

**FACILITY AUDIT REPORT
ALLIED MEDICAL PROFESSIONS
Building #306**

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GENERAL BUILDING INFORMATION

ALLIED MEDICAL PROFESSIONS #306

BUILDING ADDRESS: 1583 Perry Street

GROSS SQ. FT.: 95,144

NET ASSIGNABLE SQ. FT.: 58,544

MECHANICAL/CUSTODIAL AREA SQ. FT.: 10,515

YEAR OF CONSTRUCTION: 1971

YEAR OF LAST RENOVATION: N/A

NUMBER OF STORIES/BASEMENT: SIX STORIES PLUS A BASEMENT

AIR CONDITIONING (Percentage): 95 %

CURRENT USE: SCHOOL OF ALLIED MEDICAL SERVICES OFFICES AND CLASSROOMS

TYPE OF CONSTRUCTION: REINFORCED CONCRETE FRAME, MASONRY SKIN

ESTIMATED REPLACEMENT COST: \$11,898,000 *

BUILDING APPEARANCE: CLEAN, WELL MAINTAINED, EFFICIENT UTILIZATION OF SPACE.

HANDICAPPED ACCESSIBILITY: ACCESS RAMP IS LOCATED AT THE NORTHEAST CORNER OF THE BUILDING OFF PERRY STREET. FRONT DOOR OF THE BUILDING HAS AN AUTOMATIC OPENER THAT OPENS ON THE MAIN LOBBY TO THE ELEVATORS.

OVERALL BUILDING CONDITION: SATISFACTORY

NUMBER OF EXIT STAIRWAYS: TWO

* Replacement Cost assigned November 1991 by The Office of Campus Planning and Space Utilization.

BUILDING SYSTEMS INFORMATION

ALLIED MEDICAL PROFESSIONS #306

HEATING:

Source LOCAL BOILERS IN RM 605M, 2 HIGH TEMPERATURE HOT WATER WEIL-MCLAIN
Type Heating System HOT WATER
Steam (Line size, valve location) LOCAL 420,000 BTU STEAM BOILER RM 605M
Building Htg Water (line size, valve location) LOCAL BOILERS

VENTILATION SYSTEM: 2 DUAL DUCT HIGH VELOCITY, 3 LIQUID COOLED, 1 MULTI-ZONE

COOLING:

BLDG %: 95 % Chillers 350 TON CENTRIFUGAL & 350 ABSORPTION CHILLER
Window Units N/A, Thru-the-wall N/A Direct exp. units ONE

HVAC CONTROL SYSTEM:

POWERS DDC CENTRAL MONITORING, PNEUMATIC UNIT CONTROLS

ELECTRIC: Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm.)
1. CIRCUITS 101/302, 1500, 13,200, 480Y/277, 135M

PLUMBING:

Water (size, valve location) 8" LINE IN ROOM #001M
Gas (size, valve location) 4" LINE IN ROOM #004M
Domestic Hot Water (size, valve location) LOCAL BOILER IN THE PENTHOUSE
Compressed Air (size, location) LOCAL COMPRESSORS IN RM 605M

SEWERS: Storm 1 @ 6", 2 @ 8" Sanitary 1 @ 8" Combination N/A

METERS:

Gas (size, location) 4" LINE LOCATED IN RM #004M
Water (size, location) 4" LOCATED IN RM #001M
Electric (size, location) LOCATED WITH SWITCHBOARD IN RM #135M

ALARM SYSTEMS:

Fire Alarm YES Panel Location RM # 135M
Fire Pump YES Pump Location RM #001M
Sprinklers YES Panel Location AT MAIN ENTRANCE LOBBY
Other Alarms N/A

ELEVATORS:

Number THREE Type (passenger, freight) PASSENGER
Manufacturer OTIS Size 5,000; 3,500; 3,500 LBS

EMERGENCY GENERATOR: Size 18 KW (OMAN) Location RM #135M

KEY BOX LOCATION: NORTHWEST DOOR INSIDE BASEMENT ENTRANCE

ASBESTOS SURVEY (1986):

THE PEI ASSOCIATES SURVEY DID NOT IDENTIFY ANY ASBESTOS CONTAINING MATERIALS.

ALLIED MEDICAL PROFESSIONS NARRATIVE

GENERAL

This Building Audit was conducted by Physical Facilities for the purpose of evaluating the present condition of the buildings for which Physical Facilities has a budgetary responsibility. This audit describes the current physical condition of the facility and identifies existing corrective maintenance and building component system replacement requirements. It has been assumed that the program needs of the tenant departments are being met by the facility. Audit objectives and methodology are described in greater detail in the "Building Audit Methodology" section of this report.

