

FACILITY AUDIT REPORT

HUGHES HALL

#042

MARCH 31, 1999



HUGHES HALL

Prepared by: Augustus J.R. Van Buren
The Ohio State University
Department of Physical Facilities
Division of Resource Management

HUGHES HALL
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EXECUTIVE SUMMARY FOR HUGHES HALL

Hughes Hall was originally designed in 1941 as a three-story building and was known as the Recitation Building. Because of the wartime restrictions on all non-defense construction, the building was not built until 1948. The building was redesigned in 1944 to include a fourth floor, an auditorium on the west side and a two story addition on the south side. The building has had no major renovation or rehabilitation during the fifty-one years of its operation other than a new roof that was installed in 1996. The major deficiencies to be addressed are the installation of central air conditioning, replacing the single glazed windows, replacing the restroom water supply lines and the restroom fixtures, an added electrical distribution system, replacement of the incandescent lights in the building and the replacement of the dimmer system for the auditorium lighting. Because of the age of the building, a total renovation of the building should be considered.

PROPOSED MAINTENANCE PROJECTS

HUGHES HALL #042

A. Corrective Maintenance Projects:	Control No
-------------------------------------	------------

None

Sub Total	\$
------------------	-----------

B. Building Improvement/Addition Projects:

- | | | |
|---|------------|------|
| 1. <i>Add a secondary electrical distribution system.</i> | \$ 35,000 | 1849 |
| 2. <i>Install a central air conditioning system.</i> | \$ 940,000 | 1851 |
| 3. <i>Install emergency lighting.</i> | \$ 7,500 | 5608 |

Sub Total	\$ 982,500
------------------	-------------------

C. Building Component Replacements expected within the next 5-10 years:

- | | | |
|---|------------|------|
| 1. <i>Replace incandescent lighting.</i> | \$ 42,800 | 1554 |
| 2. <i>Replace northeast and southeast entrance doors.</i> | \$ 12,000 | 1753 |
| 3. <i>Replace manual temperature valves for radiators.</i> | \$ 10,000 | 1846 |
| 4. <i>Replace single glazed windows.</i> | \$ 288,000 | 1847 |
| 5. <i>Replace auditorium light fixtures.</i> | \$ 15,000 | 1848 |
| 6. <i>Replace restroom water supply lines and fixtures.</i> | \$ 97,300 | 1850 |
| 7. <i>Replace auditorium lighting dimmer system.</i> | \$ 35,000 | 3380 |

Sub Total	\$ 500,100
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Total Cost for all Projects	\$1,482,600
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**RENOVATION PROJECTS IN PROGRESS OR COMPLETED SINCE
LAST AUDIT**

HUGHES HALL #042

Projects:	Budget	Project no.
<i>Install keyless locks.</i>	\$ 16,992	5061-002552
<i>New roof installation.</i>	\$ 410,257	315-93-030

GENERAL BUILDING INFORMATION

HUGHES HALL #042

BUILDING ADDRESS: *1899 COLLEGE ROAD*

GROSS SQ. FT.: *61,564*

NET ASSIGNABLE SQ. FT.: *51,297*

MECHANICAL/CUSTODIAL AREA SQ. FT.: *3,906*

YEAR OF CONSTRUCTION: *1948*

YEAR OF LAST RENOVATION: *None*

NUMBER OF STORIES/BASEMENT: *Four stories with basement.*

AIR CONDITIONING (Percentage): *36%*

CURRENT USE: *Offices, classrooms and practice rooms for the School of Music.*

TYPE OF CONSTRUCTION: *Reinforced concrete with Masonry Skin*

ESTIMATED REPLACEMENT COST: *\$ 9,654,000 **

COST PER GROSS SQUARE FEET: *\$156.81*

WHEELCHAIR ACCESSIBILITY: *By ramp at the northeast entrance to the first floor elevator, that gives access to all floors.*

OVERALL BUILDING CONDITION: *Satisfactory ***

NUMBER OF EXIT STAIRWAYS: *Two (2)*

NUMBER OF OTHER EXITS: *Three (3)*

AREA SHOP RESPONSIBILITY: *Northeast Shop*

* *Replacement Cost assigned January 1999 by The Office of University Resource Planning & Institutional Analysis.*

** *The Office of University Resource Planning & Institutional Analysis C-1 Report Condition Code.*

BUILDING SYSTEMS INFORMATION

HUGHES HALL #042

HEATING:

Source – *Power plant*

Type Heating System – *Hot water*

Main Steam Feed (Line size, valve location) – *none*

Building Htg. Water (line size, valve location) – *6", room 15M*

VENTILATION SYSTEM: *two ac systems and three exhaust fans*

COOLING:

BLDG. % *36*, Chiller: *one 1976, R22, Trane at 7.5 tons.*

Window Units: *34*, Thru-the-wall: *none*, Direct expansion units: *one, Trane, 40 tons*

HVAC CONTROL SYSTEM: *Electric and pneumatic controls*

ELECTRIC:

Source Size (KVA) Primary/Secondary Switchgear & Main Disc. (Rm.)
PGS3/PGN9 500 13,200/ 208/120 on west side

PLUMBING SERVICES:

Water (size, valve location) – *4" in room 15M*

Gas (size, valve location) - *None*

Domestic Hot Water (size, valve location) – *2 1/2" from room 15M*

Compressed Air (size, location) – *1" room 15M*

SEWERS:

Storm – *none* Sanitary – *none* Combined Storm/San- *1 @ 6" , 17 @ 4"*

METERS:

Gas (size, location) – *None*

Water (size, location) – *4" in room 15M*

Electric (location) – *none*

ALARM SYSTEMS:

Fire Alarm, Main Panel Room *15M*, Remote Panel Location *none*

Fire Pump *none* GPM, Riser , Pump Location, Room

Sprinkler, Valve Location Room , 100%, Partial, Limited

Horns/Strobes, Bells in Halls, Rooms

Other Alarms – *none*

ELEVATORS:

Number-*One*, Type (passenger, freight)- *Passenger/Freight*
Manufacturer – *Dover*, Size- *8,000#*, *72” x 96”*

EMERGENCY GENERATOR:

Size- *none*

ASBESTOS SURVEY (1986): *Pipe insulation in rooms 15M, 10M, 401M, 412M and floor tiles were found to contain asbestos materials.*

HUGHES HALL NARRATIVE

HISTORY

Hughes Hall was originally designed in 1941 as a three-story building and was known as the Recitation Building. Because of the wartime restrictions on all non-defense construction, the building was not built until 1948. The building was redesigned in 1944 to include a fourth floor, an auditorium on the west side and a two story addition on the south side. The building has had no major renovation or rehabilitation during the fifty-one years of its operation other than a new roof that was installed in 1996. Because of its age, the building should be considered for a complete renovation. The building has classrooms, offices for the faculty and staff of the Music Department, practice rooms for music students and storage space for musical instruments

The building occupants and the maintenance staff have identified many items that need to be addressed to maintain the building as a functioning educational facility. Incandescent lighting in classrooms and in the stairwells should be replaced with fluorescent lights. The wooden entrance doors on the east side of the building should be replaced with new aluminum doors. Many of the manual control valves on the radiators are inoperable and need to be replaced. The original single glazed windows are difficult to operate and should be replaced with double glazed windows. The incandescent light fixtures in the auditorium should be replaced. A secondary electrical distribution system needs to be installed to accommodate the increased demand for electrical outlets and the increased demand for electrical power by computers and other electrical devices. The domestic water supply lines to the restrooms as well as the restroom fixtures need to be replaced. There are two, limited air conditioning systems and many window units that should be replaced by a central air conditioning system. The dimmer system for the auditorium lighting should be replaced. These main items as well as some smaller projects will restore Hughes Hall to a properly functioning educational facility.

A review of the work orders indicated that there are a normal number of emergency and maintenance calls to the building. The most frequent calls relate to restroom problems and lighting concerns.

Occupancy of the building, reported by The Office of University Resource Planning & Institutional Analysis, in the C-1 Building Space Assignment Report, dated January, 1999, shows a Net Assignable Area of 51,297 SF, is as follows; Instructional, office and practice room space 55%, Auditorium 12%, Circulation 25 %, Mechanical 4%, and Custodial/Toilet 4%.

PRIMARY SYSTEMS

The structural components consist of concrete spread footers with poured in place concrete basement walls up to the first floor. There are concrete columns that support reinforced concrete floors. These form the basic skeletal components of this four-story building with basement.

There are no signs of major settlement or movement in the foundation walls. There are some vertical cracks in the north and south stairwells. The structural columns and supports appear to be in good condition.

The load bearing brick walls form the exterior walls. There are several soldier courses in the brick wall. There are limestone panels at the base perimeter and around the east entrances. Limestone panels also form the exterior walls of the addition on the south side of the building. There are copper panels set in the east wall above the windows of the first and second floors. These panels have deteriorated over the years and should be replaced when the windows are replaced. There are decorative copper crests at the edge of the roofline. These items complete the architectural elements that accent this building. Openings for windows and entrance doors are accented with brick or steel lintels that form the head and jambs, with limestone sills. The exterior walls are in good condition.

The windows are single glazed, awning and hopper type, aluminum windows. The windows are difficult to operate and are not energy efficient. These windows should be replaced.

The entrance doors on the east side are the original wooden doors and need to be replaced with aluminum doors. The threshold of the northwest, exit door from the auditorium needs to be raised to close a gap at the base of the door. A metal plate is missing from the middle exit door and should be replaced. All three exit doors should be repainted. The garage style door at the dock is difficult to operate and needs to be repaired or replaced. There is a ramp from the north sidewalk that leads to the northeast entrance. These doors provide an accessible entrance to the building. There is an elevator at the first floor that provides access to all levels.

There is a copper roof on the main building and a modified bitumen roof over the auditorium. The roof has a wooden deck with tapered ISO insulation. Steel girders and purlins support the wooden deck. The roof was replaced in 1996 and is in good condition.

INTERIOR SYSTEMS

The concrete floors and columns of the building are enclosed with clay tile blocks at the perimeter and with glazed tile blocks in the stairwells and corridors. Wood studs with drywall enclose some interior spaces. There are some demountable steel

partitions in the first floor office areas. The walls are generally in good condition throughout the building.

The building has mainly wood doors in metal frames. Steel fire doors in steel frames are used at mechanical rooms. The doors have knobs and glazing. Each practice room has a set of two wooden doors set in wooden frames. These doors are set in tandem to provide sound insulation. All the doors are original but in working condition. The doors in the stairwells should be repainted.

The wall finishes are paint throughout most of the building. The restrooms have plain block tile walls. There are wood paneled walls in the auditorium. The wood panels in front of the stage show termite damage and need to be replaced. The wall finishes in the corridors should be cleaned. The restroom partitions are in good condition.

The building has carpeting in some office areas. There are asphalt asbestos tiles in the corridors, classrooms and practice rooms. The entrances and the stairwell landings have terrazzo floors. The first steps in the north and south stairwells have cracked and need to be repaired. The metal support under the first step of the north stairs has rusted out and needs to be replaced. The mechanical rooms have clear sealant floors. Although old, the floors are in reasonably good condition.

The ceilings in the building consist mainly of 12" X 12" tiles that are applied to the structure. There are some suspended aluminum grid ceilings, in the office areas, with mineral fiberboard tiles. The ceilings at the perimeter of the corridors consist of plaster. The ceilings are in good condition except on the fourth floor where stained tiles should be replaced now that the roof has been replaced.

