Facilities Condition Inventory

Workshop Manual
and
Computer Program User's Manual

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FOREWORD

In the past, the emphasis of state capital funding was on the expansion of the state's physical plant, with minimal concern for existing buildings and infrastructure. The state is now faced with a crumbling physical plant. Concern about the condition of our facilities continues to grow as demonstrated by facility condition audits that are regularly performed.

Periodic evaluation of the conditions of the state's facilities is an essential function for effectively managing facilities maintenance operations. A properly conducted building evaluation, or audit, can serve to familiarize governing boards, administrators, building managers and maintenance personnel of the condition of their facilities and where deficiencies exist. Often, people responsible for making budget or resource allocation decisions know that buildings, and the systems contained therein, are deficient, but they know few details about those deficiencies.

An accurate building evaluation will provide clear, concise information to assist administrators and managers in their long-range planning and budgeting activities. In many cases, this evaluation will also provide the facilities and maintenance groups with data to help them prioritize building renewal and deferred maintenance projects and assist in the effective day-to-day management of maintenance resources. The inspection team will record audit results in such a way that they provide a clear "snapshot" of a building's condition on the day that the team conducts an audit. The FCI process yields not only an inventory of building deficiencies due to deferred maintenance, but it also provides a deficiency ratio—a comparison of the cost of the deferred maintenance to the replacement value of the building. This is also sometimes helpful in justifying demolition or replacement of a building for which deferred maintenance costs are so high that replacing the building might be more cost effective.

Though not the main purpose of the program, the Facilities Condition Inventory process can be used to inventory building systems related to compliance with accessibility and fire laws. Items such as these are usually not considered building deficiencies if the building met the construction codes and laws in effect when a building was constructed. However, keeping an inventory of such items can help administrators better understand the potential liability of buildings that do not fully meet current specialty codes.

The first step in looking at the State of Montana's physical assets as a whole was to develop and implement a facilities condition audit program that all state agencies can use. This Facilities Condition Inventory (FCI) Program is based on the Model for Facilities Audits developed by the Association of Higher Education Facilities Officers (APPA) and is designed to provide facilities managers with a tool for evaluating and communicating data about their physical assets.[1] To insure consistency, this program is based on a sound philosophy described by Harvey H. Kaiser in *The Facilities Audit: A Process for Improving Facilities Conditions*.[1] The program also uses a comparative cost database built upon numbers from a nationally recognized cost estimating system (R.S. Means). Having agencies use the same evaluation system and estimated costs allows state offices to compile and compare data, thereby making it easier for them to review and manage maintenance functions, both within agencies and statewide.

Montana State University and its affiliate campuses have been using this FCI process since 1992 to track the condition of their facilities. Several other state agencies have been using this program as well. The purpose of releasing the FCI desktop computer application is to provide all state agencies the software tools and capacity to establish and maintain their own FCI programs.

[1]Kaiser, Harvey H. "The Facilities Audit: A Process for Improving Facilities Conditions." APPA:Alexandria, Virginia, 1993.

ABSTRACT

I. The Facilities Condition Inventory (FCI)

A. What is an FCI?
- The periodic evaluation of the condition of an institution's physical assets.
- MSU-Bozeman cycles every 3 years at a rate of one building per month: a 3-year cycle might be acceptable for an institution with 25+ major facilities (one building per month basis); while a 2-year cycle might be appropriate for an institution with 6-24 buildings.

B. Why perform the FCI?
- Inform a proactive maintenance management program.
- Provide data and information to those making budget/resource allocation decisions.
- Educate governing agencies.
- Provide a common groundwork for evaluation by the legislature and other state entities.

C. The FCI is a Dual Purpose Tool

1. Budget Tool
   - Solicit additional maintenance funding.
   - Demonstrate and forecast Long-Term Resource needs.
   - Recognize and quantify the value of facilities as an institutional asset.
   - Identify/prioritize areas of greatest need.
   - Record/illustrate Net Asset Value improvement.
2. Operational Tool
   - Identify/prioritize/schedule maintenance projects.
   - Facilitate efficient use of resources.
   - Record/illustrate improvement at plant level.
   - Detect and reduce excessive or inefficient maintenance.

II. Goals of the Facilities Condition Inventory

A. To systematically and **routinely** identify existing deficiencies in the State of Montana's physical assets.

B. To identify appropriate corrective action that would maintain the State of Montana's physical assets at a desired level of condition.

C. To maintain the Facilities Condition Inventory records by inspecting all state buildings on a periodic **scheduled** basis.

D. To involve people from many different disciplines on the audit team in order to maximize the expertise available and benefit from their interaction during the walkthrough, and minimize time required when inspecting an institution's buildings.

III. FCI Report Utilization (See *Sample Reports* to identify which reports will help with the following activities.)

A. Resource budgeting, planning and execution

B. Maintenance backlog management

C. Facility planning

D. Workload management

E. Work Order generation

F. Project need prioritization

G. Long Range Planning/Master Planning

IV. Getting Started

A. The FCI Inspection Team

1. The FCI Inspection Team Members*

Example: MSU-Bozeman:

- Campus Maintenance Manager
- Mechanical/Electrical Engineer
- Architect
- Planner
- Carpenter
- Plumber
- Electrician
- Planner
- Heat Maintenance Manager
- Refrigeration
- Custodial Manager
- Building Supervisor
- Information Technology Manager
- CADD Technician

Example: MSU-Billings:

- Associate Planner — MSU-Bozeman
- Facilities Engineer — MSU-Bozeman
- Facilities Director — MSU-Billings
- Tradesmen — MSU-Billings

2. Consult staff members with applicable expertise
   - Building Supervisor
   - ADA Advisor
   - Custodial Supervisor
3. Team Approach
   - To take advantage of team synergies and maintain consistent coverage, disciplines conduct inspections as a team (together as a group at all times).

*Note: Giving team members the authority during the walkthrough to generate work orders to correct minor deficiencies can be another way to benefit from the FCI process. It can provide opportunities to catch and repair, during their early stages, some deficiencies that might otherwise go unreported. Such minor, work-order-level deficiencies can then be considered resolved and are not entered into the FCI.

BUILDING TYPE/AGE CLASS
based on building use and construction date

The categories listed below, which are based on the type and age of buildings, are factors that affect the cost per square foot of buildings. Refer to page A-7 for the tabulated cost per square foot by building systems. The costs are summarized for each building type/age class shown below. Costs per square foot are generally, but not always, higher for newer buildings. (For example, buildings constructed in the 1970's frequently have high mechanical and electrical costs.) These factors and the subsequent component square foot costs will be provided and updated by Montana State University. This allows for consistency of scale between agencies. Note: These values will be calculated by the software based on the building data that the user enters.

Building Type/Age Class Codes
(based on building use and construction date)

	Construction Date		
Building Use (3 – 32)	**A - Pre 1950's**	**B -1950-70's**	**C -1980's+**
General Classroom/Office - **3**	3A	3B	3C
Teaching/Research Labs - **4**	4A	4B	4C
Athletic Facilities - **5**	5A	5B	5C
Vocational Shops - **6**	6A	6B	6C
Central Heating Facilities - **7**	7A	7B	7C
Warehouse/Storage Facilities - **8**	8A	8B	8C
Food Services - **9**	9A	9B	9C
Residence Halls - **10**	10A	10B	10C
Apartment, 1-3 Story - **11**	11A	11B	11C
Utility Tunnel Structures - **12**	12A	12B	12C
Sports Stadiums* - **13**	13A	13A	13C
Museums* - **14**	14A	14B	14C
Prisons - **15**	15A	15B	15C
Parking Facilities - **16**	16A	16B	16C
Elementary School – **17**	17A	17B	17C
Junior High School – **18**	18A	18B	18C
High School – **19**	19A	19B	19C
Vocational School – **20**	20A	20B	20c
College, Student Union – **21**	21A	21B	21C
Auditorium – **22**	22A	22B	22C
Community Center – **23**	23A	23B	23C
Day Care Center – **24**	24A	24B	24C
Courthouse – **25**	25A	25B	25C
Fire Station – **26**	26A	26B	26C
Hospital – **27**	27A	27B	27C
Library – **28**	28A	28B	28C
Police Station – **29**	29A	29B	29C
Town Hall – **30**	30A	30B	30C
House, Single Family - **31**	31A	31B	31C

Building Type/Age Class Codes
(based on building use and construction date)

Construction Date

Building Use (3 – 32)	A - Pre 1950's	B -1950-70's	C -1980's+
Apartment, 4-7 Story - **32**	32A	32B	32C

* Category is not priced. Pricing may be developed in the future.

