

FACILITY AUDIT REPORT
HAYES HALL, Bldg 039
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EXECUTIVE SUMMARY AND PROJECT LIST FOR HAYES HALL

At 101 years old, Hayes Hall is the oldest building on campus. It has been on the National Registry of Historic Places since 1970. The building was completely renovated in 1978. Most of the mechanical systems are functioning adequately at this time, and exterior systems are in good condition. The elevator has had a slightly higher than normal number of maintenance calls over the last several years and a project has been proposed to upgrade it by the Physical Facilities Department. The finishes in this building have been subjected to a great deal of abuse. The hallways should be repainted. The flooring in several of the studios was not replaced during the renovation and the original tile is in very poor condition. The Physical Facilities Department has covered the tile in several rooms with new tile and has an unfunded project proposed to replace the tile in several more.

PROPOSED MAINTENANCE PROJECTS:

A. Corrective Maintenance Projects:		Control #
NO MAJOR CORRECTIVE MAINTENANCE PROJECTS IDENTIFIED		
B. Building Improvement/Addition Projects:		
1. Floor tile replacement/repairs.....	\$27,900	0180
C. Projected (over the next 5 yrs) Projects:		
1. Modernize elevator.....	\$75,000	1954
Total cost for estimated projects =	\$102,900	

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GENERAL BUILDING INFORMATION

HAYES HALL #039

BUILDING ADDRESS: 108 N. OVAL MALL

GROSS SQ. FT.: 44,073

NET ASSIGNABLE SQ. FT.: 23,787

MECHANICAL/CUSTODIAL AREA SQ. FT.: 2,198

YEAR OF CONSTRUCTION: 1893

YEAR OF LAST RENOVATION: WHOLE BUILDING RENOVATION COMPLETED IN 1978 AIR
CONDITIONING ADDED IN 1984

NUMBER OF STORIES/BASEMENT: 3 STORIES AND A BASEMENT

AIR CONDITIONING (Percentage): 100 %

CURRENT USE: OFFICES AND CLASSROOMS FOR ART AND HISTORY OF ART DEPARTMENT

TYPE OF CONSTRUCTION: WOOD FRAME AND MASONRY EXTERIOR

ESTIMATED REPLACEMENT COST: \$5,839,000 *

WHEELCHAIR ACCESSIBILITY: THE NORTHWEST ENTRANCE IS AT GRADE LEVEL AND IS
EQUIPPED WITH AN ELECTRIC DOOR OPENER. THERE IS AN ELEVATOR CAPABLE OF
ACCESSING ALL FLOORS.

OVERALL BUILDING CONDITION: FUNCTIONALLY SATISFACTORY **

NUMBER OF EXIT STAIRWAYS: 3

* Replacement Cost assigned June, 1993 by The Office of Campus Planning and Space Utilization.

** Office of Campus Planning and Space Utilization C-1 Report Condition Code.

BUILDING SYSTEMS INFORMATION

HAYES HALL #039

HEATING:

Source POWER PLANT MEDIUM PRESSURE STEAM TO LOCAL HEATING HOT WATER CONVERT
Type Heating System HOT WATER
Steam (Line size, valve location) 3" SUPPLY, 1-1/2" COND RETURN, PIT - 131M
Building Htg Water (line size, valve location) 2 CONVERTERS IN 131M

VENTILATION SYSTEM:

VARIABLE AIR VOLUME SYSTEM FOR ENTIRE BLDG, SINGLE ZONE DX FOR ONE ROOM

COOLING:

Bldg % 100 Chillers TRANE, RECIPROCATING, 93 TONS, INSTALLED 1984
Window Units N/A Thru-the-wall N/A Direct exp. units 1 @ 5TONS

HVAC CONTROL SYSTEM: JC-80 SYSTEM (DIRECT DIGITAL CONTROL)

ELECTRIC: Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm)
1. BUCKEYE PGN9/PGS3 500 13,200/(208/120) NORTH EAST OUTSIDE THE BLDG

PLUMBING:

Water (size, valve location) 2", 131M
Gas (size, valve location) N/A
Domestic Hot Water (size, valve location) 2" SUPPLY, 3/4" RETURN, PIT 131M
Compressed Air (size, location) 1/2", PIT IN 131M

SEWERS: Storm 0 Sanitary 0 Combination 2 @ 6", 2 @ 4"

METERS:

Gas (size, location) N/A
Water (size, location) 2", 131M
Electric (size, location) N/A

ALARM SYSTEMS:

Fire Alarm YES Panel Location RM 131M
Fire Pump NO Pump Location N/A
Sprinklers NO Panel Location N/A
Other Alarms N/A

ELEVATORS:

Number 1 Type (passenger, freight) PASSENGER
Manufacturer OTIS Size 3,500 LBS CAPACITY, 63" X 83"

EMERGENCY GENERATOR: Size N/A Location N/A

KEY BOX LOCATION: NORTH EAST DOOR ON THE EAST WING OF THE BUILDING.

ASBESTOS SURVEY (1986):

NO ASBESTOS-CONTAINING MATERIALS WERE DISCOVERED IN THE SAMPLES THAT WERE TAKEN.

