

A background image showing two elderly individuals, a man and a woman, sitting in wooden chairs outdoors. They are facing each other and holding hands, suggesting a sense of connection and companionship. The image is slightly faded to allow the text to be prominent.

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**GROWING OLD TOGETHER**  
PREVENTING PREMATURE AGING OF YOUR FACILITY  
OR  
WHY RECREATION CENTERS GROW OLD



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# GROWING OLD TOGETHER

## PREVENTING PREMATURE AGING OF YOUR FACILITY

# PRESENTATION OBJECTIVES

- WHAT ARE THE MAIN FACTORS RESPONSIBLE FOR FACILITY AGING?
- WHAT PLANNING MISTAKES CAN CAUSE PREMATURE AGING?
- HOW DOES AN INSTITUTION SCHEDULE AND BUDGET FOR LONG TERM IMPROVEMENTS?



# AGING

- DEFINITION OF AGING?

TO GROW OLD:

*"SHE IS AGING RAPIDLY."*

- WHAT CAUSES AGING?

ENVIRONMENTAL AND BIOLOGICAL  
INTERFERENCE

DAMAGE ACCUMULATION TO DNA  
CAUSES AGING



# AGENDA

- WHAT CAUSES AGING IN RECREATION CENTERS?

PROGRAM CHANGES

OPERATIONS & MAINTENANCE EFFORT

DESIGN DECISIONS



# PROGRAM CHANGES

- PROGRAM CHANGES DUE TO
  - MARKET FORCES EFFECTING TRENDS
  - COMMUNITY DEMOGRAPHIC SHIFTS
    - AGE
    - ETHNIC
    - IMMIGRATION
    - POPULATION





# PROGRAM CHANGES

- PROGRAM CHANGES DUE TO
  - COLLEGE & UNIVERSITY DEMOGRAPHIC SHIFTS
    - FEMALE/MALE RATIOS
    - OLDER STUDENTS
    - MORE RESIDENTIAL STUDENTS
    - INTERNATIONAL STUDENTS
  - CHANGING INTERESTS OF NEW STUDENTS
  - ADJUSTMENTS TO ACCOMMODATE TRENDS
  - BUILDING FOR MIDDLE-SCHOOLERS



# PROGRAM CHANGES

## ■ TYPICAL/BEST EXAMPLE

RACQUETBALL COURTS

OFFICES

WEIGHT ROOMS

CLIMBING WALLS

GOLF SIMULATORS

TRAINING SUITES

LOCKER ROOMS

FITNESS ASSESSMENT SUITES

MULTI-PURPOSE ROOMS

SALON

STORAGE

POOLS?





# PROGRAM CHANGES

- REQUIRES FLEXIBILITY IN DESIGN & CONSTRUCTION

MOVING PARTITIONS FOR MULTI-PURPOSE ROOM

NON-LOAD BEARING WALLS BETWEEN RACQUETBALL COURTS

ADJUSTMENTS TO FRONT CONTROL DESK

CHANGES TO RETAIL & SALES AREAS

GROWTH OR REDUCTION IN SALES

FLATWIRE/WIRELESS TURNSTILES

FITNESS EQUIPMENT CHANGES IN USE

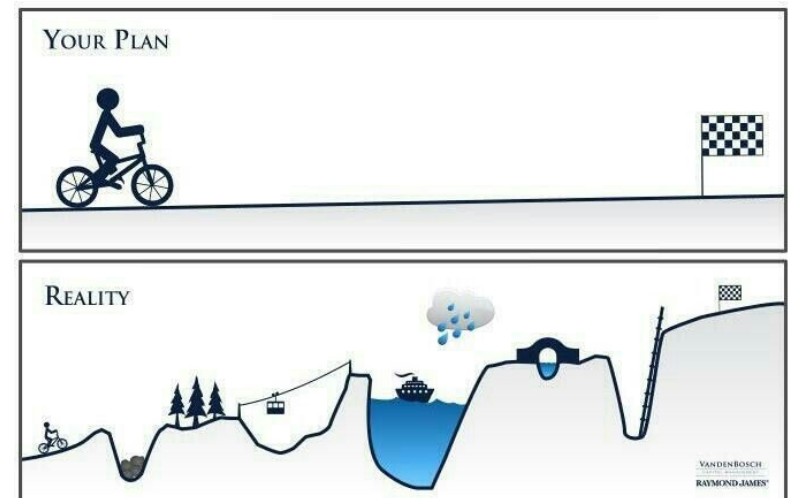
MECHANICAL CONTROLS

SIGNAGE



# PROGRAM CHANGES

- BEST LAID PLANS DO NOT ALWAYS WORK
- REQUIRES FUNDING & UNDERSTANDING
  - BOARDS/ADMINISTRATORS UP-FRONT ABOUT CAPITOL PROJECT COST NOT LONG TERM MAINTENANCE AND IMPROVEMENTS
  - NO ADMINISTRATOR WILL UNDERSTAND SPENDING MORE MONEY FIVE YEARS AFTER YOUR NEW FACILITY OPENS
  - MUST CHANGE/EDUCATE ADMINISTRATORS, COMMUNITY AND STUDENTS
    - GET BACK IN FUNDING LINE



