3			
				\$1,624,780.00			
L. Security Systems				3			
				\$926,124.60			
M. Emergency/Egress Lighting				3			
				\$324,956.00			
N. Fire Alarm				3			
				\$487,434.00			
O. Handicapped Access				2			
				\$1,025,164.20			
P. Site Condition				2			
				\$543,490.00			
Q. Sewage System				1			
				\$0.00			
R. Water Supply				1			
				\$0.00			
S. Exterior Doors				2			
				\$44,250.00			
T. Hazardous Material				1			
				\$668,245.60			
U. Life Safety				3			
				\$1,411,838.70			
V. Loose Furnishings				3			
				\$1,578,300.00			
W. Technology				3			
				\$1,830,828.00			
X. Construction Contingency / Non-Construction Cost				1			
				\$9,003,894.46			
Total							
				\$45,859,334.04			

[Previous Page](#)

Auditorium (1930) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
Addition				Date	HA	Number of Floors	Current Square Feet
Auditorium				1930	yes	2	9,296
Original Building				1930	yes	4	169,342
1952				1952	yes	2	8,556
1954				1954	yes	2	17,553
1961				1961	yes	2	53,399
1969				1969	yes	2	30,486
1998				1998	yes	1	27,042
2007				2007	yes	1	9,282
Total							324,956
				Suitability Appraisal Summary			
				Section			
				Points Possible			
				Points Earned			
				Percentage			
				Rating			
				Category			
				Cover Sheet			
				1.0 The School Site			
				2.0 Structural and Mechanical Features			
				3.0 Plant Maintainability			
				4.0 Building Safety and Security			
				5.0 Educational Adequacy			
				6.0 Environment for Education			
				LEED Observations			
				Commentary			
				Total			
				1000			
				736			
				74%			
				Satisfactory			
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor			
				102.31%			
				Cost to Renovate (Cost Factor applied)			
				\$947,823.53			
				<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>			
FACILITY ASSESSMENT				Cost Set: 2016		Dollar	
				Rating		Assessment	
				C		C	
A. Heating System				3		\$242,811.52	
B. Roofing				3		\$133,410.20	
C. Ventilation / Air Conditioning				1		\$0.00	
D. Electrical Systems				3		\$150,874.08	
E. Plumbing and Fixtures				3		\$0.00	
F. Windows				1		\$0.00	
G. Structure: Foundation				1		\$0.00	
H. Structure: Walls and Chimneys				1		\$0.00	
I. Structure: Floors and Roofs				1		\$0.00	
J. General Finishes				3		\$78,086.40	
K. Interior Lighting				3		\$46,480.00	
L. Security Systems				3		\$26,493.60	
M. Emergency/Egress Lighting				3		\$9,296.00	
N. Fire Alarm				3		\$13,944.00	
O. Handicapped Access				2		\$7,859.20	
P. Site Condition				2		\$0.00	
Q. Sewage System				1		\$0.00	
R. Water Supply				1		\$0.00	
S. Exterior Doors				2		\$0.00	
T. Hazardous Material				1		\$5,529.60	
U. Life Safety				3		\$29,747.20	
V. Loose Furnishings				3		\$0.00	
W. Technology				3		\$0.00	
X. Construction Contingency / Non-Construction Cost				1		\$181,891.35	
Total						\$926,423.15	

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

Original Building (1930) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)		
Name: Shaker Heights High School				Contact: Michael Griffith				
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200				
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller		
				Date Revised: 2021-11-03		By: Bill Prenosil		
Current Grades		9-12	Acreage:		17.70			
Proposed Grades		N/A	Teaching Stations:		125			
Current Enrollment		1735	Classrooms:		95			
Projected Enrollment		N/A						
Addition		Date	HA	Number of Floors	Current Square Feet			
<u>Auditorium</u>		1930	yes	2	9,296			
Original Building		1930	yes	4	169,342			
<u>1952</u>		1952	yes	2	8,556			
<u>1954</u>		1954	yes	2	17,553			
<u>1961</u>		1961	yes	2	53,399			
<u>1969</u>		1969	yes	2	30,486			
<u>1998</u>		1998	yes	1	27,042			
<u>2007</u>		2007	yes	1	9,282			
Total					324,956			
		*HA	=	Handicapped Access				
		*Rating	=1	Satisfactory				
			=2	Needs Repair				
			=3	Needs Replacement				
		*Const P/S	=	Present/Scheduled Construction				
Suitability Appraisal Summary								
				Section	Points Possible	Points Earned	Percentage	Rating Category
				<u>Cover Sheet</u>	—	—	—	—
				<u>1.0 The School Site</u>	100	67	67%	Borderline
				<u>2.0 Structural and Mechanical Features</u>	200	146	73%	Satisfactory
				<u>3.0 Plant Maintainability</u>	100	89	89%	Satisfactory
				<u>4.0 Building Safety and Security</u>	200	142	71%	Satisfactory
				<u>5.0 Educational Adequacy</u>	200	142	71%	Satisfactory
				<u>6.0 Environment for Education</u>	200	150	75%	Satisfactory
				<u>LEED Observations</u>	—	—	—	—
				<u>Commentary</u>	—	—	—	—
				Total	1000	736	74%	Satisfactory
				Enhanced Environmental Hazards Assessment Cost Estimates				
				C=Under Contract				
				Renovation Cost Factor				
				102.31%				
				Cost to Renovate (Cost Factor applied)				
				\$25,340,952.91				
				<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>				
FACILITY ASSESSMENT								
Cost Set: 2016				Rating	Dollar Assessment			
	A.	<u>Heating System</u>		3	\$5,802,949.04 -			
	B.	<u>Roofing</u>		3	\$636,638.10 -			
	C.	<u>Ventilation / Air Conditioning</u>		1	\$0.00 -			
	D.	<u>Electrical Systems</u>		3	\$2,748,420.66 -			
	E.	<u>Plumbing and Fixtures</u>		3	\$1,328,094.00 -			
	F.	<u>Windows</u>		1	\$132,200.00 -			
	G.	<u>Structure: Foundation</u>		1	\$0.00 -			
	H.	<u>Structure: Walls and Chimneys</u>		1	\$0.00 -			
	I.	<u>Structure: Floors and Roofs</u>		1	\$0.00 -			
	J.	<u>General Finishes</u>		3	\$3,585,420.40 -			
	K.	<u>Interior Lighting</u>		3	\$846,710.00 -			
	L.	<u>Security Systems</u>		3	\$482,624.70 -			
	M.	<u>Emergency/Egress Lighting</u>		3	\$169,342.00 -			
	N.	<u>Fire Alarm</u>		3	\$254,013.00 -			
	O.	<u>Handicapped Access</u>		2	\$518,008.40 -			
	P.	<u>Site Condition</u>		2	\$529,490.00 -			
	Q.	<u>Sewage System</u>		1	\$0.00 -			
	R.	<u>Water Supply</u>		1	\$0.00 -			
	S.	<u>Exterior Doors</u>		2	\$21,750.00 -			
	T.	<u>Hazardous Material</u>		1	\$241,534.20 -			
	U.	<u>Life Safety</u>		3	\$779,669.40 -			
	V.	<u>Loose Furnishings</u>		3	\$846,710.00 -			
	W.	<u>Technology</u>		3	\$982,183.60 -			
	X.	<u>Construction Contingency / Non-Construction Cost</u>		1	\$4,863,036.27 -			
Total					\$24,768,793.77			

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

1952 (1952) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
				Suitability Appraisal Summary			
				Section			
				Points Possible			
				Points Earned			
				Percentage			
				Rating			
				Category			
				<u>Cover Sheet</u>			
				1.0 The School Site			
				2.0 Structural and Mechanical Features			
				3.0 Plant Maintainability			
				4.0 Building Safety and Security			
				5.0 Educational Adequacy			
				6.0 Environment for Education			
				LEED Observations			
				Commentary			
Total				1000			
				736			
				74%			
				Satisfactory			
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor			
				102.31%			
				Cost to Renovate (Cost Factor applied)			
				\$1,282,350.08			
The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.							
FACILITY ASSESSMENT							
Cost Set: 2016				Rating			
				Dollar Assessment			
				C			
A. Heating System				3			
				\$291,930.72			
B. Roofing				3			
				\$62,360.00			
C. Ventilation / Air Conditioning				1			
				\$0.00			
D. Electrical Systems				3			
				\$138,863.88			
E. Plumbing and Fixtures				3			
				\$62,892.00			
F. Windows				1			
				\$0.00			
G. Structure: Foundation				1			
				\$0.00			
H. Structure: Walls and Chimneys				1			
				\$0.00			
I. Structure: Floors and Roofs				1			
				\$0.00			
J. General Finishes				3			
				\$151,441.20			
K. Interior Lighting				3			
				\$42,780.00			
L. Security Systems				3			
				\$24,384.60			
M. Emergency/Egress Lighting				3			
				\$8,556.00			
N. Fire Alarm				3			
				\$12,834.00			
O. Handicapped Access				2			
				\$24,761.20			
P. Site Condition				2			
				\$0.00			
Q. Sewage System				1			
				\$0.00			
R. Water Supply				1			
				\$0.00			
S. Exterior Doors				2			
				\$0.00			
T. Hazardous Material				1			
				\$17,755.60			
U. Life Safety				3			
				\$76,344.20			
V. Loose Furnishings				3			
				\$42,780.00			
W. Technology				3			
				\$49,624.80			
X. Construction Contingency / Non-Construction Cost				1			
				\$246,088.42			
Total							
				\$1,253,396.62			

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

1954 (1954) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
Addition				Date	HA	Number of Floors	Current Square Feet
<u>Auditorium</u>				1930	yes	2	9,296
<u>Original Building</u>				1930	yes	4	169,342
<u>1952</u>				1952	yes	2	8,556
1954				1954	yes	2	17,553
<u>1961</u>				1961	yes	2	53,399
<u>1969</u>				1969	yes	2	30,486
<u>1998</u>				1998	yes	1	27,042
<u>2007</u>				2007	yes	1	9,282
Total							324,956
				Suitability Appraisal Summary			
				Section	Points Possible	Points Earned	Percentage Rating Category
				<u>Cover Sheet</u>	—	—	—
				<u>1.0 The School Site</u>	100	67	67% Borderline
				<u>2.0 Structural and Mechanical Features</u>	200	146	73% Satisfactory
				<u>3.0 Plant Maintainability</u>	100	89	89% Satisfactory
				<u>4.0 Building Safety and Security</u>	200	142	71% Satisfactory
				<u>5.0 Educational Adequacy</u>	200	142	71% Satisfactory
				<u>6.0 Environment for Education</u>	200	150	75% Satisfactory
				<u>LEED Observations</u>	—	—	—
				<u>Commentary</u>	—	—	—
				Total	1000	736	74% Satisfactory
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor 102.31%			
				Cost to Renovate (Cost Factor applied) \$2,639,996.39			
				<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>			
FACILITY ASSESSMENT				Rating	Dollar Assessment		
Cost Set: 2016							
A.	<u>Heating System</u>			3	\$598,908.36 -		
B.	<u>Roofing</u>			3	\$115,478.80 -		
C.	<u>Ventilation / Air Conditioning</u>			1	\$0.00 -		
D.	<u>Electrical Systems</u>			3	\$284,885.19 -		
E.	<u>Plumbing and Fixtures</u>			3	\$164,871.00 -		
F.	<u>Windows</u>			1	\$0.00 -		
G.	<u>Structure: Foundation</u>			1	\$0.00 -		
H.	<u>Structure: Walls and Chimneys</u>			1	\$0.00 -		
I.	<u>Structure: Floors and Roofs</u>			1	\$0.00 -		
J.	<u>General Finishes</u>			3	\$310,688.10 -		
K.	<u>Interior Lighting</u>			3	\$87,765.00 -		
L.	<u>Security Systems</u>			3	\$50,026.05 -		
M.	<u>Emergency/Egress Lighting</u>			3	\$17,553.00 -		
N.	<u>Fire Alarm</u>			3	\$26,329.50 -		
O.	<u>Handicapped Access</u>			2	\$96,710.60 -		
P.	Site Condition			2	\$0.00 -		
Q.	<u>Sewage System</u>			1	\$0.00 -		
R.	<u>Water Supply</u>			1	\$0.00 -		
S.	Exterior Doors			2	\$0.00 -		
T.	<u>Hazardous Material</u>			1	\$39,805.30 -		
U.	<u>Life Safety</u>			3	\$91,169.60 -		
V.	<u>Loose Furnishings</u>			3	\$87,765.00 -		
W.	<u>Technology</u>			3	\$101,807.40 -		
X.	<u>Construction Contingency / Non-Construction Cost</u>			1	\$506,626.50 -		
Total					\$2,580,389.40		