HAYES HALL NARRATIVE

HISTORY

Construction of Hayes Hall was completed in 1893. It is now the oldest building on campus and was placed on the Registry of National Historic Places in 1970. It was built to house mechanical arts classes. Several wings have been constructed and removed from the north wing of the building. In 1978, the building was completely renovated. The mechanical systems were replaced. Drywall was installed over the old plaster. New partitions were constructed and the old wooden stairway was replaced with new exit stairways. The roofing and windows were replaced. The exterior was also restored at that time. The sole occupants of the building are now the History of Arts Department and portions of the Art Department. Facility use by room category is 52% Laboratory (studios) and related use, 27% office and office-related, 8% mechanical, custodial and toilet, 7% library processing, and 6% classroom.

PRIMARY SYSTEMS

The three-story building is supported by concrete footings under foundation walls at the exterior and brick load-bearing walls in the interior of the structure. Individual footings support steel columns in the basement which continue up through the structure to the third floor in the east and west wings. Wooden beams support the floors. Steel I-Beams and columns were added in 1978 to provide additional support in the east wing. Most floors are composed of 2" X 14" wooden joists 12" on center with wood decking. Concrete floors now bridge the openings where the original wooden stairway was located. Three new stairways were installed in 1978. The structure of the building appears to be sound.

The roof consists entirely of wooden trusses, rafters, and decking. There has been some minor structural replacement but the original 100-year-old timbers are still in service for the most part. No structural problems were observed. A new asphalt shingle roof and new copper flashing were installed in 1978.

The exterior walls are brick and sandstone. They were restored in 1978 and are in good condition, for the most part. There is some painted graffiti on the northwest wall requiring removal. The decorative metal cornice surrounding the gutter is peeling and should be repainted along with the downspouts. The original windows were replaced in 1978 with single-hung thermal-break windows. Occupants reported that there have been minor problems with the mechanisms from time to time but all of the windows appeared to function adequately at this time. The exterior doors are in good condition.

SECONDARY SYSTEMS

Original interior partitions consist of plastered or painted brick. Metal studs and drywall were used extensively for partition walls in the 1978 renovation. The exit stairways have concrete block walls. Drywall has been installed over the remaining plaster in the hallways. The lobby area has been recently repainted and still has its original plaster/terra cotta decorations. The hallway walls throughout the rest of the building are in poor condition requiring new paint.

Floor finishes consist of vinyl tile and some carpeting in departmental offices. The tile in the hallways has been replaced. Some of the original tile remains in the studios and is in poor condition. The Physical Facilities Department has covered the tile in several rooms with new tile and has proposed a project to replace the tile in several more. The tile throughout the hallways and pool

classrooms is in good condition. The basement floor is sealed concrete. The floor has a great deal of overspray from student painting projects and should be stripped and resealed.

The lobby area still has its original stamped metal ceiling and it is in good condition. The hallway, pool classroom and some office ceilings are composed of suspended acoustical tiles. These ceilings were installed during the 1978 renovation and are in good condition. Several studio and office ceilings consist of the painted exposed underside of the wood floor above. Several plastered ceilings have been textured. The ceilings are generally in good condition.

SERVICE SYSTEMS

An elevator was installed in the 1978 renovation. Maintenance personnel reported that there have been some mechanical problems with the elevator in the past and that it has had a slightly higher than normal number of maintenance calls. The Department of Physical Facilities has proposed a project to modernize and replace some of the mechanical components of the elevator.

The entire building is heated and cooled by a variable air volume HVAC system. There are fin tube radiators at the perimeter of the building. Unit heaters are suspended from the ceiling in the stairway exterior entrances. A reciprocating water chiller with air cooled condensers was installed in 1984 to provide chilled water to the cooling coils in the air handler. A dedicated single zone dx system was also installed in 1983 to provide additional cooling to the History of Art slide library located on the second floor. The system is controlled by a direct digital control system. No major operational problems were identified with the system and it appears to be functioning adequately at this time.

The plumbing distribution system was replaced along with the fixtures during the 1978 renovation. The only problems with the plumbing system is the tendency for the sinks in the studios to plug with paint and plaster from heavy use by the occupants.

ELECTRICITY

Electrical power is provided by a 500 KVA transformer located on the north east side of the building. The building has a 1600 amp distribution system. Utility division records indicate that the transformer is approximately 40% utilized under peak demand conditions.

The building electrical distribution and lighting systems were completely replaced in 1978. Several of the studios have suspended ceiling grids with fluorescent lights and no tiles by design. There appears to be an adequate supply of outlets and no problems with the building electrical system were observed. There is additional space for circuits in most panels.

SAFETY STANDARDS

The building is equipped with lighted exit signs and portable fire extinguishers. There are smoke detectors in the HVAC ducts and at the fire doors in the hallways. An annunciator is located outside room 131M.

ASBESTOS

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment

Program's report: Inventory of Friable Asbestos-Containing Materials in Buildings of the Ohio State University (Main and Branch Campuses) and Recommendations for Corrective Action by PEI Associates, September 1986, did not identify asbestos containing materials in the building. It should be noted that the remaining original vinyl tile probably contains asbestos but has not been specifically tested.

BUILDING PERIMETER

A driveway located on the north side of the building provides access to both Hopkins and Hayes Halls. The concrete sidewalks are in good condition on all sides of the building. The wooden fence at the north side of the building by the driveway requires repairs. The security lights on the building exterior are all working and building entrances and approaches are well lit and unobscured.