# PROGRAM CHANGES

- FUNDING OPPORTUNITIES

  - PRESERVE RESERVE & OPERATIONS BUDGET

  - SAVE FFE BUDGET FOR RAINY DAY

  - HIDE RESOURCES FOR FUTURE WORK

- FUNDING SOURCES - INCREASE

  - INCREASE MEMBERSHIPS

  - SALES & SERVICES

  - STUDENT FEE INFLATIONARY INCREASE

  - STUDENT FEE INCREASE

  - RENTALS & SPECIAL EVENTS





# OPERATIONS & MAINTENANCE

- SERVICES PROVIDED BY

- CAMPUS FACILITIES

- CUSTODIAL TEAMS

- MAINTENANCE TEAMS

- STUDENT CREWS

- MUNICIPAL FACILITIES

- RECREATION DEPARTMENT STAFF

- CITY EMPLOYEES

- SELF CONTRACTED CUSTODIAL EMPLOYEES



# OPERATIONS & MAINTENANCE

## ■ FACILITIES

CAMPUS ZONES FOR WORK DISTRIBUTION

SUPERVISORS NOT IN THE BUILDING OR AT THE RIGHT TIME

NO CONTROL OVER PERSONNEL

UNION ISSUES

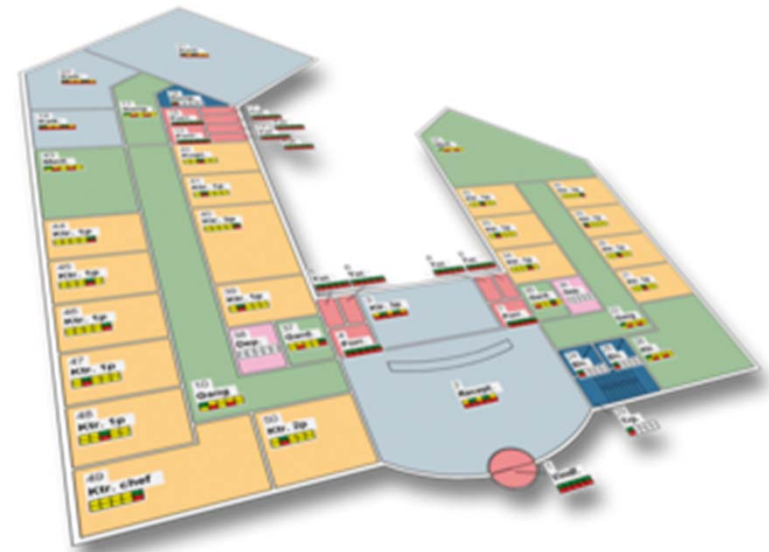
ASSIGNMENT OF PERSONNEL BASED ON CAMPUS STANDARD

TOTAL SQUARE FEET

CLASSROOM BUILDING VS. RECREATION CENTER

VISITS PER BUILDING SHOULD DETERMINE LEVEL OF  
CLEANING SUPPORT (500/3500)

BUDGET CUT BACKS



# OPERATIONS & MAINTENANCE

## ■ FACILITIES

### *CUSTODIAL STAFFING GUIDELINES FOR EDUCATION FACILITIES*

GROUP SETS GUIDELINES

LEVELS 1 – 5

RECREATION CENTERS LEVEL 5

ADJUST CREWS RESPONSIBILITIES BY FACILITY LEVEL  
OF USE

LIGHT CLEAN AT NIGHT WHEN BUSIEST

DEEP CLEANING EARLY MORNING WHEN SLOW

NOT EVERYONE GETS THREE CREWS





# OPERATIONS & MAINTENANCE

## ■ SELF CONTRACTED CLEANING CREWS

OUTSIDE PROVIDER

CHANGE OVER OF CREWS

COMPLETE CONTROL OF ASSIGNMENTS

COSTS MORE

MAY NOT BE ALLOWED

## ■ STUDENT CREWS

UNION ISSUE

SUPPLEMENTS OFFICIAL CREWS' WORK

DISNEY STANDARD



# OPERATIONS & MAINTENANCE

## ■ RECREATION STAFF ISSUES

FACILITIES GET OLD BECAUSE STAFF IS COMPLACENT

LIVING IN THE ENVIRONMENT YOU MISS DETAILS

STAFF MOTIVATION CRITICAL

1<sup>ST</sup> YEAR KEEP YOUR HEAD ABOVE WATER

2<sup>ND</sup> - 5<sup>TH</sup> EXCITEMENT IS STILL THERE FRESH CAR  
SMELL

6<sup>TH</sup> AND BEYOND MUST FIGHT TO MAINTAIN  
MOTIVATION

“PICK UP THE NOODLE” CONCEPT

EVERYONE RESPONSIBLE

CHALLENGE WITH STUDENT WORKERS



# OPERATIONS & MAINTENANCE

## ■ SOFTWARE SUPPORT

SCHEDULES MAINTENANCE BASED ON SYSTEMS

PREDICTS

LENGTH OF REPAIR

MATERIALS & PARTS NEEDED

VENDORS IF REQUIRED

COST OF WORK

YEARLY REPAIR COST

DOES NOT INTEGRATE REGULAR CLEANING

DOES NOT PREDICT LEVEL OF VANDALISM

MONDAY 01/02/2006	TUESDAY 01/03/2006	WEDNESDAY 01/04/2006	THURSDAY 01/05/2006	FRIDAY 01/06/2006	SATURDAY 01/07/2006	SUNDAY 01/08/2006
<b>Crew #1</b> Start 08:00 JOHN ADAM 907.20	<b>Crew #1</b> Start 08:00 SAM MARK 561.00	<b>Crew #1</b> Start 09:00 JOHN ADAM 892.00	<b>Crew #1</b> Start JOHN ADAM 0.00	<b>Crew #1</b> Start JOHN ADAM 0.00	<b>Crew #1</b> Start JOHN ADAM 0.00	<b>Crew #1</b> Start JOHN ADAM 0.00
<b>Crew #2</b> Start 08:00 DAVE JIM 1,088.40	<b>Crew #2</b> Start 10:00 JOHN ADAM 856.06	<b>Crew #2</b> Start DAVE JIM 0.00	<b>Crew #2</b> Start DAVE JIM 0.00	<b>Crew #2</b> Start DAVE JIM 0.00	<b>Crew #2</b> Start DAVE JIM 0.00	<b>Crew #2</b> Start DAVE JIM 0.00
<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00	<b>Crew #3</b> Start 0.00
<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00	<b>Crew #4</b> Start 0.00
<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00	<b>Crew #5</b> Start 0.00
1,995.60	1,417.06	892.00	0.00	0.00	0.00	0.00