SERVICE SYSTEMS

Most of the major service systems are not functioning well. The sanitary and storm drainage appeared to be in good condition and functioning well at this time. The plumbing drainage system did not appear to have any problems. The domestic cold and hot water system is past its anticipated life span and does not supply adequate service at the fixtures throughout the building and needs to be replaced. The restroom fixtures are original and should also be replaced.

There is one passenger/freight elevator that serves the general public, giving access to all floors. The elevator is in good condition and meets accessibility and fire codes. The speed of the elevator has been a source of complaints. The elevator has a speed of 50 feet per minute, however, it would be cost prohibitive to increase the speed of the elevator.

A 6" hot water line from the power plant supplies hot water to the building from the tunnel located on the west side of the building. The system supplies hot water for the radiators located at the perimeter of the building and to unit heaters located in

room 013. There were no complaints noted about the heat supplied, but there were complaints about the lack of control over the heating. Many individuals in private offices were forced to open their windows in the winter to relieve excessive heat in the rooms. The new control valves that are recommended should help eliminate these problems. Domestic hot water is supplied by the power plant by a 2 ½" line from room #15.

The building has no central air conditioning. Cooling is provided by one 7 ½ ton, Trane chiller that provides cooling for rooms 101A-K, on the north side of the first floor. A 40-ton, Trane DX unit provides cooling for the auditorium. In addition to these two units, there are 42 window units in various offices. The 40-ton unit was installed in 1957 and the 7-½ ton unit was installed in 1976. It is recommended that a central air conditioning system be installed and eliminate the window units and the two Trane units. There are no DDC controls in Hughes Hall

Exhaust fans remove air from restrooms and common areas.

ELECTRIC

Circuits number PGS3/PGN9 feed a 500 KVA, 208/120-volt transformer, located on the west side of the building. This transformer supplies the electrical service to Hughes Hall. Switchgear located in room 15M feeds the lighting and power distribution panels throughout the building. Panel sizes vary throughout the building depending on the load. At approximately 8 watts per square foot the building has a minimum power supply. If a central air conditioning system is installed, there will need to be an upgrade in the power supply to the building.

The building has 32-watt fluorescent tubes throughout the office areas and practice rooms, with incandescent lights in the auditorium and the stairwells. There is an unfunded project to replace the incandescent lighting and as well as to replace the dimmer system for the auditorium lighting. Some of the lights in the auditorium were burned out and should be replaced. There are an inadequate number of convenience outlets in the building and an unfunded project has been identified to add a secondary electrical distribution system to alleviate this problem.

SAFETY STANDARDS

Hughes Hall is equipped with a manual fire alarm system consisting of pull stations that provide local fire annunciation from the panel in room 15M to the bells located throughout the building. There are wet standpipes in the corridors. There are no sprinklers in the building.

There are lighted exit signs but there is no emergency exit lighting and no emergency generator. A project is recommended to install emergency exit lights.

An automatic door opener is installed at the northeast entrance of the building. This entrance gives access to the first floor and the elevator that gives access to all floors.

ASBESTOS

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment Program's report titled "Inventory of Friable Asbestos Containing Material in Buildings of the Ohio State University (Main and Branch Campuses) and Recommendations for Corrective Action", prepared by PEI Associates and dated Sept. 1986 indicates asbestos in the pipe insulation in rooms 15, 10, 401M, 412M and in the floor tiles.

PERIMETER

The brick sidewalks on the east and south side are in good condition. The asphalt sidewalk and the asphalt drive to the dock, on the north side of the building, need to be resurfaced. The steps at both east entrances need to be recaulked and the wing walls need to be repaired. The top step at the southeast entrance needs to be relayed. The cap of the wing walls at the southeast entrance needs to be recaulked.

Entrances to the building are well lighted and street lighting appears to be distributed properly. The building sign with the address is located along College Ave.

Minor Maintenance Projects (Less Than \$5000) INTERIOR

HUGHES HALL #042 MARCH 31, 1999

- 1 Install new wood panels at the front of the auditorium stage.
Customer Request # 7220 Completed
- 2 Clean all corridor walls.
Customer Request # 7221
- 3 Repair the first floor stair step in the north and south stairs.
Customer Request # 7283
- 4 Replace burnout lights in the auditorium.
Customer Request # 7223 Completed
- 5 Repaint doors in stairwell landings
Customer Request # 7224 Completed
- 6 Replace stained ceiling tiles on the 4th floor.
Customer Request # 7225 Completed

Minor Maintenance Projects (Less Than \$5000) EXTERIOR

HUGHES HALL #042 MARCH 31, 1999

- 1 Seal crack on concrete floor of the dock.
Customer Request # 7271
- 2 Repair cracks in concrete steps at eastside entrances.
Customer Request # 7272
- 3 Repair concrete wing walls at eastside entrances.
Customer Request # 7272
- 4 Recaulk the cap on the wing wall at the southeast entrance.
Customer Request # 7273
- 5 Resurface the asphalt side walk and the asphalt drive on the north side of the building.
Customer Request # 7226
- 6 Raise the threshold of the north auditorium exit door.
Customer Request # 7227
- 7 Replace missing metal strip at the base of middle, auditorium exit door.
Customer Request # 7227
- 8 Repaint auditorium exit doors.
Customer Request # 7228 Completed

BUILDING EVALUATION SUMMARY

BUILDING INFORMATION

Fac # **042**, Facility Name: **HUGHES HALL**, Date: *3/31/99* Inspector: **AJR**
 Year Constructed: *1948*, Gross Sq. Ft: *61,564*
 Net Sq. Ft: *51,297*, Replacement Cost: \$ *9,654,000* *

COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	BUILDING COMPONENT CONDITION VALUE MULTIPLIER	BUILDING COMPONENT CURRENT VALUE
Foundation	5.04	486,369	73	355,079
Columns and Beams	13.61	1,314,050	73	959,337
Exterior Walls	2.88	278,169	67	187,314
Ext. Windows & Doors	3.94	380,562	43	164,919
Roofing & Flashing	4.37	421,520	96	405,401
Partitions & Doors	8.43	814,028	65	529,151
Wall Finishes	2.56	247,451	72	178,731
Floor Finishes	4.88	471,010	53	251,218
Ceilings & Finishes	6.95	670,677	65	435,974
Conveying	1.63	157,003	88	138,176
Plumbing	8.03	774,777	47	361,581
Heating	8.49	819,148	50	409,594
Cooling and Vent.	9.74	940,314	50	470,180
Elect. Serv. & Dist.	1.68	162,123	50	81,066
Lighting and Power	11.30	1,090,491	53	581,624
Safety Standards	6.49	626,307	57	354,925
TOTALS	100.00	9,654,000	61	\$5,864,269

BUILDING RATING SUMMARY

Overall Building Rating = **61%**

* *Replacement Cost assigned January 1999 by The Office of University Resource Planning & Institutional Analysis 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.*

FOUNDATIONS

FAC #:042

DATE: 3/31/99

INSPECTOR: AJR

<p>COMPONENT RATING: (\$ <u>486,369</u>) x (<u>73%</u>) = \$ <u>355,079</u></p> <p align="center">Possible Condition Component Value Value Multiplier Value</p>

SYSTEM DESCRIPTION

Sat Att

a. Footings:

- Interior Footings/Piers
- Interior Footings/Bearing Walls
- Perimeter Footings.....
- Grade Beams
- Piles
- Caissons.....

b. Foundation Wall Materials:

- Concrete Cast-in-place *to the first floor*
- Concrete Block
- Stone
- Brick
- Other

c. Waterproofing and Underdrain:

- Coating
- Membrane.....
- Board
- Drain Tile..... *at the perimeter*

d. Slab on Grade:

- Plain.....
- Reinforced

e. Ground/Basement Floor Slab:

- Plain.....
- Reinforced

f. Special Substructures:

-

COMMENTS:

The foundation is in good condition.

COLUMNS AND BEAMS

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,314,050) x (73%) = \$ 959,337

Possible	Condition	Component
Value	Value Multiplier	Value

SYSTEM DESCRIPTION

- | Sat | Att | |
|-------------------------------------|--------------------------|---------------------------------------|
| | | a. Columns and Beams: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Reinforced Concrete |
| <input type="checkbox"/> | <input type="checkbox"/> | Precast Concrete..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Steel |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Fireproofing |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Other |
| | | b. Floor Joists: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Concrete |
| <input type="checkbox"/> | <input type="checkbox"/> | Steel Trusses |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood |
| <input type="checkbox"/> | <input type="checkbox"/> | Other |
| | | d. Floor Decks: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Concrete Slab..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Precast Slab..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Metal Deck w/concrete fill..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood |
| | | e. Roof Joists: |
| <input type="checkbox"/> | <input type="checkbox"/> | Concrete |
| <input type="checkbox"/> | <input type="checkbox"/> | Steel |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Wood |
| | | f. Pitched Roof System: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pitch []3/12, [X]6/12, []10/12..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Dormers |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Steel Beams and Purlins |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood Rafters |
| <input type="checkbox"/> | <input type="checkbox"/> | Fireproofing |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Underlayment..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Insulation..... <i>tapered</i> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Ventilation |
| <input type="checkbox"/> | <input type="checkbox"/> | Other |
| | | g. Flat Roof System: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Slope |
| <input type="checkbox"/> | <input type="checkbox"/> | Concrete Deck..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Precast Slab..... |

- Metal Deck w/concrete fill
- Metal Deck w/insulation.....
- Wood Deck.....
- Insulation
- Other.....

COMMENTS:

There were no problems noted with the columns and beams.

EXTERIOR WALLS

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>278,169</u>) x (<u>67%</u>) = \$ <u>187,314</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Walls:

- Concrete CIP PRECAST.....
- Concrete Block/brick.....
- Brick MASONRY VENEER.....
- Veneer.....
- Window/Curtainwall.....*at the east entrances*
- Metal Siding.....
- Other

b. Wall Lintels Over Openings:

- Concrete PRECAST CIP.....
- Limestone.....
- Brick Masonry
- Steel
- Wood
- Other

c. Wall Trim:

- Limestone. ...*at the east entrance and the south addition*
- Brick..... *soldier courses*
- Marble.....
- Wood.....
- Other

d. Finishes:

- Plain
- Stucco.....
- Paint
- Parging
- Exposed Aggregate
- Drivit.....
- Other

e. Exterior Wall Backing System:

- Concrete
- Concrete Block.....
- Brick Masonry.....
- Ceramic Glazed Clay Tiles
- Metal Studs

[] [] Wood Studs

COMMENTS:

The exterior walls are in good condition.