MAINTENANCE PROJECTS (LESS THAN \$5000)

1. Paint metal cornice and downspouts.
Workorder #01-5064-112272-71
2. Paint hallways, restrooms and stairways.
Workorder # 01-5064-112272-71
3. Remove graffiti from west wall of north wing of the building.
Workorder # 01-5063-008362-46
4. Repair fence panels at driveway.
Workorder # 01-5064-112276-71
5. Repair floor tile in women's restroom in basement. (rm 13T)
Workorder # 01-5064-112272-71
6. Scrape and paint ceiling in room 232.
Workorder # 01-5064-116213-66

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BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 039 FACILITY NAME: HAYES HALL
 DATE: 6/18/94 INSPECTOR: JAMES P. HERTENSTEIN
 YEAR CONSTRUCTED: 1893, RENOVATED IN 1978
 GROSS SQ FT: 44,073 NET SQ FT: 23,787
 REPLACEMENT COST \$ 5,839,000 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	CONDITION VALUE MULTIPLIER FOR BLDG. COMPONENT	BUILDING COMPONENT CURRENT VALUE
Foundation	4.2	245,238	.78	191,286
Columns and Beams	15.1	881,689	.78	687,717
Exterior Walls	9.0	525,510	.89	467,704
Windows & Doors	4.4	256,916	.84	215,809
Roofing	4.7	274,433	.75	205,825
Partitions & Drs.	7.4	432,086	.91	393,198
Wall Finishes	2.8	163,492	.64	104,635
Floor Finishes	5.4	315,306	.71	223,867
Ceilings & Finish	7.7	449,603	.83	373,170
Conveying	1.8	105,102	.77	80,929
Plumbing	2.5	145,975	.87	126,998
Heating	9.5	554,705	.86	477,046
Cooling & Vent.	10.8	630,612	.85	536,020
Elec. Ser. & Dist	1.1	64,229	.89	57,164
Lighting & Power	11.6	677,324	.83	562,179
Safety Standards	2.0	116,780	.78	91,088
TOTALS	100.00	5,839,000		4,794,635

III. BUILDING RATING SUMMARY

Overall Building Rating = 83%

* Replacement Cost assigned September 1991 by The Office of Campus Planning and Space Utilization without the furnishings and fixed equipment allocation.

** Percent allocation of each building component is calculated from The Means Standard Construction Cost data for College Classroom Buildings.

COLUMNS AND BEAMS

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Columns and Beams:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Concrete-in-place _____	[X]	[]	[]
Precast Concrete _____	[X]	[]	[]
Steel <u>STEEL COLUMNS, I-BEAMS ADDED FOR REINFORCEMENT</u>	[]	[X]	[]
Steel Fireproofing _____	[X]	[]	[]
Wood <u>BEAMS THROUGHOUT MOST OF THE BUILDING</u>	[]	[X]	[]
Other _____	[X]	[]	[]

b. Floors:

Concrete Slab <u>BASEMENT</u>	[]	[X]	[]
Precast Slab _____	[X]	[]	[]
Metal Deck _____	[X]	[]	[]
Metal Deck w/concrete fill <u>REPLACEMENT FOR ORIG STAIRWAY</u>	[]	[X]	[]
Wood <u>2" X 14", 12" ON CENTER THROUGHOUT</u>	[]	[X]	[]
Other _____	[X]	[]	[]

c. Roof System:

Flat _____	[X]	[]	[]
Pitched _____	[]	[X]	[]
Concrete _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Wood <u>TRUSSES RAFTERS AND DECKING</u>	[]	[X]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

THE STRUCTURE APPEARS SOUND. MOST OF THE LOAD OF THE BUILDING IS SUPPORTED BY THE ORIGINAL BRICK WALLS AND STEEL COLUMNS. THE WOODEN FLOORS ARE SUPPORTED BY WOODEN BEAMS. STEEL I-BEAMS AND ADDITIONAL STEEL COLUMNS WERE ADDED TO THE EAST WING OF THE BUILDING TO PROVIDE SUPPORT TO THE FLOORS IN THE 1978 RENOVATION. THERE IS SOME CHECKING EVIDENT IN THE WOODEN BEAMS, BUT THE WOODEN STRUCTURE APPEARS TO BE SOUND OVERALL CONSIDERING ITS AGE.

C. COMPONENT RATING: (\$ 881,700) (78 %) = \$ 687,700
 Possible Condition Component
 Value Value Multiplier Value

EXTERIOR WALLS

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

a. Walls:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Concrete <u>EXPOSED FOUNDATION ONLY</u>	[]	[X]	[]
Masonry <u>BRICK AND SANDSTONE</u>	[]	[X]	[]
Metal Siding _____	[X]	[]	[]
Wood Siding _____	[X]	[]	[]
Other _____	[X]	[]	[]
b. Finishes:			
Stucco _____	[X]	[]	[]
Paint <u>THE METAL CORNICE AT THE GUTTERS SHOULD BE PAINTED</u>	[]	[]	[X]
Other _____	[X]	[]	[]

B. COMMENTS:

THE MASONRY WAS RESTORED IN 1978 AND IS IN GOOD CONDITION. THE DECORATIVE METAL CORNICE THAT COVERS THE GUTTERS REQUIRES PAINTING.