# OPERATIONS & MAINTENANCE

Work Order List								
>WO No*	Equipment No*	Work Order Description	Assigned To	Scheduled*	Type	Status*	Priority*	Shift*
33	MIXER 03	PREVENTIVE WORK	SUN	2/15/2008	PM		0	
32	BUILDING 01 RM 105	REPLACE DEFECTIVE LIGHTS	EL	2/06/2008	SC		0	
31	MIXER 03	PREVENTIVE WORK	S	2/15/2008	PM		0	
30	MIXER 03	PREVENTIVE WORK	F	2/15/2008	PM		0	
29	MIXER 03	PREVENTIVE WORK	TH	2/15/2008	PM		0	
28	MIXER 03	PREVENTIVE WORK	W	2/15/2008	PM		0	
27	MIXER 03	PREVENTIVE WORK	T	2/15/2008	PM		0	
26	MIXER 03	PREVENTIVE WORK	M	2/15/2008	PM		0	
25	MIXER 02	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
24	MIXER 01	PREVENTIVE WORK	GL	2/15/2008	PM		0	
23	MIXER 01	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
22	ROUTINE	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
21	EQUIPMENT 02	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
20	EQUIPMENT 01	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
19	JAN01	PREVENTIVE WORK	SANT	2/15/2008	PM		0	
18	MACHINE 01	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
17	BUILDING 02 RM 305	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
16	BUILDING 01 RM 105	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
15	PROPERTY 01	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
14	TRUCK 02	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
13	PROPERTY 02	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1
12	CUST02-COMP01	PREVENTIVE WORK	DH	2/15/2008	PM		0	
11	TRUCK 01	PREVENTIVE WORK	MECH	2/15/2008	PM		0	1

Inventory List							
>Part Number*	Description*	Vendor*	Location*	Qty	Other Part Number*	Key Word*	OEM*
001 PAINT	PAINT, WHITE CEILING	JAG	PAINTING DEPT	-1		PAINT	HILL
002 PAINT	PAINT, RED INDOOR	JAG	PAINTING DEPT	3		PAINT	HILL
AIR CYLINDER 01	AIR CYLINDER, 30 PSI	G	AIR PARTS RM	0	Z6W103	AIR	BIMBA
AIR CYLINDER 02	AIR CYLINDER, 40 PSI	G	AIR PARTS RM	0		AIR	BIMBA
BEARING 1	BEARING, 30 X 40 X 10	BS	BEARING STOCK ROOM	20		BEARING	SKF
BEARING 2	BEARING, 40 X 50 X 11	BS	BEARING STOCK ROOM	30		BEARING	SKF
CASTER 01	CASTER 4" SWIVEL	PLC	BASEMENT	5	481-22	CASTER	COLSON
CASTER 02	CASTER 5" SWIVEL	PLC	BASEMENT	4	481-55	CASTER	COLSON
DRIVE MOTOR 01	DRIVE MOTOR/ GEAR BOX, GEAR RATIO 6.25:1 MOUNTING POS. 100 CODE EHM50177 KG444TC172	PP	MOTOR ROOM	1	Z7GJ172DF8KASOX	MOTOR/ GEARBOX	GENERAL ELECTRIC
DRIVE MOTOR 02	DRIVE MOTOR/ GEAR BOX, GEAR RATIO 6.25:1 MOUNTING POS. 100 CODE EHM50177 KG444TC172	PP	MOTOR ROOM	2		MOTOR/ GEARBOX	GENERAL ELECTRIC
EMERGENCY LIGHTS 01	REPLACEMENT BULB C403	EE	1 FLOOR STOCK RM	10		LIGHTS	PYREX
EMERGENCY LIGHTS 02	REPLACEMENT BULB L56	EE	1 FLOOR STOCK RM	10		LIGHTS	PYREX
ENVELOPES 01	ENVELOPE, #10 BOX OF 100	OFFICE	FRONT OFFICE	0		ENVELOPES	QUEEN
ENVELOPES 02	ENVELOPE, #20 BOX OF 100	OFFICE	FRONT OFFICE	2		ENVELOPES	QUEEN
FILTER 01	FILTER, LARGE	FC	FILTER ROOM	24		FILTER	NATIONAL

# OPERATIONS & MAINTENANCE

## ■ SOFTWARE SUPPORT

HANDLES

WORK ORDERS

PERSONNEL ASSIGNMENTS

BILLINGS

TRACKS WARRANTIES

SCHEDULES INSPECTIONS BASED ON SYSTEM FAILURE RATES

TRACK ASSET DEPRECIATION

LIFE CYCLE COSTING

PREDICTS DEFERRED MAINTENANCE WITH COST MODEL

PLANNING FOR THE FUTURE

**Inspection > Create Inspection Records**

Institution: Your Facility Site: Site 1 Set Inspection Date: 10/3/2007 <Today> Help