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

1961 (1961) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
Addition				Date	HA	Number of Floors	Current Square Feet
<u>Auditorium</u>				1930	yes	2	9,296
<u>Original Building</u>				1930	yes	4	169,342
<u>1952</u>				1952	yes	2	8,556
<u>1954</u>				1954	yes	2	17,553
1961				1961	yes	2	53,399
<u>1969</u>				1969	yes	2	30,486
<u>1998</u>				1998	yes	1	27,042
<u>2007</u>				2007	yes	1	9,282
Total							324,956
				Suitability Appraisal Summary			
				Section	Points Possible	Points Earned	Percentage Rating Category
				<u>Cover Sheet</u>	—	—	—
				<u>1.0 The School Site</u>	100	67	67% Borderline
				<u>2.0 Structural and Mechanical Features</u>	200	146	73% Satisfactory
				<u>3.0 Plant Maintainability</u>	100	89	89% Satisfactory
				<u>4.0 Building Safety and Security</u>	200	142	71% Satisfactory
				<u>5.0 Educational Adequacy</u>	200	142	71% Satisfactory
				<u>6.0 Environment for Education</u>	200	150	75% Satisfactory
				<u>LEED Observations</u>	—	—	—
				<u>Commentary</u>	—	—	—
				Total	1000	736	74% Satisfactory
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor 102.31%			
				Cost to Renovate (Cost Factor applied) \$7,759,064.15			
				<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>			
FACILITY ASSESSMENT				Rating	Dollar Assessment C		
Cost Set: 2016							
A.	<u>Heating System</u>			3	\$1,821,973.88 -		
B.	<u>Roofing</u>			3	\$320,759.50 -		
C.	<u>Ventilation / Air Conditioning</u>			1	\$0.00 -		
D.	<u>Electrical Systems</u>			3	\$866,665.77 -		
E.	<u>Plumbing and Fixtures</u>			3	\$424,293.00 -		
F.	<u>Windows</u>			1	\$0.00 -		
G.	<u>Structure: Foundation</u>			1	\$0.00 -		
H.	<u>Structure: Walls and Chimneys</u>			1	\$0.00 -		
I.	<u>Structure: Floors and Roofs</u>			1	\$0.00 -		
J.	<u>General Finishes</u>			3	\$945,162.30 -		
K.	<u>Interior Lighting</u>			3	\$266,995.00 -		
L.	<u>Security Systems</u>			3	\$152,187.15 -		
M.	<u>Emergency/Egress Lighting</u>			3	\$53,399.00 -		
N.	<u>Fire Alarm</u>			3	\$80,098.50 -		
O.	<u>Handicapped Access</u>			2	\$202,479.80 -		
P.	Site Condition			2	\$0.00 -		
Q.	<u>Sewage System</u>			1	\$0.00 -		
R.	<u>Water Supply</u>			1	\$0.00 -		
S.	<u>Exterior Doors</u>			2	\$2,000.00 -		
T.	<u>Hazardous Material</u>			1	\$176,039.90 -		
U.	<u>Life Safety</u>			3	\$206,116.30 -		
V.	<u>Loose Furnishings</u>			3	\$266,995.00 -		
W.	<u>Technology</u>			3	\$309,714.20 -		
X.	<u>Construction Contingency / Non-Construction Cost</u>			1	\$1,488,997.30 -		
Total					\$7,583,876.60		

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

1969 (1969) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
Addition				Date	HA	Number of Floors	Current Square Feet
Auditorium				1930	yes	2	9,296
Original Building				1930	yes	4	169,342
1952				1952	yes	2	8,556
1954				1954	yes	2	17,553
1961				1961	yes	2	53,399
1969				1969	yes	2	30,486
1998				1998	yes	1	27,042
2007				2007	yes	1	9,282
Total							324,956
Suitability Appraisal Summary							
				Section	Points Possible	Points Earned	Percentage
				Cover Sheet	—	—	—
				1.0 The School Site	100	67	67%
				2.0 Structural and Mechanical Features	200	146	73%
				3.0 Plant Maintainability	100	89	89%
				4.0 Building Safety and Security	200	142	71%
				5.0 Educational Adequacy	200	142	71%
				6.0 Environment for Education	200	150	75%
				LEED Observations	—	—	—
				Commentary	—	—	—
				Total	1000	736	74%
Enhanced Environmental Hazards Assessment Cost Estimates							
				C=Under Contract			
				Renovation Cost Factor	102.31%		
				Cost to Renovate (Cost Factor applied)	\$4,678,709.04		
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							
FACILITY ASSESSMENT				Rating	Dollar Assessment		
Cost Set: 2016							
	A.	Heating System		3	\$1,040,182.32 -		
	B.	Roofing		3	\$264,202.80 -		
	C.	Ventilation / Air Conditioning		1	\$0.00 -		
	D.	Electrical Systems		3	\$494,787.78 -		
	E.	Plumbing and Fixtures		3	\$247,902.00 -		
	F.	Windows		1	\$0.00 -		
	G.	Structure: Foundation		1	\$0.00 -		
	H.	Structure: Walls and Chimneys		1	\$0.00 -		
	I.	Structure: Floors and Roofs		1	\$0.00 -		
	J.	General Finishes		3	\$539,602.20 -		
	K.	Interior Lighting		3	\$152,430.00 -		
	L.	Security Systems		3	\$86,885.10 -		
	M.	Emergency/Egress Lighting		3	\$30,486.00 -		
	N.	Fire Alarm		3	\$45,729.00 -		
	O.	Handicapped Access		2	\$136,997.20 -		
	P.	Site Condition		2	\$0.00 -		
	Q.	Sewage System		1	\$0.00 -		
	R.	Water Supply		1	\$0.00 -		
	S.	Exterior Doors		2	\$10,250.00 -		
	T.	Hazardous Material		1	\$183,948.60 -		
	U.	Life Safety		3	\$112,555.20 -		
	V.	Loose Furnishings		3	\$152,430.00 -		
	W.	Technology		3	\$176,818.80 -		
	X.	Construction Contingency / Non-Construction Cost		1	\$897,864.10 -		
Total					\$4,573,071.10		

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

1998 (1998) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
				Suitability Appraisal Summary			
				Section			
				Points Possible			
				Points Earned			
				Percentage			
				Rating			
				Category			
				<u>Cover Sheet</u>			
				1.0 The School Site			
				2.0 Structural and Mechanical Features			
				3.0 Plant Maintainability			
				4.0 Building Safety and Security			
				5.0 Educational Adequacy			
				6.0 Environment for Education			
				LEED Observations			
				Commentary			
				Total			
				1000			
				736			
				74%			
				Satisfactory			
				Enhanced Environmental Hazards Assessment Cost Estimates			
				C=Under Contract			
				Renovation Cost Factor			
				102.31%			
				Cost to Renovate (Cost Factor applied)			
				\$3,230,357.71			
				The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.			
		*HA = Handicapped Access					
		*Rating =1 Satisfactory					
		=2 Needs Repair					
		=3 Needs Replacement					
		*Const P/S = Present/Scheduled Construction					
FACILITY ASSESSMENT							
Cost Set: 2016				Rating		Dollar Assessment	
						C	
A. Heating System				3		\$922,673.04	
B. Roofing				3		\$333,107.20	
C. Ventilation / Air Conditioning				1		\$0.00	
D. Electrical Systems				3		\$8,000.00	
E. Plumbing and Fixtures				3		\$44,000.00	
F. Windows				1		\$2,750.00	
G. Structure: Foundation				1		\$0.00	
H. Structure: Walls and Chimneys				1		\$0.00	
I. Structure: Floors and Roofs				1		\$0.00	
J. General Finishes				3		\$508,643.40	
K. Interior Lighting				3		\$135,210.00	
L. Security Systems				3		\$77,069.70	
M. Emergency/Egress Lighting				3		\$27,042.00	
N. Fire Alarm				3		\$40,563.00	
O. Handicapped Access				2		\$32,901.40	
P. Site Condition				2		\$14,000.00	
Q. Sewage System				1		\$0.00	
R. Water Supply				1		\$0.00	
S. Exterior Doors				2		\$10,250.00	
T. Hazardous Material				1		\$2,704.20	
U. Life Safety				3		\$86,534.40	
V. Loose Furnishings				3		\$135,210.00	
W. Technology				3		\$156,843.60	
X. Construction Contingency / Non-Construction Cost				1		\$619,919.34	
Total						\$3,157,421.28	

Main Assessment Menu - Shaker Heights City (44750) - Shaker Heights High School (34108)

2007 (2007) Summary

District: Shaker Heights City				County: Cuyahoga		Area: Northeastern Ohio (8)	
Name: Shaker Heights High School				Contact: Michael Griffith			
Address: 15911 Aldersyde Dr Shaker Heights, OH 44120				Phone: (216) 295-4200			
Bldg. IRN: 34108				Date Prepared: 2015-02-09		By: Kelton Waller	
				Date Revised: 2021-11-03		By: Bill Prenosil	
Current Grades		9-12	Acreage:		17.70		
Proposed Grades		N/A	Teaching Stations:		125		
Current Enrollment		1735	Classrooms:		95		
Projected Enrollment		N/A					
Addition				Date	HA	Number of Floors	Current Square Feet
Auditorium				1930	yes	2	9,296
Original Building				1930	yes	4	169,342
1952				1952	yes	2	8,556
1954				1954	yes	2	17,553
1961				1961	yes	2	53,399
1969				1969	yes	2	30,486
1998				1998	yes	1	27,042
2007				2007	yes	1	9,282
Total						324,956	
Suitability Appraisal Summary							
				Section	Points Possible	Points Earned	Percentage Rating Category
				Cover Sheet	—	—	—
				1.0 The School Site	100	67	67% Borderline
				2.0 Structural and Mechanical Features	200	146	73% Satisfactory
				3.0 Plant Maintainability	100	89	89% Satisfactory
				4.0 Building Safety and Security	200	142	71% Satisfactory
				5.0 Educational Adequacy	200	142	71% Satisfactory
				6.0 Environment for Education	200	150	75% Satisfactory
				LEED Observations	—	—	—
				Commentary	—	—	—
				Total	1000	736	74% Satisfactory
Enhanced Environmental Hazards Assessment Cost Estimates							
				C=Under Contract			
				Renovation Cost Factor		102.31%	
				Cost to Renovate (Cost Factor applied)		\$1,039,430.85	
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							
FACILITY ASSESSMENT				Rating	Dollar Assessment C		
Cost Set: 2016							
	A.	Heating System		3	\$316,701.84 -		
	B.	Roofing		3	\$100,356.40 -		
	C.	Ventilation / Air Conditioning		1	\$0.00 -		
	D.	Electrical Systems		3	\$0.00 -		
	E.	Plumbing and Fixtures		3	\$0.00 -		
	F.	Windows		1	\$2,750.00 -		
	G.	Structure: Foundation		1	\$0.00 -		
	H.	Structure: Walls and Chimneys		1	\$0.00 -		
	I.	Structure: Floors and Roofs		1	\$0.00 -		
	J.	General Finishes		3	\$164,291.40 -		
	K.	Interior Lighting		3	\$46,410.00 -		
	L.	Security Systems		3	\$26,453.70 -		
	M.	Emergency/Egress Lighting		3	\$9,282.00 -		
	N.	Fire Alarm		3	\$13,923.00 -		
	O.	Handicapped Access		2	\$5,446.40 -		
	P.	Site Condition		2	\$0.00 -		
	Q.	Sewage System		1	\$0.00 -		
	R.	Water Supply		1	\$0.00 -		
	S.	Exterior Doors		2	\$0.00 -		
	T.	Hazardous Material		1	\$928.20 -		
	U.	Life Safety		3	\$29,702.40 -		
	V.	Loose Furnishings		3	\$46,410.00 -		
	W.	Technology		3	\$53,835.60 -		
	X.	Construction Contingency / Non-Construction Cost		1	\$199,471.19 -		
Total					\$1,015,962.13		

Facility Assessment

A. Heating System

Description: The existing system for the overall facility consists of three, 1961 Titus-Atlas gas-fired steam boilers in fair condition considering their age. The capacity of each is 10,500 MBH. The steam boilers serves unit ventilators in each classroom and several air handling units that serve larger spaces except for the North Gym (1999), the main Office, and the East Science wing. The North Gym, main office and science wing each have a steam to hot water heat exchanger and associated pumps that provide hot water heat to these areas. The classrooms in these areas have unit ventilators with hot water heat. The steam unit ventilators are in poor condition. The boilers and air handling units are controlled with DDC controls and the rest of the controls are pneumatic and in poor condition. Each ventilator has an outside air grilled at the exterior wall or outside air is ducted from the attic to an interior ventilator. Overall, the ventilators and the air handling units do not provide the required outside air delivery to meet OBC mechanical code. The DDC controls were added two years ago under an energy performance contract. The staff indicates the controls do not always work and they operate the equipment in "hand". On the day of the site visit, the staff turned off the boilers because the building was warm enough and no longer required the heating on. The pipe system does not provide a capacity for simultaneous heating and cooling operation which is not compliant with the OSDM requirements. The staff indicated that the site does not contain underground fuel tanks.

Rating: 3 Needs Replacement

Recommendations: The boilers need to be replaced and are beyond the normal life expectancy. Provide a new overall heating ventilating and air conditioning system to achieve compliance with OBC and OSDM standards. Convert to ducted system to facilitate efficient exchange of conditioned air. Provide new DDC temperature controls with the new system. The new ducted system will likely require architectural soffits to accommodate the installation of the ductwork. 01-27-16 UPDATE: PROVIDE COSTS FOR REMOVING EXISTING BOILERS IN BASEMENT MECHANICAL ROOM.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
HVAC System Replacement:	\$26.12	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$8,487,850.72	(includes demo of existing system and reconfiguration of piping layout and new controls, air conditioning)
Convert To Ducted System	\$8.00	sq.ft. (of entire building addition)			Required	Required	Required	Required	Required	Required	Required	\$2,525,280.00	(includes costs for vert. & horz. chases, cut openings, soffits, etc. Must be used in addition to HVAC System Replacement if the existing HVAC system is non-ducted)
Other: Demolish Existing Heating Boilers	\$25,000.00	allowance			Required							\$25,000.00	Existing heating boilers will need to cut up and removed in peices from basement mechanical room.
Sum:			\$11,038,130.72	\$242,811.52	\$5,802,949.04	\$291,930.72	\$598,908.36	\$1,821,973.88	\$1,040,182.32	\$922,673.04	\$316,701.84		



Steam boilers



Steam unit ventilator

[Back to Assessment Summary](#)

Facility Assessment

B. Roofing

Description: Built-up roofing is used over most of the low-slope roof areas. A reflective coating was applied to these areas 5-7 years ago. Small separations were observed between plies at curbs, parapets, etc. Overflow drains were not observed. These low-slope roof areas have exceeded their expected service life and should be replaced. Both the large and small auditorium are covered with a single-ply vinyl roof. Parapets around low-sloped roofs are capped with metal coping. Some deterioration and separation was observed at the coping seams. The roofs around the perimeter are sloped and shingled with slate that is original to the building. Drainage is provided by metal lined box gutters sitting in wood cornices. Ponding was observed over the low slope roof over the administrative areas and the girls locker room. A manually operated hatch is provided for access to the roof. It appears water and weather tight.

