

FACILITY AUDIT REPORT
ALLIED MEDICAL PROFESSIONS

#306

MAY 31, 1999

ALLIED MEDICAL PROFESSIONS

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Department of Physical Facilities
Division of Resource Management

**ALLIED MEDICAL PROFESSIONS
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EXECUTIVE SUMMARY FOR ALLIED MEDICAL PROFESSIONS

The construction of the Allied Medical Professions building was completed in 1971. The building provides offices, labs and classrooms for the divisions of Circulation Technology, Health Information Management and Systems, Medical Dietetics, Medical Technology, Occupational Therapy, Physical Therapy, Radiologic Technology and Respiratory Therapy. The building also houses the Communication Services for the Medical School and for the College of Food, Agricultural and Environmental Sciences. Currently there is a project in process that will upgrade the three elevators to meet today's access and fire codes. The roof is almost thirty years old and should be replaced within the next five. The original absorption chiller, located in the penthouse, was decommissioned when a new centrifugal chiller was installed in 1988. The absorption chiller should be inspected and repaired as needed so that it could function as a back-up chiller. The concrete panels on the east side utility shafts need to be repaired and sealed to prevent falling pieces of concrete. The HVAC units, the local boilers and the chillers are at the end of their economic life and need to be replaced. There are also some minor items that need to be addressed.

PROPOSED MAINTENANCE PROJECTS

ALLIED MEDICAL PROFESSIONS #306

A. Corrective Maintenance Projects:	Control No
<i>Repair the absorption chiller.</i>	\$ 20,000 1893
<i>Repair and seal concrete panels at utility shafts.</i>	\$ 11,000
Sub Total	\$ 31,000
B. Building Improvement/Addition Projects:	
<i>Upgrade the three elevators to meet today's codes.</i>	\$ 352,000 1855
<i>Replace the single pane with double pane windows.</i>	\$ 89,500
Sub Total	\$ 441,500
C. Building Component Replacements expected within the next 5-10 years:	
<i>Replace the roof.</i>	\$ 210,500 1892*
<i>Replace the AH units.</i>	\$ 205,000
<i>Replace the two boilers.</i>	\$ 194,000
Sub Total	\$ 609,500

Total Cost for all Projects

\$ 1,082,000

**RENOVATION PROJECTS IN PROGRESS OR COMPLETED SINCE THE
LAST AUDIT. ALLIED MEDICAL PROFESSIONS #306**

Projects:

Control No

None

GENERAL BUILDING INFORMATION

ALLIED MEDICAL PROFESSOINS #306

BUILDING ADDRESS: *1583 PERRY ST.*

GROSS SQ. FT.: *95,144*

NET ASSIGNABLE SQ. FT.: *82,917*

MECHANICAL/CUSTODIAL AREA SQ. FT.: *12,917*

YEAR OF CONSTRUCTION: *1971*

YEAR OF LAST RENOVATION: *None*

NUMBER OF STORIES/BASEMENT: *five stories with partial basement and penthouse*

AIR CONDITIONING (Percentage): *90%*

CURRENT USE: *Offices, labs and classrooms for the Allied Medical Professions.*

TYPE OF CONSTRUCTION: *Reinforced concrete with masonry skin*

ESTIMATED REPLACEMENT COST: *\$ 13,949,000 **

COST PER GROSS SQUARE FEET: *\$146.61*

WHEELCHAIR ACCESSIBILITY: *From the east entrance to the elevators on the first floor, that give access to all floors.*

OVERALL BUILDING CONDITION: *Satisfactory ***

NUMBER OF EXIT STAIRWAYS: *Three (3)*

NUMBER OF OTHER EXITS: *Four (4)*

AREA SHOP RESPONSIBILITY: *Medical 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

ALLIED MEDICAL PROFESSIONS #306

HEATING:

Source – *Local boilers in room 605M*

Type Heating System – *Hot water*

Main Steam Feed (Line size, valve location) – *10” HP in room 605M*

Building Htg. Water (line size, valve location) – *6” in room 605M*

VENTILATION SYSTEM: *DDHV system and exhaust fans*

COOLING:

BLDG. % *90*, Chiller: *one 1988, R11, Trane at 350 tons in room 605M*

Window Units: *none*, Thru-the-wall: *none*, Direct expansion units: *none*

HVAC CONTROL SYSTEM: *Electric, pneumatic controls with DDC upgrade*

ELECTRIC:

Source Size (KVA) Primary/Secondary Switchgear & Main Disc. (Rm.)

101/302 1500 13,200/480/277 ROOM 135M

PLUMBING SERVICES:

Water (size, valve location) – *8” in room 001M, 4” domestic*

Gas (size, valve location) – *4” in room 001M*

Domestic Hot Water (size, valve location) – *2 1/2” from room 605M*

Compressed Air (size, location) – *1” in room 602M*

SEWERS:

Storm – *1 @ 6”, 2 @ 8”* Sanitary - *1 @ 8”* Combined Storm/San- *none*

METERS:

Gas (size, location) – *4” in room 004M*

Water (size, location) – *8” in room 001M*

Electric (location) – *in room 135M*

ALARM SYSTEMS:

Fire Alarm, Main Panel Room 135M, Remote Panel Location *in Lobby*

Fire Pump @ 750 GPM, Riser 8” , Pump Location, Room 001M

Sprinkler, Valve Location Room 001M, 100%, Partial, Limited

Horns/Strobes, Bells in Halls, Rooms

Other Alarms – *none*

ELEVATORS:

Number-*Three* Type (passenger, freight)- *Passenger/freight*
Manufacturer – *Otis*, Size- 2 @ 3,500#, 1 @ 5,000#