HISTORY

Construction was completed in 1971 for the Allied Medical Professions Building. The building provides office and classroom space for the following medical programs: Biomedical Communications, Medical Dietetics, Medical Records Administration, Medical Technology, Occupational Therapy, Physical Therapy, Radiological Technology, Respiratory Therapy. The building has had very little remodeling since completion of construction in 1971.

There is a current project funded to renovate rooms 152 - 167A to provide better utilization of the space. The current building use is as follows: Classrooms 10%, Laboratories 43%, Offices 20%, and Mechanical 27%.

In the mid-1970s, energy modifications were made to the building by reducing the lighting levels and the hours of operation of the HVAC system. A new centrifugal chiller was installed in 1988 so that the boilers would not have to be operated in the summer to supply high temperature hot water for the absorption chiller. The campus energy management group also added direct digital controls in the late 1980s to provide central monitoring and control of the HVAC system.

While a few of the rooms have been remodeled, the majority of the space in the building has the original constructed finishes. The building occupants and housekeeping staff have done a good job of maintaining the building. We found very few building components that needed to be replaced.

PRIMARY SYSTEMS

The foundation, substructure, and superstructure all appear to be in good condition. The foundation consists of concrete piers with caps that support the columns and beams. The floors are made of cast in place reinforced concrete. The exterior walls are concrete block with brick veneer. The exterior was cleaned, waterproofed, and all caulking removed and replaced in the summer of 1991. The exterior of the building is in good condition.

The single glazed aluminum casement window are in good condition and when tested operated correctly. The hinges and latches would be easier to operate if they were cleaned and lubricated. There are three different types of exterior doors. The four primary entrances have aluminum frames with full glass and are in good condition. There are solid metal doors that provide access to the mechanical rooms, and three metal roll-up doors that need to be painted.

The roof for Allied Medical is the original built-up roof installed in 1971. The roof cover has performed very adequately and very few leaks have been reported.

The roof cover is showing signs of deterioration and several large blisters were observed. A project is being proposed to replace this roof before major leaks occur. The roof area needs to be picked-up to eliminate debris that has accumulated.

SECONDARY SYSTEMS

The partitions, doors, walls, floors, and ceilings are in very good condition. The interior wear surfaces have been well maintained and not abused by the building occupants. The suspended acoustical ceiling tiles and recessed light fixtures have accumulated some dirt, but are not as dirty as what we have observed in other buildings that are 20 years old.

The floors are primarily vinyl tile that has been maintained. There are very few areas where floor tile has been replaced. The stairwells have a rubber tile floor that is in very good condition. There are a few lounge areas, office areas, and classrooms that have carpet installed. While some wear has occurred in these areas, they are not in need of replacement.

SERVICE SYSTEMS

The major service systems all appear to be functioning adequately. One of the elevators has both front and rear doors to provide direct access to the loading dock. The other two elevators are single door passenger cabs. There is a proposed project to have the firefighter's package added to these three elevators. Each elevator has an emergency telephone and a separate telephone line for each phone. The control buttons for the elevator are at the standard height making them difficult to reach from a wheelchair. We are proposing a project to add wheelchair accessible control buttons.

The plumbing system did not indicate any problems. There have been two hot water heating coils replaced in the air handler units of the HVAC system because of leaks that developed in the cast iron headers for the coils. These coils have been replaced with all copper coils. The hot water for heating is supplied by two gas-fired boilers located in the 6th floor penthouse. The boilers were also used in the summer to supply high temperature hot water for the absorption chiller that was used to cool the building until 1989.

In the fall of 1988 a new centrifugal chiller was installed to provide chilled water for the cooling system. The centrifugal chiller is a more efficient machine than the absorption chiller and uses less total energy. The absorption chiller has not been operated since October of 1988. We have proposed a project to have the absorption chiller inspected and prepared for operation so it can be ready for use if it is needed in the future to help reduce our peak electric usage. The cooling tower was also replaced in 1988 when the new centrifugal chiller was installed.

ELECTRICITY

The electric service for Allied Medical is supplied by a 1500 KVA transformer and 2000 AMP switchboard located in room 135M. The main distribution panels located in room 135M and the individual circuit breaker panels located on each floor of the building have unused space for more circuit breakers. The demand meter reading indicated that the maximum kilowatt reading was about 1/3 the electric capacity of the system. The electric distribution system for Allied Medical has excess capacity available.