Rating: 3 Needs Replacement

Recommendations: Replace all roofs - built-up, membrane at low-slope areas, and shingle on sloped roofs.. Provide new metal coping around low-slope roof perimeters. Replace and lower roof drains where necessary to ensure proper drainage. 01-27-16 UPDATE: REPLACE ROOF ON 1952 ADDITION. REPLACE CAP FLASHING AND COPING ON 1961 ADDITION AND 1969 ADDITION. REPLACE BATT INSULATION ON SLOPED ROOFS ON ORIGINAL 1930 BUILDING, 1952 ADDITION AND 1961 ADDITION. REPLACE GUTTERS AND DOWNSPOUTS ON ORIGINAL 1930 BUILDING. 11-2-21 Update: Remove scope completed in 2020: Partial slate roof fix for 1930 wing; partial membrane roof replacement; adjusted roof replacement remaining based on district's roof study.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Asphalt Shingle:	\$3.00	sq.ft. (Qty)		7,488 Required	10,886 Required	4,400 Required						\$68,322.00	
Built-up Asphalt:	\$13.20	sq.ft. (Qty)			24,532 Required		6,172 Required	9,000 Required	19,168 Required	18,185 Required	4,916 Required	\$1,082,043.60	
Membrane (all types):	\$8.70	sq.ft. (Qty)		5,400 Required								\$46,980.00	(unless under 10,000 sq.ft.)
Repair/replace cap flashing and coping:	\$18.40	in.ft.				1,600 Required		1,000 Required		500 Required	400 Required	\$64,400.00	
Gutters/Downspouts	\$13.10	in.ft.			1,200 Required							\$15,720.00	
Remove/replace existing roof Drains and Sump:	\$1,200.00	each				6 Required						\$7,200.00	
Overflow Roof Drains and Piping:	\$2,500.00	each		2 Required	24 Required		2 Required	4 Required	2 Required	4 Required	2 Required	\$100,000.00	
Roof Insulation:	\$4.70	sq.ft. (Qty)		12,546 Required	39,641 Required	1,600 Required	6,172 Required	15,385 Required	1,316 Required	15,716 Required	4,916 Required	\$457,272.40	(tapered insulation for limited area use to correct ponding)
Correct Ponding Water on Roof by Remove/Replace Existing Ponding Area:	\$12.50	sq.ft. (Qty)						8,000 Required				\$100,000.00	(provide tapered insulation for limited area use to correct ponding)
Other: Batt Insulation	\$1.25	sq.ft. (Qty)			14,500 Required	4,000 Required		1,000 Required				\$24,375.00	Batt Insulation on Sloped Roof Areas
Sum:			\$1,966,313.00	\$133,410.20	\$636,638.10	\$62,360.00	\$115,478.80	\$320,759.50	\$264,202.80	\$333,107.20	\$100,356.40		



[Back to Assessment Summary](#)

Facility Assessment

C. Ventilation / Air Conditioning

Description: Only certain areas of the building are air conditioned with chilled water cooling; the East Science wing, the Library (first and second floor) and the first floor. The chiller and cooling tower were recently replaced: the McQuay 250 Ton chiller was installed in 2012, and the cooling tower for the chiller was installed in 2013. Both are in very good condition. The refrigerant in the chiller is R134a. The classroom unit ventilators have operational dampers to the outside. This provides limited outside air to the classrooms. The following air handling units share the same outside air intake plenum: Library, Kitchen and Cafeteria units. The outside air is limited for all units, likely due to a limited intake area. The staff shut down half of the kitchen outside air in order to satisfy the Library unit. Is north gym AC. Several classrooms and office/work areas have window air conditioners. Relief air venting is provided by transfer grilles from classrooms to corridors through plenums above the ceilings to relief ventilators on the roof. This system was installed when the building was built. It is not likely that this system is still functional. The ventilation system does not meet the OBC fresh air requirement. The overall system is not compliant with Ohio School Design Manual requirements. The general building exhaust systems located in the restrooms are dated and in poor condition.

Rating: 1 Satisfactory

Recommendations: Provide an air conditioning system to meet OBC and OSDM requirements. Pricing included in Item A.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



Chiller



Rooftop unit

[Back to Assessment Summary](#)

Facility Assessment

D. Electrical Systems

Description: There are two power feeds for electrical system in the facility. One is 480V, 3 phase, 1600 amps and the other is 480V, 3 phase, 800 amps. The 800 amp service serves a 225 KVA transformer to reduce the voltage to 240 Volts, 3 phase. The incoming power was updated 10-15 years ago when the transformer was replaced. The Main disconnect, main distribution panels and transformers were replaced at that time are in good condition. The most of the panel boards are original equipment and in poor condition. There is an electric meter installed on each power main line that reports the electric usage to the DDC temperature control system. This was installed 2 years ago. The transformer is owned by the utility and is a pad mounted transformer located outside. The power into and out of the transformer is fed underground. The electric meter is on the pad mounted transformer. The panel board system installed 1961, 1969, 1980 and is in poor condition and is also beyond the normal equipment life. There is no extra capacity in the oldest sections of the building. Additional outlets have been added to the classrooms, but some the classrooms are still not equipped with adequate electrical outlets. Adequate GFI protected exterior outlets are not provided around the perimeter of the building. The facility is equipped with a diesel emergency generator. There is no lightning protection. The overall electrical main equipment is in good condition. The panel board system is beyond the normal equipment life and should be replaced. The oldest areas of the building do not have any spare electrical capacity. About half of the classrooms do not meet OSDM requirements in supporting the current needs of the school and will be inadequate to meet the facility's future needs.

Rating: 3 Needs Replacement

Recommendations: The electrical system down stream from the main distribution panels requires replacement to meet Ohio School Design Manual guidelines for overall capacity due to poor condition and age for all areas except the 1998 and 2007 addition. This includes panels and wiring.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft ²	Original Building (1930) 169,342 ft ²	1952 (1952) 8,556 ft ²	1954 (1954) 17,553 ft ²	1961 (1961) 53,399 ft ²	1969 (1969) 30,486 ft ²	1998 (1998) 27,042 ft ²	2007 (2007) 9,282 ft ²	Sum	Comments
System Replacement:	\$16.23	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required			\$4,684,497.36	(Includes demo of existing system. Includes generator for life safety systems. Does not include telephone or data or equipment) (Use items below ONLY when the entire system is NOT being replaced)
Additional Circuits:	\$800.00	per circuit								10 Required	0 Required	\$8,000.00	
Sum:			\$4,692,497.36	\$150,874.08	\$2,748,420.66	\$138,863.88	\$284,885.19	\$866,665.77	\$494,787.78	\$8,000.00	\$0.00		



Main Electrical Switch Gear



Panel Boards

[Back to Assessment Summary](#)

Facility Assessment

E. Plumbing and Fixtures

Description: The domestic water supply piping in the original building is a mixture of galvanized and copper and parts are in satisfactory condition. A water treatment system is not required for the domestic water system. There is a small water softener for the boiler water make-up. The facility has two gas fired domestic water boilers; Lockinvar 475 MBH, with an external storage tank. The approximate 1000 gallon storage tank is 1961 and was converted from steam heat in satisfactory condition. The sanitary waste piping is a mixture of galvanized and cast iron and is in fair condition. No issues were noted by the staff. There is no backflow preventer in the building. There are the required backflow preventers for non-potable water usage in the building, i.e. heating system make-up water, etc. There are check valves on the heating water make-up system. There is a pressure reducing valve on the incoming water service. The exterior water supply About 15 years ago, the water closets in the facility were converted to automatic sensor type flush valves. The toilets are a mixture of wall mounted and floor mounted toilets. The lavatories are a combination of manual faucet and sensor faucets. The school contains 14 restrooms for boys, 12 restrooms for girls, and 14 restrooms for the staff. The Basement level has 3 boys ADA restrooms and 2 girls ADA restrooms. The first floor has 2 boys ADA restrooms and 2 girls restrooms. The second floor has 2 boys ADA restrooms and 2 girls ADA restrooms. The third floor has 1 boys ADA and 1 girls ADA restrooms. There is a mixture of wall mounted toilets and floor mounted toilets. There are 53 LAVs, 25 ADA LAVs, 68 toilets, 17 ADA toilets, 32 urinals and 7 ADA urinals. The Art rooms have stainless steel trough sinks with 5 faucets in fair to good condition. The manual faucets are in fair to poor condition and showing age. The sensor faucets and flush valves are in good condition. There are 24 electric water coolers and 8 drinking fountains in the school in generally satisfactory condition. There is an Ansul suppression system in the kitchen. There is no grease trap.

Rating: 3 Needs Replacement

Recommendations: Replace all of the galvanized piping with copper piping in the older areas of the building (not 1998 and 2007 areas). Replace all of the fixtures with low flow fixtures to include all of the faucets and flush valves with sensors, to meet OSFC requirements. Provide a backflow preventer for the service main and for the make-up water for both the heating system and the chilled water system. Provide a grease trap for the three compartment sink in the kitchen. 01-27-16 UPDATE: REPLACE DOMESTIC WATER HEATERS. INSTALL A MIXING VALVE ON DOMESTIC WATER HEATING SYSTEM. REPLACE THE SANITARY WASTE PIPING IN ORIGINAL 1930 BUILDING, 1930 ADDITION, 1952 ADDITION, 1954 ADDITION, 1961 ADDITION AND 1969 ADDITION.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Back Flow Preventer:	\$5,000.00	unit			3 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$15,000.00	
Domestic Supply Piping:	\$3.50	sq.ft. (of entire building addition)			Required	Required	Required	Required	Required			\$977,676.00	(remove / replace)
Sanitary Waste Piping:	\$3.50	sq.ft. (of entire building addition)			Required	Required	Required	Required	Required			\$977,676.00	(remove / replace)
Domestic Water Heater:	\$5,100.00	per unit			2 Required							\$10,200.00	(remove / replace)
Toilet:	\$1,500.00	unit			45 Required	1 Required	10 Required	14 Required	9 Required	6 Required	0 Required	\$127,500.00	(remove / replace) See Item O
Urinal:	\$1,500.00	unit			9 Required	1 Required	8 Required	7 Required	6 Required	8 Required		\$58,500.00	(remove / replace)
Two Station Modular Lavatory	\$3,000.00	unit			2 Required	0 Required	2 Required	2 Required	1 Required	2 Required	0 Required	\$27,000.00	(remove / replace)
Three Station Modular Lavatory	\$4,000.00	unit			4 Required		2 Required	3 Required	2 Required	4 Required	0 Required	\$60,000.00	(remove / replace)
HIGH BAY/INDUSTRIAL SPACE - LAB TYPES 5,6,7 - Grease Trap or Oil Interceptor	\$6,000.00	each			1 Required							\$6,000.00	
Other: Add frostproof hose bibbs on exterior of building.	\$1,000.00	each			3 Required		1 Required	1 Required	1 Required	1 Required		\$7,000.00	Cost includes fixture and 100 ft of piping.
Other: Domestic Hot Water Mixing Valve	\$5,500.00	lump sum			Required							\$5,500.00	Provide Mixing Valve on Domestic Water Supply
Sum:			\$2,272,052.00	\$0.00	\$1,328,094.00	\$62,892.00	\$164,871.00	\$424,293.00	\$247,902.00	\$44,000.00	\$0.00		



Toilet with sensor faucet



2 Water Heaters and 1 storage tank

[Back to Assessment Summary](#)

Facility Assessment

F. Windows

Description: Windows throughout the building consists of aluminum clad wood windows with false muntins and decorative panning around the perimeter. The exterior finish is white painted aluminum and the interior is a natural hardwood. The windows are operable with screens. No integral blinds are present. They are all less than 10 years old.

Rating: 1 Satisfactory

Recommendations: No work is recommended at this time. 01-27-16 UPDATE: REPLACE SKYLIGHTS. REPLACE INSECT SCREENS. replace wood windows on original 1930 building.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Insulated Glass/Panels:	\$60.00	sq.ft. (Qty)			120 Required							\$7,200.00	(includes blinds)
Skylights:	\$125.00	sq.ft. (Qty)			1,000 Required							\$125,000.00	(remove and replace)
Other: Insect Screens	\$110.00	per unit								25 Required	25 Required	\$5,500.00	Provide New Insect Screens
Sum:			\$137,700.00	\$0.00	\$132,200.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,750.00	\$2,750.00		



[Back to Assessment Summary](#)

Facility Assessment

G. Structure: Foundation

Description: CMU foundation walls and concrete piers on spread footings were observed at the lowest points accessible during the assessment. Evidence of moisture breaching through retaining walls was observed in the mechanical room. Several vertical cracks were observed in the concrete piers. The column has cracks in the corner concrete cover. This indicates the reinforcing is corroding which causes it to expand and crack the concrete cover. With the concrete cover cracked and continual exposure to moisture it will continue to corrode at a faster rate.

Rating: 1 Satisfactory

Recommendations: Remove the loose concrete cleaning the reinforcing of loose rust and then patching the column with a cement based patching mortar. The column should then be sealed with a penetrating sealer. 01-27-16 UPDATE: PROVIDE WATERPROOFING MEMBRANE AND DRAINAGE TILE AT BASEMENT OF 1930 AUDITORIUM. 11-2-21 Update: Remove all scope, done in 2018.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



[Back to Assessment Summary](#)

Facility Assessment

H. Structure: Walls and Chimneys

Description: Load bearing masonry walls are the principle vertical structural members throughout the building. On exterior walls, they are clad with brick and keystone accents. Several instances of mortar wash-out were observed around the building's perimeter. Window openings are accented with stone keystones, soldier courses and stone sills. One instance of separation at a joint was observed in a stair. This joint should be cut evenly and filled with an expandable/compressible material.