EMERGENCY GENERATOR:

Size- *18 KVA*, located in room *135M*

ASBESTOS SURVEY (1986): *The survey did not identify asbestos containing material in the building.*

ALLIED MEDECAL PROFESSIONS NARATIVE

HISTORY

The construction of the Allied Medical Professions building was completed in 1971. The north part of the building is five stories high with a penthouse for most of the mechanical equipment. The south part of the building is two stories high and houses the media center. The building provides offices, labs and classrooms for the divisions of Circulation Technology, Health Information Management and Systems, Medical Dietetics, Medical Technology, Occupational Therapy, Physical Therapy, Radiologic Technology and Respiratory Therapy. The building also houses the Communication Services for the Medical School and for the College of Food, Agricultural and Environmental Sciences. Currently there is a project in process that will upgrade the three elevators to meet today's accessibility and fire codes. The roof is almost thirty years old and should be replaced within the next five years. The absorption chiller was decommissioned when the centrifugal chiller was installed in 1988. The absorption chiller should be inspected and repaired as need and then act as a back-up chiller. To prevent spalling concrete from hitting pedestrians, the concrete panels on the utility shafts, on the eastside of the building need to be cleaned, repaired and sealed.

During interviews with the building coordinator, it was learned that the occupants are basically satisfied with the functioning of the building. The main complaint by the building occupants come from the supervisor of the TV studio. He was concerned about the moisture in the studio on warm, humid days. He informed us that the air conditioning units are shut down during the night because the chiller is shut down to save energy. Moisture accumulates during the night and causes problems with the sensitive equipment related to TV broadcasting. His request was to maintain a low level of humidity in that area with a DX unit that could be run 24 hours per day. As there is one unit that cools this area, some accommodation is recommended.

We also spoke with the Director of the Allied Medical Professions about his long-term needs for the building and how the needs of the School's programs have changed the building requirements. He expressed several areas where the building should be improved to meet the needs of today's and tomorrow's teaching and research activities:

- Because of the increased use of audiovisual presentations, the rooms should have the ability to be darkened to enhance the presentations.
- The electrical system should be updated to allow various levels of lighting to allow students and staff to see their computer screens without a reflective glare from ceiling lights.
- More electrical outlets need to be provided in the computer rooms. There is a need for at least two additional classrooms that can accommodate between 50 and 60 students.

- There was also a concern expressed about the need for added social space for the students.
- Some spaces need to be renovated to provide better research space in the building.
- Renovation was needed to allow various divisions to cluster in one part of the building and give greater personnel efficiencies.
- Because of changes in the occupational and physical therapy areas, the labs in these areas needed to be rehabilitated.
- Ventilation needs to be provided on the fourth floor to allow the establishment of a molecular lab on this floor.
- The TV production area needs 24 hour per day, seven day a week air conditioning.
- Ventilation needs are increasing because of a shift from regular labs to bio-containment labs.

A review of the work orders indicated that there are a normal number of maintenance calls to the building. The most frequent calls relate to clogged water closets.

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 for a Net Assignable Area of 82,917 SF, is as follows; Office space 29%, Circulation 27 %, Labs 22%, Classroom 7%, Mechanical 12%, and Custodial/Toilet 3%.

PRIMARY SYSTEMS

The structural components consist of concrete piles with concrete caps and grade beams that support the concrete columns and beams. The building has poured in place concrete basement walls up to the first floor. Part of the basement forms a tunnel that connects the building to the medical complex. Concrete columns and beams support the reinforced, poured in place, one way and plain, concrete floors. These form the basic skeletal components of this five-story building with partial basement, a tunnel and penthouse.

There are no signs of major settlement or movement in the foundation walls. The structural columns and supports appear to be in good condition. There is a crack at the column at the penthouse level, in the north stairwell. This crack in the upper part of the stairwell should be sealed.

A brick veneer was installed on concrete block of cast-in-place concrete walls, to form the exterior walls. There are concrete panels on the sides of the utility shafts on the east side of the building. These concrete panels have vertical cracks. In some places, small pieces of concrete were found underneath these shafts. It is recommended that these concrete panels be cleaned, repaired and sealed. The

concrete panels at the exterior utility shafts and the perimeter concrete panels at the roof line complete the architectural elements that accent this building. Openings for windows and entrance doors are accented with brick that form the heads and jambs, with brick window sills. The exterior bricks are in good condition.

The windows are single glazed, aluminum casement windows. The windows appear to be in good condition. There were complaints of cold drafts during the winter. This is a problem due to the loss of energy both in the winter and summer months. The windows should be replaced in the next five to ten years. The latching mechanism for the window in room 516N needs to be repaired.

The lobby entrance, at the east side of the building, is a vestibule entrance, with three sets of single, aluminum doors. In addition, there are four sets of double aluminum exit doors and two single steel exit doors. There are three stairwell exit doors. The two single steel doors need to be repainted. The rest of the doors are in good to fair condition. One of the vestibule doors is an automatic door. This door gives access to the lobby and the elevators, that in turn give access to all floors.

There are three roofing levels to this building. There are asphalt, built-up roofs, with gravel over the two story level on the south side, over the five story level and over the penthouse. There is a total of 423 square feet neoprene roof over the entrance canopies and the utility shafts. The roofs are supported by concrete beams, concrete joists. The parapet walls consist of concrete with precast concrete caps. The roofs have roof drains with interior storm drains. The roof over the lower level has had extensive patching. This roof also supports several large satellite dishes. The built-up roofs are 28 years old and need to be replaced in the next five years. The roof over the dock area shows signs of extensive water penetration and should be replaced now before further deterioration takes place.