The building has primarily fluorescent light fixtures. In the corridors and lobby areas the lighting levels were reduced by removing the bulbs from every other fixture. This has worked very effectively, except when light bulbs are not replaced promptly there are temporary dark areas in the building. There is an emergency generator to supply back-up power to selected lights in the building and the exit lights if there is a power outage.

SAFETY STANDARDS

Allied Medical Professions Building is equipped with a manual fire alarm system, smoke detectors, fire hose cabinets, portable fire extinguishers, and a partial sprinkler system. The Auto Call fire alarm system that includes the smoke and heat detectors is an obsolete system that is very difficult to obtain replacement parts. A project has been proposed by the Physical Facilities Department to replace this system with a new low voltage electronic system.

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 any asbestos containing materials in the Allied Medical Professions Building.

BUILDING PERIMETER

The sidewalks on the 10th Avenue and Dodd Dr. side of the building are in good condition. The sidewalk on Perry Street, east side, has several sections that have deteriorated and need to be replaced. The driveways and streets on each side of the building are satisfactory.

The exterior lighting on the building and from the street lights adequately lights the area around the building. The building has signage at both the front and the rear of the building that identifies the building. The concrete benches at the front entrance are in good condition. The shrubs and trees have been trimmed and appear to be healthy. The area around the exterior of the building is in good condition.

CONCLUSION

Allied Medical Professions Building is in very good condition. Existing maintenance deficiencies consist of replacement of the roof, updating the fire alarm system, and adding firemen's service to the elevators. The air conditioning system had a new centrifugal chiller added in 1988 and the original absorption chiller needs to be inspected and prepared for use as a back-up to the centrifugal chiller.

The exterior of the building was cleaned and sealed in 1991 and is in good condition. The front sidewalk has a few sections of concrete that need to be replaced and the exterior metal doors could use a new coat of paint.

PROPOSED MAINTENANCE PROJECTS
(R&R or CAPITAL FUNDED)

ALLIED MEDICAL PROFESSIONS #306

A. Corrective Maintenance Projects:

- 1. Replace the unreliable and obsolete fire alarm system.
This would upgrade the system to bring up to current
fire code compliance.....\$ 71,360*
 - 2. Install firefighter service to all three elevators.
This would include the installation of smoke sensors
and a manual override operator..... 50,000*
 - 3. Roof replacement of the BUR with gravel cover of
the 10,792 SF over the TV Studio, the 9,176 SF
over the 5th floor, and the 3,430 SF over the 2nd
floor..... 140,390
 - 4. Inspect and repair absorption chiller for
operation to use as a back-up source of chilled
water and to be available to reduce electric
consumption..... 20,000
- Sub Total \$261,750

B. Building Improvements/Addition Projects:

- 1. Install handicapped accessible controls for
each of the three elevators.....\$ 45,000
- Sub Total \$ 45,000

C. Building Component Replacements expected within the next 5 Years:

No projects identified.

Total Cost for all Estimated Projects = \$ 306,750

* These projects are currently on our departmental project list as proposed projects.

MAINTENANCE PROJECTS
(Less than \$5,000)

ALLIED MEDICAL PROFESSIONS #306

1. Paint metal exterior doors.
2. Clean debris from roof areas.
3. Repair aluminum counter flashing at threshold to exit doors from penthouse.
4. Replace damaged sections of concrete sidewalk at the southeast corner of the building.
5. Repair leaking laboratory faucet in Rm. #532.
6. Replace ceiling tile above cooler in Rm. #532.

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 306 FACILITY NAME: ALLIED MEDICAL PROFESSIONS
 DATE: 3-13-92 INSPECTOR: RDL
 YEAR CONSTRUCTED: 1971
 GROSS SQ FT: 95,144 NET SQ FT: 58,544
 REPLACEMENT COST \$ 11,898,000 X 90% = 10,708,200 *

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	5.03	538,622	0.93	500,918
Columns and Beams	13.58	1,454,174	0.93	1,352,382
Exterior Walls	8.04	860,939	0.91	783,454
Windows & Doors	2.28	244,147	0.82	200,201
Roofing	1.76	188,464	0.43	81,040
Partitions & Drs.	8.41	900,560	0.89	801,498
Wall Finishes	2.56	274,130	0.67	183,667
Floor Finishes	4.87	521,489	0.85	443,266
Ceilings & Finish	6.93	742,078	0.79	586,242
Conveying	3.60	385,495	0.69	265,992
Plumbing	8.01	857,727	0.89	763,377
Heating	8.47	906,985	0.82	743,728
Cooling & Vent.	9.72	1,040,837	0.91	947,162
Elec. Ser. & Dist	1.68	179,898	0.86	154,712
Lighting & Power	10.37	1,110,440	0.79	877,248
Safety Standards	4.69	502,215	0.45	225,997
TOTALS	100.00	10,708,200	0.83	8,910,884