PRICE CHANGES

Note: Repricing is performed every two years to update for inflation, etc., a schedule that allows for maximum accuracy in formulating the Long Range Building Program. Pricing updates will be provided by the Montana State University-Bozeman Planning Department.

FUNDING TYPES

Following are the various funding types as they appear within the University System. It is possible for an entity to have different or additional funding sources.

State — Operations and Maintenance (O & M) is funded by the State.

Auxiliary — Operations and Maintenance (O & M) is funded by the consumer.

Non-State — Operations and Maintenance (O & M) is funded by another entity, such as non-profit organizations or individuals that provide donations.

Federal — Operations and Maintenance (O & M) is funded by a federal government program.

Other — all other (and unanticipated) funding sources.

COST CORRECTION FACTORS
by building square footage

These cost factors are used to adjust the cost per square foot, an element used in calculating renewal costs for buildings. Buildings that are 50,000 square feet and smaller have higher renewal costs and corresponding factors greater than 1. Buildings that are larger than 50,000 square feet have factors less than 1 because they have relatively lower renewal costs. In short, larger buildings achieve an economy of scale that generally results in a lesser construction cost per square foot than for smaller buildings. These factors are also based on nationally recognized standards, as mentioned in the Foreword. Note: These values will be selected and applied by the software based on the building data that the user enters.

Building Size (SF)	Factor	Building Size (SF)	Factor
Up to 10,000	1.44	50,001 - 75,000	0.98
10,001 - 20,000	1.21	75,001 - 100,000	0.96
20,001 - 30,000	1.16	100,001 - 150,000	0.94
30,001 - 40,000	1.08	150,001 - 200,000	0.93
40,001 - 50,000	1.04	Over 200,000	0.93

BUILDING SYSTEMS AND COMPONENTS

For FCI purposes, the inspection team assesses a building by determining and documenting deficiencies that exist in each system and component listed below that occurs in the building.

System	Component Code and Definition	
System 1 — Foundation	1A	Footings/Foundation Walls
	1B	Exterior Steps/Retaining Walls
System 2 — Envelope	2A	Exterior Walls
	2B	Exterior Windows
	2C	Exterior Doors/Hatches
	2D	Interior Columns/Beams
System 3 — Floor System	3A	Structure
	3B	Stair Treads/Risers
System 4 — Roof System	4A	Structure
	4B	Covering
	4C	Insulation
System 5 — Finishes	5A	Interior Wall Systems
	5B	Ceilings
	5C	Interior Doors/Hardware/Windows
	5D	Floor Finishes
	5E	Wall Finishes
System 6 — Specialties	6A	Toilet Partitions
	6B	Signage/Directories
	6C	Fixed Seating/Risers
	6D	Chalk/Tackboards/Cabinets
	6E	Fume Hoods
	6F	Lockers
	6G	Cells and Visitor Cubicles
	6H	Ansul Hoods
	6I	Swimming Pool
System 7 — H & V System	7A	Heating
	7B	Ventilating
	7C	Cooling
System 8 — Plumbing System	8A	Fixtures
	8B	Supply Piping
	8C	Waste Piping
System 9 — Electrical System	9A	Building Service
	9B	Lighting
	9C	Distribution
	9D	Voice/Data
System 10 — Conveying	10A	Elevator/Lift
System 11 — Safety Systems	11A	Egress
	11B	Extinguishing System
	11C	Exit Signs/Emergency Lighting/Alarms
	11D	Asbestos/Hazardous Materials
	11E	Handicap Accessibility

COST SUMMARY BY BUILDING TYPE/AGE CLASS, EXAMPLE — 2011-2012 PRICING

See page A-3 for a listing and definitions of building types and age class.
Note: Repricing is performed every two years to update for inflation, etc., a schedule that allows for maximum accuracy in formulating the Long Range Building Program. Pricing updates will be provided by the Montana State University-Bozeman Planning Department.

General Classroom/Office (3)				
		Cost/SF		
System Number	**System Name**	**3A Pre 1950's**	**3B 1950-70's**	**3C 1980's +**
1	Foundations	*6.08*	*4.98*	*4.98*
2	Envelope	*18.13*	*18.41*	*18.41*
3	Floor System	*22.07*	*22.07*	*22.07*
4	Roof System	*6.95*	*6.49*	*6.49*
5	Finishes	*51.89*	*48.01*	*48.01*
6	Specialties	*11.31*	*11.77*	*11.86*
7	HVAC System	*22.66*	*32.96*	*32.96*
8	Plumbing System	*27.71*	*31.71*	*32.11*
9	Electrical System	*32.00*	*35.00*	*38.01*
10	Conveying	*5.92*	*5.38*	*5.38*
11	Safety System	*16.82*	*16.82*	*16.49*
Building Class Total Cost/SF		***221.54***	***233.60***	***236.77***

Teaching/Research Labs (4)				
		Cost/SF		
System Number	**System Name**	**4A Pre 1950's**	**4B 1950-70's**	**4C 1980's +**
1	Foundations	*17.88*	*16.78*	*16.78*
2	Envelope	*22.50*	*22.32*	*22.32*
3	Floor System	*17.07*	*17.07*	*17.07*
4	Roof System	*11.80*	*10.91*	*10.91*
5	Finishes	*57.97*	*52.92*	*52.92*
6	Specialties	*14.46*	*17.43*	*18.14*
7	HVAC System	*18.59*	*36.43*	*36.43*
8	Plumbing System	*45.63*	*52.03*	*52.60*
9	Electrical System	*21.22*	*23.45*	*25.68*
10	Conveying	*5.92*	*5.38*	*5.38*
11	Safety System	*14.25*	*14.25*	*13.92*
Building Class Total Cost/SF		***247.29***	***268.97***	***272.15***

Athletic Facilities (5)				
		Cost/SF		
System Number	**System Name**	**5A Pre 1950's**	**5B 1950-70's**	**5C 1980's +**
1	Foundations	*9.48*	*8.38*	*8.38*
2	Envelope	*50.32*	*47.55*	*47.55*
3	Floor System	*13.81*	*13.81*	*13.81*
4	Roof System	*17.85*	*17.01*	*17.01*
5	Finishes	*39.19*	*35.96*	*35.96*
6	Specialties	*58.28*	*58.99*	*59.00*
7	HVAC System	*12.66*	*18.41*	*18.41*
8	Plumbing System	*13.89*	*16.45*	*16.89*
9	Electrical System	*14.06*	*15.59*	*17.12*
10	Conveying	*5.92*	*5.38*	*5.38*
11	Safety System	*17.89*	*17.89*	*17.56*
Building Class Total Cost/SF		***253.33***	***255.42***	***257.08***

Vocational Shops (6)				
		Cost/SF		
System Number	System Name	6A Pre 1950's	6B 1950-70's	6C 1980's +
1	Foundations	*12.98*	*11.89*	*11.89*
2	Envelope	*23.61*	*23.04*	*23.04*
3	Floor System	*18.16*	*18.16*	*18.16*
4	Roof System	*13.85*	*12.79*	*12.79*
5	Finishes	*11.71*	*10.70*	*10.70*
6	Specialties	*3.16*	*3.21*	*3.22*
7	HVAC System	*12.22*	*16.34*	*16.34*
8	Plumbing System	*8.97*	*10.15*	*10.24*
9	Electrical System	*11.73*	*13.08*	*14.43*
10	Conveying	*26.34*	*23.94*	*23.94*
11	Safety System	*20.36*	*20.36*	*20.03*
Building Class Total Cost/SF		***163.09***	***163.66***	***164.78***

Central Heating Facilities (7)				
		Cost/SF		
System Number	System Name	7A Pre 1950's	7B 1950-70's	7C 1980's +
1	Foundations	*9.43*	*8.26*	*8.26*
2	Envelope	*29.77*	*28.57*	*28.57*
3	Floor System	*27.57*	*27.57*	*27.57*
4	Roof System	*12.75*	*11.85*	*11.85*
5	Finishes	*7.30*	*6.67*	*6.67*
6	Specialties	*1.41*	*1.44*	*1.44*
7	HVAC System	*3.12*	*7.79*	*7.79*
8	Plumbing System	*4.98*	*5.64*	*5.68*
9	Electrical System	*9.46*	*10.53*	*11.60*
10	Conveying	*5.27*	*4.79*	*4.79*
11	Safety System	*18.56*	*18.56*	*18.23*
Building Class Total Cost/SF		***129.62***	***131.67***	***132.45***