INTERIOR SYSTEMS

The concrete floors and concrete columns of the building are enclosed with concrete blocks at the perimeter and in the stairwells. Metal studs with drywall enclose the interior spaces except on the first floor where glazed bricks form the corridor walls. The walls are 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 while the stairwells have wooden doors in steel frames. The doors to the offices have knobs and limited glazing. There are special acoustical doors in the TV studio. The doors are in good condition.

The wall finishes are mostly paint throughout the building. There are vinyl wall coverings in the lecture hall and in the faculty lounge. There is some wood paneling in the lobby area. There are glazed bricks in the first floor corridors and ceramic tiles in the restrooms and in the showers of the locker rooms. The wall finishes are

generally in good condition except for the walls in room 124 and in the north stairwell which exhibit peeling paint. These walls need to be repainted. Also, there are some black sound-proving panels in room 155 that need to be reattached to the east wall.

There is carpeting in most of the offices, the faculty lounge and the lecture hall. There is terrazzo in the main lobby, the first floor corridors and in the restrooms. There is a rubber covering on the stair landings and steps. The nosing on several steps have broken and needs to be replaced. The mechanical room floors have a clear sealant topping. There is a raised metal floor, with vinyl tile inserts, in the TV studio. The rest of the building has vinyl tile floors. The base molding is terrazzo in the first floor corridors, ceramic tile molding in the other floor corridors and vinyl base molding in the carpeted areas. The office areas have vinyl base molding. The floors in the corridors have many black scuff marks that should be removed and the floors sealed. There are several broken/missing ceramic base tiles in the 2nd and 3rd floor corridors that need to be replaced. There are some broken tiles in the men's shower. These tiles should be replaced. The remaining floors are in good condition.

The ceilings in the building consists of a suspended aluminum 2x2 grid, with mineral fiber board tiles. The ceilings in the mechanical rooms are exposed concrete. The faculty lounge has a drywall ceiling. There are some stained ceiling tiles on the 5th floor that should be replaced. The rest of the ceilings are in good condition.

SERVICE SYSTEMS

There are two passenger elevators and one passenger/freight elevator that serve the general public, giving access to all floors. One elevator, used as freight elevator, goes to the penthouse. The elevators were upgraded in May, 1999 to meet today's accessibility and fire codes. They are in good condition.

The major service systems, domestic cold and hot water, standpipe and sprinkler system, natural gas, vacuum, compressed air, sanitary and storm drainage appear to be in good to fair condition. There are house pumps located in the basement mechanical rooms as well as sewage ejectors. The building also has an acid waste system and a vacuum system for the labs on the upper floors. The labs are also supplied with de-ionized water. There are fire pumps located in room 001M. During times of heavy rains, minor flooding occurs in the tunnel area south of the elevator. It appears that a joint in the storm drain has developed a leak. This joint should be repaired. The domestic hot water is supplied by a hot water boiler. There is no hot water in the women's shower on the third floor. Hot water should be provided as there are students who use this facility. The water supply and stand pipe system appear to be in good condition. The fixtures are in good working order even though some water closets and sinks are clogged on occasion. A backflow valve should be installed.

Heating hot water for the building is supplied by two local, Weil McClain, hot water boilers. Each boiler has a 4.043 MBTU capacity. Both boilers are gas fired and one boiler has been set up to use oil as a backup source for heating, however, it is not currently connected to an oil source. Heating hot water is supplied to the heating coils for the multizone, CAV and dual duct air handling units. Hot water is also supplied to the unit heaters located in the stairwells and at the entrances. There are six air handling units located in various mechanical rooms throughout the building. Two units are located in room 225M, two units are located in room 267M and two units are located in room 603M. The air handlers located in the penthouse are DDHV units. There were some complaints noted about the heating in the office areas.

Chilled water is supplied by a 360 ton centrifugal chillers located in the penthouse. There is also a 295 ton absorption chiller located in the penthouse. This chiller has not been in use since 1988. This chiller could be repaired and act as a backup unit. The 360 ton, Marley cooling tower, located above the penthouse, was installed in 1988. The centrifugal chiller was installed in 1988 and has R11 refrigerant. The chiller may need to be reworked to accept the R22 refrigerant when the R11 is no longer available. The chiller supplies chilled water to the cooling coils of the six air handling units. Controls for the heating and cooling system are pneumatic and electric and have been tied into a DDC upgraded system. The cooling system seems to be functioning as designed although a failure in the damper system was noted during our inspection in one of the units located in the penthouse. The system is 28 years old and is approaching the end of its life cycle. The coils, motors, fans and drip pans should be replaced in the next five years. There was a complaint noted with the cooling system. The staff in the TV studio area indicated that on some hot and humid days they noticed moisture on the walls of the studio when they arrived for work in the mornings. According to the staff, the reason for this moisture was the fact that the air conditioning units were shut down during the evening hours, to conserve energy. Because of the sensitive equipment located in the studio, they requested some level of air conditioning throughout the entire 24 hours of the day. It is recommended that a DX unit be installed to accommodate this area when the air handlers are renovated.

There are 27 exhaust fans located in the penthouse and in various rooms that remove air from restrooms, common areas, labs and hoods.

ELECTRIC

Circuits number 101/302 feed a 1500 KVA, 480/277 volt transformer located in room 135M that supplies the electrical service to the Allied Medical Professions building. Switchgear located in rooms 135M and 605M feed the lighting and power distribution panels throughout the building. Panel sizes vary throughout the building depending on the load. The building has 32-watt fluorescent light tube

fixtures with some trac lighting in the lecture hall. At approximately 16 watts per square foot the building appears to have an adequate power supply although there were some complaints of not enough power in certain rooms. A review should be made to ascertain if added panels need to be installed for certain rooms. There was a request noted to add convenience outlets in the computer rooms of the building.

