

**MUSKEGON COMMUNITY COLLEGE
FACILITIES AUDIT REPORT**

4/1/07

Audit conducted between 8/2006 and 3/2007

Audit Team Members; Diana Osborn, Bill Ross, Roger Stoel, Paul Oakes,
Tonette Brown-Garner, Jerry Nyland, Joe Doyle

Safety audit team leader – Fred Mannaar
Roof evaluation
GVSU energy audit

Background

The 2006/07 Facilities Audit is an integral component of Priority #1 of the 2006-11 Strategic Plan – Develop and implement institution long range planning. The goal of implementing a campus master plan for facilities is supported by the facilities audit. This comprehensive facilities audit is a follow up to the initial comprehensive audit conducted in 1991. Subsequent updates had been completed in 1998 and 2000. Each audit and update has as it's goal to provide specific information to aid in planning and implementing an effective deferred maintenance plan. The audit involved the inspection and evaluation of the following building systems: Foundation, Column & Exterior Walls, Floor, Roof, Ceiling, Interior Walls, Window, Door, Cooling/Ventilation, Heating, Heating, Plumbing, electrical, Conveying, Safety Conditions and Grounds.

A **priority** for repair or replacement was given to each building system :

- 1 - Life safety items and building system deficiencies that require immediate attention or have exceeded their life cycle.
- 2 – Repairs and renovations are necessary to maintain an optimal level of operation
- 3 – Building systems that are approaching the end of their life cycle and if not repaired will begin to fail.
- 4 - Routine repairs made as needed to maintain optimal operation.

Each Building System was has from four (4) to ten (10) sub-systems. Each Building System has an assigned numerical weight that is multiplied by the Condition Value Multiplier to determine the Numerical Rating. The rating then is used to determine the Priority Rating.

Each sub-system was rated as follows:
Satisfactory = 0, 2, 3, 4, or Unsatisfactory = 5. Each rating deducted the appropriate decimal equivalent from 1.00 to determine the Condition Value Multiplier to determine the Numerical Rating.

Comments noted on each of the Building System evaluations are reflected in the ratings.

Introduction

In August of 2006, the Facilities Audit Committee began the process of assessing each of the Building Systems for all campus buildings. The purpose of the audit was to inspect buildings and determine deferred maintenance needs of the facilities and provide assessment of conditions, which would supply data for setting and justifying priorities for major Repair, Replacement and Renovation (RRR) and general maintenance of the facilities.

The scope of the audit included the inspection and evaluation of each building and the building systems as follows:

Buildings;	Year constructed	Square Footage
Main Academic Building	1967	
+ Fine Arts addition	1969	231,055
Technical Building	1966	41,957
Gymnasium	1968	21,525
Art Building	1978	6,954
Maintenance/Apprentice Building	1971	13,116
Stevenson Center	1995	112,000

All adjacent grounds areas and all utilities were also include in the audit.

The *Meijer Library Information Technology Center* was *not* included in this audit. This facility was opened in January of 2006.

Building Systems evaluated:

- A. Primary Structure
 - 1. Foundation
 - 2. Column & Exterior wall
 - 3. Floor
 - 4. Roof
- B. Secondary Structure
 - 1. Ceiling
 - 2. Interior walls
 - 3. Windows
 - 4. Doors
- C. Service Systems
 - 1. Cooling/Ventilation
 - 2. Heating
 - 3. Plumbing
 - 4. Electrical
 - 5. Conveying
- D. Safety Standards

The committee used the audit format developed by the Association of Physical Plant Administrators (APPA).

Muskegon Community College's facilities play a major role in the mission of the institution. The condition and appearance of the buildings reflect the institution's commitment to the development of a quality environment which is conducive to the learning process.

PHYSICAL FACILITIES EVALUATION SUMMARY Form

Building: _____

	Possible	Ratings	Actual
A. Primary Structure			
a. Foundation	15		
b. Column & Exterior wall	15		
c. Floor	8		
d. Roof	8		
 B. Secondary Structure			
a. Ceiling	3		
b. Interior walls	3		
c. Windows	3		
d. Doors	2		
 C. Service Systems			
a. Cooling/Ventilation	11		
b. Heating	11		
c. Plumbing	5		
d. Electrical	8		
e. Conveying	2		
 D. Safety Standards	6		
	100		

Building Rating:

Satisfactory	0 - 25
Remodeling A	25 - 50
Remodeling B	51 - 75
Remodeling C	76 - 94
Demolition	95 - 100

FINDINGS/RECOMMENDATIONS

Specific building by building recommendations are included in the Building Summaries.