Rating: 1 Satisfactory

Recommendations: Areas of mortar wash-out should be tuck-pointed and a masonry sealer should be applied to the wall. 01-27-16 UPDATE: REPLACE CAULK AT ORIGINAL 1930 BUILDING, 1969 ADDITION AND 1998 ADDITION. REPLACE CRACKED AND SPALLING SILLS ON ORIGINAL 1930 BUILDING. ADD WEEPS ABOVE WINDOW LINTELS ON ORIGINAL 1930 BUILDING, 1952 ADDITION, 1954 ADDITION, 1961 ADDITION AND 1969 Addition. REMOVE WINDOWS IN 1930 AUDITORIUM AND INFILL WITH BRICK. PROVIDE MASONRY CLEANING AND SEALING ON 1969 ADDITION. 11-2-21 Update: Remove all scope, completed in 2018.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
				9,296 ft ²	169,342 ft ²	8,556 ft ²	17,553 ft ²	53,399 ft ²	30,486 ft ²	27,042 ft ²	9,282 ft ²		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



[Back to Assessment Summary](#)

Facility Assessment

I. Structure: Floors and Roofs

Description: Floors throughout the building are framed with structural poured concrete slab and concrete pan joists. Some efflorescence was observed on the underside of the floor slab. Bar joists and steel deck are used to frame over an infilled pool area. Structure for low-sloped roof areas were not observable. Areas of pitched roof are supported by wood rafters, structural steel beams and masonry columns. The north gymnasium roof is framed with joists on structural steel clear span ribs.

Rating: 1 Satisfactory

Recommendations: No work is recommended at this time.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
				9,296 ft ²	169,342 ft ²	8,556 ft ²	17,553 ft ²	53,399 ft ²	30,486 ft ²	27,042 ft ²	9,282 ft ²		
Sum:	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



[Back to Assessment Summary](#)

Facility Assessment

J. General Finishes

Description: The basement floors are lain with VCT flooring. Walls consists of painted and exposed brick and drywall. Ceilings in the corridor are plastered. Basement classroom flooring varies from carpet to wood to VCT. Classroom ceilings consist of suspended acoustic tile as well as direct adhered acoustic tiles. Upper level corridor floors are lain with terrazzo and VCT. The walls are finished with plaster atop a brick wainscot. Ceramic tile floor in the north gymnasium lobby displayed cracks and its surface is difficult to maintain. Wood sports floors were observed in the gymnasiums. The floor surfaces are flat flush and do not interfere with physical activity or safety. The bleachers are in good working order. The kitchen is utilized to prepare meals for other schools in the district. A kiln is provided for the art education.

Rating: 3 Needs Replacement

Recommendations: With the exception of the 1998 and 2007 additions finishes have exceeded their expected service life and should be replaced. 01-27-16 UPDATE: PROVIDE ACOUSTICAL TREATMENT IN GYMNASIUM AND STUDENT DINING. REPAIR/REPLACE 300 SF OF CRACKED TERRAZZO FLOORING.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Paint:	\$2.00	sq.ft. (of entire building addition)		Required								\$18,592.00	(partial finish - floor area/prep and installation)
Acoustic Ceiling:	\$2.90	sq.ft. (Qty)		9,296 Required								\$26,958.40	(partial finish - drop in/standard 2 x 4 ceiling tile per area)
Carpet:	\$3.50	sq.ft. (Qty)		9,296 Required								\$32,536.00	(partial finish - tear-out and replace per area)
Complete Replacement of Finishes and Casework (High):	\$17.70	sq.ft. (of entire building addition)			Required	Required	Required	Required	Required	Required	Required	\$5,587,182.00	(high school, per building area, with removal of existing)
Total Kitchen Equipment Replacement:	\$190.00	sq.ft. (Qty)			2,975 Required							\$565,250.00	(square footage based upon only existing area of food preparation, serving, kitchen storage areas and walk-ins. Includes demolition and removal of existing kitchen equipment)
Other: DEDUCT- Terrazzo floor	-\$19,783.00	lump sum			Required							-\$19,783.00	Deduct to replacement of finishes for terrazzo which won't be replaced.
Other: Gym Acoustical Treatment	\$30,000.00	allowance								Required		\$30,000.00	Acoustical Treatment for Gymnasium
Other: Student Dining Acoustical Treatment	\$30,000.00	allowance			Required							\$30,000.00	Acoustical Treatment for Student Dining
Other: Terrazzo Floor Repair	\$42.00	sq.ft. (Qty)			300 Required							\$12,600.00	Terrazzo Repair
Sum:			\$6,283,335.40	\$78,086.40	\$3,585,420.40	\$151,441.20	\$310,688.10	\$945,162.30	\$539,602.20	\$508,643.40	\$164,291.40		



[Back to Assessment Summary](#)

Facility Assessment

K. Interior Lighting

Description: The florescent lighting is a mixture of recessed with acrylic lense, surface mounted with acrylic lense, parabolic, surface mounted with acrylic wrap around lense and pendent mounted with acrylic lense. The gym fixtures are high bay forescent fixtures. In 2012, the ballast and lamps have been upgraded to electronic energy efficient ballast and T8 lamps. Classroom lighting level is 68 FC, a Science Room lighting level is 25 FC, the Corridor lighting level is 28 FC, the Gym is 50 FC and the Art Room #11 is 65 FC. The classrooms have dual level lighting controls. (One row of lights per switch.) There are no dimming controls in the building. The cafeteria lights are controlled through electronic controls.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of lighting system due to installation of ducted HVAC systems and fire suppression systems.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft ²	Original Building (1930) 169,342 ft ²	1952 (1952) 8,556 ft ²	1954 (1954) 17,553 ft ²	1961 (1961) 53,399 ft ²	1969 (1969) 30,486 ft ²	1998 (1998) 27,042 ft ²	2007 (2007) 9,282 ft ²	Sum	Comments
Complete Building Lighting Replacement	\$5.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$1,624,780.00	Includes demo of existing fixtures
Sum:			\$1,624,780.00	\$46,480.00	\$846,710.00	\$42,780.00	\$87,765.00	\$266,995.00	\$152,430.00	\$135,210.00	\$46,410.00		



Corridor Lighting



Typical Classroom lighting

[Back to Assessment Summary](#)

Facility Assessment

L. Security Systems

Description: The security system consists of 20 exterior mounted cameras located around the building and entrance doors. There are 92 interior cameras. There are 6 key card entry doors. There is a camera at the front door, both interior and exterior, but there are no locks on the front door and no two way call box. There is a security person manning the front door, where all visitors must check in. A new visitor system will be installed to register drivers license numbers and print out visitor badges. This system will be located with the person manning the front door. The cameras report to computer screens located in the Security office. DVRs record locally the feedback from the cameras. There is no remote monitoring of the video system. The interior hallways have motion sensors tied to the security system. The system is not fully compliant with OSFC design manual guidelines. The exterior lighting consists of building mounted lighting and provides coverage for the building entrances. There are a few parking lot pole mounted lights for site lighting that provide additional lighting coverage.

Rating: 3 Needs Replacement

Recommendations: Provide a partial security system upgrade due to installation of a new HVAC/suppression system. Increase security at the front door and other main access doors to meet OSFC design manual guidelines for the security system. Upgrade site lighting. 01-27-16 UPDATE: PROVIDE FOR COMPLETE REPLACEMENT.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
Security System:	\$1.85	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$601,168.60	(complete, area of building)
Exterior Site Lighting:	\$1.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$324,956.00	(complete, area of building)
Sum:			\$926,124.60	\$26,493.60	\$482,624.70	\$24,384.60	\$50,026.05	\$152,187.15	\$86,885.10	\$77,069.70	\$26,453.70		



Side entrance door



Interior Camera

[Back to Assessment Summary](#)

Facility Assessment

M. Emergency/Egress Lighting

Description: The overall facility is equipped with emergency egress lighting system consisting of a LED exit signs and emergency lighting on a panel served by the emergency generator. The system is in good condition. The staff indicated that there are only a few emergency flood lights powered by battery packs that remain. The system is adequately provided throughout, and is compliant with OSFC design manual guidelines.

Rating: 3 Needs Replacement

Recommendations: Provide a complete replacement of emergency egress lighting due to installation of systems outlined in J, K, and U.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
Emergency/Egress Lighting:	\$1.00	sq.ft. (of entire building addition)		9,296 ft ²	169,342 ft ²	8,556 ft ²	17,553 ft ²	53,399 ft ²	30,486 ft ²	27,042 ft ²	9,282 ft ²	\$324,956.00	(complete, area of building)
Sum:			\$324,956.00	\$9,296.00	\$169,342.00	\$8,556.00	\$17,553.00	\$53,399.00	\$30,486.00	\$27,042.00	\$9,282.00		



Exit sign



Exit sign

[Back to Assessment Summary](#)

Facility Assessment

N. Fire Alarm

Description: The fire alarm system has three different panels with the newest one dated 1999. This system is a non-addressable system. There appears to be sufficient horns and pull stations, however inadequate number of strobes. The system provides inadequate coverage for the facility to meet today's codes. This system is remotely monitored. The fire alarm system is not fully compliant with NFPA and OSFC standards. It is likely the current system would accommodate the addition of a fire suppression system.

Rating: 3 Needs Replacement

Recommendations: Replacement of the system will be required when the work in C - Upgrading the ventilation and air conditioning. At that time, the devices would be replaced and added to with addressable devices.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
Fire Alarm System:	\$1.50	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$487,434.00	(complete new system, including removal of existing)
Sum:			\$487,434.00	\$13,944.00	\$254,013.00	\$12,834.00	\$26,329.50	\$80,098.50	\$45,729.00	\$40,563.00	\$13,923.00		



Main Fire Alarm panels



Fire Alarm devices

[Back to Assessment Summary](#)

Facility Assessment

O. Handicapped Access

Description: An elevator is provided that allows for wheelchair access to nearly all parts of the building. There is one corridor, however, that has steps but no lift. Most doors do not have adequate pull clearance at the latch side, nor do most doors have lever hardware. Signage does not have brail. An adequate number of ADA assist door operators was not observed. Wheelchair accessible water fountains were observed near the cafeteria. There are no ADA showers. Newer restrooms have adequately sized ADA stalls, grab bars and fixtures.

Rating: 2 Needs Repair

Recommendations: Provide a lift 1st floor corridor adjacent to the west of the gymnasium. Provide high-contrast signage and wayfinding with braille. Doors should be provided ADA compliant lever hardware. Provide ADA assist door operators and showers. 01-27-16 UPDATE: REVISE QUANTITY OF HANDICAPPED DOOR HARDWARE TO BE REPLACED. REVISED QUANTITY FOR REWORKING OPENINGS AND CORRIDOR WALLS TO ACCOMMODATE ADA STANDARDS. PROVIDE FOR ADA TOILET ACCESSORIES. PROVIDE FOR HANDRAILS IN BASEMENT OF 1930 ORIGINAL BUILDING. PROVIDE FOR HANDRAILS SERVING 1ST AND 2ND FLOOR RAMPS IN 1930 ORIGINAL BUILDING. PROVIDE FOR ONE (1) ADA SHOWER IN 1998 ADDITION. PROVIDE AN ADA OPENER AT MAIN ENTRANCE DOORS OF 1998 ADDITION. INSTALL HANDICAP ACCESS RAMPS IN 1954 ADDITION AND 1969 ADDITION

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Handicapped Hardware:	\$350.00	set			264 Required	23 Required	36 Required	68 Required	54 Required	27 Required	7 Required	\$167,650.00	(includes installation / hardware only)
Signage:	\$0.20	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	Required	Required	Required	\$64,991.20	(per building area)
Ramps:	\$40.00	sq.ft. (Qty)					340 Required		300 Required			\$25,600.00	(per ramp/interior-exterior complete)
Lifts:	\$15,000.00	unit								1 Required		\$15,000.00	(complete)
ADA Assist Door & Frame:	\$7,500.00	unit						2 Required				\$15,000.00	(openers, electrical, patching, etc)
Replace Doors:	\$5,000.00	leaf			76 Required	3 Required	13 Required	30 Required	20 Required			\$710,000.00	(rework opening and corridor wall to accommodate ADA standards when door opening is set back from edge of corridor and cannot accommodate a wheelchair.)
Remount Restroom Mirrors to Handicapped Height:	\$285.00	per restroom									4 Required	\$1,140.00	
Provide ADA Shower:	\$3,000.00	each		2 Required						1 Required		\$9,000.00	(includes fixtures, walls, floor drain, and supply line of an existing locker room)
Provide Toilet Accessories:	\$1,000.00	per restroom			4 Required		2 Required	3 Required				\$9,000.00	
Other: Handrails	\$43.00	sq.ft. (Qty)			40 Required							\$1,720.00	Provide Handrails at Ramp in Basement
Other: handrails	\$43.00	sq.ft. (Qty)			140 Required					1 Required		\$6,063.00	Provide Handrails to Ramps serving 1st and 2nd floors.
Sum:			\$1,025,164.20	\$7,859.20	\$518,008.40	\$24,761.20	\$96,710.60	\$202,479.80	\$136,997.20	\$32,901.40	\$5,446.40		



[Back to Assessment Summary](#)

Facility Assessment

P. Site Condition

Description: In general the site is well landscaped and well maintained. The building is surrounded by greenscaping. Hard surfaces in the form of walks are adequately provided for pedestrian circulation. Paved parking areas are generally in good condition, though deterioration is visible in limited areas. Parking, however, is significantly undersized to meet the current demand for staff parking. No student parking is provided on site.