Warehouse/Storage (8)				
		Cost/SF		
System Number	System Name	8A Pre 1950's	8B 1950-70's	8C 1980's +
1	Foundations	*8.84*	*7.74*	*7.74*
2	Envelope	*22.23*	*21.07*	*21.07*
3	Floor System	*14.33*	*14.33*	*14.33*
4	Roof System	*12.75*	*11.85*	*11.85*
5	Finishes	*6.84*	*6.25*	*6.25*
6	Specialties	*0.89*	*0.91*	*0.92*
7	HVAC System	*3.65*	*7.30*	*7.30*
8	Plumbing System	*4.67*	*5.29*	*5.33*
9	Electrical System	*8.87*	*9.87*	*10.88*
10	Conveying	*4.94*	*4.49*	*4.49*
11	Safety System	*17.42*	*17.42*	*17.09*
Building Class Total Cost/SF		***105.43***	***106.52***	***107.25***

Food Services (9)				
		Cost/SF		
System Number	System Name	9A Pre 1950's	9B 1950-70's	9C 1980's +
1	Foundations	*15.88*	*14.78*	*14.78*
2	Envelope	*42.91*	*43.77*	*43.77*
3	Floor System	*11.07*	*11.07*	*11.07*
4	Roof System	*17.48*	*16.21*	*16.21*
5	Finishes	*42.32*	*38.79*	*38.79*
6	Specialties	*23.46*	*23.83*	*23.92*
7	HVAC System	*31.41*	*58.43*	*58.43*
8	Plumbing System	*27.89*	*32.80*	*33.57*
9	Electrical System	*20.15*	*21.74*	*23.33*
11	Safety System	*26.60*	*26.60*	*26.27*
Building Class Total Cost/SF		***259.17***	***288.02***	***290.14***

Residence Halls (10)				
		Cost/SF		
System Number	System Name	10A Pre 1950's	10B 1950-70's	10C 1980's +
1	Foundations	*5.84*	*4.74*	*4.74*
2	Envelope	*19.08*	*19.19*	*19.19*
3	Floor System	*43.89*	*43.89*	*43.89*
4	Roof System	*2.91*	*2.77*	*2.77*
5	Finishes	*61.99*	*57.39*	*57.39*
6	Specialties	*7.74*	*8.11*	*8.20*
7	HVAC System	*16.44*	*20.57*	*20.57*
8	Plumbing System	*32.49*	*37.00*	*37.39*
9	Electrical System	*20.72*	*23.06*	*25.39*
10	Conveying	*20.88*	*18.98*	*18.98*
11	Safety System	*15.27*	*15.27*	*14.94*
Building Class Total Cost/SF		***247.25***	***250.97***	***253.45***

Private Single Family and Multiple-Unit Residences (11)				
		Cost/SF		
System Number	System Name	11A Pre 1950's	11B 1950-70's	11C 1980's +
1	Foundations	*8.32*	*7.22*	*7.22*
2	Envelope	*26.52*	*26.51*	*26.51*
3	Floor System	*28.83*	*28.83*	*28.83*
4	Roof System	*5.04*	*4.70*	*4.70*
5	Finishes	*43.10*	*40.22*	*40.22*
6	Specialties	*5.72*	*5.72*	*5.72*
7	HVAC System	*21.71*	*28.74*	*28.74*
8	Plumbing System	*27.76*	*32.16*	*32.72*
9	Electrical System	*15.52*	*16.91*	*18.29*
10	Conveying	*8.72*	*7.93*	*7.93*
11	Safety System	*13.84*	*13.84*	*13.52*
Building Class Total Cost/SF		***205.08***	***212.78***	***214.40***

Utility Tunnel Structures (12)				
		Cost/SF		
System Number	System Name	12A Pre 1950's	12B 1950-70's	12C 1980's +
1	Foundations	*9.56*	*8.47*	*8.54*
2	Envelope	*32.00*	*29.41*	*29.79*
3	Floor System	*6.04*	*6.04*	*6.12*
4	Roof System	*9.35*	*8.83*	*8.90*
5	Finishes	*1.74*	*1.60*	*1.64*
6	Specialties	*0.66*	*0.66*	*0.69*
7	HVAC System	*0.07*	*0.26*	*0.28*
8	Plumbing System	*2.11*	*2.32*	*2.36*
9	Electrical System	*5.11*	*5.11*	*5.60*
10	Conveying	*0.00*	*0.00*	*0.00*
11	Safety System	*4.20*	*4.20*	*3.93*
Building Class Total Cost/SF		***70.84***	***66.90***	***67.85***

Prison/Jail Facilities (15)				
		Cost/SF		
System Number	System Name	15A Pre 1950's	15B 1950-70's	15C 1980's +
1	Foundations	*5.09*	*3.99*	*3.99*
2	Envelope	*48.08*	*49.54*	*49.54*
3	Floor System	*36.94*	*36.94*	*36.94*
4	Roof System	*6.74*	*6.41*	*6.41*
5	Finishes	*20.83*	*19.12*	*19.12*
6	Specialties	*75.14*	*94.86*	*99.79*
7	HVAC System	*12.91*	*25.82*	*25.82*
8	Plumbing System	*76.69*	*87.33*	*88.24*
9	Electrical System	*15.24*	*16.87*	*18.51*
10	Conveying	*7.42*	*6.75*	*6.75*
11	Safety System	*16.26*	*16.26*	*15.93*
Building Class Total Cost/SF		***321.34***	***363.89***	***371.04***

Parking Facilities (16)				
		Cost/SF		
System Number	System Name	16A Pre 1950's	16B 1950-70's	16C 1980's +
1	Foundations	*6.86*	*5.76*	*5.76*
2	Envelope	*36.34*	*32.70*	*32.70*
3	Floor System	*10.92*	*10.92*	*10.92*
4	Roof System	*0.25*	*0.23*	*0.23*
5	Finishes	*2.74*	*2.52*	*2.52*
6	Specialties	*0.80*	*0.80*	*0.80*
8	Plumbing System	*2.64*	*2.94*	*2.95*
9	Electrical System	*4.40*	*4.90*	*5.40*
10	Conveying	*4.31*	*3.92*	*3.92*
11	Safety System	*7.34*	*7.34*	*7.01*
Building Class Total Cost/SF		***76.60***	***72.03***	***72.21***

SAMPLE
Inspection Responsibilities

FCI INSPECTION RESPONSIBILITIES

Pre-Inspection Logistics

□ 1. **Research Data Analyst** schedules, notifies, and coordinates the FCI inspections. Inspections of academic buildings are on the 2nd Wednesday of the month; and auxiliary buildings are the 4th Wednesday (auxiliaries usually coordinates their FCI inspections).

□ 2. Inspection team consists of: (may vary)

- Manager Campus Maintenance
- Plumber Foreman
- M/E Engineer
- Electrician Foreman
- Planner
- CAD Technician
- Architect
- Custodial Supervisor
- Carpenter Foreman
- HVAC&R Foreman
- ITC – Data Technician

□ 3. The **Research Data Analyst** schedules the meeting location for the Building Review Session and Exit Session. Most often, academic FCI's meet in Facilities Conference Room, and Auxiliary FCI's meet in Miller Dining Hall. If the location is different, it will be provided in the informational email.

□ 4. The **Research Data Analyst** sends notice of the FCI to the Building Supervisor one week prior to the scheduled inspections. Comments received from the Building Supervisor will be presented at the Building review Session. Other responsibilities may include:

a. Verify all building occupants have been notified.
b. Reiterate that the FCI is to document maintenance needs vs. adaptive renovation needs.
c. Invite Building Supervisor or designee to Building Inspection Session (suggest 9:30 a.m. arrival), and encourage written comments.
d. Be sure to coordinate special access requirements. Discuss and document problems that might be caused by the inspection itself.
   - possible contamination of inspection team members from laboratories, storage, or mechanical areas
   - possible experiment contamination by inspection team members
   - light/noise interruptions in classrooms, laboratories, or meeting rooms

□ 5. The **Research Data Analyst** compiles the following background data:

- Building-specific FCI Audit Forms (fill in date)
- 8½ x 11" building plans (floor plans and roof plans) for each team member
- Previous FCI data (Deficiency Detail by Building – Deficiency Category 1-6 and Deficiency Category 7)
- Recent Work Orders, Requested/Completed (i.e., during the preceding 3 years, or 1 FCI cycle)
- Space Management Study, if applicable
- Custodial Report

□ 6. Two days prior to the inspections, the **Research Data Analyst** verifies with the Building Supervisor the following:
   a. Date and schedule for Inspection
   b. All building occupants notified
   c. Building Review and Exit Session location
   d. Special access requirements noted in Item 5e above

Inspection

□ 1. The **Research Data Analyst** provides copies of the background data for each team member.