It is recommended that a cost estimate be compiled for each of the priority one items.

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **TECH**

	Weight	Ratings		Possible	Actual
E. Primary Structure					
a. Foundation	15	2	30		3
b. Column & Exterior wall	15	4	60		12
c. Floor	8	3	24		4
d. Roof	8	3.5	28		8
F. Secondary Structure					
a. Ceiling	3	2.5	7.5		2.7
b. Interior walls	3	3.5	10.5		2.1
c. Windows	3	2.5	7.5		.6
d. Doors	2	4	8		1.6
G. Service Systems					
a. Cooling/Ventilation	11	5	55		15.4
b. Heating	11	4	44		9.9
c. Plumbing	5	4.5	22.5		5.5
d. Electrical	8	5	40		11.2
e. Conveying	2	3.5	0		0
H. Safety Standards					
	6	3	18		5.4
	100		355		81.4
			81.4 divided by 355 =		22.93
Building Rating:					
Satisfactory	0 – 25				22.93
Remodeling A	25 - 50				
Remodeling B	51 - 75				
Remodeling C	76 - 94				
Demolition	95 - 100				

TECH WING – 11/9/06

**TECH WING
Priorities**

Building System	Priority
Roof	
Near end of life. Repairs needed: joints in metal edge gravel stop/coping detail.	2
Ceiling	
Replace 500, 501	3
Asbestos abatement	2
Cooling/Heating	
Control system needs upgrade	1
Electrical	
Additional capacity needed	2
Convert to T-8 ballasts	2

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **ART**

	Weight	Ratings		Possible	Actual
I. Primary Structure					
a. Foundation	15	2	30		0
b. Column & Exterior wall	15	4	60		19.5
c. Floor	8	3	24		4.0
d. Roof	8	3.5	28		6.4
J. Secondary Structure					
a. Ceiling	3	2.5	7.5		1.8
b. Interior walls	3	3.5	10.5		.6
c. Windows	3	0	0		0
d. Doors	2	4	8		.8
K. Service Systems					
a. Cooling/Ventilation	11	5	55		16.5
b. Heating	11	4	44		15.4
c. Plumbing	5	4.5	22.5		3.5
d. Electrical	8	5	40		16
e. Conveying	2	0	0		0
L. Safety Standards					
	6	3	18		5.4
	100		347.5		89.9

$89.9 \text{ divided by } 347.5 = 25.87$

Building Rating:

Satisfactory	0 – 25	25.87
Remodeling A	25 - 50	
Remodeling B	51 - 75	
Remodeling C	76 - 94	
Demolition	95 - 100	

ART
Priorities

Building System	Priority
Col. & Exterior Walls	
Eaves need repair	2
Cooling/Heating	
No A/C in building, air filtration needs upgrade	1
Control system needs upgrade	1
Electrical	
Additional capacity needed	2
Convert to T-8 ballasts	2
Additional emergency lighting needed	2

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **GYM**

	Weight	Ratings		Possible	Actual
M. Primary Structure					
a. Foundation	15	2	30		6
b. Column & Exterior wall	15	4	60		9
c. Floor	8	3	24		3.2
d. Roof	8	3.5	28		8.8
N. Secondary Structure					
a. Ceiling	3	2.5	7.5		2.4
b. Interior walls	3	3.5	10.5		1.2
c. Windows	3	2.5	7.5		0
d. Doors	2	4	8		1.6
O. Service Systems					
a. Cooling/Ventilation	11	5	55		15.4
b. Heating	11	4	44		19.8
c. Plumbing	5	4.5	22.5		4.5
d. Electrical	8	5	40		15.2
e. Conveying	2	3.5	7		0
P. Safety Standards					
	6	3	18		6.6
	100		362		93.7
				93.7 divided by 362 =	25.88
Building Rating:					
Satisfactory		0 – 25			25.88
Remodeling A		25 - 50			
Remodeling B		51 - 75			
Remodeling C		76 - 94			
Demolition		95 - 100			

GYM
Priorities

Building System	Priority
Col. & Exterior Walls	
Exterior air intake vents need to be permanently closed	2
Roof	
Near end of life. Repair vertical expansion joints, metal edge	2
Cooling/Heating	
No cooling system for Gym – decrease humidity build up	3
Control system needs upgrade	1
Air handlers and boiler need replacements	2
Plumbing	
Rust build up due to old water lines. Need to be replaced	2
No handicapped showers	3
Electrical	
Additional capacity needed	2
Convert to T-8 ballasts	2
Upgrade Gym lighting	3