EXTERIOR WINDOWS AND DOORS

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>380,562</u>) x (43%) = \$ <u>164,919</u>						
<table style="margin: auto; border: none;"> <tr> <td style="text-align: center; padding: 0 10px;">Possible</td> <td style="text-align: center; padding: 0 10px;">Condition</td> <td style="text-align: center; padding: 0 10px;">Component</td> </tr> <tr> <td style="text-align: center; padding: 0 10px;">Value</td> <td style="text-align: center; padding: 0 10px;">Value Multiplier</td> <td style="text-align: center; padding: 0 10px;">Value</td> </tr> </table>	Possible	Condition	Component	Value	Value Multiplier	Value
Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

Sat Att

a. Window materials:

- [] [] Wood.....
- [] [] Steel
- [X] [] Alum
- [] [] PVC.....
- [] [] Other

b. Windows type & number:

- [] [] Double Hung.....
- [] [X] Awning.....45
- [] [] Casement.....
- [] [] Pivoted
- [] [] Sliding.....
- [] [X] Fixed114
- [] [X] Other 4 hopper

c. Window glazing:

- [] [X] Single pane
- [] [] Double pane

d. Window Wall and/or Store Front:

- [] [] Store Front
- [] [] Vestibule
- [] [] Single pane.....
- [] [] Double pane
- [] [] Other

e. Door Materials:

- [] [X] Wood.....
- [] [] Steel
- [] [] Alum
- [] [] Stainless Steel.....

f. Doors type & number:

- [] [] Vestibule
- [] [X] Double.....5
- [] [X] Exit.....3
- [] [X] Stair Exit.....2
- [] [X] Garage.....1
- [] [] Special.....

g. Hardware:

- Automatic opener *at the northeast entrance*
- Push Bar Openers wt Closures
- Key Cards *at the northeast entrance*

COMMENTS:

The wooden doors at the two east entrances should be replaced. The exit doors from the west side of the auditorium should be repaired. The threshold on one door needs to be raised and a metal kick plate is missing from another door. The garage door is difficult to operate and should be repaired or replaced.

ROOFING

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>421,520</u>) x (<u>96%</u>) = \$ <u>405,401</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Roof Covering:

- [] [] Built-up []asphalt []Coal Tar []Modified
- [] [] Built-up w/gravel []asphalt []Coal Tar
- [X] [] Asphalt Roll *modified 5,428 SF*
- [] [] Asphalt Shingle.....
- [X] [] Copper..... *12,560 SF*
- [] [] EPDM
- [] [] Other

b. Flashing:

- [X] [] Materials: [X]Cu []Galv []Al []EPDM [XSS []PVC....
- [X] [] Counter *389 LF*
- [X] [] Cap..... *216 LF*
- [X] [] Reglet..... *270 LF*
- [X] [] Valley & Ridge *205 LF*

c. Gravel Stop & Edge Strips:

- [X] [] Type []SS []Galv []Al [X]Cu []PVC *233 LF*

d. Drainage:

- [X] [] Gutters w/ Exterior Downspouts..... *744 LF*
- [] [] Scuppers w/o Exterior Downspouts
- [] [] Drains w/ Interior Storm Drains
- [X] [] Emergency Overflow *over edge*

e. Parapets:

- [] [] Concrete
- [X] [] Brick *25 LF*
- [] [] Precast
- [] [] Other

f. Parapet Caps:

- [X] [] Metal []SS []Galv []Al [X]Cu []PVC *25 LF*
- [] [] Tile
- [] [] Limestone
- [] [] Precast
- [] [] Other

h. Roof accessories:

- Lightning Protection.....
- Roof Curbs
- Equipment Frames.....
- Pitch Pockets
- Other.....

COMMENTS:

The roof was installed in 1996 and is in good condition.

PARTITIONS AND DOORS

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>814,028</u>) x (<u>65%</u>) = \$ <u>529,151</u>						
<table style="margin: auto; border: none;"> <tr> <td style="padding: 0 10px;">Possible</td> <td style="padding: 0 10px;">Condition</td> <td style="padding: 0 10px;">Component</td> </tr> <tr> <td style="padding: 0 10px;">Value</td> <td style="padding: 0 10px;">Value Multiplier</td> <td style="padding: 0 10px;">Value</td> </tr> </table>	Possible	Condition	Component	Value	Value Multiplier	Value
Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

Sat Att

a. Partition Framing:

- [] [] Concrete Block.....
- [X] [] Clay Tile Block.....
- [X] [] Glazed Clay Tile Block.....
- [X] [] Masonry
- [] [] Wood Stud
- [X] [] Metal Stud.....*limited*
- [] [] Other

b. Special partitions and Walls:

- [X] [] Demountable.....*metal*
- [X] [] Toilet.....*metal*
- [] [] Screen Walls
- [] [] Glass.....
- [] [] Gate.....
- [] [] Other

c. Wall Material:

- [] [] Plaster.....
- [X] [] Drywall
- [] [] Glass.....
- [] [] Wood Paneling.....
- [] [] Composite Paneling
- [] [] Steel Panels
- [X] [] Tile
- [] [] Other

d. Interior Doors & Frames:

- [X] [] Met Door/Met Frame
- [X] [] Wood Door/Wood Frame
- [X] [] Wood Door/Metal Frame.....*in practice rooms*
- [X] [] Glazing.....
- [] [] Roll-up
- [] [] Sliding.....
- [] [] Other

e. Hardware:

- [] Door Knobs Levers
- [] Door Closures
- [] Kick/Push Plates
- [] Security & Detection
- [] Automatic Openers *at the northeast entrance*
- [] Fire Door Magnets
- [] Other

COMMENTS :

Though relatively old, the partitions and doors are in good condition. There are some metal partitions in the office areas. The practice rooms on the fourth floor have double doors for sound attenuation

WALL FINISHES

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>247,451</u>) x (<u>72%</u>) = \$ <u>178,731</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Wall Finishes:

- [] [X] Paint.....
- [] [] Vinyl Wall Coverings.....
- [] [X] Prefinished Paneling.....
- [] [] Cork.....
- [] [] Wallpaper
- [] [] Ceramic Glazed Tile.....
- [] [] Marble
- [] [] Stone.....
- [] [] Trim & Wainscot.....
- [] [] Decoration
- [] [] Glass.....
- [X] [] Other..... *unfinished tiles in the restrooms*

COMMENTS:

Wall finishes in the first and second floor corridors are dirty and need to be cleaned. The wood paneling in front of the auditorium stage has termite holes and needs to be replaced.