SAFETY STANDARDS

The Allied Medical Professions building is equipped with a manual fire alarm system consisting of pull stations at exits that provide local fire annunciation from the panel in room 135M to the bells located throughout the building. The remote panel is located off the west side of the lobby area. A 750 GPM fire pump supplies water to the wet standpipes in the stairwells and there is a limited sprinkler system in the building.

There are lighted exit signs at each exit that are on an emergency circuit. There are emergency lights located throughout the building and in the stairwells. There is an emergency generator, located in room 135M, that supplies power to the elevators, fire pumps and emergency lighting.

ASBESTOS

This building was not covered in 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.

PERIMETER

Holes in the loading dock floor need to be patched to protect the steel rebars. There are cracks in the concrete steps on the east side of the building that need to be repaired. Five slabs of concrete on the east side of the building need to be raised to their original level. The limestone cap on the retaining wall needs to be reset and the joints need to be recaulked. There are cracks in the retaining wall, on the east side of the building, that need to be sealed. The shrubs around the building need to be trimmed. Ivy needs to be removed from the west wall and from the trees at the east entrance. There is a metal post at the southeast corner that needs to be removed. The storm drains on the east side of the building need to be cleaned. The lawn area on the southwest side needs to be repaired.

Entrances to the building are well lighted and area, flood and street lighting appear to be distributed properly. Signage with address identification are located on the east and west side of the building.

**Maintenance Projects (Less Than \$5000) INTERIOR
ALLIED MEDICAL PROFESSIONS #306 MAY 31, 1999**

- 1 Seal the crack in the north stairwell at the penthouse level.
Work Request #
- 2 Repair the latching mechanism on the window in room 516N.
Work Request #
- 3 Repaint the walls in room 124 and in the north stairwell.
Work Request #
- 4 Reattach sound proof panels to the east wall of the TV studio.
Work Request #
- 5 Replace the nosing on the stair steps in the north and south stairwells.
Work Request #
- 6 Remove the scuff marks from the vinyl tiles in all corridor floors.
Work Request #
- 7 Replace the broken/missing ceramic molding in the 2nd and 3rd floor corridors.
Work Request #
- 8 Replace missing tiles in the men's shower on the third floor.
Work Request #
- 9 Replace stained ceiling tiles on the 5th floor.
Work Request #
- 10 Restore hot water to the women's shower.
Work Request #
- 11 Repair storm drain in the tunnel south of the elevator.
Work Request #

**Minor Maintenance Projects (Less Than \$5000) EXTERIOR
ALLIED MEDICAL PROFESSIONS #306 MAY 31, 1999**

- 1 Repaint the two single steel exit doors.
Work Request #
- 2 Seal the flashing joints of the built-up roofs.
Work Request #
- 3 Repair holes in concrete dock floor to protect the rebar and prevent concrete from spalling.
Work Request #
- 4 Repair cracks in the concrete steps on the east side of the building.
Work Request #
- 5 Raise the concrete slabs next to the building in the east side patio area.
Work Request #
- 6 Reset the limestone caps on the east side retaining wall and recaulk the joints.
Work Request #
- 7 Seal the cracks in the east side retaining wall.
Work Request #
- 8 Trim the shrubs around the building and remove the ivy from the trees on the east side to the building and from the west wall.
Work Request #
- 9 Remove the metal post at the southeast corner of the building.
Work Request #
- 10 Clean out the storm drain on the east patio area.
Work Request #
- 11 Repair lawn area at the southwest corner of the building.
Work Request #
- 12 Repair the dock ceiling and roof.
Work Request #

BUILDING INFORMATION

Fac # 306, Facility Name: *ALLIED MEDICAL PROFESSIONS* Date: 5/31/99

Inspector: *AJR* Year Constructed: 1971, Gross Sq. Ft: 95,144

Net Sq. Ft: 82,917, Replacement Cost: \$ 13,949,000 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	BUILDING COMPONENT CONDITION VALUE MULTIPLIER	BUILDING COMPONENT CURRENT VALUE
Foundation	13.98	1,949,690	84	1,637,891
Columns and Beams	10.28	1,433,396	87	1,251,946
Exterior Walls	7.40	1,032,588	84	869,745
Ext. Windows & Doors	2.09	292,114	75	218,129
Roofing & Flashing	2.39	332,874	60	199,739
Partitions & Doors	6.10	851,432	78	662,281
Wall Finishes	2.35	328,345	78	255,401
Floor Finishes	5.37	749,532	75	559,695
Ceilings & Finishes	6.38	889,928	70	622,994
Conveying	3.31	461,947	71	329,549
Plumbing	7.37	1,028,059	75	767,679
Heating	7.79	1,086,935	75	811,643
Cooling and Vent.	8.94	1,247,711	62	776,396
Elect. Serv. & Dist.	1.54	215,123	81	174,982
Lighting and Power	10.37	1,446,982	75	1,080,499
Safety Standards	4.32	602,343	62	374,812
TOTALS	100.00	13,949,000	76	\$10,593,382

III. BUILDING RATING SUMMARY

Overall Building Rating = **76%**

* *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 #:306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,949,690) x (84%) = \$ 1,637.891						
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Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