C. COMPONENT RATING: (\$525,500) (89 %) = \$467,700
 Possible Condition Component
 Value Value Multiplier Value

EXTERIOR WINDOWS & DOORS

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Windows type & number:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Wood _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Alum <u>141 SINGLE-HUNG, 107 FIXED UNITS</u>	[]	[X]	[]
Other _____	[X]	[]	[]
b. Window glazing:			
Single pane _____	[]	[X]	[]
Double pane <u>ALL ALUMINUM FRAME WINDOWS</u>	[]	[X]	[]
Other _____	[X]	[]	[]
c. Doors type & number:			
Wood <u>1 SET OF DOUBLE DOORS AT SOUTH ENTRANCE</u>	[]	[X]	[]
Steel <u>1 SINGLE AND 1 SET OF DOUBLE DOORS</u>	[]	[X]	[]
Alum <u>3 SINGLE DOORS</u>	[]	[X]	[]
Other _____	[X]	[]	[]
d. Shading Devices:			
Types <u>VENETIAN BLINDS/CURTAINS</u>	[]	[X]	[]

B. COMMENTS:

THE WINDOWS WERE REPLACED IN THE 1978 RENOVATION.

C. COMPONENT RATING: (\$256,900) (84 %) = \$205,800
 Possible Condition Component
 Value Value Multiplier Value

ROOFING

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Roof Covering:	N/A	Sat	Att
Built-up _____	[X]	[]	[]
Built-up w/gravel <u>1900 SF INSTALLED IN 1966</u>	[X]	[]	[]
Asphalt Shingle <u>15,900 SF INSTALLED IN 1978</u>	[]	[X]	[]
Copper _____	[X]	[]	[]
Glass (Skylight) _____	[X]	[]	[]
Slate _____	[X]	[]	[]
Spanish Tile _____	[X]	[]	[]
Metal _____	[X]	[]	[]
Other _____	[X]	[]	[]

c. Flashing:

Base & Counter <u>COPPER</u>	[]	[X]	[]
Cap <u>COPPER</u>	[]	[X]	[]
Through Wall _____	[X]	[]	[]
Valley & Ridge <u>COPPER VALLEY FLASHING</u>	[]	[X]	[]

d. Gravel Stop & Edge Strips:

Type _____	[X]	[]	[]
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e. Drainage:

Gutters w/ Exterior Downspouts <u>COPPER</u>	[]	[]	[X]
Scuppers w/ Exterior Downspouts _____	[X]	[]	[]
Drains w/ Interior Storm Drains _____	[X]	[]	[]

f. Parapets:

Concrete _____	[X]	[]	[]
Brick _____	[X]	[]	[]
Block _____	[X]	[]	[]
Precast _____	[X]	[]	[]
Other _____	[X]	[]	[]

g. Insulation:

Type <u>CELLULOSE INSULATION BETWEEN THE CEILING JOISTS</u>	[]	[X]	[]
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B. COMMENTS

THE ROOF APPEARS TO BE IN GOOD CONDITION. A NEW ROOF WAS INSTALLED IN 1978 OVER THE EXISTING ASPHALT SHINGLE ROOF. THE DOWNSPOUTS COULD USE A COAT OF PAINT.

C. COMPONENT RATING: (\$274,400) (75 %) = \$205,800
 Possible Condition Component
 Value Value Multiplier Value

WALL FINISHES

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Paint <u>ALL HALLWAYS EXCEPT LOBBY AND RESTROOMS REQ. ATTN</u>	[]	[]	[X]
b. Wall Coating _____	[]	[]	[]
c. Wall Coverings _____	[X]	[]	[]
d. Paneling			
Prefinished _____	[X]	[]	[]
Plank _____	[X]	[]	[]
e. Cork _____	[X]	[]	[]
f. Wallpaper _____	[X]	[]	[]
g. Ceramic Tile _____	[X]	[]	[]
h. Trim & Wainscot <u>LOBBY</u>	[]	[X]	[]
i. Decoration <u>LOBBY AREA</u>	[]	[X]	[]
j. Glass <u>DEPARTMENTAL OFFICES OFF LOBBY</u>	[]	[X]	[]
k. Other _____	[X]	[]	[]

B. COMMENTS

THE WALLS IN THE HALLWAYS AND STAIRWAYS ARE MARKED WITH SMUDGES AND GRAFFITI. THE RESTROOMS WALLS ARE NOT PARTICULARLY GRAFFITI-COVERED BUT DO REQUIRE PAINTING. THE HALLWAY WALLS SHOULD ALSO BE PAINTED. THE STAIRWAY WALLS ARE COMPOSED OF PAINTED DRYWALL AND UNPAINTED BLOCK. THE DRYWALL SURFACES ARE IN FAIR CONDITION. THE PREVIOUSLY UNPAINTED BLOCK HAS BEEN DECORATED BY THE STUDENTS.