□ 2. The **Team Leader** leads the discussion throughout the Building review Session and insures a team member has appropriate keys: Master/Mechanical/Custodial/Roof Hatch.

□ 3. The team goes to the building site and inspects the building. Individual team members point out observed issues and makes note of the deficiencies.

Post-Inspection

□ 1. The **Team Leader** leads the Exit Session.

- Review each Building System and Component. Complete the Audit Rating Forms identifying new deficiency items. Review and modify (if appropriate) items on the previous deficiency report.

  Each deficiency discovered during the inspection shall be briefly described – beginning with an action verb such as "repair" "replace" or "investigate" followed by the deficiency and location. All updated forms are provided to the data Information Specialist (who is also present taking notes).

- Review any building construction discrepancies and ensure the CAD Technician has information to update plans to actual conditions.

□ 3. The **Research Data Analyst** enters the inspection data into the FCI database, prints a copy to verify all changes are correct, files a hard copy with the FCI Cycle files, and forwards a copy to the Building Supervisor.

SAMPLE
Facility Inspection Schedule

FACILITY INSPECTION SCHEDULE

CYCLE 7: Team Leader – Mark Cusack

Month	Building
October 14, 2009	Herrick
*November 18, 2009	Reid
December 9, 2009	Cooley
January 13, 2010	AJMJ
February 10, 2010	EPS
March 10, 2010	ChemBiochem Building
April 14, 2010	Roberts Hall
May 12, 2010	Cheever Hall
June 9, 2010	Cobleigh Hall
July 14, 2010	Visual Comm. Building
August 11, 2010	Black Box
September 8, 2010	Traphagen Hall
October 13, 2010	Leon Johnson Hall
November 10, 2010	Marsh Lab
December 8, 2010	Sherrick Hall
January 12, 2011	Linfield Hall & Wool Lab
February 9, 2011	Montana Hall
March 9, 2011	Kellogg, ACE Language Ctr
April 13, 2011	Romney Gym
May 11, 2011	Huffman Building
June 8, 2011	Hamilton Hall
July 13, 2011	Wilson Hall
August 10, 2011	Tietz Hall
September 14, 2011	Animal Bioscience Building
October 12, 2011	Plew Physical Plant, Heating Plant
November 9, 2011	Howard Hall
December 14, 2011	Renne Library
January 11, 2012	Museum of the Rockies
February 8, 2012	Gaines
March 14, 2012	Lewis Hall
April 11, 2012	Haynes Hall
May 9, 2012	McCall Hall
June 13, 2012	Taylor Hall
July 11, 2012	Culbertson Hall
August 8, 2012	Plant Growth Center
September 12, 2012	Plant Bioscience Complex

cc: Victoria Drummond, Candace Mastel, Dan Stevenson, Dennis Raffensperger, Loras O'Toole, Bob Lashaway, Jeff Butler

SAMPLE
Notice to Building Supervisor

Memo

TO: _____, Building Supervisor
_____ Hall

FROM: _____, Data Information Specialist
For (Team Leader's Name)

RE: FACILITIES CONDITION INVENTORY (FCI)
(Building Name)

An inspection team from Facilities Services will be conducting a Facilities Condition Inventory (FCI) audit of **(Name of Building)** on **(Date of Inspection)** from approximately **9:00 a.m. to 11:00.**

The FCI provides a periodic evaluation of the condition of the institution's physical assets and the data are used by those making facilities budget/resource allocation decisions and maintenance management. The FCI Inspection Team consists of approximately twelve people, with backgrounds in pertinent disciplines, who will inspect all areas of the building.

As Building Supervisor you are the communication liaison between Facilities and the faculty, staff, and students that use **(Name of Building)**. Therefore, you may collect occupants' comments regarding deferred maintenance issues affecting the physical condition of the building and provide them to me in advance. You are invited to participate in the FCI by accompanying the Team during the inspection or simply by providing the collected comments.

Your assistance is essential and your cooperation is greatly appreciated. Please call if you have any questions and thank you.

cc: Victoria Drummond

SAMPLE
Notice to FCI Inspection Team Members

MEMORANDUM

DATE: January 19, 2016

TO: Dan Stevenson
Victoria Drummond
Candace Mastel
Dennis Raffensperger
Tom Pike
Loras O'Toole
Gary Gramer
Kent Porter
Mark Cusack
Rick Holland
Randy Bolin
Tom Nowak
Lloyd Hansen
Bill Sullivan
Scott Richardson
Cindy Tirrell – ITC
Brenda York
Chris Catlett
EJ Hook

FROM: **(Name of Team Leader)**
Team Leader

RE: **(Name of Building)**
Facilities Condition Inventory (FCI)

The team will meet at 8:30 A.M., on **(Date of Inspection)** in the Facilities Conference Room to begin the next FCI. Exit session will directly follow the onsite inspection of the **(Name of Building).** Your input and assistance is greatly appreciated. Please notify Matthew Hume(x4213) if you are unable to attend. Thank you.

FCI INSPECTION

Needed Materials

- **Building Plans and Roof Plans**
  Team members can use the 8-1/2 x 11" building and roof plans to note places where the drawings do not accurately reflect existing conditions. Examples include plans that have not been updated to show the results of remodeling or the case where a building's room numbers do not match the plans' numbers. Team members also use the plans to navigate the buildings, making sure that they inspect the entire building.

- **Deficiency Detail by Building (if it exists)**
  This report, which was formerly titled Facility Condition Inventory: Buildings by System*, related only to the building to be inspected, lists deferred maintenance items from previous FCI inspections if the building has been inspected in a previous FCI cycle. Items are grouped by system and sorted by system components. Renewal costs are provided for each item and subtotaled for each system.*

- **Work Order History**
  This report lists work orders, grouped by fixture, that have been completed by the Facilities Services' staff in the building scheduled for inspection. This report is gathered from the maintenance department, not from the FCI software. The team reviews the work orders to identify recurring problems or building-wide failures of a certain component.

  For example, having more work orders for leaking faucets than what can be explained by normal wear-and-tear might lead the team to pay special attention to faucets during the inspection. The team might then decide that the building's faucets have exceeded their practical lives and that replacing them would be more appropriate than continuing to repair them.

- **Custodial Report**
  The Custodial Report lists problems reported by custodians. Most of the problems are related to minor repairs, such as malfunctioning plumbing and light fixtures and broken windows. Like the Work Order History, the Custodial Report can reveal chronic problems, such as light fixtures that cause bulbs to burn out prematurely.

- **Projects Database List**
  This list helps the team conduct more efficient inspections. Reviewing the work that has been done since the previous FCI inspection makes it easier to know what items can be deleted from the list of deficiencies. For example, a remodeling project that includes replacing all exterior windows makes it less likely that there will be FCI items in that component.

- **FCI Audit Form**
  The FCI application has a FCI Audit Form (see page A-21) which can be used to track new deficiency details that are found during the audit. The rating form is later used for reference when adding new deficiencies into the FCI application.

- **Other**
  Compile all additional information that is pertinent to the facility's physical condition.

TYPICAL FCI INSPECTION SCENARIO

8:30 a.m. – 9:15 a.m.	Roundtable Review Session: The Inspection Team (planner, engineer, plumber foreman, electrician foreman, carpenter foreman, refrigeration foreman, CAD Technician, Architect, custodial supervisor, Information Technology Center representative, heating maintenance supervisor) meets in the Facilities Services' Conference Room to review background data, the previous Deficiency Detail by Building Report, and specific aspects of the building being inspected.
9:15 a.m. – 11:00 a.m.	On Site Inspection Session: Inspection Team accompanied by Building Supervisor begins inspection of each building system.
11:00 a.m. – 12:00 p.m.	Exit Session: The Inspection Team reviews/updates the previous Deficiency Detail by Building Report based on the On Site Inspection Session.

The agenda should be flexible enough to let the team devote more or less time to the process as needed. The age, condition, and size of the building will likely affect how much time the team spends, not only on inspecting the building, but also on conducting the Building Review Session.

*On the first time a building is inspected, the entire audit may be expanded from about 8:30 to 3:00.