Select a Supervisory Zone To Inspected

Area	Supervised By
Zone 1	Supervisor1 Sample4

Select an Evaluator: Supervisor1 Sample4

Generate Printable Inspection Forms

Create and Store Inspection Records

Prepare Export To Pocket PC

Single	List	Area Type	No of Rooms	10% or Min To Inspect	1	Total sq. ft.
Single	List	CLASSROOM W/HARD FLOOR (APPA)	1	10% or Min To Inspect	1	550
Single	List	CLASSROOM W/CARPET (EDU)	1	10% or Min To Inspect	1	700

Record: 1 of 2

# OPERATIONS & MAINTENANCE

## Life Cycle Model Expenditure Projections By Year 007 - BUILDING A

Asset Code	Uniformat Code	Component Description	Qty	Units	2009 Replacement Cost	Year
007	B2030	HI - USE EXT. DOOR LOCKSET REPLACEMENT	1	EA	\$426	2009
Projected Component Replacement Cost for Asset No. 007 for 2009					\$426	

Asset Code	Uniformat Code	Component Description	Qty	Units	2010 Replacement Cost	Year
007	B2010	EXTERIOR POWER WASH AND STAIN REMOVAL	6,000	SF	\$1,867	2010
007	B3010	FLAT ROOFING SYSTEM (BUR); BAD WINTERS	5,500	SF	\$41,307	2010
007	B3020	VINYL FLOOR TILE UPGRADES (NO ACM)	1,000	SF	\$7,479	2010
007	D2010	DUAL-LEVEL DRINKING FOUNTAIN	2	EA	\$6,204	2010
007	D2020	WATER SUPPLY PIPING	5,188	SF	\$11,895	2010
007	D3040	COMPUTER PACKAGE UNIT - CHILLED WATER	10	TON	\$32,166	2010
007	D5040	EMERGENCY GENERATOR, 150 KW	25	KW	\$10,652	2010
Projected Component Replacement Cost for Asset No. 007 for 2010					111,569	

Asset Code	Uniformat Code	Component Description	Qty	Units	2011 Replacement Cost	Year
007	D2010	PLUMBING FIXTURE COMPONENTS	5,188	SF	\$3,230	2011
Projected Component Replacement Cost for Asset No. 007 for 2011					\$3,230	

Asset Code	Uniformat Code	Component Description	Qty	Units	2012 Replacement Cost	Year
007	B3010	ROOF FLASHING AND SHEET METAL	100	LF	\$987	2012
007	C3010	INTERIOR PAINTING (DRYWALL PLASTER REPAIR INCLD)	6,750	SF	\$9,987	2012
007	D5010	ELECTRICAL SWITCHGEAR 800A, 208V	1	EA	\$13,216	2012
Projected Component Replacement Cost for Asset No. 007 for 2012					\$24,170	

No Projected Component Replacement Cost for Asset No. 007 for 2013

Asset Code	Uniformat Code	Component Description	Qty	Units	2014 Replacement Cost	Year
007	B2030	HI - USE EXT. DOOR LOCKSET REPLACEMENT	1	EA	\$470	2014
007	C1020	LO - USE INT. DOOR LOCKSET REPLACEMENT	100	EA	\$15,021	2014
007	C3020	HI - USE CARPET REPLACEMENT	450	SY	\$24,593	2014
Projected Component Replacement Cost for Asset No. 007 for 2014					\$40,084	

Asset Code	Uniformat Code	Component Description	Qty	Units	2015 Replacement Cost	Year
007	C1020	INTERIOR DOOR REPLACEMENTS (LESS HARDWARE)	18	EA	\$30,921	2015
Projected Component Replacement Cost for Asset No. 007 for 2015					\$30,921	

Asset Code	Uniformat Code	Component Description	Qty	Units	2016 Replacement Cost	Year
007	B2030	LO - USE EXT. DOOR LOCKSET REPLACEMENT	18	EA	\$5,463	2016
Projected Component Replacement Cost for Asset No. 007 for 2016					\$5,463	

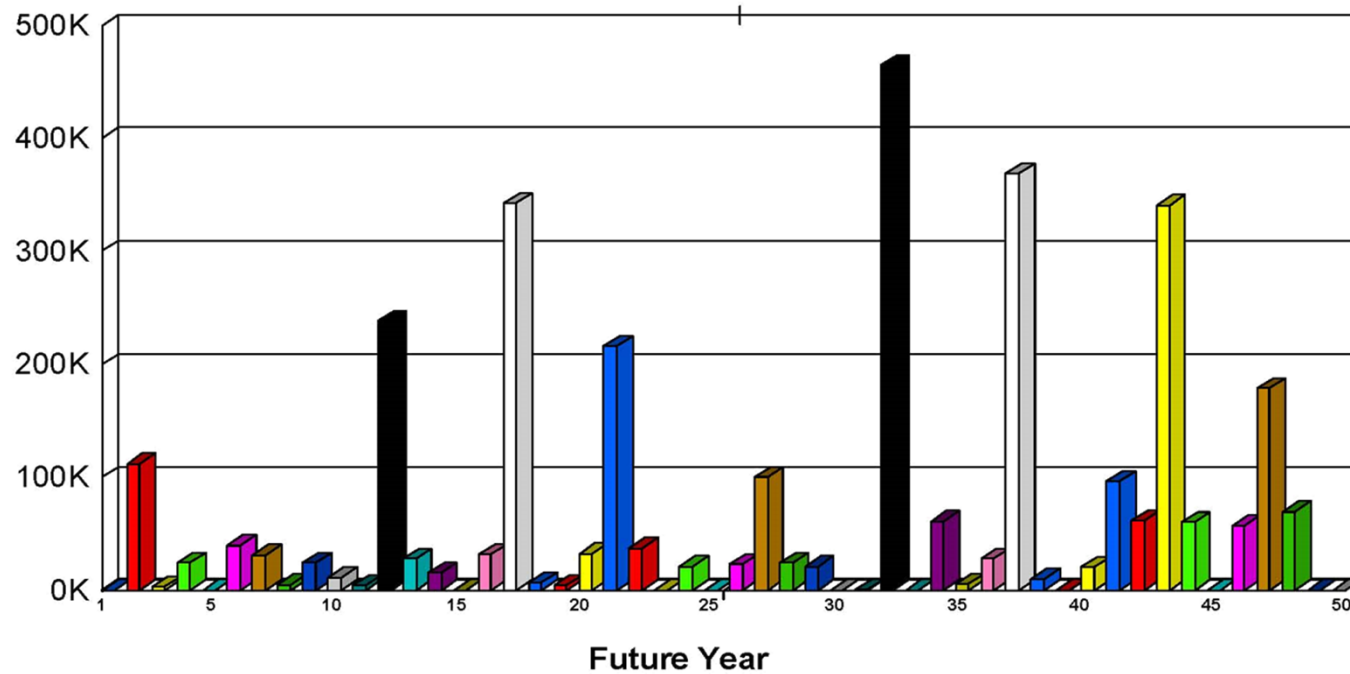
Asset Code	Uniformat Code	Component Description	Qty	Units	2017 Replacement Cost	Year
007	D2010	PLUMBING FIXTURES	5,188	SF	\$24,274	2017
Projected Component Replacement Cost for Asset No. 007 for 2017					\$24,274	