C. COMPONENT RATING: (\$163,500) (64 %) = \$104,600
 Possible Condition Component
 Value Value Multiplier Value

FLOOR FINISHES

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled <u>DEPARTMENTAL OFFICES</u>	[]	[X]	[]
Tile _____	[X]	[]	[]
b. Composition:			
Epoxy _____	[X]	[]	[]
Synthetic _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Concrete Topping:			
Clear Sealant <u>BASEMENT,MECHANICAL ROOM, STAIRWAYS</u>	[]	[]	[X]
Abrasive _____	[X]	[]	[]
Epoxy _____	[X]	[]	[]
Aggregate _____	[X]	[]	[]
d. Resilient:			
Vinyl Tile <u>THROUGHOUT THE BUILDING</u>	[]	[]	[X]
Linoleum _____	[X]	[]	[]
Vinyl _____	[X]	[]	[]
Rubber <u>SHEET RUBBER ON THE RAMPS IN THE NORTH WING</u>	[]	[X]	[]
Cork _____	[X]	[]	[]
e. Ceramic Tile _____	[X]	[]	[]
f. Masonry _____	[X]	[]	[]
g. Terrazzo _____	[X]	[]	[]
h. Wood _____	[X]	[]	[]
i. Metal _____	[X]	[]	[]

B. COMMENTS

THE HALLWAY FLOOR TILE HAS BEEN REPLACED THROUGHOUT THE BUILDING ALTHOUGH SOME OF THE ORIGINAL FLOOR TILE REMAINS IN THE DEPARTMENTAL LABORATORY SPACE AND IS IN POOR CONDITION. THE CONCRETE FLOOR HAS BEEN DECORATED BY STUDENTS IN THE BASEMENT. THE DEPARTMENT OF PHYSICAL FACILITIES HAS COVERED SOME OF THE TILE WITH NEW IN SEVERAL AREAS AND HAS PROPOSED A PROJECT TO INSTALL NEW TILE IN ROOMS: 223, 225, 233, 300, 302, 304, AND 330.

C. COMPONENT RATING: (\$315,300) (71 %) = \$223,900
 Possible Condition Component
 Value Value Multiplier Value

CEILING AND FINISHES

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. System Type:	N/A	Sat	Att
Exposed <u>MECHANICAL ROOMS, SOME CLASSROOMS</u>	[]	[X]	[]
Applied to Structure <u>PLASTER & LATHE, DRYWALL</u>	[]	[X]	[]
Suspended <u>MINERAL FIBERBOARD CEILING</u>	[]	[X]	[]
 b. Materials:			
Drywall <u>STAIRWAYS AND RESTROOMS</u>	[]	[X]	[]
Plaster <u>SOME STUDIOS AND AREAS OF FIRST FLOOR</u>	[]	[X]	[]
Mineral Fiber Board <u>HAS BEEN INSTALLED IN MOST HALLS</u>	[]	[X]	[]
Metal Pan <u>LOBBY</u>	[]	[X]	[]
Luminous Panels <u></u>	[X]	[]	[]
Other <u>WOOD</u>	[]	[X]	[]
 c. Finishes:			
Paint <u>WOODEN UNDERSIDE OF FLOORS ABOVE, PLASTER</u>	[]	[X]	[]
Fabric <u></u>	[X]	[]	[]
Prefinished <u></u>	[]	[X]	[]
Other <u>TEXTURED CEILING IN SEVERAL STUDIOS</u>	[]	[X]	[]
 d. Openings & Inserts:			
Air Distribution <u>HALLWAY DIFFUSERS ARE DIRTY</u>	[]	[]	[X]
Lighting Fixtures <u></u>	[]	[X]	[]
Access Panels <u></u>	[X]	[]	[]
Skylights <u></u>	[X]	[]	[]
Fire Protection <u></u>	[X]	[]	[]
Other <u></u>	[X]	[]	[]

B. COMMENTS:

SUSPENDED CEILING HAVE BEEN INSTALLED IN THE HALLWAYS AND OFFICE AREAS. THE STUDIO CLASSROOMS HAVE TEXTURED PLASTER OR THE PAINTED EXPOSED UNDERSIDE OF THE FLOOR ABOVE FOR CEILING. THE ORIGINAL STAMPED METAL CEILING REMAIN IN THE LOBBY AREA. SUSPENDED GRIDS WITHOUT TILES HAVE BEEN INSTALLED IN SEVERAL OF THE STUDIO CLASSROOMS TO SUPPORT LIGHTS BELOW THE CEILING. THE CEILING ARE GENERALLY IN GOOD CONDITION.

C. COMPONENT RATING: (\$449,600) (83 %) = \$373,200
 Possible Condition Component
 Value Value Multiplier Value

CONVEYING

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Elevators:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Number <u>1</u>	[X]	[]	[]
Type <u>PASSENGER</u>	[]	[X]	[]
Speed <u>125 FPM</u>	[]	[X]	[]
Capacity (lbs) <u>3500</u>	[]	[X]	[]
Dimensions <u>63" X 83"</u>	[]	[X]	[]
Door Operation:			
Center _____	[X]	[]	[]
To Side _____	[]	[X]	[]

b. Lifts and Hoists:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

c. Moving Stairs and Walks:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

d. Conveyors:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

e. Pneumatic Tubes:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

B. COMMENTS:

THE ELEVATOR WAS INSTALLED IN 1978. THIS ELEVATOR HAS REQUIRED MORE MAINTENANCE THAN AVERAGE. THE DEPARTMENT OF PHYSICAL FACILITIES HAS PROPOSED A PROJECT TO REPLACE AND UPGRADE SOME OF ITS MECHANICAL COMPONENTS AND INSTALL FIREFIGHTER'S SERVICE.