III. BUILDING RATING SUMMARY

Overall Building Rating = 83 %

* Replacement Cost assigned November 1992 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 # 306 DATE: 3-13-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Columns and Beams:

	N/A	Sat	Att
Concrete-in-place <u>REINFORCED</u>	[]	[X]	[]
Precast Concrete _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Steel Fireproofing _____	[X]	[]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]

b. Floors:

Concrete Slab <u>7" THICK SLAB REINFORCED</u>	[]	[X]	[]
Precast Slab _____	[X]	[]	[]
Metal Deck _____	[X]	[]	[]
Metal Deck w/concrete fill _____	[X]	[]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]

c. Roof System:

Flat <u>BUILT-UP ROOF COVER</u>	[]	[X]	[]
Pitched _____	[X]	[]	[]
Concrete <u>DECK, CAST-IN-PLACE</u>	[]	[X]	[]
Steel _____	[X]	[]	[]
Wood _____	[X]	[]	[]
Other <u>DECK OF 2-STORY SECTION IS PRECAST CONCRETE</u>	[]	[X]	[]

B. COMMENTS:

1. THERE WERE NO SIGNS OF ANY SETTLEMENT OR MOVEMENT IN THE BUILDING STRUCTURE.

C. COMPONENT RATING: (\$1,454,174) X (0.93) = \$1,352,382

Possible	Condition	Component
Value	Value Multiplier	Value

EXTERIOR WINDOWS & DOORS

FAC # 306 DATE: 3-13-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Windows type & number:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Wood _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Alum <u>CASEMENT STYLE ALUMINUM FRAMES</u>	[]	[]	[X]
Other _____	[X]	[]	[]
b. Window glazing			
Single pane <u>ALUMINUM CASEMENT</u>	[]	[]	[X]
Double pane _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Doors type & number:			
Wood _____	[X]	[]	[]
Steel <u>SIX DOORS TO PENTHOUSE & TV STUDIO</u>	[]	[]	[X]
Alum <u>NINE ENTRANCE DOORS WITH FULL GLASS</u>	[]	[X]	[]
Other <u>THREE STEEL ROLL-UP GARAGE DOORS</u>	[]	[]	[X]
d. Shading Devices:			
Types <u>DRAPERIES ARE LOCATED AT MOST WINDOWS</u>	[X]	[]	[]

B. COMMENTS:

1. EXTERIOR METAL DOORS NEED PAINTED.
2. CASEMENT WINDOW HARDWARE HAS A TENDENCY TO STICK AND MAKE WINDOW OPERATION DIFFICULT.

C. COMPONENT RATING: (\$244,147) X (0.82) = \$200,201

Possible	Condition	Component
Value	Value Multiplier	Value

ROOFING

FAC # 306 DATE: 3-13-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Roof Covering:	N/A	Sat	Att
Built-up _____	[X]	[]	[]
Built-up w/gravel <u>SEVERAL BLISTERS OBSERVED (24,348 SF)</u>	[]	[]	[X]
Asphalt Shingle _____	[X]	[]	[]
Copper _____	[X]	[]	[]
Glass (Skylight) _____	[X]	[]	[]
Slate _____	[X]	[]	[]
Spanish Tile _____	[X]	[]	[]
Metal _____	[X]	[]	[]
Other <u>CONCRETE CANOPIES WITH NEOPRENE COVERING (423 SF)</u>	[]	[X]	[]

b. Flashing:

Base & Counter <u>FELT BASE WITH ALUMINUM COUNTER FLASHING</u>	[]	[]	[X]
Cap <u>CONCRETE USED FOR LOWER LEVEL PARAPETS (2 STORY AREA)</u>	[]	[X]	[]
Through Wall _____	[X]	[]	[]
Valley & Ridge _____	[X]	[]	[]

c. Gravel Stop & Edge Strips:

Type <u>ALUMINUM USED FOR ROOF AREA ABOVE THE 5TH FLOOR</u>	[]	[X]	[]
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e. Drainage:

Gutters _____	[X]	[]	[]
Drains <u>LOCATED AT THE CENTER OF THE ROOF</u>	[]	[X]	[]
Scuppers _____	[X]	[]	[]
Downspouts <u>ELEVATOR SHAFT ROOF AREA</u>	[]	[X]	[]

f. Parapets:

Concrete <u>FORMED FOR ROOF AREAS ON THE 2 STORY SECTION</u>	[]	[X]	[]
Brick _____	[X]	[]	[]
Block _____	[X]	[]	[]
Precast _____	[X]	[]	[]
Other _____	[X]	[]	[]

g. Insulation:

Type <u>LIGHT WEIGHT INSULATING CONCRETE (4" TO 6")</u>	[]	[X]	[]
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B. COMMENTS

1. ROOF COVER OVER THE 2 STORY SECTION OF THE TV STUDIO IS IN VERY POOR CONDITION. SEVERAL LARGE BLISTER AREAS.
2. ALL ROOF AREAS HAVE DEBRIS THAT NEEDS TO BE REMOVED.
3. THE ROOF COVER OVER THE 5 STORY SECTION OF THE BUILDING WILL ALSO NEED TO BE REPLACED IN THE NEXT FEW YEARS.

C. COMPONENT RATING: $(\underline{\$188,464}) \times (\underline{0.43}) = \underline{\$81,040}$

Possible	Condition	Component
Value	Value Multiplier	Value

FLOOR FINISHES

FAC # 306 DATE: 3-12-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled <u>LOCATED IN LECTURE HALL & LOUNGES</u>	[]	[X]	[]
Tile _____	[X]	[]	[]
b. Composition:			
Epoxy _____	[X]	[]	[]
Synthetic _____	[]	[X]	[]
Other _____	[X]	[]	[]
c. Concrete Topping:			
Clear Sealant <u>BASEMENT & PENTHOUSE</u>	[]	[X]	[]
Abrasive _____	[X]	[]	[]
Epoxy _____	[X]	[]	[]
Aggregate _____	[X]	[]	[]
d. Resilient:			
Vinyl Tile <u>CLASSROOMS, CORRIDORS, & OFFICES</u>	[]	[X]	[]
Linoleum _____	[X]	[]	[]
Vinyl _____	[X]	[]	[]
Rubber _____	[X]	[]	[]
Cork _____	[X]	[]	[]
e. Ceramic Tile <u>RESTROOMS</u>	[]	[X]	[]
f. Masonry _____	[X]	[]	[]
g. Terrazzo <u>FIRST FLOOR CORRIDOR</u>	[]	[X]	[]
h. Wood _____	[X]	[]	[]
i. Metal _____	[X]	[]	[]

B. COMMENTS

C. COMPONENT RATING: $\frac{(\$521,489)}{\text{Possible Value}} \times \frac{(0.85)}{\text{Condition Value Multiplier}} = \frac{\$443,266}{\text{Component Value}}$

CEILING AND FINISHES

FAC # 306 DATE: 3-12-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. System Type:	N/A	Sat	Att
Exposed <u>CEILING IN MECHANICAL ROOMS</u>	[]	[X]	[]
Applied to Structure _____	[X]	[]	[]
Suspended <u>CORRIDORS, OFFICES, & CLASSROOMS</u>	[]	[X]	[]
 b. Materials:			
Drywall _____	[X]	[]	[]
Plaster _____	[X]	[]	[]
Mineral Fiber Board <u>SUSPENDED CEILING TILES</u>	[]	[X]	[]
Metal Pan _____	[X]	[]	[]
Luminous Panels _____	[X]	[]	[]
Other _____	[X]	[]	[]
 c. Finishes:			
Paint _____	[X]	[]	[]
Mineral Fiber <u>CEILING TILE</u>	[]	[X]	[]
Fabric _____	[X]	[]	[]
Prefinished <u>CEILING TILE</u>	[]	[X]	[]
Other _____	[X]	[]	[]
 d. Openings & Inserts:			
Air Distribution <u>SOME DIRT FROM AIR CIRCULATION</u>	[]	[X]	[]
Lighting Fixtures <u>FLUORESCENT FIXTURES, RECESSED</u>	[]	[X]	[]
Access Panels _____	[X]	[]	[]
Skylights _____	[X]	[]	[]
Fire Protection _____	[X]	[]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

1. LIGHT FIXTURES AND REGISTERS ARE DIRTY.

C. COMPONENT RATING: $\frac{(\$742,078)}{\text{Possible Value}} \times \frac{(0.79)}{\text{Condition Value Multiplier}} = \frac{\$586,242}{\text{Component Value}}$