Rating: 2 Needs Repair

Recommendations: Provide parking for 20% of student body. Provide concrete pad for dumpster enclosure. 01-27-16 UPDATE: PROVIDE FOR REPLACEMENT FOR STAIRS, Railings, CONCRETE WALKS, PAVING AND LANDSCAPING DUE TO WATERPROOFING OF FOUNDATION WALLS ON 1930 ORIGINAL BUILDING. PROVIDE REGRADING AND RETAINING WALL AT SOUTH LOT NEAR TRASH COMPACTOR. REPLACE STORM PIPING AND STRUCTURES @ 1930 ORIGINAL BUILDING COURTYARD AND AREA BETWEEN 1952 BAND ROOM AND 1930 AUDITORIUM.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
				9,296 ft ²	169,342 ft ²	8,556 ft ²	17,553 ft ²	53,399 ft ²	30,486 ft ²	27,042 ft ²	9,282 ft ²		
New Asphalt Paving (light duty):	\$25.80	sq. yard			1,000 Required							\$25,800.00	
Additional Parking Spaces Required for High	\$462.00	per student			340 Required							\$157,080.00	(\$1,100 per parking space; 0.42 spaces per high school student. Parking space includes parking lot drive space.)
Concrete Sidewalk:	\$4.69	sq.ft. (Qty)			5,000 Required							\$23,450.00	(5 inch exterior slab)
Replace Concrete Steps:	\$32.00	sq.ft. (Qty)			220 Required							\$7,040.00	
Provide Concrete Dumpster Pad:	\$2,400.00	each			1 Required							\$2,400.00	(for two dumpsters)
Base Sitework Allowance for Unforeseen Circumstances	\$50,000.00	allowance			Required							\$50,000.00	Include this and one of the next two. (Applies for whole building, so only one addition should have this item)
Sitework Allowance for Unforeseen Circumstances for buildings 100,000 SF or larger	\$150,000.00	allowance			Required							\$150,000.00	Include this one or the previous. (Applies for whole building, so only one addition should have this item)
Other: Hanrails	\$43.00	in.ft.			40 Required							\$1,720.00	Replacement of Handrails due to excavation for foundation waterproofing
Other: Landscaping	\$2,000.00	allowance			Required							\$2,000.00	Landscaping due to excavation of perimeter wall excavation for waterproofing.
Other: Retaining Wall	\$65.00	sq.ft. (Qty)			800 Required							\$52,000.00	Regrading and Retaining Wall @ South Lot near Trash Compactor
Other: Storm Piping	\$110.00	in.ft.			400 Required							\$44,000.00	Replacement Storm Piping
Other: Storm Structures	\$2,500.00	each			2 Required					2 Required		\$10,000.00	New Storm Manholes
Other: Storm Structures	\$1,500.00	per unit			6 Required					6 Required		\$18,000.00	Storm Catch Basins
Sum:			\$543,490.00	\$0.00	\$529,490.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,000.00	\$0.00		



[Back to Assessment Summary](#)

Facility Assessment

Q. Sewage System

Description: The sanitary sewer system drains to the city sewer system. One significant system deficiency was reported for the sanitary sewer inside the building. Upon a large rain event, the water backs up into the Lower Level Boiler room through the floor drains. This area has flooded. There were no other areas of concern reported for this system. Overall the staff reported the system in satisfactory condition.

Rating: 1 Satisfactory

Recommendations: Take measures to prevent the water from backing up into the mechanical room during rain events. Utilize site allowance to grade for drainage away from building.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
				9,296 ft²	169,342 ft²	8,556 ft²	17,553 ft²	53,399 ft²	30,486 ft²	27,042 ft²	9,282 ft²		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



flooding near boilers at floor drains

[Back to Assessment Summary](#)

Facility Assessment

R. Water Supply

Description: The domestic water supply system is galvanized and copper and is tied to the city system. There is no backflow preventer in the building, but there is a pressure reducing valve on the 6" incoming water service. The system provides adequate pressure and capacity for the facility's needs. The facility is not equipped with an automatic fire suppression system, and the existing water supply system will not provide adequate support for the future system.

Rating: 1 Satisfactory

Recommendations: Replace water main to meet the sprinkler requirements and install a backflow preventer. 01-27-16 UPDATE: PROVIDE FOR NEW BACKFLOW PREVENTER ON EXISTING DOMESTIC WATER SUPPLY. 11-2-21 Update: Remove scope completed in 2018/19.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
				9,296 ft²	169,342 ft²	8,556 ft²	17,553 ft²	53,399 ft²	30,486 ft²	27,042 ft²	9,282 ft²		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



Pressure regulator on 6" water main

[Back to Assessment Summary](#)

Facility Assessment

S. Exterior Doors

Description: All exterior doors were replaced less than 10 years ago. The doors are white metal or FRP leaves with panic hardware. They appear to be in good condition and should continue to perform well. The doors at the main entrance are fully glazed. The remainder are 1/2 glazed or flush.

Rating: 2 Needs Repair

Recommendations: No work is recommended at this time. 01-27-16 UPDATE: REPLACE TRANSOM AND SIDE LIGHTS ON EXTERIOR DOORS ON ORIGINAL 1930 BUILDING, 1969 ADDITION AND 1988 ADDITION. 01-27-16 UPDATE: REPLACE EXTERIOR DOORS IN 1930 ORIGINAL BUILDING, 1961 addition, 1969 addition AND 1998 ADDITION. REPLACE OVERHEAD ROLLING DOORS UNDER BLEACHERS IN 1930 ORIGINAL BUILDING.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Door Leaf/Frame and Hardware:	\$2,000.00	per leaf			5 Required			1 Required	3 Required	3 Required		\$24,000.00	(includes removal of existing)
Overhead doors and hardware:	\$2,500.00	per leaf			3 Required							\$7,500.00	(8 x 10 sectional, manual operation)
Other: Side Lights and Transom	\$4,250.00	per unit			1 Required				1 Required	1 Required		\$12,750.00	Replace Side Light and Transom
Sum:			\$44,250.00	\$0.00	\$21,750.00	\$0.00	\$0.00	\$2,000.00	\$10,250.00	\$10,250.00	\$0.00		



[Back to Assessment Summary](#)

Facility Assessment

T. Hazardous Material

Description: Environmental assessment data not available at time of report.

Rating: 1 Satisfactory

Recommendations: No work is recommended at this time.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
<i>Environmental Hazards Form</i>				EEHA Form	EEHA Form	EEHA Form	EEHA Form	EEHA Form	EEHA Form	EEHA Form	EEHA Form	—	
Breaching Insulation Removal	\$10.00	sq.ft. (Qty)		0 Required	750 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$7,500.00	
Tank Insulation Removal	\$8.00	sq.ft. (Qty)		0 Required	50 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$400.00	
Duct Insulation Removal	\$8.00	sq.ft. (Qty)		0 Required	0 Required	0 Required	0 Required	1,100 Required	0 Required	0 Required	0 Required	\$8,800.00	
Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$1.00	per unit		0 Required	5,000 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$5,000.00	
Special Engineering Fees for LBP Mock-Ups	\$1.00	per unit		0 Required	5,000 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$5,000.00	
Fluorescent Lamps & Ballasts Recycling/Incineration	\$0.10	sq.ft. (Qty)		9,296 Required	169,342 Required	8,556 Required	17,553 Required	53,399 Required	30,486 Required	27,042 Required	9,282 Required	\$32,495.60	
Pipe Insulation Removal	\$10.00	in.ft.		0 Required	2,000 Required	0 Required	0 Required	100 Required	0 Required	0 Required	0 Required	\$21,000.00	
Pipe Fitting Insulation Removal	\$20.00	each		0 Required	200 Required	0 Required	0 Required	40 Required	200 Required	0 Required	0 Required	\$8,800.00	
Pipe Insulation Removal (Crawlspace/Tunnel)	\$12.00	in.ft.		0 Required	3,000 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$36,000.00	
Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	\$30.00	each		0 Required	20 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$600.00	
Pipe Insulation Removal (Hidden in Walls/Ceilings)	\$15.00	in.ft.		200 Required	3,400 Required	200 Required	350 Required	1,100 Required	600 Required	0 Required	0 Required	\$87,750.00	
Dismantling of Boiler/Furnace/Incinerator	\$2,000.00	each		0 Required	4 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$8,000.00	
Fireproofing Removal	\$25.00	sq.ft. (Qty)		0 Required	1,300 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$32,500.00	
Acoustical Panel/Tile Ceiling Removal	\$3.00	sq.ft. (Qty)		0 Required	1,400 Required	0 Required	0 Required	26,300 Required	25,100 Required	0 Required	0 Required	\$158,400.00	See J
Laboratory Table/Counter Top Removal	\$100.00	each		0 Required	0 Required	0 Required	0 Required	0 Required	200 Required	0 Required	0 Required	\$20,000.00	See J
Cement Board Removal	\$5.00	sq.ft. (Qty)		0 Required	0 Required	0 Required	100 Required	0 Required	0 Required	0 Required	0 Required	\$500.00	
Fire Door Removal	\$100.00	each		0 Required	26 Required	0 Required	1 Required	2 Required	0 Required	0 Required	0 Required	\$2,900.00	See S
Non-ACM Ceiling/Wall Removal (for access)	\$2.00	sq.ft. (Qty)		800 Required	13,600 Required	800 Required	1,400 Required	4,400 Required	2,400 Required	0 Required	0 Required	\$46,800.00	See J
Resilient Flooring Removal, Including Mastic	\$3.00	sq.ft. (Qty)		0 Required	5,000 Required	0 Required	9,800 Required	16,700 Required	22,000 Required	0 Required	0 Required	\$160,500.00	See J
Carpet Mastic Removal	\$2.00	sq.ft. (Qty)		0 Required	1,800 Required	0 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$3,600.00	
Carpet Removal (over RFC)	\$1.00	sq.ft. (Qty)		0 Required	2,000 Required	0 Required	0 Required	5,500 Required	1,800 Required	0 Required	0 Required	\$9,300.00	See J
Acoustical Tile Mastic Removal	\$3.00	sq.ft. (Qty)		0 Required	0 Required	4,100 Required	0 Required	0 Required	0 Required	0 Required	0 Required	\$12,300.00	
Sink Undercoating Removal	\$100.00	each		0 Required	0 Required	0 Required	0 Required	1 Required	0 Required	0 Required	0 Required	\$100.00	
Sum:			\$668,245.60	\$5,529.60	\$241,534.20	\$17,755.60	\$39,805.30	\$176,039.90	\$183,948.60	\$2,704.20	\$928.20		

[Back to Assessment Summary](#)

Facility Assessment

U. Life Safety

Description: Sprinklers are not provided in the facility. Egress stair throughout the building are less than 42" Glass in doors and sidelights is not safety rated or wired. Doors to egress stairs do not latch. Many egress stair doors have more than 100" of vision anel. The facility is equipped with an 80 KW Kohler emergency generator. The diesel generator was installed in 2006 and is in good condition. The fuel supply is from a belly tank under the generator.

Rating: 3 Needs Replacement

Recommendations: Provide a new fire suppression system and the requisite main from the fire line. Provide increase water service of a capacity sufficient to support the fire suppression system, funding included in Waste Supply funding. Provide fire suppression system in all throughout building, including attic spaces. 01-27-16 UPDATE: REPLACE HANDRAILS IN EACH STAIR TOWER. REBUILD HANDICAPPED RAMPS. PROVIDE INTERIOR STAIR ENCLOSURES. PROVIDE BOOSTER PUMP. PROVIDE FOR A NEW BACKFLOW PREVENTER. PROVIDE FOR PRE-ACTION FIRE SUPPRESSION SYSTEM IN ATTIC SPACE OF 1930 ORIGINAL BUILDING, 1952 ADDITION AND 1961 ADDITION.

Item	Cost	Unit	Whole Building	Auditorium (1930) 9,296 ft²	Original Building (1930) 169,342 ft²	1952 (1952) 8,556 ft²	1954 (1954) 17,553 ft²	1961 (1961) 53,399 ft²	1969 (1969) 30,486 ft²	1998 (1998) 27,042 ft²	2007 (2007) 9,282 ft²	Sum	Comments
Sprinkler / Fire Suppression System:	\$3.20	sq.ft. (Qty)		9,296 Required	169,342 Required	8,556 Required	17,553 Required	53,399 Required	30,486 Required	27,042 Required	9,282 Required	\$1,039,859.20	(includes increase of service piping, if required)
Interior Stairwell Closure:	\$5,000.00	per level			5 Required	2 Required	2 Required	1 Required				\$50,000.00	(includes associated doors, door frames and hardware)
Water Main	\$40.00	in.ft.			500 Required							\$20,000.00	(new)
Handrails:	\$5,000.00	per level			5 Required	5 Required	5 Required	5 Required	3 Required			\$115,000.00	
Other: Attic Sprinklers	\$3.50	sq.ft. (Qty)			13,650 Required	3,990 Required		1,497 Required				\$66,979.50	Pre-Action Fire Suppression System for Attic Space
Other: Backflow Preventer	\$85,000.00	per unit			1 Required							\$85,000.00	Install New Backflow Preventer
Other: Fire Suppression Booster Pump	\$35,000.00	unit			1 Required							\$35,000.00	Suppression Booster Pump
Sum:			\$1,411,838.70	\$29,747.20	\$779,669.40	\$76,344.20	\$91,169.60	\$206,116.30	\$112,555.20	\$86,534.40	\$29,702.40		



[Back to Assessment Summary](#)

Facility Assessment

V. Loose Furnishings

Description: Furniture, though dated in design, is in good condition overall and should continue to perform well. There are, however, repairs which must be made each year.