BUILDING REVIEW SESSION AGENDA

See *FCI Inspection: Needed Materials* (page A-16) for an explanation of how and why the team reviews the items listed in the agenda:

- Distribute Building and Roof Plans
- Read FCI Report from previous (and most recent) audit*
- Circulate Work Order History*
- Circulate Custodial Report*
- Read pertinent LRBP List items*
- Read Projects Database List items*
- Share personal knowledge about the subject building's condition**

*when available

**Ask each team member to share with the others assembled for the Building Review Session what they personally know about the subject building. For example, the plumbing and custodial supervisors should offer their perspectives about the condition of the building's plumbing fixtures and the work control supervisor should explain that previously noted roof system deficiencies were remedied when the building's roof was replaced.

DEFICIENCY CATEGORY SYSTEM

Category	Definition
1	**SAFETY** — Situations or conditions that pose an immediate danger to life, limb or property, if the deficiency is not corrected.
2	**DAMAGE/WEAR OUT** — Potential for serious damage to the building or the building components if the deficiency is not corrected.
3	**CODES/STANDARDS** — Building codes and/or institutional construction standards were not met during construction or renovation. Condition may or may not represent an urgent situation if deficiency is not corrected. This category does not include grandfathered deficiencies due to changes in subsequent codes.
4	**ENVIRONMENTAL IMPROVEMENTS** — Correctable deficiencies that will improve system operations and increase the comfort level of the building occupants.
5	**ENERGY CONSERVATION** — Amelioration or upgrading of the operating systems in order to reduce energy consumption in the building.
6	**AESTHETICS** — Renovation/maintenance designed to improve the appearance of the building.
7	**BUILDING ENHANCEMENTS** — Renovation/Adaptive, Life Safety/Code upgrades, i.e., ADA. These items are not calculated as part of the building's total deferred maintenance, but deficiency category 7 is frequently used to note other building needs.

Note: When categorizing observed deficiencies, note only deficiencies that exist at the time of the inspection. Do not record incidental deficiencies that will occur as a result of repairs. For example, if a water pipe is on the verge of bursting and poses a safety risk, record only the deficiency of the pipe itself. Do not record deficiencies related to repairs that a wall will need if workers cut a hole to access the deficient pipe.

SAMPLE
Facilities Condition Inventory
Audit Form Cover Page

FACILITIES CONDITION INVENTORY
AUDIT FORM

CAMPUS : Montana State University – Bozeman

DATE OF INSPECTION : January 19, 2016

BUILDING NAME : Leon Johnson Hall

BUILDING TYPE/AGE CLASS : 4B

INSPECTION TEAM : Victoria Drummond *(planner)*
Loras O'Toole *(engineer)*
Jeff Butler *(Facilities Services director)*
Darrell Freeland *(plumber foreman)*
Tom Nowak *(electrician foreman)*
Kent Porter *(carpenter foreman)*
Lloyd Hansen *(refrigeration foreman)*
Gary Gramer (*CAD Technician)*
Dennis Raffensperger *(architect)*
Scott Richardson *(custodial supervisor)*
Cindy Tirrell *(Information Technology Center representative)*
Mark Cusack *(heating maintenance supervisor)*
Jon Wraith *(building supervisor)*

FCI DEFICIENCY CATEGORIES

1. SAFETY
2. DAMAGE/WEAR OUT
3. CODES/STANDARDS
4. ENVIRONMENTAL IMPROVEMENTS
5. ENERGY CONSERVATION
6. AESTHETICS
7. BUILDING ENHANCEMENTS

SAMPLE
FCI Audit Form
(Paper Saver)
Option 1

① **Building Name:** Reid Hall **Audit Date:**

② **Bld Type/ Age Class:** General Classroom/Office (3B) **Building Number:** 115 ③

④

System	Component
1 Foundations	A Footings/Foundation Walls
	B Exterior Steps/Retaining Walls
2 Envelope	A Exterior Walls
	B Exterior Windows
	C Exterior Doors/Hatches
	D Interior Columns/Beams
3 Floor System	A Floor Structure
	B Stair Treads/Risers
4 Roof System	A Structure
	B Covering
	C Insulation
5 Finishes	A Interior Wall Systems
	B Ceilings
	C Interior Doors/Hardware/Windows
	D Floor Finishes
	E Wall Finishes
6 Specialties	A Toilet Partitions
	B Signage/Directories
	C Fixed Seating/Risers
	D Chalk/Tackboards/Cabinets
7 HVAC System	A Heating
	B Ventilating
	C Cooling
8 Plumbing System	A Fixtures
	B Supply Piping
	C Waste Piping
9 Electrical System	A Building Service
	B Lighting
	C Distribution
	D Voice/Data
10 Conveying	A Elevator/Lift
11 Safety System	A Egress
	B Extinguishing System
	C Exit/Emergency Lighting/Alarms
	D Asbestos/Hazardous Material
	E ADA Accessibility

⑤ System	⑥ Component	⑦ Def. Cat. (1-7)	⑧ Percent of Deficiency	⑨ Explanation
7	*A*	*2*	*1 %*	*Replace all zone pumps and balance.*

FCI AUDIT FORM LEGEND

Recorded during "Preparing for an Inspection" phase

① Building Name from Facilities Inventory – The building name is automatically generated from the FCI database. See "FCI Audit Form" on page B-20 for directions on selecting buildings.

② Building Type/Age Class (from Building Type/Age Class Categories listed on page A-3) - The building type/age class is automatically generated from the FCI database.

③ Building Number from Facilities Inventory – The building number is automatically generated from the FCI database.

④ Building Systems and components being evaluated (from Building Systems and Components listed on page A-6)
NOTE: Per item 5 of the "FCI Inspection Responsibilities" (page A-11), the team captain should ensure that, when the team receives the form, items 1 through 4 are complete and accurate for the building being inspected.

Recorded during "Conducting an Inspection" phase

⑤ The team identifies the System number being evaluated from the list in point 4.

⑥ The team identifies where a deficiency exists, using items defined in 4 above.

⑦ The team assigns a deficiency category to each deficiency (using deficiency category definitions listed on page A-19).

⑧ The team uses a percentage to indicate how much of the component is deficient for the particular item noted. The entire component represents 100%.

⑨ Description of the deficiency (including location) and the action suggested.

Deficiency Categories
1=Safety 2=Damage/Wear-out 3=Codes/Standards 4=Environmental Improvements 5=Energy Conservation
6=Aesthetics 7=Building Enhancements (non-FCI items)

SAMPLE
FCI Audit Form
(11 pages)
Option 2

① **BUILDING NAME:** Reid Hall **AUDIT DATE:** 12/14/2011

② ③ **BUILDING TYPE/AGE CLASS:** 3C **BUILDING NUMBER:** 115

④ **SYSTEM:** H&V System (7) **Page** 1 of 1

⑤ **SYSTEM COMPONENTS**

7A	Heating
7B	Ventilation
7C	Cooling

EXPLANATION OF DEFICIENCY

System	Component	Deficiency Category (1 thru 7)	Percent of Deficiency	Explanation
	⑥	⑦	⑧	⑨
7	*A*	*2*	*1%*	*Replace all zone pumps and balance.*
7	*B*	*2*	*75%*	*Modify existing penthouse HV unit and mixing boxes.*
7	*B*	*4*	*5%*	*Modify and replace controls on multi-zones and balance.*
7				
7				
7				
7				
7				

FCI AUDIT FORM LEGEND

Recorded during "Preparing for an Inspection" phase

①Building Name from Facilities Inventory – The building name is automatically generated from the FCI database.

② Building Type/Age Class (from Building Type/Age Class Categories listed on page A-3) - The building type/age class is automatically generated from the FCI database.

③ Building Number from Facilities Inventory – The building number is automatically generated from the FCI database.

④ Building System being evaluated (from Building Systems and Components listed on page A-6)

⑤ Predefined components of the system being evaluated (from Building Systems and Components listed on page A-6)
NOTE: Per item 5 of the "FCI Inspection Responsibilities" (page A-11), the team captain or research analyst should ensure that, when the team receives the form, items 1 through 5 are complete and accurate for the building being inspected.

Recorded during "Conducting an Inspection" phase

⑥ The team identifies where a deficiency exists, using items defined in 5 above.

⑦ The team assigns a deficiency category to each deficiency (using deficiency category definitions listed on page A-19).

⑧ The team uses a percentage to indicate how much of the component is deficient for the particular item noted. The entire component represents 100%.

⑨ Description of the deficiency (including location) and the action suggested.

Deficiency Categories
1=Safety 2=Damage/Wear-out 3=Codes/Standards 4=Environmental Improvements 5=Energy Conservation
6=Aesthetics 7=Building Enhancements (non-FCI items)

COMPUTER PROGRAM USER'S MANUAL

General Notes:

1) The manual illustrates and describes each menu and form that users will see as they use the program. The manual is organized by the program's six menus. There are five types of menu items, each of which is represented by an icon as shown in the following table.