Sat	Att	DESCRIPTION
		a. Footings:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Interior Footings/Piers <i>on pile caps</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Interior Footings/Bearing Walls..... <i>on pile caps</i>
<input type="checkbox"/>	<input type="checkbox"/>	Perimeter Footings.....
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Grade Beams..... <i>between pile caps</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Piles
<input type="checkbox"/>	<input type="checkbox"/>	Caissons
		b. Foundation Wall Materials:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concrete Cast-in-place..... <i>to the first floor</i>
<input type="checkbox"/>	<input type="checkbox"/>	Concrete Block.....
<input type="checkbox"/>	<input type="checkbox"/>	Stone
<input type="checkbox"/>	<input type="checkbox"/>	Brick.....
<input type="checkbox"/>	<input type="checkbox"/>	Other
		c. Waterproofing and Underdrain:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Coating.....
<input type="checkbox"/>	<input type="checkbox"/>	Membrane
<input type="checkbox"/>	<input type="checkbox"/>	Board.....
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drain Tile..... <i>6" at perimeter</i>
		d. Slab on Grade:
<input type="checkbox"/>	<input type="checkbox"/>	Plain
<input type="checkbox"/>	<input type="checkbox"/>	Reinforced.....
		e. Ground/Basement Floor Slab:
<input type="checkbox"/>	<input type="checkbox"/>	Plain
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reinforced.....
		f. Special Substructures:
<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS:

The foundation is in good condition.

COLUMNS AND BEAMS

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>1,433,396</u>) x (<u>87%</u>) = \$ <u>1,251,946</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. Columns and Beams:**
- [] Reinforced Concrete.....
- [] Precast Concrete.....
- [] Steel.....
- [] Fireproofing.....
- [] Wood.....
- [] Other.....
- b. Floor Joists:**
- [] Concrete..... *one way*
- [] Steel Trusses.....
- [] Wood.....
- [] Other.....
- d. Floor Decks:**
- [] Concrete Slab.....
- [] Precast Slab.....
- [] Metal Deck w/concrete fill.....
- [] Wood.....
- e. Roof Joists:**
- [] Concrete.....
- [] Steel.....
- [] Wood.....
- f. Pitched Roof System:**
- [] Pitch []3/12, []6/12, []10/12.....
- [] Dormers.....
- [] Steel Beams and Purlins.....
- [] Wood Rafters.....
- [] Fireproofing.....
- [] Underlayment.....
- [] Insulation.....
- [] Ventilation.....
- [] Other.....
- g. Flat Roof System:**
- [] Slope..... *1/4"/foot*
- [] Concrete Deck.....
- [] Precast Slab.....

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

COMMENTS:

There were no problems noted with the columns and beams. There are some minor cracks in the north stairwell.

EXTERIOR WALLS

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>1,032,588</u>) x (<u>84%</u>) = \$ <u>869,745</u>			
<table style="margin: auto; border: none;"> <tr> <td style="text-align: center; padding: 0 10px;">Possible Value</td> <td style="text-align: center; padding: 0 10px;">Condition Value Multiplier</td> <td style="text-align: center; padding: 0 10px;">Component Value</td> </tr> </table>	Possible Value	Condition Value Multiplier	Component Value
Possible Value	Condition Value Multiplier	Component Value	

SYSTEM DESCRIPTION

Sat Att

a. Walls:

- Concrete CIP PRECAST.....
- Concrete Block/brick.....
- Brick MASONRY VENEER
- Veneer.....
- Window/Curtainwall
- Metal Siding*around the cooling tower*
- Other

b. Wall Lintels Over Openings:

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

c. Wall Trim:

- Limestone
- Brick
- Marble.....
- Wood
- Other.....*roloc courses*

d. Finishes:

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

e. Exterior Wall Backing System:

- Concrete.....*cast in place*
- Concrete Block
- Brick Masonry
- Ceramic Glazed Clay Tiles.....
- Metal Studs.....

[] [] Wood Studs

COMMENTS:

The exterior walls were cleaned, sealed and spot pointed in 1991 and the brick portion of the walls are in good condition. The cast in place concrete walls of the utility shafts need to be cleaned and sealed.

EXTERIOR WINDOWS AND DOORS

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>292,114</u>) x (75%) = \$ <u>218,129</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. Window materials:

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

b. Windows type & number:

- [] [] Double Hung
- [] [] Awning
- [X] [] Casement *.91*
- [] [] Pivoted.....
- [] [] Sliding
- [] [] Fixed.....
- [] [] Other

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:

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

f. Doors type & number:

- [X] [] Vestibule *three single*
- [X] [] Double *4*
- [] [X] Exit *2*
- [X] [] Stair Exit..... *3*
- [X] [] Garage..... *3*

- Special
- g. Hardware:**
- Automatic opener*at the main east entrance*
- Push Bar Openers wt Closures
- Key Cards

COMMENTS:

The single glazed, casement type windows should be replaced with energy efficient type windows.

The doors are in good condition except for two single, steel exit doors that need to be repainted.

ROOFING

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>332,874</u>) x (<u>60%</u>) = \$ <u>199,739</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. Roof Covering:**
- [] [] Built-up []asphalt []Coal Tar []Modified
- [] [X] Built-up w/gravel []asphalt [X]Coal Tar.....24,348 SF
- [] [] Asphalt Roll.....
- [] [] Asphalt Shingle
- [] [] Copper
- [] [] EPDM.....
- [] [X] Other..... neoprene roof 424 SF
- b. Flashing:**
- [] [X] Materials: []Cu []Galv [X]Al []EPDM []SS []PVC....
- [X] [] Counter1,124 LF
- [X] [] Cap.....1,124 LF
- [X] [] Reglet.....830 LF
- [] [] Valley & Ridge.....
- [] [] Thru-the-wall.....
- c. Gravel Stop & Edge Strips:**
- [] [] Type []SS []Galv []Al []Cu []PVC
- d. Drainage:**
- [] [] Gutters w/ Interior Downspouts
- [] [] Scuppers w/o Exterior Downspouts
- [X] [] Drains w/ Interior Storm Drains
- [] [] Emergency Overflow.....
- e. Parapets:**
- [X] [] Concrete.....626 LF
- [X] [] Brick306 LF
- [] [] Precast
- [] [] Other.....
- f. Parapet Caps:**
- [X] [] Metal []SS []Galv [X]Al []Cu []PVC306 LF
- [] [] Tile
- [] [] Limestone
- [X] [] Precast626 LF
- [] [] Other

h. Roof accessories:

- [] Lightning Protection
- [] Roof Curbs
- [] Equipment Frames.....
- [] Pitch Pockets
- [] Other..... *satilite dishes on lower roof*

COMMENTS:

The roof is the original installed in 1971 and should be replaced within the next five years. The roof over the two story portion of the building supports several satilite dishes. The roof over the dock area should be repaired soon to prevent further deterioration of the concrete ceiling.