Rating: 3 Needs Replacement

Recommendations: Items in disrepair should be replaced as they fall into disrepair. 01-27-16 UPDATE: REVISE CEFPI RATING FROM 6 TO 0-5.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
CEFPI Rating 0 to 3	\$5.00	sq.ft. (of entire building addition)		9,296 ft ²	169,342 ft ²	8,556 ft ²	17,553 ft ²	53,399 ft ²	30,486 ft ²	27,042 ft ²	9,282 ft ²	\$1,578,300.00	
Sum:			\$1,578,300.00	\$0.00	\$846,710.00	\$42,780.00	\$87,765.00	\$266,995.00	\$152,430.00	\$135,210.00	\$46,410.00		



[Back to Assessment Summary](#)

Facility Assessment

W. Technology

Description: The typical classroom is equipped with 2 data ports total (1 data, 1 VOIP, CAT 5 wire). Each classroom has a dedicated wireless access point (CAT 6E wire). Each classroom has phone capable of calling the office. The phone is used system is used by the office to contact the classrooms. There is a projector and audio system in every classroom. The coax cable system in every classroom is not being replaced as it fails, as it is rarely used. Fiber is used to connect the data closets and there are 5 data closets in the High School. All data closets have color coded wires based on the service district wide. The school has a PA system, and the PA system can be used in each classroom to contact the office, however this system is not used. This system meets the OSDM requirements. The facility is not equipped with a centralized clock system. Specialized electrical /sound requirements for gymnasium, student dining and music spaces are adequately provided. The facility has 4 computer labs for use by the students. The school will be establishing COWs (Computers on Wheels) for teachers to sign out. 4-5 carts with NET books or small laptops are planned.

Rating: 3 Needs Replacement

Recommendations: The technology systems meet OSDM requirements, however, provide a full replacement of the Technology system due to the new HVAC/fire suppression system.

Item	Cost	Unit	Whole Building	Auditorium (1930)	Original Building (1930)	1952 (1952)	1954 (1954)	1961 (1961)	1969 (1969)	1998 (1998)	2007 (2007)	Sum	Comments
HS portion of building with total SF > 200,400	\$5.80	sq.ft. (Qty)		9,296 ft ²	169,342	8,556	17,553	53,399	30,486	27,042	9,282	\$1,830,828.00	
Sum:			\$1,830,828.00	\$0.00	\$982,183.60	\$49,624.80	\$101,807.40	\$309,714.20	\$176,818.80	\$156,843.60	\$53,835.60		



Typical Classroom Technology



Server Room

[Back to Assessment Summary](#)

X. Construction Contingency / Non-Construction Cost

Renovation Costs (A-W)		\$36,855,439.58
7.00%	Construction Contingency	\$2,579,880.77
Subtotal		\$39,435,320.35
16.29%	Non-Construction Costs	\$6,424,013.69
Total Project		\$45,859,334.04

Construction Contingency	\$2,579,880.77
Non-Construction Costs	\$6,424,013.69
Total for X.	\$9,003,894.46

Non-Construction Costs Breakdown		
Land Survey	0.03%	\$11,830.60
Soil Borings / Phase I Envir. Report	0.10%	\$39,435.32
Agency Approval Fees (Bldg. Code)	0.25%	\$98,588.30
Construction Testing	0.40%	\$157,741.28
Printing - Bid Documents	0.15%	\$59,152.98
Advertising for Bids	0.02%	\$7,887.06
Builder's Risk Insurance	0.12%	\$47,322.38
Design Professional's Compensation	7.50%	\$2,957,649.03
CM Compensation	6.00%	\$2,366,119.22
Commissioning	0.60%	\$236,611.92
Non-Construction Contingency (includes partnering and mediation services)	1.12%	\$441,675.59
Total Non-Construction Costs	16.29%	\$6,424,013.69

[Back to Assessment Summary](#)

School Facility Appraisal - Shaker Heights City

Name of Appraiser	Bill Prenosil	Date of Appraisal	2015-02-09
Building Name	Shaker Heights High School		
Street Address	15911 Aldersyde Dr		
City/Town, State, Zip Code	Shaker Heights, OH 44120		
Telephone Number(s)	(216) 295-4200		
School District	Shaker Heights City		

Setting:	Urban		
Site-Acreage	17.70	Building Square Footage	324,956
Grades Housed	9-12	Student Capacity	2,012
Number of Teaching Stations	125	Number of Floors	4
Student Enrollment	1735		
Dates of Construction	1930,1930,1952,1954,1961,1969,1998,2007		

Energy Sources:	<input type="checkbox"/> Fuel Oil	<input checked="" type="checkbox"/> Gas	<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Solar
Air Conditioning:	<input type="checkbox"/> Roof Top	<input checked="" type="checkbox"/> Windows Units	<input type="checkbox"/> Central	<input checked="" type="checkbox"/> Room Units
Heating:	<input type="checkbox"/> Central	<input type="checkbox"/> Roof Top	<input checked="" type="checkbox"/> Individual Unit	<input checked="" type="checkbox"/> Forced Air
	<input checked="" type="checkbox"/> Hot Water	<input checked="" type="checkbox"/> Steam		

Type of Construction

- Load bearing masonry
- Steel frame
- Concrete frame
- Wood
- Steel Joists

Exterior Surfacing

- Brick
- Stucco
- Metal
- Wood
- Stone

Floor Construction

- Wood Joists
- Steel Joists
- Slab on grade
- Structural slab

[Back to Assessment Summary](#)

Suitability Appraisal of 1.0 The School Site for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

1.0 The School Site	Points Allocated	Points
1.1 Site is large enough to meet educational needs as defined by state and local requirements <i>Recommended site size for a high school of this enrollment in an urban area is approximately 37 acres. The site is only 17.7 acres.</i>	25	12
1.2 Site is easily accessible and conveniently located for the present and future population <i>The site is accessed by multiple streets in a residential neighborhood. While the location is geographically advantageous, the roads to the school may not be adequate for the volume of traffic.</i>	20	15
1.3 Location is removed from undesirable business, industry, traffic, and natural hazards <i>Disruptive elements were not observed.</i>	10	10
1.4 Site is well landscaped and developed to meet educational needs <i>The landscaping is well designed and serves the students well.</i>	10	8
1.5 ES Well equipped playgrounds are separated from streets and parking areas MS Well equipped athletic and intermural areas are separated from streets and parking HS Well equipped athletic areas are adequate with sufficient solid-surface parking <i>The conditions of the athletic surfaces are in good condition. Parking is significantly inadequate for the student population. All non-staff and even some of the staff have to park off-site.</i>	10	4
1.6 Topography is varied enough to provide desirable appearance and without steep inclines <i>The site gently slopes away from the building in most areas.</i>	5	4
1.7 Site has stable, well drained soil free of erosion <i>Erosive conditions were not observed.</i>	5	5
1.8 Site is suitable for special instructional needs , e.g., outdoor learning <i>Only one area suitable for outdoor class was observed.</i>	5	3
1.9 Pedestrian services include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes <i>Such accommodations are provided around the site.</i>	5	5
1.10 ES/MS Sufficient on-site, solid surface parking for faculty and staff is provided HS Sufficient on-site, solid surface parking is provided for faculty, students, staff and community <i>On-site parking is provided for most of the staff. Late-arriving staff as well as students must park off-site.</i>	5	1
TOTAL - 1.0 The School Site	100	67

Suitability Appraisal of 2.0 Structural and Mechanical Features for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

2.0 Structural and Mechanical Features	Points Allocated	Points
Structural		
2.1 Structure meets all barrier-free requirements both externally and internally	15	6
<i>Lever hardware is not provided. High contrast signage with brail is not provided. One corridor is accessible via stairs only. Several classroom doors are recessed in alcoves which are not wide enough for wheelchair maneuverability.</i>		
2.2 Roofs appear sound, have positive drainage, and are weather tight	15	12
<i>Most roofs drain efficiently. However, ponding was observed on one of the low-sloped roofs.</i>		
2.3 Foundations are strong and stable with no observable cracks	10	7
<i>One column was observed to have a 24" tall vertical crack.</i>		
2.4 Exterior and interior walls have sufficient expansion joints and are free of deterioration	10	6
<i>Joints were only observed between additions of the school. None observed over windows, doors, etc.</i>		
2.5 Entrances and exits are located so as to permit efficient student traffic flow	10	10
<i>Entrances relate efficiently to corridors and large gather spaces for efficient circulation.</i>		
2.6 Building "envelope" generally provides for energy conservation (see criteria)	10	7
<i>The walls are not insulated. However, newly replaced windows are double glazed.</i>		
2.7 Structure is free of friable asbestos and toxic materials	10	4
<i>Some ACM may be present in pipe insulation in the tunnels.</i>		
2.8 Interior walls permit sufficient flexibility for a variety of class sizes	10	5
<i>Flexibility of space configurations was observed in limited areas.</i>		
Mechanical/Electrical		
2.9 Adequate light sources are well maintained, and properly placed and are not subject to overheating	15	13
<i>The majority of the areas have adequate light sources, and the lighting is maintained and not subject to overheating. Some of the fixtures are very old.</i>		
2.10 Internal water supply is adequate with sufficient pressure to meet health and safety requirements	15	15
<i>The internal water supply has sufficient pressure.</i>		
2.11 Each teaching/learning area has adequate convenient wall outlets , phone and computer cabling for technology applications	15	6
<i>There are not enough wall outlets to support the computer/technology equipment.</i>		
2.12 Electrical controls are safely protected with disconnect switches easily accessible	10	7
<i>Disconnect switches are easily accessible and there are no provisions for the disabled.</i>		
2.13 Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled	10	10
<i>Drinking fountains are well maintained and there are provisions for the disabled.</i>		
2.14 Number and size of restrooms meet requirements	10	10
<i>Number of fixtures exceeds OSDM recommendation and there are supplemental number of restrooms. The restrooms are sized properly and do accommodate ADA clearances and include proper hardware in most locations.</i>		
2.15 Drainage systems are properly maintained and meet requirements	10	10
<i>The drainage systems were reported to be in good condition.</i>		

2.16 Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements	10	5
<i>There is no sprinkler system and the fire alarm system is not up to date and does not meet NFPA and OSFC requirements.</i>		
2.17 Intercommunication system consists of a central unit that allows dependable two-way communication between the office and instructional areas	10	10
<i>The phone in each classroom provides the two way communication to the office.</i>		
2.18 Exterior water supply is sufficient and available for normal usage	5	3
<i>There are only a few hose bibs for the exterior of the building, which is not adequate.</i>		
<hr/>		
TOTAL - 2.0 Structural and Mechanical Features	200	146

Suitability Appraisal of **3.0 Plant Maintainability** for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

3.0 Plant Maintainability	Points Allocated	Points
3.1 Windows, doors, and walls are of material and finish requiring minimum maintenance <i>Materials for these times have performed for decades with minimal degradation.</i>	15	15
3.2 Floor surfaces throughout the building require minimum care <i>Floor surfaces throughout the building are mostly of resilient materials. Some wood flooring exists as well.</i>	15	12
3.3 Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain <i>Direct adhered acoustic panels aren't easy to clean. However, the painted plaster and the brick on the walls maintain easily.</i>	10	10
3.4 Built-in equipment is designed and constructed for ease of maintenance <i>Book shelf repairs are required from time to time.</i>	10	8
3.5 Finishes and hardware , with compatible keying system, are of durable quality <i>The level of visible wear on the hardware varies throughout the facility.</i>	10	6
3.6 Restroom fixtures are wall mounted and of quality finish <i>New and renovated restrooms were added with cafeteria additions. These restrooms have wall mounted fixtures.</i>	10	8
3.7 Adequate custodial storage space with water and drain is accessible throughout the building <i>Sufficient mop sinks and storage are provided for custodial activity.</i>	10	10
3.8 Adequate electrical outlets and power , to permit routine cleaning, are available in every area <i>Sufficient electrical service is provided for housekeeping and maintenance.</i>	10	10
3.9 Outdoor light fixtures, electrical outlets , equipment, and other fixtures are accessible for repair and replacement <i>Maintenance staff indicated that the site is appropriately illuminated at night.</i>	10	10
TOTAL - 3.0 Plant Maintainability	100	89

Suitability Appraisal of 4.0 Building Safety and Security for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

4.0 Building Safety and Security	Points Allocated	Points
Site Safety		
4.1 Student loading areas are segregated from other vehicular traffic and pedestrian walkways <i>Comingling between vehicular and pedestrian circulation exists where pedestrians must cross driveways.</i>	15	9
4.2 Walkways , both on and offsite, are available for safety of pedestrians <i>Walkways are provided appropriately on and off site. However, some do cross drives used by buses.</i>	10	7
4.3 Access streets have sufficient signals and signs to permit safe entrance to and exit from school area <i>Signs are provided. Signals are not present.</i>	5	3
4.4 Vehicular entrances and exits permit safe traffic flow <i>Vehicular circulation is provided safe pathways.</i>	5	5
4.5 ES Playground equipment is free from hazard MS Location and types of intramural equipment are free from hazard HS Athletic field equipment is properly located and is free from hazard <i>Athletic equipment is without hazard.</i>	5	5
Building Safety		
4.6 The heating unit(s) is located away from student occupied areas <i>Heating equipment is located in student occupied areas, but does not disrupt the teaching environment.</i>	20	15
4.7 Multi-story buildings have at least two stairways for student egress <i>Multiple stairways are provided throughout the building for circulation and egress.</i>	15	15
4.8 Exterior doors open outward and are equipped with panic hardware <i>All exterior doors have been recently replaced. The open outward and are outfitted with panic hardware.</i>	10	10
4.9 Emergency lighting is provided throughout the entire building with exit signs on separate electrical circuits <i>Emergency light fixtures were observed in limited areas.</i>	10	5
4.10 Classroom doors are recessed and open outward <i>The doors open outward but are not recessed.</i>	10	6
4.11 Building security systems are provided to assure uninterrupted operation of the educational program <i>Systems for uninterrupted operation of the building are not provided.</i>	10	0
4.12 Flooring (including ramps and stairways) is maintained in a non-slip condition <i>Non-slip surfaces were observed in ramps and a limited number of stairs.</i>	5	3
4.13 Stair risers (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 <i>Stair risers are taller than 6 1/2".</i>	5	3
4.14 Glass is properly located and protected with wire or safety material to prevent accidental student injury <i>Wired glass is not provided in doors or adjacent panels.</i>	5	0
4.15 Fixed Projections in the traffic areas do not extend more than eight inches from the corridor wall <i>Corridors are free of such projections.</i>	5	5