Asset Code	Uniformat Code	Component Description	Qty	Units	2018 Replacement Cost	Year
007	C3010	INTERIOR PAINTING (DRYWALL PLASTER REPAIR INCLD)	6,750	SF	\$11,247	2018
Projected Component Replacement Cost for Asset No. 007 for 2018					\$11,247	

# OPERATIONS & MAINTENANCE

## Life Cycle Model Expenditure Projections

007 - BUILDING A



Average Annual Renewal Cost per SqFt **\$7.24**



# COST OF TEAM

## ■ LIFETIME COST OF BUILDING

PROJECT TEAM 1%

CONSTRUCTION COST 11%

ENERGY 26%

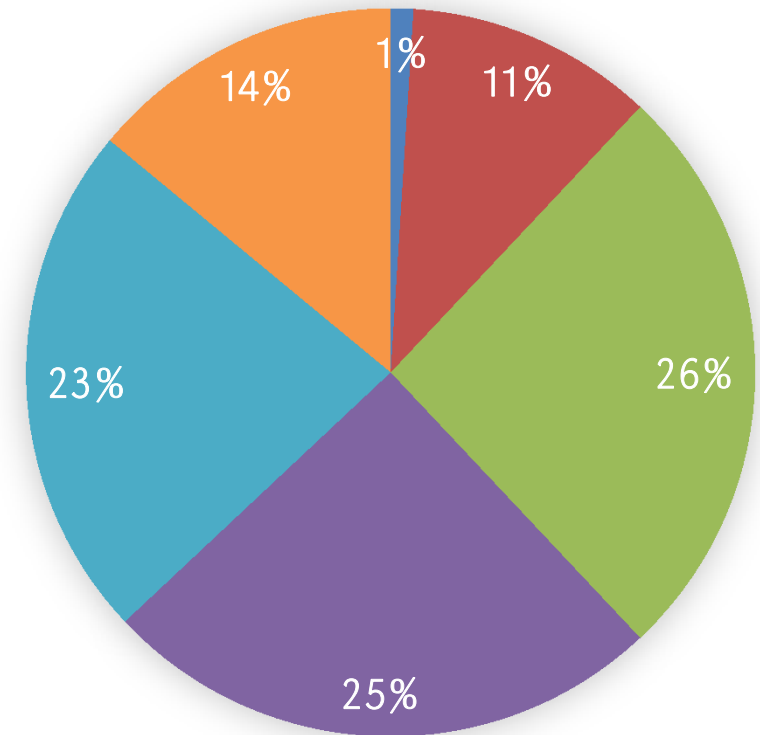
ALTERATION 25%

MAINTENANCE 23%

FINANCING 14%

## ■ THE PROJECT TEAM IMPACTS ALL OF THESE

## ■ DESIGN DECISIONS IMPACT ALL OF THESE!



■ Project Team ■ Construction ■ Energy  
■ Alteration ■ Maintenance ■ Financing

# DESIGN

- WHAT CAUSES AGING

WEATHER

ATYPICAL USAGE LEVELS

COMPROMISED DESIGN DECISIONS



# DESIGN

## ■ WEATHER

TEMPERATURE CHANGES

WIND

RAIN

SUN – UV

AIRBORNE CONTAMINATION

DIRT

SNOW

POLLUTION

POLLEN

CLIMBING WALL CAULK



# DESIGN

## ■ ATYPICAL USAGE LEVELS

MOST USED FACILITY ON CAMPUS OR IN YOUR  
COMMUNITY

EXTENDED HOURS OF USE

EXTREME LEVELS OF USE

SPECIAL EVENTS

PLANNED & UNANTICIPATED

CAMPUS CENTERS OF CAMPUS





# DESIGN

- COMPROMISED DESIGN DECISIONS

RECREATION DIRECTORS THAT DO NOT LOOK TO THE FUTURE

THINKING ONLY IN REAL TIME

IT'S NOT JUST ABOUT INTRAMURALS

REQUIRES TIME AND EFFORT

TOURING EXISTING FACILITIES

ARCHITECTS WITH NO RECREATION EXPERIENCE

LEARNING ON THE (YOUR) JOB

CUSTOMIZE DESIGN TO CAMPUS OR MUNICIPALITY  
(NO COOKIE CUTTER DESIGN)