Icon	Item Type	Notes
■	Menu	
●	Form	Users will enter or edit data.
▲	Report	
►	Dialogue Box	Users will make selections for the reports that they want to generate.
♦	Miscellaneous	Users can view "Help" or return to a previous menu.

■ Main Menu
- ● Site Entry/Edit
- ● Building Entry/Edit
- ● Audit Data Entry/Edit
- ■ Report Menu
- ♦ Help
- ♦ Exit FCI Program

■ Report Menu
- ■ Deficiency Detail Reports
- ■ Summary Reports
- ■ Database Reports
- ► FCI Audit Form (Paper Saver) – Option 1…
- ► FCI Audit Form (11 Pages) – Option 2…
- ♦ Back to Main Menu

■ Deficiency Detail Reports Menu
- ► Deficiency Detail by Deficiency Category…
- ► Deficiency Detail by Component…
- ► Deficiency Detail by Building…
- ► Deficiency Detail by Building for Audit…
- ► Deficiency Detail by Building (Inactive)…
- ► Deficiency Detail Report - Selected Deficiency Range…
- ♦ Back to Report Menu

■ Summary Reports Menu
- ► Component Summary by Building…
- ► Building Summary…
- ► Deficiency Category Summary…
- ► Site Summary…
- ♦ Back to Report Menu

- Database Reports Menu
  - Component Pricing Detail
  - System Pricing Summary
  - Site List
  - Building List
  - Basic Database Reports
  - Back to Report Menu

- Basic Database Reports Menu
  - Agencies by Program
  - Building Type
  - Building Age Classes
  - Building Funding Sources
  - Deficiency Categories
  - System and Component List
  - Back to Database Reports Menu

2) **SYMBOLS:** Ellipses (…) that follow menu options indicate that a dialogue box will appear when a user chooses a corresponding option. In other words, those menu options will lead a user to make additional selections.
3) **NAVIGATION:** After data is entered in a form, it will be displayed in the grid at the bottom of the screen. For buildings with more than one record, choosing "Edit" mode will allow a user to move among the records using the navigation buttons at the top of the grid or the Page Up and Page Down buttons. It is also possible to select a record by clicking on its row in the grid.
4) **SORTING:** Clicking on a column heading will sort the data displayed in the grid. Each click will sort the data on the corresponding field and will switch between ascending and descending order.
5) **DATA ENTRY:** Selections from dropdown lists can be made with a mouse or other pointing device or by entering codes associated with the systems and components. For fields that allow multiple selections, a user can use the standardized technique for making multiple selections, i.e., pressing <Ctrl> while clicking on each selection.

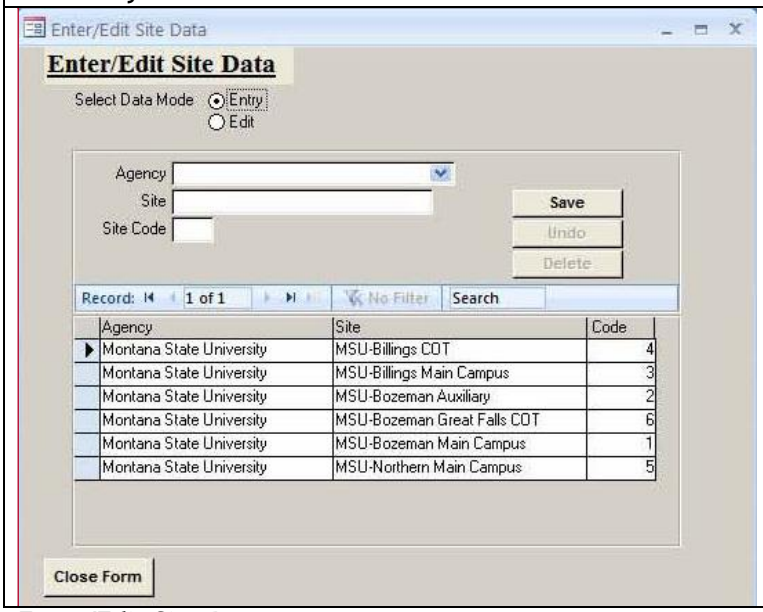
Main Menu and Related Entry Forms

The **Main Menu** appears when a user starts the FCI program. These are the **Main Menu** options:

Site Entry/Edit
Building Entry/Edit
Audit Data Entry/Edit
Report Menu
Help
Exit FCI Program

All menu options shown above are described in the following section, as items I. A through I. F.

Site Entry/Edit Form



FIELD NAME	FIELD TYPE
Agency	dropdown list
Site	alphanumeric
Site Code	numeric— 2-digit value from 1 to 99

Enter/Edit Site Data

The screen shown above appears when a user chooses **Site Entry/Edit** from the **Main Menu**. The form defaults to "Entry" mode, which a user needs to set up the program initially and to later add new sites.

COMPONENTS: The form allows you to enter or edit Site information. A Site consists of an Agency, Site Name, and Site Code.

ENTER/EDIT: In "Entry" mode all fields are initially blank. Use "Edit" mode to change previously entered data. New records cannot be entered in "Edit" mode, nor can existing records be edited in "Entry" mode. Field descriptions follow.

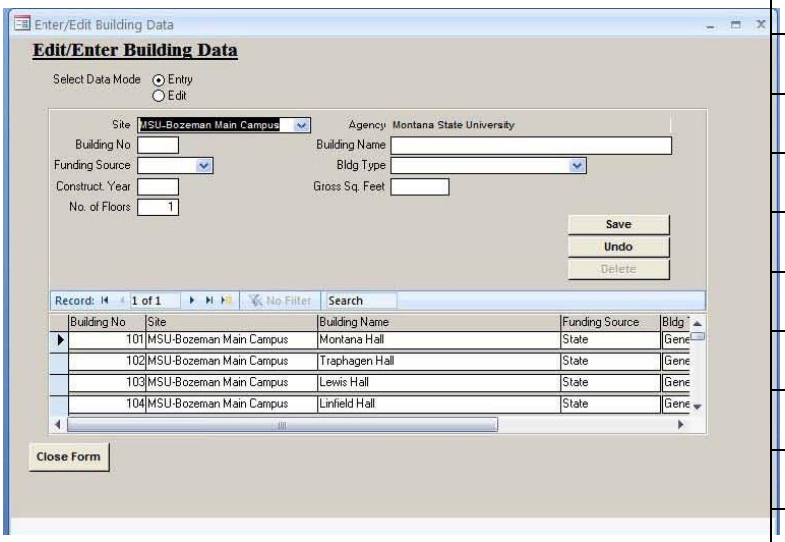
Agency: Select an Agency from the dropdown list. (Users cannot add new Agencies.)

Site: Type the Site Name according to the Agency's preferences. At various places throughout the program, sites will be listed alphabetically. So, you should carefully define and follow naming conventions, such as abbreviations, especially if you have a large number of sites.

Site Code: Enter a one- or two-digit Site Code with a value between 1 and 99. Like the naming conventions, nomenclature of the site codes might be especially important for users who manage data for many sites. For example, an agency with regions might want to reserve ranges of numbers for specific geographical areas.

Note: Each site within the same Agency must have a unique Site Code and Site Name.

Building Entry/Edit Form



FIELD NAME	FIELD TYPE
Site	dropdown list
Agency	automatic fill-in
Building No	numeric
Building Name	alphanumeric
Funding Source	dropdown list
Bldg Category	dropdown list
Construct. Year	Numeric
Gross Sq. Feet	Numeric
No. of Floors	Numeric

Enter/Edit Building Data

The screen shown above appears when a user chooses **Building Entry/Edit** from the **Main Menu**. The form defaults to "Entry" mode, which users need to set up the program initially and to later add new buildings.

COMPONENTS: The form allows a user to enter or edit Building data. A Building record consists of the Site (selected from a dropdown list that contains your Site Names), Building Number, Building Name, Funding Source, Building Type/Age Class, Construction Year, Gross Square Feet, and Number of Floors. All fields are required.

ENTER/EDIT: Upon opening the form, all but one field is blank. The field "No. of Floors" defaults to 1. Use "Edit" mode to change previously entered data. New records cannot be entered in "Edit" mode, nor can existing records be edited in "Entry" mode. Descriptions of the fields follow.

Site: Select a name from the dropdown list.

Agency: The Agency will be displayed based on your Site selection.

Building Number (Building No): Enter a building number within a numbering system determined by your Agency and/or Site. Numerical values ranging from 1 to 99999 are valid.