4.16 Traffic areas terminate at an exit or a stairway leading to an egress	5	5
<i>Egress means are provided at the end of each corridor.</i>		
Emergency Safety	Points Allocated	Points
4.17 Adequate fire safety equipment is properly located	15	8
<i>Fire extinguishers are located near exits. However, hoses at standpipes have been removed.</i>		
4.18 There are at least two independent exits from any point in the building	15	15
<i>All point in the building have 2 exits.</i>		
4.19 Fire-resistant materials are used throughout the structure	15	15
<i>Non-combustible materials are used throughout.</i>		
4.20 Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided	15	8
<i>Fire alarm system devices are provided throughout the building, but are inadequate to meet current requirements.</i>		
<hr/>		
TOTAL - 4.0 Building Safety and Security	200	142

Suitability Appraisal of 5.0 Educational Adequacy for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

5.0 Educational Adequacy Points Allocated Points

Academic Learning Space

- 5.1 **Size of academic learning areas** meets desirable standards 25 12
Most classrooms are 700 sq. ft. or smaller. This is significantly less than OSDM guideline of 900 sq. ft. The quantity of shelving is not adequate.
- 5.2 **Classroom space** permits arrangements for small group activity 15 6
Most of the class rooms are too small for a variety of classroom arrangements.
- 5.3 **Location of academic learning areas** is near related educational activities and away from disruptive noise 10 10
Disruptive noises were not observed near the academic learning areas.
- 5.4 **Personal space** in the classroom away from group instruction allows privacy time for individual students 10 6
Student privacy is available only in the larger classrooms.
- 5.5 **Storage for student materials** is adequate 10 10
Lockers are provided for storage of student materials.
- 5.6 **Storage for teacher materials** is adequate 10 4
Storage for teacher items is inconsistently provided throughout the building. Some have a hook on the wall. Most have a file cabinet.

Special Learning Space Points Allocated Points

- 5.7 **Size of special learning area(s)** meets standards 15 4
Per OSDM these areas should have nearly 6,000 sq. ft. of area. The high school has between 2,000 and 3,000.
- 5.8 **Design of specialized learning area(s)** is compatible with instructional need 10 3
The design of these areas does not relate specifically the students' needs.
- 5.9 **Library/Resource/Media Center** provides appropriate and attractive space 10 10
The media center has been recently remodeled and its environment provides a stimulating environment.
- 5.10 **Gymnasium (or covered P.E. area)** adequately serves physical education instruction 5 5
Two gymnasiums and a multipurpose roof are all available for student use.
- 5.11 **ES Pre-kindergarten and kindergarten space** is appropriate for age of students and nature of instruction 10 10
MS/HS Science program is provided sufficient space and equipment
A science wing was constructed for the school in 1969.
- 5.12 **Music Program** is provided adequate sound treated space 5 4
Separate rooms for instrumental and vocal music. The rooms have adjacent storage areas and practice rooms.
- 5.13 **Space for art** is appropriate for special instruction, supplies, and equipment 5 4
Six rooms for art instruction. More storage provisions are need.

School Facility Appraisal Points Allocated Points

- 5.14 **Space for technology education** permits use of state-of-the-art equipment 5 4
Computers are provided in the Media Center and in a large computer classroom.
- 5.15 **Space for small groups and remedial instruction** is provided adjacent to classrooms 5 4

Several individual rooms around the building are available for small groups.

5.16 **Storage for student and teacher material** is adequate 5 3

Students are provided lockers. However, storage for teacher materials is inconsistent throughout the building.

Support Space

Points Allocated Points

5.17 **Teacher's lounge and work areas** reflect teachers as professionals 10 9

Well furnished spaces are provided for teacher work and lounge areas.

5.18 **Cafeteria/Kitchen** is attractive with sufficient space for seating/dining, delivery, storage, and food preparation 10 10

All functions associated with the receipt, preparation, and distribution of meals are provided sufficient space and appropriately designed areas.

5.19 **Administrative offices** provided are consistent in appearance and function with the maturity of the students served 5 4

Administrators are provided appropriately sized offices. However, the space is not necessarily designed to the age of the students.

5.20 **Counselor's office** insures privacy and sufficient storage 5 5

Counselors are provided private offices and equipment for file storage.

5.21 **Clinic** is near administrative offices and is equipped to meet requirements 5 5

The clinic is in the administrative office suite and has adequate space and provisions to meet students' needs.

5.22 **Suitable reception space** is available for students, teachers, and visitors 5 5

An accommodating reception area is provided in the administrative suite.

5.23 **Administrative personnel** are provided **sufficient work space and privacy** 5 5

Administrators are provided such areas. However, administrative assistants do not have privacy.

TOTAL - 5.0 Educational Adequacy 200 142

Suitability Appraisal of 6.0 Environment for Education for Shaker Heights HS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

6.0 Environment for Education	Points Allocated	Points
Exterior Environment		
6.1 Overall design is aesthetically pleasing to age of students <i>Design does not appear to be targeted to its age group.</i>	15	7
6.2 Site and building are well landscaped <i>Greenscape and plantings are provided around the entire site.</i>	10	10
6.3 Exterior noise and poor environment do not disrupt learning <i>Disruptive noises and odors do not impact the learning environment.</i>	10	10
6.4 Entrances and walkways are sheltered from sun and inclement weather <i>The building has 3 overhangs with a only few feet of depth. No shelter exists over walkways.</i>	10	4
6.5 Building materials provide attractive color and texture <i>The brownish red Georgian brick exterior is punctuated with white classical elements at building entrances.</i>	5	4
Interior Environment		
6.6 Color schemes, building materials, and decor provide an impetus to learning <i>The scheme is minimal in color and does not appear to stimulate learning.</i>	20	12
6.7 Year around comfortable temperature and humidity are provided throughout the building <i>Temperature is difficult to maintain consistently throughout the building.</i>	15	8
6.8 Ventilating system provides adequate quiet circulation of clean air and meets 15cfm VBC requirement <i>The ventilation system does not provide adequate ventilation and does not meet the requirements.</i>	15	5
6.9 Lighting system provides proper intensity, diffusion, and distribution of illumination <i>The lighting levels are inconsistent where several areas meet or exceed requirements, and other areas of similar use do not meet the requirements.</i>	15	7
6.10 Drinking fountains and restroom facilities are conveniently located <i>A sufficient number of these facilities are provided and located conveniently around the building.</i>	15	15
6.11 Communication among students is enhanced by commons area(s) for socialization <i>Two levels of Cafeteria space and a senior lounge are provided for students.</i>	10	10
6.12 Traffic flow is aided by appropriate foyers and corridors <i>Circulation of students throughout the building is facilitated by appropriately designed corridors.</i>	10	10
6.13 Areas for students to interact are suitable to the age group <i>Two levels of Cafeteria space and a senior lounge are provided for students.</i>	10	10
6.14 Large group areas are designed for effective management of students <i>Areas such as cafeterias, auditoriums and gymnasiums have sufficient portals to facilitate flow of students.</i>	10	10
6.15 Acoustical treatment of ceilings, walls, and floors provides effective sound control <i>The only acoustic consideration in the corridors is the direct adhered tile ceiling. Suspended acoustic ceilings are found in many of the classrooms.</i>	10	10
6.16 Window design contributes to a pleasant environment	10	10

New double glazed aluminum clad wood windows with false muntins allow for high levels of natural light.

6.17 **Furniture and equipment** provide a pleasing atmosphere 10 8

The furniture is dated but in performing condition.

TOTAL - 6.0 Environment for Education 200 150

LEED Observation Notes

School District: Shaker Heights City
County: Cuyahoga
School District IRN: 44750
Building: Shaker Heights High School
Building IRN: 34108

Sustainable Sites

Construction process can have a harmful effect on local ecology, especially when buildings are build on productive agricultural, wildlife or open areas. Several measures can be take however to prevent the impact on undeveloped lands or to improve previously contaminated sites. Appropriate location reduces the need for private transportation and helps to prevent an increase in air pollution. Developing buildings in urban areas and on brownfield sites instead of greenfield locations has economical and environmental benefits. Controlling stormwater runoff and erosion can prevent the worsening of water quality in receiving bodies of water and the impact on aquatic life. Once the building is constructed, it's important to decrease heat island effects and reduce the light pollution on the site.

(source: LEED Reference Guide, 2001:9)

Water Efficiency

In the US ca. 340 billion gallons of fresh water are withdrawn daily from surface sources, 65% of which is discharged later after use. Water is also withdrawn from underground aquifers The excessive usage of water results in the current water deficit, estimated at 3,700 billion gallons. Water efficiency measures in commercial buildings can reduce water usage by at least 30%. Low-flow fixtures, sensors or using non potable water for landscape irrigation, toilet flushing and building systems are just some of available strategies. Not only do they result in environmental savings, but also bring about financial benefits, related to lower water use fees, lower sewage volumes to treat and energy use reductions.

(source: LEED Reference Guide, 2001:65)

Replace all fixtures with low flow fixtures.

Energy & Atmosphere

Buildings in the US account for more than 30% of the total energy use and for approximately 60% of electricity. 75% of energy is derived from the burning of fossil fuels, which releases CO₂ into the Atmosphere and contributes to global warming. Moreover, coal fired electric utilities release nitrogen oxides and sulfur dioxide, where the former contribute to smog and the latter to acid rain. Other types of energy production are not less harmful. Burning of natural gas produces nitrogen oxides and greenhouse gases as well, nuclear power creates nuclear wastes, while hydroelectric generating plants disrupt natural water flows. Luckily there are several practices that can reduce energy consumption and are environmentally and economically beneficial. Not only will they reduce the air pollution and mitigate global warming thanks to being less dependent on power plants, but also they will reduce operational costs and will quickly pay back. In order to make the most of those practices, it's important to adopt a holistic approach to the building's energy load and integrate different energy saving strategies.

(source: LEED Reference Guide, 2001:93)

Upgrades to the HVAC system will allow for increased ventilation and the use of outside air for cooling. Recommend changing the steam boilers to heating water boilers for energy savings. There is some flat roof area where photovoltaic solar collector panels for possible on-site electrical generation.

Material & Resources

The steps related to process building materials, such as extraction, processing and transportation are not environmentally natural, as they pollute the air, water and use natural resources. Construction and demolition wastes account for 40% of the solid waste stream in the US. Reusing existing documents is one of the best strategies to reduce solid wastes volumes and prevents them from ending up at landfills. It also reduces habitat disturbance and minimizes the need for the surrounding infrastructure. While using new materials one should take into account different material sources. Salvaged materials provide savings on material costs, recycled content material minimizes waste products and local materials reduce the environmental impact of transportation. Finally, using rapidly renewable materials and certified wood decreases the consumption of natural resources. Recycling and reusing construction waste is another strategy to be taken into consideration in sustainable design.

(source: LEED Reference Guide, 2001:167)

Indoor Environmental Quality

As we spend a big majority of our time indoors, the emphasis should be put on optimal indoor environmental quality strategies while (re)designing a building . Otherwise, a poor IEQ will have adverse effects on occupants' health, productivity and quality of life. IEQ strategies such as ventilation effectiveness and control of contaminants or a building flush-out prior to occupancy can reduce potential liability, increase the market value of the building but can also result in a significantly higher productivity (16%). Other strategies involve automatic sensors and controls, introducing fresh air to the building or providing lots of daylighting views.

(source: LEED Reference Guide, 2001:215)

The replacement of the HVAC system will increase the IEQ to meet the requirements.

Innovation & Design Process

This category is aimed at recognizing projects that implemented innovative building features and sustainable building knowledge, and whose strategy or measure results exceeded those which are required by the LEED Rating System. Expertise in sustainable design is the key element of the innovative design and construction process.

(source: LEED Reference Guide, 2001:271)

Justification for Allocation of Points - Shaker Heights City

Building Name and Level: **Shaker Heights High School**
9-12

Building features that clearly exceed criteria:

1. The high school has 3 spaces totaling 24,123 sq. ft. available for physical education. OSFC guidelines recommend approximately 14,500 sq. ft. for a student enrollment of 1,735 students.
- 2.
- 3.
- 4.
- 5.
- 6.

Building features that are non-existent or very inadequate:

1. Major cracks were observed in on of the foundation piers in the mechanical level. The separation is aprroximately 1/4" wide and several inches deep.
- 2.
- 3.
- 4.
- 5.
- 6.

[Back to Assessment Summary](#)

Environmental Hazards Assessment Cost Estimates

Owner:	Shaker Heights City
Facility:	Shaker Heights High School
Date of Initial Assessment:	Feb 9, 2015
Date of Assessment Update:	Nov 3, 2021
Cost Set:	2016

District IRN:	44750
Building IRN:	34108
Firm:	Ohio Facilities Construction Commission

Scope remains unchanged after cost updates.