C. COMPONENT RATING: (\$105,100) (77 %) = \$ 80,900
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/PLUMBING

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Services Available:	N/A	Sat	Att
Cold Water <u>2" SUPPLY LOCATED IN RM 131M PIT</u>	[]	[X]	[]
Hot Water <u>2" SUPPLY, 3/4" RETURN LOCATED IN RM 131M PIT</u>	[]	[X]	[]
Acid Waste _____	[X]	[]	[]
Oxygen _____	[X]	[]	[]
Natural Gas _____	[X]	[]	[]
Vacuum _____	[X]	[]	[]
Distilled Water _____	[X]	[]	[]
Compressed Air <u>1/2" SUPPLY, FOR CONTROL AIR</u>	[]	[X]	[]
Other _____	[X]	[]	[]
b. Piping & Fittings:			
Cast Iron VENTS _____	[]	[X]	[]
Copper Tubing _____	[]	[X]	[]
Plastic _____	[X]	[]	[]
Steel _____	[]	[X]	[]
Glass _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Water Heaters:			
Electric _____	[X]	[]	[]
Gas _____	[X]	[]	[]
Oil _____	[X]	[]	[]
Steam Converter _____	[X]	[]	[]
Other <u>SUPPLIED BY UNIVERSITY POWER PLANT</u>	[]	[X]	[]
d. Drainage:			
Storm Drains _____	[X]	[]	[]
Sanitary Drainage _____	[X]	[]	[]
Combined Storm/San. <u>2 @ 4", 2 @ 6"</u>	[]	[X]	[]
Floor Drains <u>RESTROOMS IN THE BASEMENT</u>	[]	[X]	[]
e. Fixtures:			
Water Closets <u>10</u>	[]	[X]	[]
Urinals <u>6</u>	[]	[X]	[]
Lavatories <u>9</u>	[]	[X]	[]
Showers _____	[X]	[]	[]
Kitchen Sinks <u>30 SINKS LOCATED IN THE STUDIOS</u>	[]	[]	[X]
Service Sinks <u>4</u>	[]	[X]	[]
Drinking Fountains _____	[X]	[]	[]
Electric Water Coolers _____	[]	[X]	[]
f. Sprinkler Systems:			
Wet _____	[X]	[]	[]
Dry _____	[X]	[]	[]
g. Standpipe Systems:			
Wet _____	[X]	[]	[]
Dry _____	[X]	[]	[]
Valves _____	[X]	[]	[]
Hose Cabinets _____	[X]	[]	[]

B. COMMENTS:

NEW PLUMBING FIXTURES WERE INSTALLED IN THE 1978 RENOVATION ALONG WITH THE DISTRIBUTION PIPING AND WASTE LINES. THE SINKS IN THE STUDIOS TEND TO PLUG WITH PLASTER AND PAINT AND ARE A CONSTANT SOURCE OF SERVICE CALLS.

C. COMPONENT RATING: (\$146,000) (87 %) = \$127,000
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/HEATING

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Heat Source:	N/A	Sat	Att
Central Plant Steam <u>3" SUPPLY, 1-1/2" COND RET, 131M</u>	[]	[X]	[]
Central Plant Hot Water _____	[X]	[]	[]
Boilers: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Furnace: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Heat Pump: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]

b. System Type:			
Steam <u>USED TO MAKE HEATING HOT WATER IN THE BUILDING</u>	[]	[X]	[]
Hot Water <u>2 CONVERTERS LOCATED IN 131M</u>	[]	[X]	[]
Air _____	[]	[X]	[]
Multizone _____	[X]	[]	[]
Dual Duct _____	[X]	[]	[]
Terminal Reheat _____	[X]	[]	[]
Variable Volume <u>INSTALLED THROUGHOUT IN 1978</u>	[]	[X]	[]
Other _____	[X]	[]	[]

c. Space Equipment:			
Radiators <u>FIN TUBE AT PERIMETER</u>	[]	[X]	[]
Convectors _____	[X]	[]	[]
2-Pipe Fan Coil _____	[X]	[]	[]
Unit Heaters <u>AT ENTRANCES</u>	[]	[X]	[]
Other _____	[X]	[]	[]

d. Control Type:			
Pneu <u>ACTUATORS</u>	[]	[X]	[]
Electric _____	[X]	[]	[]
DDC _____	[]	[X]	[]
Manual Valves _____	[]	[X]	[]

B. COMMENTS:

MAINTENANCE PERSONNEL COMMENTED THAT THE HEATING SYSTEM IS FUNCTIONING ADEQUATELY AT THIS TIME.

C. COMPONENT RATING: (\$554,700) (86 %) = \$477,000
 Possible Condition Component
 Value Value Multiplier Value

COOLING & VENTILATING

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System:			
Type <u>VARIABLE AIR VOLUME SYSTEM AND ONE DX SYSTEM</u>	[]	[X]	[]
Capacity <u>TOTAL TONNAGE IS ESTIMATED TO BE 98 TONS</u>	[]	[X]	[]
b. Chillers:			
Centrifugal _____	[X]	[]	[]
Reciprocating <u>TRANE, 92.5 TONS, INSTALLED IN 1984</u>	[]	[X]	[]
Absorption _____	[X]	[]	[]
c. Cooling Towers:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
d. Condensers: <u>AIR-COOLED CONDENSERS</u>	[]	[X]	[]
e. Space Equipment:			
Direct Expansion -			
Window units _____	[X]	[]	[]
Thru-the-wall _____	[X]	[]	[]
Single zone <u>5 TON DX SYSTEM TO AUGMENT VAV IN RM 204</u>	[]	[X]	[]
Single zone con. vol. _____	[X]	[]	[]
Other _____	[X]	[]	[]
Air/Water -			
2-pipe fan coil _____	[X]	[]	[]
Terminal reheat _____	[X]	[]	[]
Variable volume <u>SERVES THE ENTIRE BUILDING</u>	[]	[X]	[]
Dual Duct _____	[X]	[]	[]
Multizone _____	[X]	[]	[]
f. Special Systems:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
g. Control Systems:			
Pneu ACTUATORS _____	[]	[X]	[]
Electric _____	[X]	[]	[]
Electronic <u>DDC</u>	[]	[X]	[]
h. Fans:			
Exhaust <u>3</u>	[]	[X]	[]
Recirculating <u>ONE AIR HANDLER LOCATED IN 131M</u>	[]	[X]	[]