PARTITIONS AND DOORS

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>851,432</u>) x (<u>78%</u>) = \$ <u>662,281</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:

- | | | |
|-------------------------------------|--------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Concrete Block <i>in corridors</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Clay Tile Block..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Glazed Brick..... <i>first floor corridors</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Masonry |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood Stud..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Metal Stud <i>for office areas</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Other |

b. Special partitions and Walls:

- | | | |
|-------------------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Demountable..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Toilet <i>metal</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Screen Walls..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Glass |
| <input type="checkbox"/> | <input type="checkbox"/> | Gate..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Other..... <i>open office walls</i> |

c. Wall Material:

- | | | |
|-------------------------------------|--------------------------|---------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Plaster |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Drywall |
| <input type="checkbox"/> | <input type="checkbox"/> | Glass |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood Paneling |
| <input type="checkbox"/> | <input type="checkbox"/> | Composite Paneling..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Steel Panels..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Tile/Glazed <i>in restrooms</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Other |

d. Interior Doors & Frames:

- | | | |
|-------------------------------------|--------------------------|-------------------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Met Door/Met Frame..... <i>mechanical rooms</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Wood Door/Wood Frame |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Wood Door/Metal Frame <i>throughout</i> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Glazing |
| <input type="checkbox"/> | <input type="checkbox"/> | Roll-up..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Sliding |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Other..... <i>acoustic doors in TV studio</i> |

e. Hardware:

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

COMMENTS :

The partitions and doors are in good condition.

Some office areas have an open office motive with six foot high partitions. Overall, the partitions are in good condition.

There are some cracks in the north stairwell that need to be sealed.

WALL FINISHES

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>328,345</u>) x (<u>78%</u>) = \$ <u>255,401</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Wall Finishes:

- [] [X] Paint *parts of the north stairwell walls are flaking*
- [X] [] Vinyl Wall Coverings *lecture hall and faculty lounge*
- [X] [] Prefinished Paneling *in the entrance lobby*
- [] [] Cork
- [] [] Wallpaper.....
- [X] [] Ceramic Glazed Tile *in restrooms*
- [] [] Marble.....
- [] [] Stone
- [] [] Trim & Wainscot
- [] [] Decoration.....
- [] [] Glass.....
- [X] [] Other *glazed brick in the first floor corridors*

COMMENTS:

Wall finishes are in good condition except for the north stairwell walls where the paint has flaked on several levels and should be repainted.

FLOOR FINISHES

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>749,532</u>) (<u>75%</u>) = \$ <u>559,695</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 offices, faculty lounge and lecture hall</i>
<input type="checkbox"/>	<input type="checkbox"/>	Tile.....
		b. Concrete Topping:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Clear Sealant..... <i>on equipment 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 checked="" type="checkbox"/>	Vinyl/Asbestos Tile..... <i>classrooms, labs, corridors</i>
<input type="checkbox"/>	<input type="checkbox"/>	Asphalt Asbestos Tile.....
<input type="checkbox"/>	<input type="checkbox"/>	Linoleum Tile
<input type="checkbox"/>	<input type="checkbox"/>	Vinyl Roll
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Rubber <i>stairs and landings</i>
<input type="checkbox"/>	<input type="checkbox"/>	Other
<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Ceramic Tile <input type="checkbox"/> Mosaic <input checked="" 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 type="checkbox"/> Marble <input checked="" type="checkbox"/> Granite..... <i>first floor corridors</i>
<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 type="checkbox"/>	<input type="checkbox"/>	Wood
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terrazzo..... <i>first floor corridors and restrooms</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ceramic Tile <i>in corridors</i>
<input type="checkbox"/>	<input type="checkbox"/>	Masonry.....

COMMENTS:

Carpeting is used in the offices, the faculty lounge and in the lecture hall on the first floor. Terrazzo is used in the first floor corridors and in the restrooms. Vinyl tiles are used in the classrooms, labs and in the remaining corridors. The vinyl tiles in the corridors have many black scuff marks that should be removed. The nosing on the stairs treads has broken in many places and should be replaced. There are a few broken ceramic tiles in the shower in room 249 that need to be replaced. Broken ceramic tiles in the corridors should be replaced.

CEILINGS AND FINISHES

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>889,928</u>) x (<u>70%</u>) = \$ <u>622,994</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 equipment rooms*
- [] Applied to Structure
- [] Suspended Steel Grid
- [] Suspended Aluminum Grid *throughout*
- [] Suspended Sealed Grid.....
- [] Suspended Concealed Spline.....

b. Materials:

- [] Drywall *in lounges*
- [] Plaster
- [] Mineral Fiber Board *throughout*
- [] Fiberglas Board.....
- [] Metal Pan Tile
- [] Other

c. Finishes:

- [] Paint..... *basement ceilings*
- [] Prefinished Paint [] vinyl [] Fabric
- [] Other

d. Openings & Inserts:

- [] Air Distribution
- [] Lighting Fixtures
- [] Access Panels
- [] Sprinklers.....
- [] Smoke Detectors..... *in lecture hall*
- [] Speakers.....
- [] Skylights
- [] Other

COMMENTS:

Most areas have 2 X 2 ceiling tiles with the exception of the faculty lounge where there is a drywall ceiling. There are some stained ceiling tiles throughout the building that should be replaced.