# DESIGN

## ■ COMPROMISED DESIGN DECISIONS

VALUE ENGINEERING

FAVORITE EXAMPLES

STORAGE DECREASE

MINIMUM HVAC

EQUIPMENT AMOUNTS & QUALITY REDUCED

FINISHES SWITCHED FOR LESS QUALITY

NO MATTER WHAT ANYONE SAYS IT'S "CHEAPER VS.  
LASTING LONGER"



# DESIGN

- COMPROMISED DESIGN DECISIONS

FLOORS

WALLS

CEILINGS

THINGS THAT MOVE

THINGS THAT USE WATER

THINGS PEOPLE TOUCH

EXTERIOR ISSUES



# DESIGN

## ■ FLOORS – PUBLIC SPACES

TYPES – TILE, TERRAZZO, VCT, CONCRETE, CARPET

PROBLEMS

CRACKING

HARD TO CLEAN

FAILING GROUT

CHOICES

TERRAZZO FIRST

LARGE TILE/LIMITED GROUT

ADEQUATE CONTROL JOINTS

LIMIT CARPET OR CONCRETE





# DESIGN

## ■ FLOORS – RESTROOMS, LOCKER ROOMS, SHOWERS

TYPES – TILE, SYNTHETIC, CONCRETE

PROBLEMS

CRACKING – TILE & CORNERS

HARD TO CLEAN

FAILING GROUT

TOO MUCH GROUT

CHOICES

TERRAZZO FIRST

LARGE TILE/LIMITED GROUT

CORNER GUARDS



# DESIGN

## ■ FLOORS – POOL DECKS

TYPES – TILE, CONCRETE, POOL DECK

PROBLEMS

CRACKING

HARD TO CLEAN – POWER WASHING

FAILING GROUT

TOO MUCH GROUT

SURFACE WEARING

CHOICES

LARGE TILE FORMAT

CONCRETE WITH WEARING PATTERN



# DESIGN

## ■ FLOORS – GYMS, RBALL COURTS, MULTI-PURPOSE ROOMS

TYPES – WOOD

PROBLEMS

EXPANSION & CONTRACTION

WEAR & SHOE DAMAGE

SPECIAL EVENTS DAMAGE

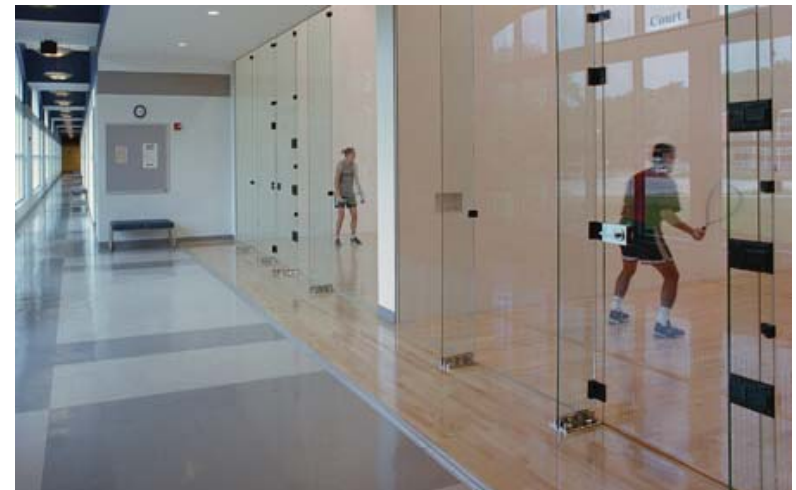
CATASTROPHIC DAMAGE

CHOICES

REGULAR DUSTING

REGULAR CHEMICAL CLEANING

SCREENING & SANDING



# DESIGN

- FLOORS – MAC COURTS, TRACKS, FITNESS ROOMS

TYPES – SYNTHETIC, PVC, CARPET, TURF, WOOD

## PROBLEMS

WEAR IN HIGH ACTIVITY AREAS

SPECIAL EVENTS DAMAGE

SHOE MARKS

UV DAMAGE

STAINS – BLOOD/SODA

SEAMS – DIRT ACCUMULATION

GUM

EQUIPMENT DAMAGE





# DESIGN

## ■ FLOORS – MAC COURTS, TRACKS, FITNESS ROOMS

TYPES – SYNTHETIC, PVC, CARPET, TURF, WOOD  
CHOICES

LIMIT FOOD & DRINKS

CAREFUL COLOR SELECTION

WELDED OR CONTINUOUS POURED PRODUCT

LIMIT USE OF CARPET (ANTI-MICROBIAL)

FLOOR COVERINGS FOR SPECIAL EVENTS

POLICE SHOE TYPE (OPTIONAL)