Building Name: Building Names are sometimes listed alphabetically. So, users should carefully define and follow conventions, such as abbreviations, especially if they have a large number of buildings. It is not possible to search for text, so it is best to have names appear in predictable, expected positions within various lists. This required field accepts up to 30 characters.

Funding Source: Select from the dropdown list. The Funding Sources are Auxiliary, Federal, Non-State, Private, and State. Users cannot change the names of Funding Sources, but each Agency can define and use them according to its needs. For example, Non-State could apply to a leased building or to one that is owned by a county and provided to an Agency for its use. An Agency might use Auxiliary and Non-State categories as "Other" categories.

The term "Funding Source" is intended to be related only to how the maintenance itself is funded, not to construction funding. Perhaps construction is funded by federal, state, and private sources, but the maintenance costs are covered only by state funding. In this case, the Funding Source would be State. The software developers have pre-defined Funding Source categories with the intent to help users compile FCI data that is relevant to the State Legislature as it relates to Long Range Building Programs (LRBP).

Building Type: Use the dropdown list to select from predefined categories or type the corresponding numerical codes listed in the "Categorizing and Coding Building Data" portion of this

manual. If a building does not exactly match a category, or if it matches more than one, use the category that best matches or the one corresponding to the building's primary function. For example, categorize a dorm with dining facilities as a Residence Hall, not as a Food Service building because its primary use and most of its square footage is dedicated to its residence hall function. If an agency has buildings that people will find difficult to categorize and/or if data will be recorded in more than one database, the agency should consider writing guidelines to ensure consistency.

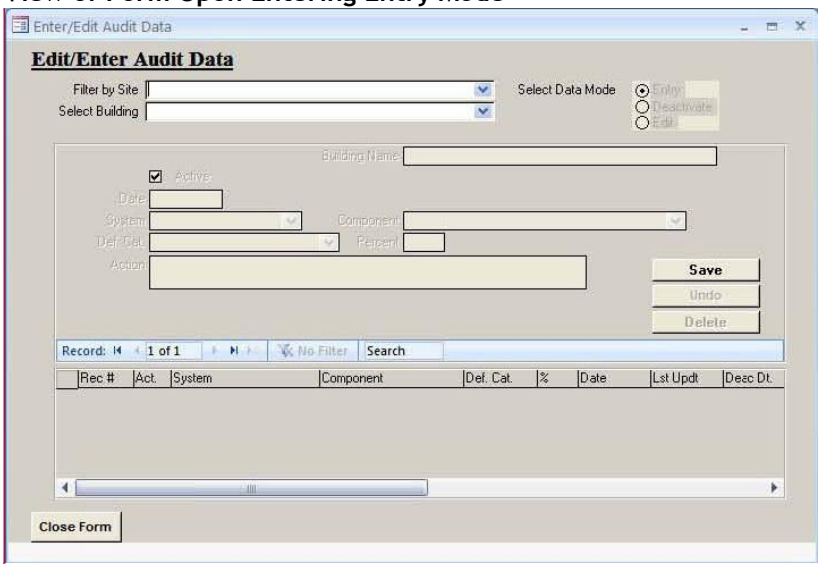
Construction Year (Construct. Year): Enter the year in which the building was first occupied in this field. The 4-digit field accepts values from 1800 to the current year.

Gross Square Feet (Gross Sq. Feet): Determine the area of all floors in a building and enter the sum of the areas in this field that will accept values between 1 and 9999999.

Number of Floors (No. of Floors): Enter the number of floors in a building that are above ground. Exclude basements and crawl spaces. Enter a numeric value between 1 and 255.

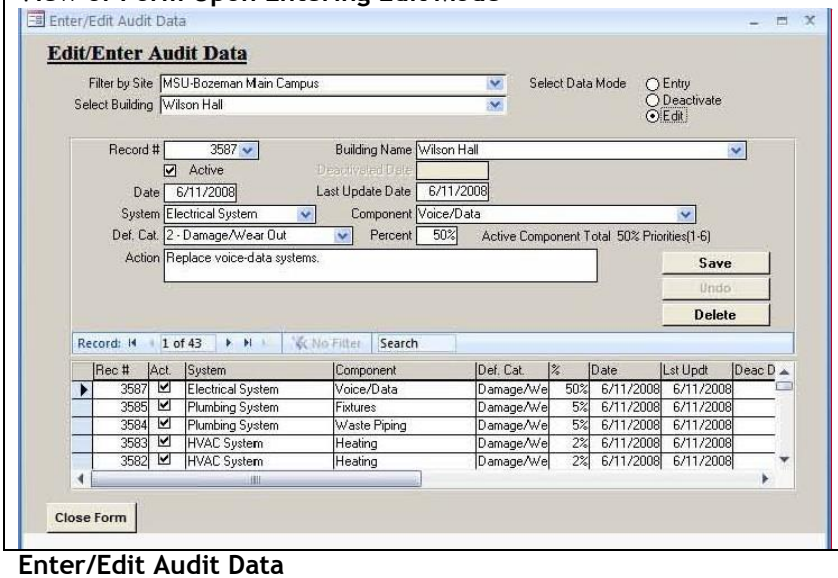
Audit Entry/Edit Form

View of Form Upon Entering Entry Mode



FIELD NAME	FIELD TYPE
Filter by Site	dropdown list
Select Building	dropdown list
Active	checkbox
Date	date MM/DD/YYYY
System	dropdown list
Component	dropdown list
Deficiency Category	dropdown list
Percent	numeric – whole numbers ≤ 100
Action	Alphanumeric

View of Form Upon Entering Edit Mode



Enter/Edit Audit Data

The screen shown above appears when users choose **Audit Data Entry/Edit** from the **Main Menu**. The form defaults to "Entry" mode. Users will use this screen to enter new audit data or to edit records from previous audits. All fields are required.

Following the instructions in the FCI Workshop Manual, the inspection team will record audit data. They will note changes to items recorded during previous audits on the "Deficiency Detail by Building for Audit" report (formerly titled "Buildings by System") and new items on the Rating Form completed during the most recent audit.

ENTER/EDIT: All entry fields default to blank. The Active checkbox defaults as checked. It cannot be unchecked in Entry mode. New records cannot be entered in "Edit" mode, nor can existing records be edited in "Entry" mode. Descriptions of the fields follow.

Filter by Site: Select a Site from the list. Selecting the site will apply a filter so that only buildings related to that site appear in the resulting list from which a Building Name can be selected.

Select Building: Find and select the Building Name for the building that was audited.

Selecting a building in "Edit" mode applies a filter so that only audit records associated with that building will be displayed in the grid.

Active: While in "Entry" mode, this checkbox defaults to checked and cannot be changed.

To deactivate a record, first choose "Deactivate" or "Edit" mode. Next, find the record. The default sort is descending order by record number. So, the record with the greatest number will be at the top of both the dropdown list and the grid unless the records are sorted differently from the grid as described in the "General Notes."

Typing a record number in the "Record #" field and pressing the <tab> or <enter> key is another way to select the record. The form's middle section will display the selected record's data. After selecting a record, uncheck the Active checkbox by clicking on it or by pressing the spacebar.

Date: Enter the audit date in a numerical format where the first two digits represent the month, the next two are the date, and the final four are the year. Single digit months and days may be entered with a zero or a space to fill the field's first position or with a single digit followed by a slash (/). For example, options for entering June 2, 2005 include typing 6/2/2005, 06022005, or in a similar way with spaces in place of leading zeroes in the month and day. The year requires four digits. Similarly, when you deactivate an entry, make sure to include the deactivation date.

System: To enter the System for an audit item, choose the System name from the dropdown list by clicking on or by typing its name until it appears in the field window. The field's auto-fill function will display a name once an appropriate beginning character has been typed. For example, typing an "F" fills the field with "Finishes." To select Foundations, type the first two characters. Users who prefer to use codes may enter the System number, e.g., 1 to represent Foundations. Only Systems on the list are valid entries.

Component: This field works the same way as the System field, but it uses alphabetical codes. Some alphabetical codes create unexpected results when a code matches the first character of a component name within the same system. For example, within System 4-Roof System, C is the code for Insulation. However, because the component name "Covering" starts with the letter C, the program displays Covering.

To use the code for these items, first enter the code. When the incorrect description is displayed, all but the first character will be highlighted. Next, press delete. Only the character code remains. Pressing <tab> or <enter> will display the description corresponding to the code and enter the data.