FLOOR FINISHES

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>471,010</u>) (<u>53%</u>) = \$ <u>251,218</u>						
<table style="margin: auto; border: none;"> <tr> <td style="padding: 0 10px;">Possible</td> <td style="padding: 0 10px;">Condition</td> <td style="padding: 0 10px;">Component</td> </tr> <tr> <td style="padding: 0 10px;">Value</td> <td style="padding: 0 10px;">Value Multiplier</td> <td style="padding: 0 10px;">Value</td> </tr> </table>	Possible	Condition	Component	Value	Value Multiplier	Value
Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

Sat	Att	
		a. Carpet:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Rolled <i>in office areas</i>
<input type="checkbox"/>	<input type="checkbox"/>	Tile.....
		b. Concrete Topping:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Clear Sealant..... <i>on mechanical room floors</i>
<input type="checkbox"/>	<input type="checkbox"/>	Antislip
<input type="checkbox"/>	<input type="checkbox"/>	Epoxy.....
		c. Resilient:
<input type="checkbox"/>	<input type="checkbox"/>	Vinyl Composition Tile.....
<input type="checkbox"/>	<input type="checkbox"/>	Vinyl/Plastic Tile.....
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Asphalt Asbestos Tile..... <i>in corridors and classrooms</i>
<input type="checkbox"/>	<input type="checkbox"/>	Linoleum Tile
<input type="checkbox"/>	<input type="checkbox"/>	Vinyl Roll
<input type="checkbox"/>	<input type="checkbox"/>	Rubber
<input type="checkbox"/>	<input type="checkbox"/>	Other
<input type="checkbox"/>	<input type="checkbox"/>	d. Ceramic Tile <input type="checkbox"/> Mosaic <input type="checkbox"/> Quarry <input type="checkbox"/> Pavers
<input type="checkbox"/>	<input type="checkbox"/>	f. Masonry <input type="checkbox"/> Marble <input type="checkbox"/> Granite <input type="checkbox"/> Slate <input type="checkbox"/> Brick.....
<input checked="" type="checkbox"/>	<input type="checkbox"/>	g. Terrazzo <input checked="" type="checkbox"/> Marble <input type="checkbox"/> Granite
<input type="checkbox"/>	<input type="checkbox"/>	h. Wood <input type="checkbox"/> Tiles <input type="checkbox"/> T&G Hardwood <input type="checkbox"/> Planking
<input type="checkbox"/>	<input type="checkbox"/>	i. Pedestal <input type="checkbox"/> Vinyl Tiles <input type="checkbox"/> Grills <input type="checkbox"/> Supply Air <input type="checkbox"/> Vent....
		j. Base Molding:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vinyl.....
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wood
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terrazzo.....
<input type="checkbox"/>	<input type="checkbox"/>	Ceramic Tile
<input type="checkbox"/>	<input type="checkbox"/>	Masonry.....

COMMENTS:

Asphalt asbestos tiles are used in the corridors, the classrooms and the practice rooms. Some of the office areas are carpeted. The entrance areas, the stairwell landing and the steps have terrazzo. The floors are in good condition.

CEILINGS AND FINISHES

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>670,677</u>) x (<u>65%</u>) = \$ <u>435,974</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. System Type:

- Exposed..... *in mechanical rooms*
- Applied to Structure..... *12' X 12" acoustical tiles*
- Suspended Steel Grid.....
- Suspended Aluminum Grid *in office areas*
- Suspended Sealed Grid
- Suspended Concealed Spline

b. Materials:

- Drywall
- Plaster..... *at the perimeter of the corridor ceilings*
- Mineral Fiber Board.....
- Fiberglas Board.....
- Metal Pan Tile.....
- Other

c. Finishes:

- Paint *at the perimeter of the corridors*
- Prefinished Paint vinyl Fabric
- Other

d. Openings & Inserts:

- Air Distribution.....
- Lighting Fixtures.....
- Access Panels.....
- Sprinklers
- Smoke Detectors
- Speakers
- Skylights
- Other

COMMENTS:

Most areas have 12" X 12" acoustical ceiling tiles, with some suspended aluminum grid in the office areas. There are small sections at the perimeter of the corridor ceilings that have plaster ceilings. The ceilings are in good condition except for stained ceiling tiles on the fourth floor.

CONVEYING

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (<u>\$ 157,003</u>) x (<u>88%</u>) = <u>\$ 138,176</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Elevators:

- [] Number..... *one Dover*
- [] Type.....*Passenger/freight*
- [] Speed *50 FPM*
- [] Capacity (lbs.)..... *8,000 Lbs.*
- [] Dimensions..... *72"x96"*
- [] Door Operation: Center To Side
- [] Accessible Codes.....
- [] Fire Codes.....

b. Elevators:

- [] Number.....
- [] Type.....
- [] Speed
- [] Capacity (lbs.).....
- [] Dimensions.....
- [] Door Operation: Center To Side
- [] Accessible Codes.....
- [] Fire Codes.....

c. Lifts and Hoists:

- [] Number.....
- [] Type.....

d. Moving Stairs and Walks:

- [] Number.....
- [] Type.....

COMMENTS:

The elevator is 13 years old and is in good condition. The elevator has a slow speed because the electric power available would not permit a faster rate. Once added power is made available, it would cost approximately \$ 50,000 to upgrade the elevator.