# DESIGN

## ■ WALLS – MASONRY

TYPES – BRICK, STONE, PAINTED, BURNISHED, SPLIT FACE, INTEGRAL COLOR

### PROBLEMS

SETTLING – CRACKS

SHOE MARKS

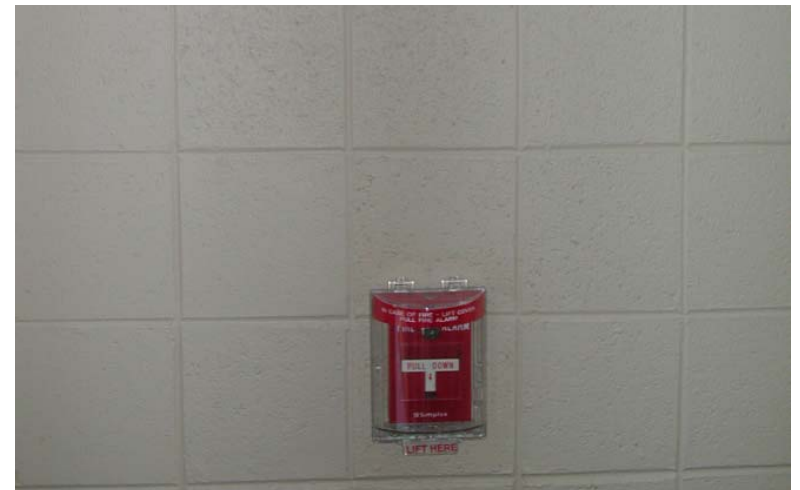
CELL DAMAGE

OIL & GREASE STAINS

### CHOICES

LIMIT PAINTED SURFACES

ANTI - GRAFFITI SEALANT



# DESIGN

## ■ WALLS - DRYWALL

TYPES –

PROBLEMS

EXPANSION & CONTRACTION CRACKS

ACCIDENTAL DAMAGE

CORNERS & HOLES

SHOE MARKS

CHOICES

LIMITED USE IN ACTIVITY AREAS

HIGH LOCATIONS ONLY

REVEALS & EXPANSION JOINTS

CORNER GUARDS



# DESIGN

## ■ CEILINGS

TYPES – ACOUSTICAL TILE, OPEN STRUCTURE, TECTUM

PROBLEMS

DIRT FROM RETURN AIR

DAMAGE FROM ACTIVITIES

DAMAGE FROM WATER INFILTRATION

CHOICES

CAREFUL SELECTION FOR USE IN ACTIVITY SPACES

SMOOTH TEXTURE SELECTION





# DESIGN

## ■ THINGS THAT MOVE

DOORS & HARDWARE

GYM CURTAINS

BASKETBALL BACKSTOPS

LOCKERS

CASEWORK



# DESIGN

## ■ THINGS THAT MOVE

### DOORS & HARDWARE

TYPES – SOLID WOOD, METAL, GLASS, COMPOSITE

### PROBLEMS

LATCHES & HINGES

DENTS

SETTLING & BINDING

CONSTANT REPAINTING

### CHOICES

HARDWARE CHOICE

CONTINUOUS HINGES

SOLID WOOD

PUSH PLATES



# DESIGN

## ■ THINGS THAT MOVE

GYMNASIUM CURTAINS

PROBLEMS

MOTOR BURN OUT

GROMMET FAILURE

WIRE BINDING

RIPS & CUTS

CHOICES

OVERSIZED MOTORS

QUALITY VINYL

LIMITED MESH BELOW 8'



# DESIGN

## ■ THINGS THAT MOVE

BASKETBALL BACKSTOPS

PROBLEMS

MOTOR BURN OUT

HINGE BINDING

BELT SLIPPING

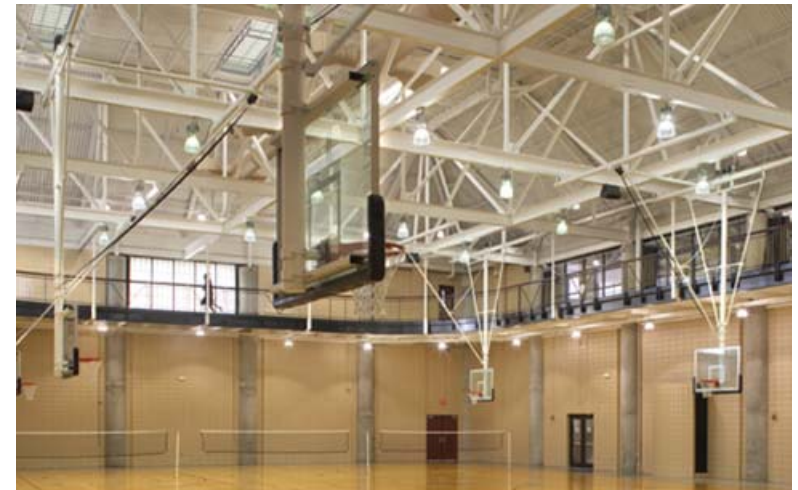
RIM DAMAGE

PADDING FAILURE

CHOICES

NO DUNKING

RESEARCH PEER FACILITIES





# DESIGN

## ■ THINGS THAT MOVE

LOCKERS

PROBLEMS

HARDWARE, HINGES, HOOKS FAILURE

RUSTING

COIN COLLECTION PROBLEMS

WOOD LOCKER SHRINKAGE

CHOICES

GO WITH THE OLD STANDARD

DON'T RELY ON INCOME

RESEARCH PEER FACILITIES



# DESIGN

## ■ THINGS THAT MOVE

CASEWORK

PROBLEMS

HARDWARE & HINGES FAILURE

P-LAM DE-LAMINATION

DRAW GLIDES FAILURE

CASE CABINET DAMAGE

CHOICES

LIMIT BUILDER GRADE USE

NON-PLAM COUNTER TOPS



# DESIGN

## ■ THINGS THAT USE WATER

SHOWERS, SINKS & TOILETS

DRINKING FOUNTAINS

POOLS

MECHANICAL EQUIPMENT

FIRE PROTECTION SYSTEMS



# DESIGN

## ■ THINGS THAT USE WATER

SHOWERS, SINKS & TOILETS

PROBLEMS

VALVES!