CONVEYING

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>461,947</u>) x (<u>71%</u>) = \$ <u>329,549</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Elevators:

- Number.....*Two Otis*
- Type.....*Passenger*
- Speed.....*300 FPM*
- Capacity (lbs.).....*2 @ 3,500 LBS*
- Dimensions.....*60" X 78"*
- Door Operation: Center To Side
- Accessible Codes.....
- Fire Codes.....

b. Elevators:

- Number.....*One Otis*
- Type.....*Passenger/Freight*
- Speed.....*300 FPM*
- Capacity (lbs.).....*5000 LBS*
- Dimensions.....*66" X 90"*
- Door Operation: Center To Side
- Accessible Codes.....
- Fire Codes.....

c. Lifts and Hoists:

- Number.....
- Type.....

d. Moving Stairs and Walks:

- Number.....
- Type.....

e. Conveyors:

- Number.....
- Type.....

COMMENTS:

The elevators are 28 years old and are in the process of being upgraded to meet current accessibility and fire codes.

MECHANICAL/PLUMBING

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>1,028,059</u>) x (<u>75%</u>) = \$ <u>767,679</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 Water8" DWS
- Backflow Valve
- Hot Water 2 1/2" DHW, 1" HWR
- Natural Gas.....4"
- Compressed Air.....1 1/2" in basement
- Other..... DI water and vacuum for labs

b. Piping & Fittings:

- Cast Iron
- Dur Iron Pipe
- Copper Pipe
- Copper Tubing.....
- Steel
- Galv. Steel
- Other.....

c. Water Heaters:

- Gas boilers.....
- Steam Converter/Tank..... room 001M
- Steam Instantaneous
- Central Hot Water.....

d. Drainage:

- Storm Drains..... 1 @ 6", 2 @ 8"
- Sanitary Drainage 1 @ 8"
- Floor Drains
- Sump Pumps
- Ejector Pumps.....

e. Fixtures: Number

- Water Closets 47
- Urinals 17
- Lavatory Sinks 39
- Kitchen Sinks 1
- Service Sinks 6
- Showers 2

[] Electric Water Coolers 5

[] **f. Sprinkler Systems:**

[] Wet *limited system*

[] [] Dry.....

[] [] Carbon Dioxide

[] [] Halon

[] [] **g. Standpipe Systems:**

[] [X]Wet []Dry

[] [] Fire Hose Valves []2.5" [X]1.25"

[] [] Hose Cabinets, Hoses []Installed [X]Removed

COMMENTS:

The plumbing and the fixtures appear to be in good condition. In addition to the regular services provided, the labs have gas, air, deionized water and vacuum available.

MECHANICAL/HEATING

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,086,935) x (75%) = \$ 811,643 <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
- Boilers: Type *2 Weil McClain*
- Size *4.043 MBTU each*

b. System Type:

- Steam
- Hot Water *from local boilers*
- Warm Air.....

c. Air Handling Units:

- Multizone Preheat Heating Reheat.....
- VAVDual Duct Preheat Heating Reheat.....
- Make-up Air Preheat Heating Reheat.....
- Variable Volume Air Preheat Heating Reheat
- Constant Volume Air Preheat Heating Reheat....
- Other.....

d. Air Filters:

- PrefilterMulti DDAHU MUAHU VAVAHU CAV
- BagfilterMulti DDAHU MUAHU VAVAHU CAV
- Other.....

e. Space Equipment:

- Radiators.....
- Convectors.....
- Unit Heaters..... *stairwells and loading dock*
- Reheat Coils
- DD Boxes
- CAV Boxes.....
- 2-Pipe Fan Coil.....
- Other.....

f. Control Type:

- Pneu Electric DDC DDC Upgrade.....

COMMENTS:

The system is 28 years old and does not meet the current and future needs of the occupants. The system should be replaced. The boilers also need to be replaced.

COOLING/VENTILATING

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,247,711) x (62%) = \$ 776,396

Possible Value	Condition Value Multiplier	Component Value
-------------------	-------------------------------	--------------------

SYSTEM DESCRIPTION

Sat Att

- a. System/Capacity:**
- [] Water 360 Tons
- [] DX
- b. Chillers Capacity/Year/Refrigerant/Manufacturer:**
- [] Centrifugal one, 360 tons, 1988, R-11, Trane
- [] Reciprocating.....
- [X] Absorption 295 Tons
- [] Screw
- c. Condenser Side:**
- [] Type/Capacity [X]CW []DX 360 Tons
- d. Air Handling Units:**
- [X] Multizone [X]CW []DX []HUMD
- [X] Dual Duct [X]CW []DX []HUMD
- [] Make-up Air []CW []DX []HUMD.....
- [] Variable Volume [X]CW []DX []HUMD
- [X] Constant Volume [X]CW []DX []HUMD
- [] Other
- e. Additional Air Filters:**
- [] Postfilter []Multi []DDAHU []MUAHU []VAVAHU []CAV
- [] Other []HEPA []BAG []CARTRIDGE []CHARCOAL
- f. Direct Expansion: Number**
- [] Window units
- [] Thru-the-wall.....
- [] Single zone 5 ton for room 258
- [] 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 equipment27 *Exhaust fans*

[] Recirculating.....2 *Recirculating fans*

COMMENTS:

The Trane chiller was installed in 1988 to replace the absorption chiller as an energy saving device. This chiller provides adequate cooling capacity for the building. The air handling units are 28 years old and should be replaced.