MECHANICAL/PLUMBING

FAC # 306 DATE: 3-12-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Services Available:	N/A	Sat	Att
Cold Water <u>8" SUPPLY LINE</u>	[]	[X]	[]
Hot Water <u>STORAGE TANK IN THE PENTHOUSE</u>	[]	[X]	[]
Acid Waste <u>TO DILUTION TANK IN THE BASEMENT</u>	[]	[X]	[]
Oxygen	[X]	[]	[]
Natural Gas <u>4" SUPPLY LINE IN THE BASEMENT</u>	[]	[X]	[]
Vacuum PUMPS <u>LOCATED IN THE BASEMENT</u>	[]	[X]	[]
Distilled Water <u>SYSTEM IS LOCATED IN PENTHOUSE (DEPT.)</u>	[]	[X]	[]
Compressed Air <u>COMPRESSORS LOCATED IN PENTHOUSE</u>	[]	[X]	[]
Other	[X]	[]	[]
b. Piping & Fittings:			
Cast Iron <u>WASTE DRAIN LINES</u>	[]	[X]	[]
Copper Tubing <u>WATER LINES AND VACUUM LINES</u>	[]	[X]	[]
Plastic	[X]	[]	[]
Steel <u>4" GAS LINE</u>	[]	[X]	[]
Glass	[X]	[]	[]
c. Water Heaters:			
Electric	[X]	[]	[]
Gas <u>LOCAL BOILERS USED TO SUPPLY HOT WATER.</u>	[]	[X]	[]
Oil	[X]	[]	[]
Steam Converter	[X]	[]	[]
d. Drainage:			
Storm Drains <u>LOCATED ON EACH SIDE OF THE BUILDING</u>	[]	[X]	[]
Sanitary Drainage <u>LOCATED ON THE EAST SIDE OF BUILDING</u>	[]	[X]	[]
Combined Storm/San.	[X]	[]	[]
Floor Drains <u>LOCATED IN MECHANICAL ROOMS AND LABORATORIES</u>	[]	[X]	[]
e. Fixtures:			
Water Closets <u>47 FIXTURES IN 10 DIFFERENT LOCATIONS</u>	[]	[X]	[]
Urinals <u>17 FIXTURES IN 6 DIFFERENT LOCATIONS</u>	[]	[X]	[]
Lavatories <u>39 FIXTURES IN 10 DIFFERENT LOCATIONS</u>	[]	[X]	[]
Showers <u>LOCATED IN LOCKER ROOMS ON 2ND FLOOR</u>	[]	[X]	[]
Kitchen Sinks <u>16 DIFFERENT LOCATIONS</u>	[]	[X]	[]
Service Sinks <u>LOCATED IN THE JANITOR CLOSETS</u>	[]	[X]	[]
Drinking Fountains	[X]	[]	[]
Electric Water Coolers <u>LOCATED IN EACH CORRIDOR</u>	[]	[X]	[]
f. Sprinkler Systems:			
Wet <u>PARTIALLY SPRINKLED</u>	[]	[X]	[]
Dry	[X]	[]	[]
Water Storage/Supply	[X]	[]	[]
g. Standpipe Systems:			
Wet <u>SUPPLIES HOSE CABINETS ON EACH FLOOR</u>	[]	[X]	[]
Dry	[X]	[]	[]
Valves	[X]	[]	[]
Hose Cabinets <u>LOCATED AT THE ENDS OF EACH CORRIDOR</u>	[]	[X]	[]

B. COMMENTS:

1. LABORATORY FAUCET IN ROOM 532 WAS RUNNING CONTINUOUSLY.

C. COMPONENT RATING: $\left(\frac{\$857,727}{\text{Possible Value}} \right) \times \left(\frac{0.89}{\text{Condition Value Multiplier}} \right) = \frac{\$763,377}{\text{Component Value}}$