MECHANICAL/PLUMBING

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>774,777</u>) x (<u>47%</u>) = \$ <u>361,581</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. Services Available:

- Cold Water 4" DWS
- Backflow Valve
- Hot Water.....6" DHW
- Natural Gas
- Compressed Air
- Other

b. Piping & Fittings:

- Cast Iron.....
- Vitrified Clay
- Copper Pipe
- Copper Tubing
- Steel
- Galv. Steel
- Other

c. Water Heaters:

- Electric
- Steam Converter/Tank
- Steam Instantaneous.....
- Central Hot Water

d. Drainage:

- Storm/Sanitary combined..... 1 @6", 17 @ 4"
- Sanitary Drainage.....
- Floor Drains
- Sump Pumps

e. Fixtures: Number

- Water Closets.....24
- Urinals7
- Lavatory Sinks 16
- Kitchen Sinks
- Service Sinks4
- Showers.....
- Electric Water Coolers 10

- f. Sprinkler Systems:**
- Wet
- Dry.....
- Carbon Dioxide
- Halon
- g. Standpipe Systems:**
- [X]Wet []Dry
- Fire Hose Valves [X]2.5" []1.25"
- Hose Cabinets, Hoses []Installed []Removed

COMMENTS:

The plumbing and the fixtures are original and the domestic water lines and restroom fixtures need to be replaced. The water cooler on the 4th floor does not shut off and needs to be repaired. The faucets at the lavatory sink in the 3rd floor men's restroom and the service sink on the 4th floor are leaking and should be repaired.

MECHANICAL/HEATING

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>819,148</u>) x (<u>50%</u>) = \$ <u>409,594</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Heat Source:

- Central Plant Steam
- Central Plant Hot Water.....6"

b. System Type:

- Steam
- Hot Water.....6" in room 15M
- Warm Air

c. Air Handling Units:

- Multizone Preheat Heating Reheat
- VAV Dual Duct Preheat Heating Reheat.....
- Make-up Air Preheat Heating Reheat AH 2
- Variable Volume Air Preheat Heating Reheat.....
- Constant Volume Air Preheat Heating Reheat AI
- Other

d. Air Filters:

- Prefilter Multi DDAHU MUAHU VAVAHU CAV
- Bagfilter Multi DDAHU MUAHU VAVAHU CAV
- Other

e. Space Equipment:

- Radiators at the perimeter
- Convectors
- Unit Heaters in room 013
- Reheat Coils..... AH1 & AH2
- DD Boxes.....
- CAV Boxes
- 2-Pipe Fan Coil
- Other

f. Control Type:

- Pneu Electric DDC DDC Upgrade.....

COMMENTS:

There were complaints about the lack of control for the heating radiators. It is recommended that new valves be installed where necessary.

COOLING/VENTILATING

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>940,314</u>) x (<u>50%</u>) = \$ <u>470,180</u>						
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Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

Sat Att

- a. System/Capacity:**
 - [] Water
 - [] DX39 tons
- b. Chillers Capacity/Year/Refrigerant/Manufacturer:**
 - [] Centrifugal
 - [] Reciprocating.....Trane, 40 tons, R22, 1957
 - [] Absorption
 - [] Screw
- c. Condenser Side:**
 - [] Type/Capacity CW []DX40 tons
- d. Air Handling Units:**
 - [] Multizone []CW []DX []HUMD
 - [] Dual Duct CW []DX []HUMD
 - [] Make-up Air []CW []DX []HUMD
 - [] Variable Volume []CW []DX []HUMD
 - [] Constant Volume []CW []DX []HUMD
 - [] Other..... single zone
- e. Additional Air Filters:**
 - [] Postfilter []Multi []DDAHU []MUAHU []VAVAHU []CAV
 - [] Other []HEPA []BAG []CARTRIDGE []CHARCOAL
- f. Direct Expansion: Number**
 - [] Window units 42 units
 - [] Thru-the-wall
 - [] Single zonefor rooms 101A-K
 - [] Other
- g. Distribution Boxes:**
 - [] VAV []FC []REHEAT
 - [] CAV []FC []REHEAT
 - [] DUAL DUCT []FC []REHEAT
- h. Special Systems:**
 - [] Type
 - [] Capacity
- i. Control Systems:**
 - [] Pneu Electric []DDC []DDC Upgrade

j. Fans:

- [] Exhaust equipment3 Exhaust fan
- [] Recirculating..... 4 Recirculating fans

COMMENTS:

The Trane chiller was installed in 1957 and the direct expansion unit was installed 1976. There are a total of 42 window units installed in various offices. All these units are inefficient and inadequate and should be replaced with a central air conditioning systems.

ELECTRICAL SERVICE AND DISTRIBUTION

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>162,123</u>) x (<u>50%</u>) = \$ <u>81,066</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

a. Service:

Substation: Buckeye, McCracken Power Plant AEP

Primary Voltage: 13,200 Volts, Volts

Switch Gear Circuit No.: PGS3/PGN9

Transformer:

Manufacture	Type	KVA	Secondary/Voltages	Location
VONTRAN	Mineral	500	208/120	West Side

b. Distribution System:

1. Motor Control Center (MCC) Room 15M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 1200A, 1000A, 600A, 400A, 200A

2. Lighting Room 15M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 1000A, 400A, 250A, 200A, 150A, 100A

3. Building Power Room 15M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 800A, 400A, 250A, 200A, 150A, 100A

4. Isolated Ground Power Room

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 800A, 400A, 250A, 200A, 150A, 100A

c. Conduit and wire:

Conduit Steel, Aluminum, PVC, Flexible

Conductor Copper, Aluminum, MIT

Wire: PVC Cover, Romex, Armored Cable(BX)

d. Emergency System:

Battery backup Room

Emergency Panel Room

UPS Room

e. Emergency Generator: none

COMMENTS:

The electrical distribution system is original and is inadequate for the current demands of the building occupants. It is recommended that an additional electrical system be installed to provide added power and additional outlets.