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1930 Auditorium	9,296	\$5,529.60	\$5,529.60
1930 Original Building	169,342	\$241,534.20	\$231,534.20
1952 1952	8,556	\$17,755.60	\$17,755.60
1954 1954	17,553	\$39,805.30	\$39,805.30
1961 1961	53,399	\$176,039.90	\$176,039.90
1969 1969	30,486	\$183,948.60	\$183,948.60
1998 1998	27,042	\$2,704.20	\$2,704.20
2007 2007	9,282	\$928.20	\$928.20
Total	324,956	\$668,245.60	\$658,245.60
Total with Regional Cost Factor (102.31%)	—	\$683,682.07	\$673,451.07
Regional Total with Soft Costs & Contingency	—	\$850,707.65	\$837,977.19

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - Auditorium

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** Auditorium
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Not Present	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Not Present	0	\$20.00	\$0.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	200	\$15.00	\$3,000.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Not Present	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Not Present	0	\$3.00	\$0.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Not Present	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	800	\$2.00	\$1,600.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Not Present	0	\$3.00	\$0.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32. Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$4,600.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$4,600.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 9296	9296	\$0.10	\$929.60

E. Other Environmental Hazards/Remarks <input type="checkbox"/> None Reported	
Description	Cost Estimate
1. Costs for lead-based paint mock-ups are included in assessment for 1930 (Original Building).	\$0.00
2. See Bulk Sample Record Nos. 1, 17, & 25 for sampling results in this addition.	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Renovation \$0.00
4. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Demolition \$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries	
1. A35, B1, C3, D1, and E3	Total Cost for Env. Hazards Work - Renovation \$5,529.60
2. A36, B1, D1, and E4	Total Cost for Env. Hazards Work - Demolition \$5,529.60

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - Original Building

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** Original Building
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material			
ACM Found		Status	Quantity	Unit Cost	Estimated Cost
1.	Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2.	Breeching Insulation Removal	Assumed Asbestos-Containing Material	750	\$10.00	\$7,500.00
3.	Tank Insulation Removal	Assumed Asbestos-Containing Material	50	\$8.00	\$400.00
4.	Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5.	Pipe Insulation Removal	Assumed Asbestos-Containing Material	2000	\$10.00	\$20,000.00
6.	Pipe Fitting Insulation Removal	Assumed Asbestos-Containing Material	200	\$20.00	\$4,000.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Assumed Asbestos-Containing Material	3000	\$12.00	\$36,000.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Assumed Asbestos-Containing Material	20	\$30.00	\$600.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	3400	\$15.00	\$51,000.00
10.	Dismantling of Boiler/Furnace/Incinerator	Assumed Asbestos-Containing Material	4	\$2,000.00	\$8,000.00
11.	Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12.	Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13.	Fireproofing Removal	Assumed Asbestos-Containing Material	1300	\$25.00	\$32,500.00
14.	Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15.	Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16.	Acoustical Panel/Tile Ceiling Removal	Reported Asbestos-Containing Material	1400	\$3.00	\$4,200.00
17.	Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18.	Cement Board Removal	Not Present	0	\$5.00	\$0.00
19.	Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22.	Fire Door Removal	Assumed Asbestos-Containing Material	26	\$100.00	\$2,600.00
23.	Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25.	Soil Removal	Not Present	0	\$150.00	\$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	13600	\$2.00	\$27,200.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29.	Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	5000	\$3.00	\$15,000.00
30.	Carpet Mastic Removal	Reported Asbestos-Containing Material	1800	\$2.00	\$3,600.00
31.	Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	2000	\$1.00	\$2,000.00
32.	Acoustical Tile Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
33.	Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34.	Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$214,600.00
36.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$214,600.00

B. Removal Of Underground Storage Tanks						<input checked="" type="checkbox"/> None Reported	
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost		
1.	(Sum of Lines 1-0)					Total Cost For Removal Of Underground Storage Tanks	\$0.00

C. Lead-Based Paint (LBP) - Renovation Only			<input type="checkbox"/> Addition Constructed after 1980
1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups		\$5,000.00
2.	Special Engineering Fees for LBP Mock-Ups		\$5,000.00
3.	(Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups	\$10,000.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration				<input type="checkbox"/> Not Applicable
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost	
1. 169342	169342	\$0.10	\$16,934.20	

E. Other Environmental Hazards/Remarks			<input type="checkbox"/> None Reported
Description		Cost Estimate	
1.	See Bulk Sample Record Nos. 1 through 7, 15, 17, 23, 24, & 25 for sampling results in this addition.		\$0.00
2.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Renovation	\$0.00
3.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Demolition	\$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries			
1.	A35, B1, C3, D1, and E2	Total Cost for Env. Hazards Work - Renovation	\$241,534.20
2.	A36, B1, D1, and E3	Total Cost for Env. Hazards Work - Demolition	\$231,534.20

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 1952

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 1952
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$20.00	\$0.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	200	\$15.00	\$3,000.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Not Present	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	800	\$2.00	\$1,600.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
30. Carpet Mastic Removal	Not Present	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32. Acoustical Tile Mastic Removal	Reported Asbestos-Containing Material	4100	\$3.00	\$12,300.00
33. Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$16,900.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$16,900.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 8556		\$0.10	\$855.60

E. Other Environmental Hazards/Remarks <input type="checkbox"/> None Reported	
Description	Cost Estimate
1. Costs for lead-based paint mock-ups are included in assessment for 1930 (Original Building).	\$0.00
2. See Bulk Sample Record Nos. 8 through 13, & 25 for sampling results in this addition.	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Renovation \$0.00
4. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Demolition \$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries	
1. A35, B1, C3, D1, and E3	Total Cost for Env. Hazards Work - Renovation \$17,755.60
2. A36, B1, D1, and E4	Total Cost for Env. Hazards Work - Demolition \$17,755.60

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 1954

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 1954
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$20.00	\$0.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	350	\$15.00	\$5,250.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Not Present	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Assumed Asbestos-Containing Material	100	\$5.00	\$500.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Assumed Asbestos-Containing Material	1	\$100.00	\$100.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	1400	\$2.00	\$2,800.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	9800	\$3.00	\$29,400.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32. Acoustical Tile Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$38,050.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$38,050.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 17553	17553	\$0.10	\$1,755.30

E. Other Environmental Hazards/Remarks <input type="checkbox"/> None Reported	
Description	Cost Estimate
1. Costs for lead-based paint mock-ups are included in assessment for 1930 (Original Building).	\$0.00
2. See Bulk Sample Record Nos. 18, 21, 22, & 25 for sampling results in this addition.	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Renovation \$0.00
4. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Demolition \$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries	
1. A35, B1, C3, D1, and E3	Total Cost for Env. Hazards Work - Renovation \$39,805.30
2. A36, B1, D1, and E4	Total Cost for Env. Hazards Work - Demolition \$39,805.30

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 1961

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 1961
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Assumed Asbestos-Containing Material	1100	\$8.00	\$8,800.00
5. Pipe Insulation Removal	Assumed Asbestos-Containing Material	100	\$10.00	\$1,000.00
6. Pipe Fitting Insulation Removal	Assumed Asbestos-Containing Material	40	\$20.00	\$800.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	1100	\$15.00	\$16,500.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported Asbestos-Containing Material	26300	\$3.00	\$78,900.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Assumed Asbestos-Containing Material	2	\$100.00	\$200.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	4400	\$2.00	\$8,800.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	16700	\$3.00	\$50,100.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	5500	\$1.00	\$5,500.00
32. Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Assumed Asbestos-Containing Material	1	\$100.00	\$100.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$170,700.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$170,700.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 53399	53399	\$0.10	\$5,339.90

E. Other Environmental Hazards/Remarks <input type="checkbox"/> None Reported	
Description	Cost Estimate
1. Costs for lead-based paint mock-ups are included in assessment for 1930 (Original Building).	\$0.00
2. See Bulk Sample Record Nos. 16, 19, 20, & 25 for sampling results in this addition.	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Renovation \$0.00
4. (Sum of Lines 1-2)	Total Cost for Other Environmental Hazards - Demolition \$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries	
1. A35, B1, C3, D1, and E3	Total Cost for Env. Hazards Work - Renovation \$176,039.90
2. A36, B1, D1, and E4	Total Cost for Env. Hazards Work - Demolition \$176,039.90

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 1969

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 1969
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Assumed Asbestos-Containing Material	200	\$20.00	\$4,000.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	600	\$15.00	\$9,000.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Not Present	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported Asbestos-Containing Material	25100	\$3.00	\$75,300.00
17. Laboratory Table/Counter Top Removal	Assumed Asbestos-Containing Material	200	\$100.00	\$20,000.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Not Present	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	2400	\$2.00	\$4,800.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	22000	\$3.00	\$66,000.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	1800	\$1.00	\$1,800.00
32. Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$180,900.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$180,900.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported						
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost	
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks					\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups
	\$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 30486	30486	\$0.10	\$3,048.60

E. Other Environmental Hazards/Remarks <input type="checkbox"/> None Reported	
Description	Cost Estimate
1. Costs for lead-based paint mock-ups are included in assessment for 1930 (Original Building).	\$0.00
2. See Bulk Sample Record Nos. 14, 15, & 25 for sampling results in this addition.	\$0.00
3. There are some sampling issues associated with materials described on Bulk Sample Record No. 14 that require attention; refer to this Bulk Sample Record for additional information.	\$0.00
4. (Sum of Lines 1-3)	Total Cost for Other Environmental Hazards - Renovation
	\$0.00
5. (Sum of Lines 1-3)	Total Cost for Other Environmental Hazards - Demolition
	\$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries	
1. A35, B1, C3, D1, and E4	Total Cost for Env. Hazards Work - Renovation
	\$183,948.60
2. A36, B1, D1, and E5	Total Cost for Env. Hazards Work - Demolition
	\$183,948.60

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 1998

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 1998
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material			
ACM Found		Status	Quantity	Unit Cost	Estimated Cost
1.	Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2.	Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3.	Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4.	Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5.	Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6.	Pipe Fitting Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$20.00	\$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Reported / Assumed Asbestos-Free Material	0	\$15.00	\$0.00
10.	Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11.	Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12.	Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13.	Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14.	Hard Plaster Removal	Not Present	0	\$7.00	\$0.00
15.	Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16.	Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
17.	Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18.	Cement Board Removal	Not Present	0	\$5.00	\$0.00
19.	Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22.	Fire Door Removal	Reported / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
23.	Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25.	Soil Removal	Not Present	0	\$150.00	\$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Not Present	0	\$2.00	\$0.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29.	Resilient Flooring Removal, Including Mastic	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
30.	Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31.	Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32.	Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33.	Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34.	Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$0.00
36.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$0.00

B. Removal Of Underground Storage Tanks						<input checked="" type="checkbox"/> None Reported	
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost		
1.	(Sum of Lines 1-0)					Total Cost For Removal Of Underground Storage Tanks	\$0.00

C. Lead-Based Paint (LBP) - Renovation Only		<input checked="" type="checkbox"/> Addition Constructed after 1980
1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2.	Special Engineering Fees for LBP Mock-Ups	\$0.00
3.	(Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups

D. Fluorescent Lamps & Ballasts Recycling/Incineration				<input type="checkbox"/> Not Applicable
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost	
1.	27042	\$0.10	\$2,704.20	

E. Other Environmental Hazards/Remarks			<input type="checkbox"/> None Reported
Description		Cost Estimate	
1.	See Bulk Sample Record No. 25 for sampling results in this addition.		\$0.00
2.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Renovation	\$0.00
3.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Demolition	\$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries			
1.	A35, B1, C3, D1, and E2	Total Cost for Env. Hazards Work - Renovation	\$2,704.20
2.	A36, B1, D1, and E3	Total Cost for Env. Hazards Work - Demolition	\$2,704.20

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights High School (34108) - 2007

Owner: Shaker Heights City **Bldg. IRN:** 34108
Facility: Shaker Heights High School **BuildingAdd:** 2007
Date On-Site: 2015-02-09 **Consultant Name:** Gandee & Associates, Inc.

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material			
ACM Found		Status	Quantity	Unit Cost	Estimated Cost
1.	Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2.	Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3.	Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4.	Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5.	Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6.	Pipe Fitting Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$20.00	\$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Reported / Assumed Asbestos-Free Material	0	\$15.00	\$0.00
10.	Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11.	Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12.	Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13.	Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14.	Hard Plaster Removal	Not Present	0	\$7.00	\$0.00
15.	Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16.	Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
17.	Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18.	Cement Board Removal	Not Present	0	\$5.00	\$0.00
19.	Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22.	Fire Door Removal	Reported / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
23.	Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25.	Soil Removal	Not Present	0	\$150.00	\$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Not Present	0	\$2.00	\$0.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29.	Resilient Flooring Removal, Including Mastic	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
30.	Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31.	Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32.	Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33.	Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34.	Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$0.00
36.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$0.00

B. Removal Of Underground Storage Tanks						<input checked="" type="checkbox"/> None Reported	
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost		
1.	(Sum of Lines 1-0)					Total Cost For Removal Of Underground Storage Tanks	\$0.00

C. Lead-Based Paint (LBP) - Renovation Only		<input checked="" type="checkbox"/> Addition Constructed after 1980
1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2.	Special Engineering Fees for LBP Mock-Ups	\$0.00
3.	(Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups

D. Fluorescent Lamps & Ballasts Recycling/Incineration				<input type="checkbox"/> Not Applicable
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost	
1.	9282	\$0.10	\$928.20	

E. Other Environmental Hazards/Remarks		<input type="checkbox"/> None Reported
Description	Cost Estimate	
1.	See Bulk Sample Record No. 25 for sampling results in this addition.	\$0.00
2.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Renovation
3.	(Sum of Lines 1-1)	Total Cost for Other Environmental Hazards - Demolition

F. Environmental Hazards Assessment Cost Estimate Summaries	
1.	A35, B1, C3, D1, and E2 Total Cost for Env. Hazards Work - Renovation
2.	A36, B1, D1, and E3 Total Cost for Env. Hazards Work - Demolition

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- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
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