COOLING & VENTILATING

FAC # 306 DATE: 3-12-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System:			
Type <u>DUAL DUCT HIGH VELOCITY & MULTIZONE SYSTEM</u>	[]	[X]	[]
Capacity <u>350 TONS OF COOLING</u>	[]	[X]	[]
b. Chillers:			
Centrifugal <u>350 TON TRANE CENTRAVAC CHILLER (R-11) (1988)</u>	[]	[X]	[]
Reciprocating _____	[X]	[]	[]
Absorption <u>350 TON TRANE ABSORPTION CHILLER (1972)</u>	[]	[]	[X]
c. Cooling Towers:			
Type <u>MARLEY SERIES 220 (1988)</u>	[]	[X]	[]
Capacity <u>NOMINAL TONAGE 324</u>	[]	[X]	[]
d. Condensers: <u>2- DUNHAM-BUSH (R-22) (OUT OF SERVICE)</u>	[]	[]	[X]
e. Space Equipment:			
Direct Expansion:			
Window units _____	[X]	[]	[]
Thru-the-wall _____	[X]	[]	[]
Single zone <u>LIEBERT UNIT FOR RM 156 & 158</u>	[]	[X]	[]
Other _____	[X]	[]	[]
Air/Water:			
2-pipe fan coil _____	[X]	[]	[]
Unit ventilators _____	[X]	[]	[]
Terminal Reheat _____	[X]	[]	[]
Variable volume _____	[X]	[]	[]
Dual Duct <u>MODIFIED TO VAV IN SOME LOCATIONS</u>	[]	[X]	[]
Multi-zone <u>SYSTEM FOR THE TV STUDIO AREA</u>	[]	[X]	[]
f. Special Systems:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
g. Control Systems:			
Pneu <u>TEMPERATURE CONTROLS AND ACTUATORS</u>	[]	[X]	[]
Electric <u>POWERS DDC FOR CENTRAL MONITORING</u>	[X]	[]	[]
Electronic _____	[]	[X]	[]
h. Fans:			
Exhaust <u>29 EXHAUST FANS</u>	[]	[X]	[]
Recirculating <u>30 SUPPLY AND RECIRCULATING FANS</u>	[]	[X]	[]

B. COMMENTS:

1. ABSORPTION CHILLER HAS NOT BEEN OPERATED SINCE 1988.
2. THE 2 DUNHAM-BUSH CONDENSERS (PM3-2923 & 24) HAVE BEEN DISCONNECTED SINCE 12-1-88.

C. COMPONENT RATING: $\frac{(\$1,040,837)}{\text{Possible Value}} \times \frac{(0.91)}{\text{Condition Value Multiplier}} = \frac{\$947,162}{\text{Component Value}}$

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 306 DATE: 3-11-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) Service:

Substation BUCKEYE CIRCUITS 101/302

Primary Voltage 13,200 VOLTS

Transformer:

Manufacture	Type	KVA	Secondary Voltages
<u>GE M163117C</u>	<u>SILICONE</u>	<u>1500</u>	<u>480Y/277</u>

(b) Distribution System:

Panelboard (type) CIRCUIT BREAKERS

Voltage 277/480 VOLTS

Amperage 2000 AMPS @ TRANSFORMER SWITCHBOARD

Conduit ALUMINUM & STEEL

Conductor COPPER

Wire (type) VARIES

Armored Cable LIMITED USE

Other N/A

(c) Emergency System:

General or (type & capacity) 18 KW ONAM, NATURAL GAS

B. COMMENTS:

1. ELECTRIC DISTRIBUTION SYSTEM HAS EXCESS CAPACITY. MOST CIRCUIT PANEL BOXES HAVE UNUSED CIRCUIT BREAKERS.

C. COMPONENT RATING: (\$179,898) x (0.86) = \$154,712
Possible Condition Component
Value Value Multiplier Value

ELECTRICAL/LIGHTING & POWER

FAC # 306 DATE: 3-11-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Lighting (lamp type):

	N/A	Sat	Att
Fluor <u>PRIMARY FIXTURE TYPE, CORRIDORS, OFFICES, CLASSROOMS</u>	[]	[]	[X]
Incand <u>USED IN RESTROOMS</u>	[]	[X]	[]
HID <u></u>	[X]	[]	[]
Other <u></u>	[X]	[]	[]

b. Receptacles & Switches

Type & Capacity <u>DUPLEX GROUNDING TYPE 120 VOLTS</u>	[]	[X]	[]
--	-----	-----	-----

c. Special:

Baseboard Heat <u></u>	[X]	[]	[]
Lightning Protection <u>LIGHTNING ROD SYSTEM ON ROOF</u>	[]	[X]	[]
Communication & Alarm <u>TV STUDIO HAS 2 SATELLITE DISHES</u>	[]	[X]	[]
Data Systems <u></u>	[X]	[]	[]

B. COMMENTS:

1. EVERY OTHER LIGHT FIXTURE IN THE CORRIDORS HAS HAD THE BULBS REMOVED TO REDUCE ENERGY CONSUMPTION IN THE BUILDING. SEVERAL OF THE BULBS THAT ARE SUPPOSE TO BE WORKING ARE BURNT-OUT.