ELECTRICAL LIGHTING AND POWER

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,090,491) x (53%) = \$ 581,624 <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Lighting (lamp type):

- Fluor 40 watt.....
- Fluor 32 watt..... *in most of the building*
- Fluor Can
- Incandescent *in the classrooms and auditorium*
- HID []Mercury []HPS []Metal Halide
- Low Voltage (12V).....
- Other

b. Lighting Levels

- Halls.....
- Rooms.....
- Mechanical Rooms

c. Fixture Condition

- Fixtures
- Bulbs..... *need to be replaced in the auditorium*
- Fixture Lens.....

d. Receptacles & Switches:

- Wall Outlet 20A
- GFIC Breakers
- Switches.....
- Cover Plates.....

c. Special:

- Lightning Protection
- Communication [X]Clock []Public Address [X]Bells
- Alarm [X]Fire [X]Security
- Telecommunication [X] Phones [X]Data []Cable TV
- Data Systems
- Fiber Optics

COMMENTS:

The building has 32-watt fixtures throughout the corridors and offices, with incandescent lighting in the classrooms and in the auditorium. Some bulbs in the auditorium need to be replaced.

[] [] **f. Lightning Protection**

COMMENTS:

Exit lighting has been installed in the stairs and at exits. There are no sprinklers in the building.

BUILDING PERIMETER EVALUATION

FAC #: 042

DATE: 3/31/99

INSPECTOR: AJR

SYSTEM DESCRIPTION

Sat	Att	
		a. Building Access:
[]	[X]	Driveway.....
[X]	[]	Loading Dock.....
		Sidewalks.....
[X]	[]	Front east
[]	[X]	Side..... north
[X]	[]	Rear..... west
		Steps.....
[]	[X]	Frontat northeast entrance
[]	[X]	Side.....at southeast entrance
[]	[]	Rear.....
[X]	[]	Rampat northeast entrance
		b. Lawn and Landscaping:
[X]	[]	Lawn.....
[X]	[]	Shrubs.....
[X]	[]	Trees.....
[]	[]	Undesirable Insect.....
[]	[]	Bedding Material.....
[]	[]	Watering System.....
		c. General Site Information:
[X]	[]	Signage..... at College Ave.
[X]	[]	Address Identification..... on sign
[X]	[]	Security Lights.....
[X]	[]	Street Lights.....
[X]	[]	Drainage.....
[X]	[]	Storm Drains.....

COMMENTS:

The brick sidewalk on the east side is in good condition. The asphalt sidewalk and the drive to the dock, on the north side of the building should be resurfaced. The steps at the east entrances have cracks that need to be repaired and some steps need to be relayed. The wing walls at the east entrances need to be repaired and the caps on these walls need to be recaulked. The dock has some cracks in the concrete floor that should be sealed

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 172 OSU buildings that the Department of Physical Facilities is budgetary responsible. These audits will be used to establish repair and renovation projects, budget cost estimates for these projects, and overall levels of required maintenance funding.

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. This building replacement cost is allocated to each building component to provide an estimated value for each component. Project cost estimates will exceed the building component values in most situations because of tear-out, handling and site limitations that occur in building component replacement projects.

5. DATA USAGE

Repair and Renovation Projects: provided to assist in the budgeting process for the Department of Physical Facilities. Building Evaluation: provided to give a numerical rating for each building on campus quantifying its percentage of deficiency.

6. 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 State of Ohio Division of Factory and Building Inspection at the time of construction approved the buildings inspected. 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 and redecorating, wholesale replacement of building and system components on-going maintenance, replacement and renovation projects are not included.
 - (b) Includes exterior building walls and attached items.
 - (c) Includes the first step up at all entries. Ramps outside the buildings are included; the steps and walks up to the ramps are not included.
 - (d) Blinds, drapes, light bulbs, and movable furniture are 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

A/C	AIR CONDITIONING
AHU	AIR HANDLING UNIT
ATT	ATTENTION
BLDG	BUILDING
BUR.....	BUILT UP ROOF
COND.....	CONDENSATE WATER
CAV	CONSTANT AIR VOLUME
DDAHU	DUAL DUCT AIR HANDLING UNIT
DDHV	DUAL DUCT HIGH VELOCITY
DHWH	DOMESTIC HOT WATER HEATER
DHWR.....	DOMESTIC HOT WATER RETURN
DHWS	DOMESTIC HOT WATER SUPPLY
DHWT.....	DOMESTIC HOT WATER TANK
DX	DIRECT EXPANSION AIR CONDITIONER
EWC	ELECTRIC WATER COOLER
FPM.....	FEET PER MINUTE
GPM	GALLONS PER MINUTE
HID	HIGH INTENSITY DISCHARGE LIGHT
HPS	HIGH PRESSURE STEAM (125 PSI)
HVAC.....	HEATING, VENTILATING AND AIR CONDITIONING
KV	KILOVOLTS
KVA	KILOVOLTS AMPS
KW	KILOWATTS
LC	LIQUID COOLED
LF	LINEAL FEET
LPS	LOW PRESSURE STEAM (15 PSI)
MBH.....	THOUSAND BTU PER HOUR
MCC	MOTOR CONTROL PANEL
MPS.....	MEDIUM PRESSURE STEAM (50 PSI)
MZCV	MULTIZONE CONSTANT VOLUME AIR HANDLING
N/A	NOT APPLICABLE
PSI.....	POUNDS PER SQUARE INCH
RM.....	ROOM
RTU.....	ROOF TOP UNIT (HEATING OR A/C)
SAT	SATISFACTORY
SF	SQUARE FEET
S/P	STAND PIPE
SR.....	STEAM RETURN LINE
SS	STEAM SUPPLY LINE
SY.....	SQUARE YARDS
TR.....	TERMINAL REHEAT
V	VOLTS
VAV	VARIABLE AIR VOLUME

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