ELECTRICAL SERVICE AND DISTRIBUTION

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>215,123</u>) x (<u>81%</u>) = \$ <u>174,982</u>						
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Possible	Condition	Component				
Value	Value Multiplier	Value				

SYSTEM DESCRIPTION

a. Service:

Substation: Buckeye, McCracken Power Plant AEP

Primary Voltage: 13,200 Volts, Volts

Switch Gear Circuit No.: 101/302

Transformer:

Manufacture	Type	KVA	Secondary/Voltages	Location
G. E.	silicon	1500	480/277	room 135M

b. Distribution System:

1. Motor Control Center (MCC) Room 606M

Panelboard Fused, Circuit Breakers

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

Amperage 1200A, 800A, 600A, 400A, 200A

2. Lighting Room 135M

Panelboard Fused, Circuit Breakers

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

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

3. Building Power Room 135M

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 135M

UPS Room

e. Emergency Generator: 18 KVA, in room 135M

COMMENTS:

The electrical distribution system is 28 years old and is in good condition. There is an emergency generator located in room 135M that provides emergency backup power to the elevators and emergency lights. At 16 amps per square foot, transformer that supplies power to the Allied Medical Professions Building seems to be adequate for the building load. However the Director of the program complained that certain areas did not have adequate power and not sufficient convenience outlets. A study should be done to determine the power needs by location and, if necessary, additional panels and outlets installed.

ELECTRICAL LIGHTING AND POWER

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ 1,446,982) x (75%) = \$ 1,080,499 <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..... *throughout the building*
- Fluor Can.....
- Incandescent *in the TV studio*
- HID Mercury HPS Metal Halide.....
- Low Voltage (12V).....
- Other..... *trac lighting in the lecture hall*

b. Lighting Levels

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

c. Fixture Condition

- Fixtures.....
- Bulbs.....
- Fixture Lens.....

d. Receptacles & Switches:

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

c. Special:

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

COMMENTS:

The building has 32-watt fixtures throughout and lighting levels are adequate. There are trac lights in the lecture hall and incandescent lights in the TV studio. There is special lighting in the TV studio that is maintained by the building occupants.

SAFETY STANDARDS

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

COMPONENT RATING: (\$ <u>602,343</u>) x (<u>62%</u>) = \$ <u>374,812</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. Exits:

Stair Construction:

- [X] [] concrete *to the basement*
- [X] [] steel *with concrete fill*
- [] [] wood.....
- [X] [] Number of Exit Stairs 3
- [X] [] Number of Other Exits 4

b. Fire Rating:

- [X] [] Construction Type: I_ IIX III_ IV_ V_ VI__
- Building Height: 84 ft, 5 stories

c. Extinguishing Systems:

- [X] [] Portable.....
- [X] [] Standpipe
- [X] [] Hose Cabinets.....
- [] [] Hoses
- [X] [] Sprinklers..... *partial*
- [] [] Gas Suppression
- [] [] Other

d. Detection & Alarm Systems:

- [X] [] Pull Stations.....
- [X] [] Bells.....
- [X] [] Horns
- [X] [] Strobes
- [X] [] Annunciator Panel *off lobby*
- [X] [] Smoke Detectors.....
- [] [] Halls
- [X] [] Elevators.....
- [X] [] Rooms *in lecture hall*
- [X] [] Equip Rooms.....
- [X] [] Ducts

e. Lighting Systems:

- [] Exit Signs []BATTERY EMC
- [] Exit Lighting []BATTERY EMC
- [] Emergency Lighting []BATTERY EMC
- [] Emergency Generator *in room 135M*
- [] **f. Lightning Protection**

COMMENTS:

Exit and emergency lighting has been installed in halls, stairs and at exits. There are a limited number of sprinklers in the building.

BUILDING PERIMETER EVALUATION

FAC #: 306

DATE: 5/31/99

INSPECTOR: AJR

SYSTEM DESCRIPTION

Sat Att

a. Building Access:

- [] [] Driveway
- [] [X] Loading Dock *concrete*
- Sidewalks.....
- [] [X] Front *east*
- [X] [] Side..... *north*
- [X] [] Rear *west*
- Steps
- [] [X] Front *at east entrance*
- [] [] Side.....
- [] [] Rear
- [X] [] Ramp *on east side*

b. Lawn and Landscaping:

- [X] [] Lawn
- [X] [] Shrubs.....
- [] [X] Trees *ivy needs to be removed*
- [] [] Undesirable Insect
- [X] [] Bedding Material
- [X] [] Watering System..... *hose bibbs*

c. General Site Information:

- [X] [] Signage *at Perry St. and at Dodd Dr.*
- [X] [] Address Identification.....
- [X] [] Security Lights.....
- [X] [] Street Lights.....
- [] [X] Drainage *drains on the east side need to be cleaned*
- [X] [] Storm Drains.....

COMMENTS:

Holes in the loading dock floor need to be patched to protect the rebar. There are cracks in the concrete steps on the east side of the building that need to be repaired. Five slabs of concrete on the east side of the building need to be raised to their original level. The limestone caps on the retaining wall need to be reset and joints need to be recaulked. There are cracks in the retaining wall that need to be sealed. The shrubs around the building need to be trimmed. Ivy needs to be removed from the from the west wall and from the trees at the east entrance. There is a metal post at the southeast corner that needs to be removed. The storm drains on the east side of the building need to be cleaned. The lawn area on the southwest side needs to be repaired.

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