DRAIN BACK-UP

SOAP DISPENSER FAILURES

COMPOSTING URINALS

CHOICES

EASY ACCESS VALVES & SUPPLY

REGULAR INSPECTION & MAINTENANCE





# DESIGN

## ■ THINGS THAT USE WATER

DRINKING FOUNTAINS

PROBLEMS

ELECTRIC MOTORS

KNOBS

LEAKS

VANDALISM

CHOICES

DRINKING FOUNTAIN VS. WATER COOLER

PORCELAIN NOT METAL IN ACTIVITY AREAS



# DESIGN

## ■ THINGS THAT USE WATER

POOLS

PROBLEMS

CONTROLLER ISSUES

CHEMICAL ISSUES

LEAKS & WATER LOSS

BOILERS & HEATING SYSTEMS

CHOICES

POOL CONSULTANT

KEEP IT SIMPLE



# DESIGN

## ■ THINGS THAT USE WATER

FIRE PROTECTION SYSTEMS

PROBLEMS

WRONG APPLICATION

ACCIDENTAL DAMAGE

INTENTIONAL DAMAGE

CHOICES

PROPER CAGE PROTECTION

NO LOW HANGING FRUIT



# DESIGN

## ■ THINGS PEOPLE TOUCH

HANDRAILS

COUNTER TOPS

TOILET PARTITIONS

TURNSTILES





# DESIGN

## ■ THINGS PEOPLE TOUCH

HANDRAILS

TYPES – METAL, GLASS, MESH, SOLID

PROBLEMS

SCRATCHING

BENDS & DENTS

WOBBLY CONSTRUCTION

CHOICES

WOOD TOP RAIL

HEAVY CONSTRUCTION

WELDED CONNECTIONS



# DESIGN

## ■ THINGS PEOPLE TOUCH

COUNTER TOPS

TYPES – PLAM, SOLID SURFACE, STONE, TILE

PROBLEMS

SCRATCHING

DE-LAMINATION

CHOICES

SCRATCH RESISTANT MATERIAL



# DESIGN

## ■ THINGS PEOPLE TOUCH

TOILET PARTITIONS

TYPES – METAL, PHENOLIC, PLASTIC

PROBLEMS

RUST

DENT

BEND

FALL APART (LATCHES, HINGES & HOOKS)

CHOICES

CEILING HUNG

PHENOLIC



# DESIGN

## ■ THINGS PEOPLE TOUCH

CONTROL GATES & TURNSTILES

PROBLEMS

HINGE FAILURE

FLOOR MOUNTING FAILURE

BIO METRICS SOFTWARE ISSUES

CHOICES

DEEP FOOTING CONNECTION

CONTINUOUS HINGES

PORTABLE TURNSTILES

WIRELESS/FLATWIRE TURNSTILES





# DESIGN

## ■ EXTERIOR ISSUES

WALLS

WINDOWS

ROOFS



# DESIGN

## ■ EXTERIOR ENVELOPE – WALLS & WINDOWS

TYPES - VARIES

PROBLEMS

SETTLEMENT

SEALANT FAILURE

WINDOW GASKET FAILURE

EFFLORESCENCE

CHOICES

CAREFUL & TIME TESTED SYSTEMS

THIRD PARTY EXTERIOR WINDOW CONSULTANT



# DESIGN

## ■ EXTERIOR ENVELOPE – ROOFS

TYPES – EPDM, BUILT-UP, METAL, SHINGLE, SLATE

### PROBLEMS

COPING FAILURE

STORM DAMAGE

FAULTY CONSTRUCTION

BAD DESIGN

UV DEGRADATION

PENETRATIONS & WALKING PATHS

### CHOICES

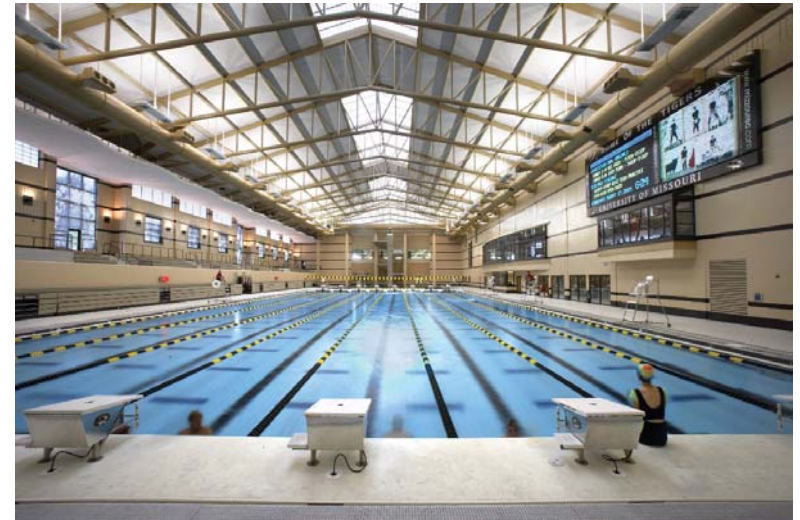
STAY OFF THE ROOF

THIRD PARTY ROOF CONSULTANT



# PRESENTATION OBJECTIVES

- WHAT ARE THE MAIN FACTORS RESPONSIBLE FOR FACILITY AGING?
  
- WHAT PLANNING MISTAKES CAN CAUSE PREMATURE AGING?
  
- HOW DOES AN INSTITUTION SCHEDULE AND BUDGET FOR LONG TERM IMPROVEMENTS?







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# GROWING OLD TOGETHER

PREVENTING PREMATURE AGING OF YOUR FACILITY

OR  
WHY RECREATION CENTERS GROW OLD