B. COMMENTS:

THE AIR DISTRIBUTION SYSTEM WAS INSTALLED IN THE 1978 RENOVATION BUT THE CHILLERS WERE NOT INSTALLED UNTIL 1984. THE SYSTEM WAS REPORTED TO BE FUNCTIONING WITHOUT PROBLEMS.

C. COMPONENT RATING: (\$630,600) (85 %) = \$536,000
 Possible Condition Component
 Value Value Multiplier Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

(a) Service:

Substation BUCKEYE PGN9/PGS3

Primary Voltage 13,200

Transformer:

Manufacture	Type	KVA	Secondary Voltages
<u>VONTRAN</u>	<u>MINERAL OIL</u>	<u>500</u>	<u>208/120</u>

(b) Distribution System:

Panelboard (type) CIRCUIT BREAKER

Voltage 208/120

Amperage 1600 AMPS

Conduit GALVANIZED STEEL AND ALUMINUM

Conductor COPPER

Wire (type) VARIES

Armored Cable YES

Other

(c) Emergency System:

General or (type & capacity) N/A

B. COMMENTS:

A NEW TRANSFORMER AND ELECTRICAL DISTRIBUTION SYSTEM WAS INSTALLED IN 1978. UTILITY DIVISION PEAK DEMAND RECORDS INDICATE THE TRANSFORMER IS APPROXIMATELY 40% UTILIZED.

C. COMPONENT RATING: (\$ 64,300) (89 %) = \$57,160

Possible	Condition	Component
Value	Value Multiplier	Value

SAFETY STANDARDS

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
(a) Exits:			
Stair Construction:			
concrete _____	[X]	[]	[]
steel <u>NEW STAIRWAYS WERE INSTALLED IN 1978</u>	[]	[X]	[]
wood _____	[X]	[]	[]
Number of exits <u>6</u>	[]	[X]	[]
(b) Fire Rating:			
Construction Type: I ___ II ___ III ___ IV <u>X</u> V ___ VI ___			
Building Height: <u>61</u> ft., <u>3 STORIES AND A BASEMENT</u>			
(c) Extinguishing Systems:			
Portable <u>ABC TYPE THROUGHOUT THE BUILDING</u>	[]	[X]	[]
Standpipe _____	[X]	[]	[]
Hose Cabinets _____	[X]	[]	[]
Sprinklers _____	[X]	[]	[]
Suppression _____	[X]	[]	[]
Other _____	[X]	[]	[]
(d) Detection & Alarm Systems:			
Manual Alarm _____	[]	[X]	[]
Annunciator <u>LOCATED IN RM 131M</u>	[]	[X]	[]
Smoke Detectors <u>IN DUCTS AND HALLWAYS</u>	[]	[X]	[]
(e) Lighting Systems:			
Exit Signs <u>LIGHTED</u>	[]	[X]	[]
Exit Lighting <u>EXIT SIGNS</u>	[]	[X]	[]
Emergency Lighting <u>LOCATED IN HALLS & STAIRWAYS</u>	[]	[X]	[]
Emergency Generator _____	[X]	[]	[]

B. COMMENTS:

SYSTEMS ARE ALL FUNCTIONAL AND WERE UPDATED IN THE 1978 RENOVATION.

C. COMPONENT RATING: (\$116,800) (78 %) = \$91,100
 Possible Condition Component
 Value Value Multiplier Value

BUILDING PERIMETER EVALUATION

FAC # 039 DATE 6/3/94 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
1. Building Access:			
Driveway <u>ACCESSES THE NORTH SIDE OF THE BUILDING</u>	[]	[X]	[]
Loading Dock _____	[X]	[]	[]
Sidewalks			
Front _____	[]	[X]	[]
Side _____	[]	[X]	[]
Rear _____	[]	[X]	[]
Steps			
Front <u>SOUTH ENTRANCE</u>	[]	[X]	[]
Side _____	[X]	[]	[]
Rear _____	[X]	[]	[]
Handicap Ramp <u>H/C ENTRANCE AT GRADE LEVEL WEST SIDE</u>	[]	[X]	[]
2. Lawn and Landscaping:			
Lawn <u>BARE SPOTS ON THE SOUTH SIDE OF THE BUILDING</u>	[]	[]	[X]
Shrubs <u>SOUTH AND WEST SIDES OF THE BUILDING</u>	[]	[X]	[]
Trees <u>MATURE TREES ON THE SITE</u>	[]	[X]	[]
Undesirable Insect _____	[X]	[]	[]
Bedding Material <u>SHRUBBERY BEDS TO THE SOUTH</u>	[]	[X]	[]
Watering System _____	[X]	[]	[]
3. General Site Information:			
Signage <u>LOCATED ON THE SOUTH SIDE OF THE BUILDING</u>	[]	[X]	[]
Address Identification <u>ON SIGN</u>	[]	[X]	[]
Security Lights <u>AT THE EXIT DOORS</u>	[]	[X]	[]
Street Lights <u>LOCATED ON ALL SIDES OF THE BUILDING</u>	[]	[X]	[]
Drainage <u>NO PROBLEMS OBSERVED</u>	[]	[X]	[]
Storm Drains _____	[]	[X]	[]

B. COMMENTS:

THE STEPS AT THE SOUTH ENTRANCE TO THE BUILDING ARE WORN BUT DO NOT POSE A SERIOUS TRIPPING HAZARD AT THIS TIME.