C. COMPONENT RATING: $\frac{(\$1,110,440)}{\text{Possible Value}} \times \frac{(0.79)}{\text{Condition Value Multiplier}} = \frac{\$877,248}{\text{Component Value}}$

SAFETY STANDARDS

FAC # 306 DATE: 3-12-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) Exits:

Stair Construction:	N/A	Sat	Att
concrete _____	[X]	[]	[]
steel <u>FRAME WITH RUBBER TREADS</u>	[]	[X]	[]
wood _____	[X]	[]	[]
Number of exits <u>TWO STAIRWELLS</u>			

(b) Fire Rating:

Construction Type: I X II ___ III ___ IV ___ V ___ VI ___
 Building Height: 78 FEET 6 STORIES

(c) Extinguishing Systems:

Portable <u>LOCATED IN CORRIDORS</u>	[]	[X]	[]
Standpipe <u>SUPPLIES HOSE CABINETS</u>	[]	[X]	[]
Hose Cabinets <u>LOCATED AT THE END OF THE CORRIDORS</u>	[]	[X]	[]
Sprinklers <u>LOCATED IN LABORATORIES AND STORAGE RM</u>	[]	[X]	[]
Suppression _____	[X]	[]	[]
Other _____	[X]	[]	[]

(d) Detection & Alarm Systems:

Manual Alarm <u>PULL STATIONS LOCATED AT STAIRWELLS</u>	[]	[]	[X]
Annunciator <u>LOCATED AT FIRST FLOOR LOBBY</u>	[]	[]	[X]
Smoke Detectors <u>LOCATED ON EACH FLOOR</u>	[]	[]	[X]

(e) Lighting Systems:

Exit Signs <u>LOCATED AT THE END OF EACH CORRIDOR</u>	[]	[X]	[]
Exit Lighting <u>POWERED BY EMERGENCY GENERATOR</u>	[]	[X]	[]
Emergency Lighting <u>POWERED BY EMERGENCY GENERATOR</u>	[]	[X]	[]
Emergency Generator <u>18 KW OMAN, NATURAL GAS</u>	[]	[X]	[]

B. COMMENTS:

1. FIRE ALARM SYSTEM IS UNRELIABLE AND PARTS ARE DIFFICULT TO OBTAIN FOR REPAIRS.
A NEW UP-TO-DATE ALARM SYSTEM HAS BEEN PROPOSED.

C. COMPONENT RATING: (\$502,215) x (0.45) = \$225,997
 Possible Condition Component
 Value Value Multiplier Value

BUILDING PERIMETER EVALUATION

FAC # 306 DATE: 3-12-92 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
1. Structural Access:			
Driveway <u>ALL FOUR SIDES HAVE A DRIVEWAY</u>	[]	[X]	[]
Loading Dock <u>REAR OF THE BUILDING OFF DODD DRIVE</u>	[]	[X]	[]
Sidewalks			
Front <u>SE CORNER HAS 12 SECTIONS OF SPALLED CONCRETE</u>	[]	[]	[X]
Side <u>10 TH AVENUE</u>	[]	[X]	[]
Rear <u>DODD DRIVE</u>	[]	[X]	[]
Steps			
Front <u>MAIN ENTRANCE FROM PERRY STREET</u>	[]	[X]	[]
Side _____	[X]	[]	[]
Rear _____	[X]	[]	[]
Handicap Ramp <u>NE CORNER OF THE BLDG OFF PERRY STREET</u>	[]	[X]	[]
2. Lawn and Landscaping:			
Lawn <u>NORTHSIDE OF BUILDING</u>	[]	[X]	[]
Shrubs <u>TRIMMED</u>	[]	[X]	[]
Trees _____	[X]	[]	[]
Undesirable Insect _____	[X]	[]	[]
Bedding Material <u>SATISFACTORY</u>	[]	[X]	[]
Watering System _____	[X]	[]	[]
3. General Site Information:			
Signage <u>LOCATED ON PERRY ST. AND DODD DRIVE</u>	[]	[X]	[]
Address Identification <u>LOCATED ON SIGN</u>	[]	[X]	[]
Security Lights <u>LOCATED ON BUILDING EXTERIOR</u>	[]	[X]	[]
Street Lights <u>LOCATED ON PERRY ST. AND DODD DR.</u>	[]	[X]	[]
Drainage <u>LOW AREA IN FRONT HAS SEVERAL YARD DRAINS</u>	[]	[X]	[]
Storm Drains <u>LOCATED IN FRONT AND REAR OF THE BUILDING</u>	[]	[X]	[]

B. COMMENTS:

1. SIDEWALK IN FRONT NEED TO HAVE 12 SECTIONS REMOVED AND REPLACED.

**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 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 and redecorating, wholesale replacement of building and system components. Ongoing 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

ATT ATTENTION
BLDG BUILDING
BUR BUILT UP ROOF
COND CONDENSATE WATER
DD DUAL DUCK 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

Building Floor Plans
C-1 Building Space Assignments