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **Higher Ed Center** (Stevenson Center)

	Weight	Ratings		Possible	Actual
Q. Primary Structure					
a. Foundation	15	2	30		6
b. Column & Exterior wall	15	4	60		9
c. Floor	8	3	24		3.2
d. Roof	8	3.5	28		3.2
R. Secondary Structure					
a. Ceiling	3	2.5	7.5		1.8
b. Interior walls	3	3.5	10.5		1.8
c. Windows	3	2.5	7.5		1.2
d. Doors	2	4	8		.4
S. Service Systems					
a. Cooling/Ventilation	11	5	55		17.6
b. Heating	11	4	44		13.2
c. Plumbing	5	4.5	22.5		1.0
d. Electrical	8	5	40		3.2
e. Conveying	2	3.5	7		.4
0					
T. Safety Standards					
	6	3	18		1.8
	100		362		63.8
			63.8 divided by 362 =		17.62
Building Rating:					
Satisfactory	0 – 25				17.62
Remodeling A	25 - 50				
Remodeling B	51 - 75				
Remodeling C	76 – 94				
Demolition	95 – 100				

HEC
Priorities

Building System	Priority
Roof	
3-6 year life. Repair reglet joint, conduit opening on fan units	3
Cooling/Heating	
Humidity Control system needed for 3 rd level	2
Heating units being converted to 4 speed motors	3
Electrical	
Additional capacity needed	2
Convert to T-8 ballasts	2

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **MAIN**

	Weight	Ratings		Possible	Actual
U. Primary Structure					
a. Foundation	15	x	20 =	300	60
b. Column & Exterior wall	15	4	60		18
c. Floor	8	12	96		12.8
d. Roof	8	3.5	28		9.6
V. Secondary Structure					
a. Ceiling	3	2.5	7.5		2.4
b. Interior walls	3	3.5	10.5		2.7
c. Windows	3	2.5	7.5		1.8
d. Doors	2	4	8		2.2
W. Service Systems					
a. Cooling/Ventilation	11	5	55		22.2
b. Heating	11	4	44		15.4
c. Plumbing	5	4.5	22.5		7.5
d. Electrical	8	5	40		18.4
e. Conveying	2	3.5	7		2.8
X. Safety Standards					
	6	3	18		5.4
	100		434		127.2
			114.6 divided by 434 =		29.31
Building Rating:					
Satisfactory	0 - 25				
Remodeling A	25 - 50				
Remodeling B	51 - 75				
Remodeling C	76 - 94				
Demolition	95 - 100				

MAIN BUILDING
Priorities

Building System	Priority
Col. & Exterior Walls paint efas, caulk, insulate, center court settling & FA entrance	2
Roof Near end of life. Repair expansion joints now.	2
Doors Replace closers and some doors	3
Rekey to match LIT system	4
Cooling/Heating Control system needs upgrade	1
Electrical Additional capacity needed	2
Convert to T-8 ballasts	2

PHYSICAL FACILITIES EVALUATION SUMMARY

Building: **Maintenance**

	Weight	Ratings		Possible	Actual
Y. Primary Structure					
a. Foundation	15	2	30		3
b. Column & Exterior wall	15	4	60		22.5
c. Floor	8	3	24		3.2
d. Roof	8	3.5	28		6.4
Z. Secondary Structure					
a. Ceiling	3	2.5	7.5		1.8
b. Interior walls	3	3.5	10.5		.6
c. Windows	3	2.5	0		0
d. Doors	2	4	8		1.0
AA. Service Systems					
a. Cooling/Ventilation	11	5	55		12.1
b. Heating	11	4	44		7.7
c. Plumbing	5	4.5	22.5		5.5
d. Electrical	8	5	40		10.4
e. Conveying	2	3.5	0		0
BB. Safety Standards					
	6	3	18		6.0
	100		347.5		80.2
			$80.2 \text{ divided by } 347.5 =$		23.08
Building Rating:					
Satisfactory					23.08
Remodeling A	0 – 25				
Remodeling B	25 - 50				
Remodeling C	51 - 75				
Demolition	76 - 94				
	95 – 100				

Maintenance Priorities

Building System	Priority
Col. & Exterior Walls	
Block wall crack/damaged	3
Eaves need repair	2
Roof	
Near end of life. Repair expansion joints now.	2
Doors	
Replace 3 rollup doors	3
Rekey to match LIT system	4
Cooling/Heating	
Control system needs upgrade	2
Electrical	
Additional capacity needed	2
Convert to energy efficient lighting	2