**The Ohio State University
Department of Physical Facilities**

BUILDING AUDIT METHODOLOGY

1. BUILDING AUDIT PROGRAM OBJECTIVE

To provide a building-by-building inventory, including maintenance deficiencies that currently exist, for the OSU buildings that the Department of Physical Facilities has budgetary responsibility for. These audits will be used to establish corrective maintenance projects and budget cost estimates.

2. BUILDING AUDIT APPROACH

A five-step procedure is used to meet the program objectives:

1. Collect Historical and Inventory Data on each building.
2. Interview Building Occupants.
3. Perform a Building Inspection.
4. Complete Building Evaluation Forms.
5. Issue Written Report.

3. DATA ORGANIZATION

The data collected is stored by hard copy with field notes in a building file established for each building. The report data is being stored in a database program that allows retrieval of specific data as it is needed. The "Building Evaluation" forms contain ratings for the condition of each building component and a description of any deficiencies for those components. The "Building Information" sheets provide data on the utilities to the buildings and the type of systems in each building.

4. COST ESTIMATES

Costs are for budgeting purposes only and are based on The Means Standard Construction Cost data, auditor experience, industry sources and OSU project cost data. Costs are reported current to the year of the audit. The building component values assigned in the "Building Evaluation" forms are not cost estimates. These values are calculated from the replacement cost provided by The Office of Campus Planning and Space Utilization for each OSU building.

5. LIMITATIONS

(1) All inspections are visual and do not include physical tests, instrumentation or metering measurements, sampling, or monitoring.

(2) Only random typical offices or laboratories are entered. Typical spaces are deemed to be representative of average conditions throughout each building.

(3) The scope of the analysis does not include complete OSHA, energy, or physical impaired access study. Buildings and components are inspected for condition and general safety requirements rather than specialized code conformance.

(4) It is assumed that the buildings inspected were approved by the State of Ohio Division of Factory and Building Inspection at the time of construction.

The recommendations listed in the reports are not an attempt to bring these existing buildings up to present day code standards. Rather, the intent is to eliminate obvious problems and to upgrade the buildings in a reasonable manner in regard to occupant safety.

(5) Cost estimates are in current year dollars and include contractor mark-ups, construction administration costs, and architectural/engineering costs where applicable. Escalation factors must be applied for future work. Combining of projects should serve to decrease costs. These estimates are strictly for purposes of budgeting, and final pricing will be required when the specific scope of work for the project is defined.

(6) The building inspections are defined to include the following:

- (a) Includes general repainting, redecorating and wholesale replacement of building and system components. Ongoing maintenance, replacement and renovation projects are included.
- (b) Includes exterior building walls and attached items.
- (c) Includes the entrance steps at all entries. Ramps outside the buildings are included. Plantings around the building exterior are included.
- (d) Movable furniture is not included.
- (e) Fixed equipment inside the buildings that is installed and maintained by a specific academic department or using agency is not included.
- (f) Utility lines supplying the buildings are not included.
- (g) The program needs of the using department are assumed to be satisfied. No consideration has been given to anticipate any changes in current occupant space needs.

ABBREVIATIONS

ATT.....	ATTENTION
BLDG.....	BUILDING
BUR.....	BUILT UP ROOF
COND.....	CONDENSATE WATER
DD.....	DUAL DUCT AIR HANDLING SYSTEM
DDHV.....	DUAL DUCT HIGH VELOCITY
DHWR.....	DOMESTIC HOT WATER RETURN
DHWS.....	DOMESTIC HOT WATER SUPPLY
DX.....	DIRECT EXPANSION AIR CONDITIONER
FPM.....	FEET PER MINUTE
HID.....	HIGH INTENSITY DISCHARGE LIGHT
HPS.....	HIGH PRESSURE STEAM (125 PSI)
HVAC.....	HEATING, VENTILATING AND AIR CONDITIONING SYSTEM
KV.....	KILOVOLTS
KVA.....	KILOVOLTS AMPS
KW.....	KILOWATTS
LC.....	LIQUID COOLED
LPS.....	LOW PRESSURE STEAM (15 PSI)
MPS.....	MEDIUM PRESSURE STEAM (50 PSI)
MZ.....	MULTIZONE AIR HANDLING SYSTEM
N/A.....	NOT APPLICABLE
PSI.....	POUNDS PER SQUARE INCH
RM.....	ROOM
SAT.....	SATISFACTORY
SR.....	STEAM RETURN LINE
SS.....	STEAM SUPPLY LINE
TR.....	TERMINAL REHEAT AIR HANDLING SYSTEM
V.....	VOLTS
VAV.....	VARIABLE AIR VOLUME SYSTEM

APPENDIX
Reduced Scale Building Floor Plans
C-1 Building Space Assignments