These codes will create the unexpected results listed in the "Initial Component Displayed" column:

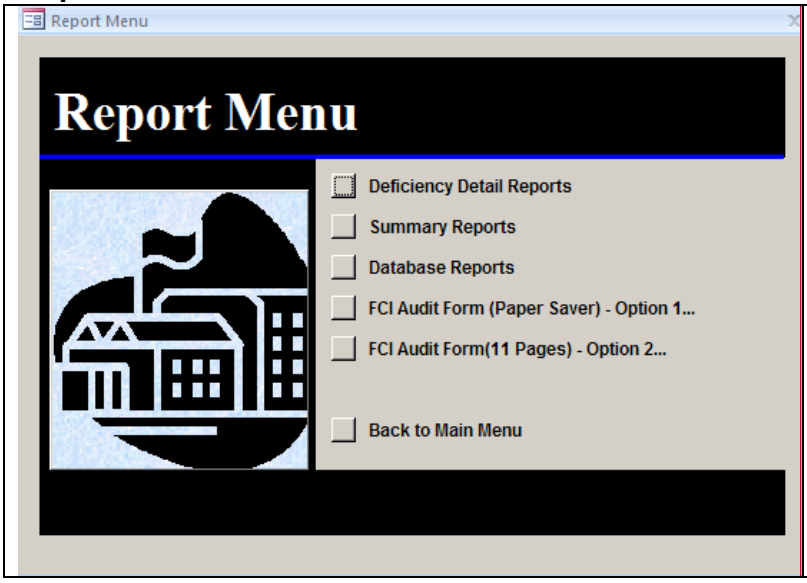
Code	Desired Entry (System and Component)		Initial Component Displayed
4C	Roof	Insulation	Covering
5C	Finishes	Interior Doors/Hardware/Windows	Ceilings
6A	Specialties	Toilet Partitions	Ansul Hoods
6C	Specialties	Fixed Seating/Risers	Chalk/Tackboards/Cabinets
6F	Specialties	Lockers	Fixed Seating/Risers
9B	Electrical System	Lighting	Building Service
11A	Safety Systems	Egress	Asbestos/Hazardous Materials
11E	Safety Systems	ADA Accessibility	Egress

Deficiency Category: Like other dropdown list fields on this form, the deficiency category field allows users to pick the category from a list, or type numeric codes. The deficiency category codes and descriptions listed below are also listed at the bottom of the Rating Form.

Code	Description
1	Safety
2	Damage/Wear Out
3	Codes and Standards
4	Environmental Improvements
5	Energy Conservation
6	Aesthetics
7	Building Enhancements

Percent: For each item, enter as a whole number the percentage that the inspection team recorded on the Rating Form. If the cursor is placed on this field after a user enters category 1-6 in the deficiency category field, the program displays "Active Component Total ##% - Priorities(1-6)" where the # symbol represents the sum, in percent, for all active records for the building and the system component for which a user is entering an audit item. If a user is entering a 7 item, the display will read "Active Component Total ##% - Priority (7)." The program will not allow the Active Component Total exceed 100% for audit records with priorities 1-6, nor for audit records recorded as category 7.
Action: For each record, enter an Action statement recorded by the inspection team as a complete sentence. The Action statement should be worded such that completing the action will eliminate the documented deficiency. The field accepts 255 characters.

Report Menu and its Sub-Menus

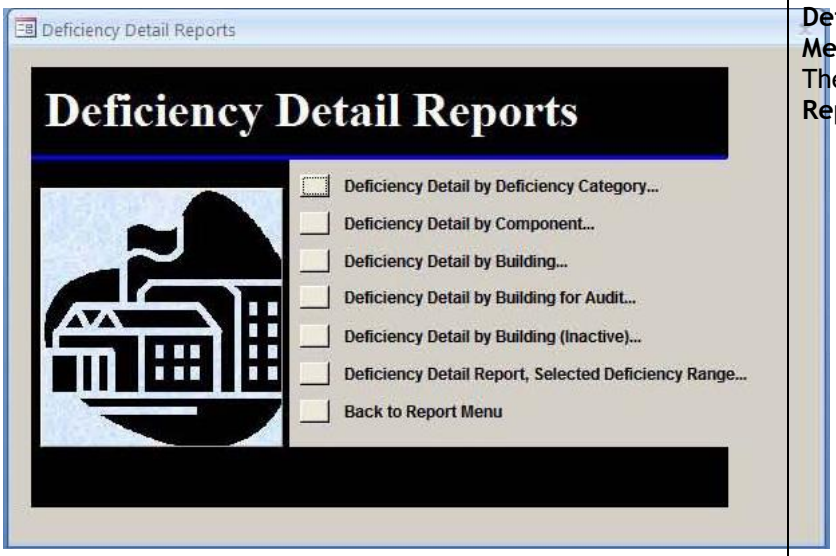


The screen shown at left appears when a user chooses **Report Menu** from the **Main Menu**.
These are the **Report Menu** options:

- Deficiency Detail Reports
- Summary Reports
- Database Reports
- FCI Audit Form (Paper Saver) – Option 1…
- FCI Audit Form (11 Pages) – Option 2…

Back to Main Menu

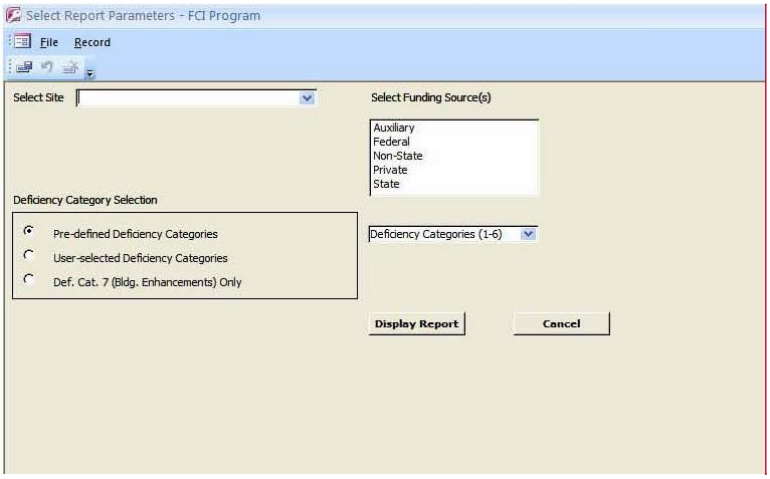
Deficiency Detail Report Menu and Related Selection Forms



The screen shown at left appears when a user chooses **Deficiency Detail Reports** from the **Report Menu**.

These are the **Deficiency Detail Reports Menu** options:

- Deficiency Detail by Deficiency Category…
- Deficiency Detail by Component…
- Deficiency Detail by Building…
- Deficiency Detail by Building for Audit…
- Deficiency Detail by Building (Inactive)…
- Deficiency Detail Report - Selected Deficiency Range
- Back to Report Menu

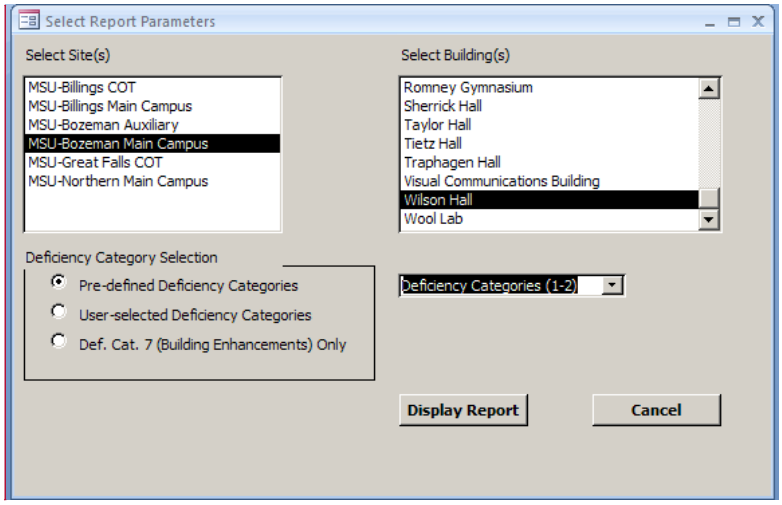


The screen shown at left appears when a user chooses **Deficiency Detail by Deficiency Category…** or **Deficiency Detail by Component…** from the **Deficiency Detail Reports Menu**.

To build a customized report, make the following selections: site, funding source(s), deficiency categories (predefined or user-selected). Selecting a site is required because the resulting reports accommodate only one site.

Making no selection for the Funding Source produces a report with all options. The report will include the default priorities (displayed in the field window) when a user does not make a selection.

After clicking on a down arrow for a dropdown field, a user may select from the resulting list.



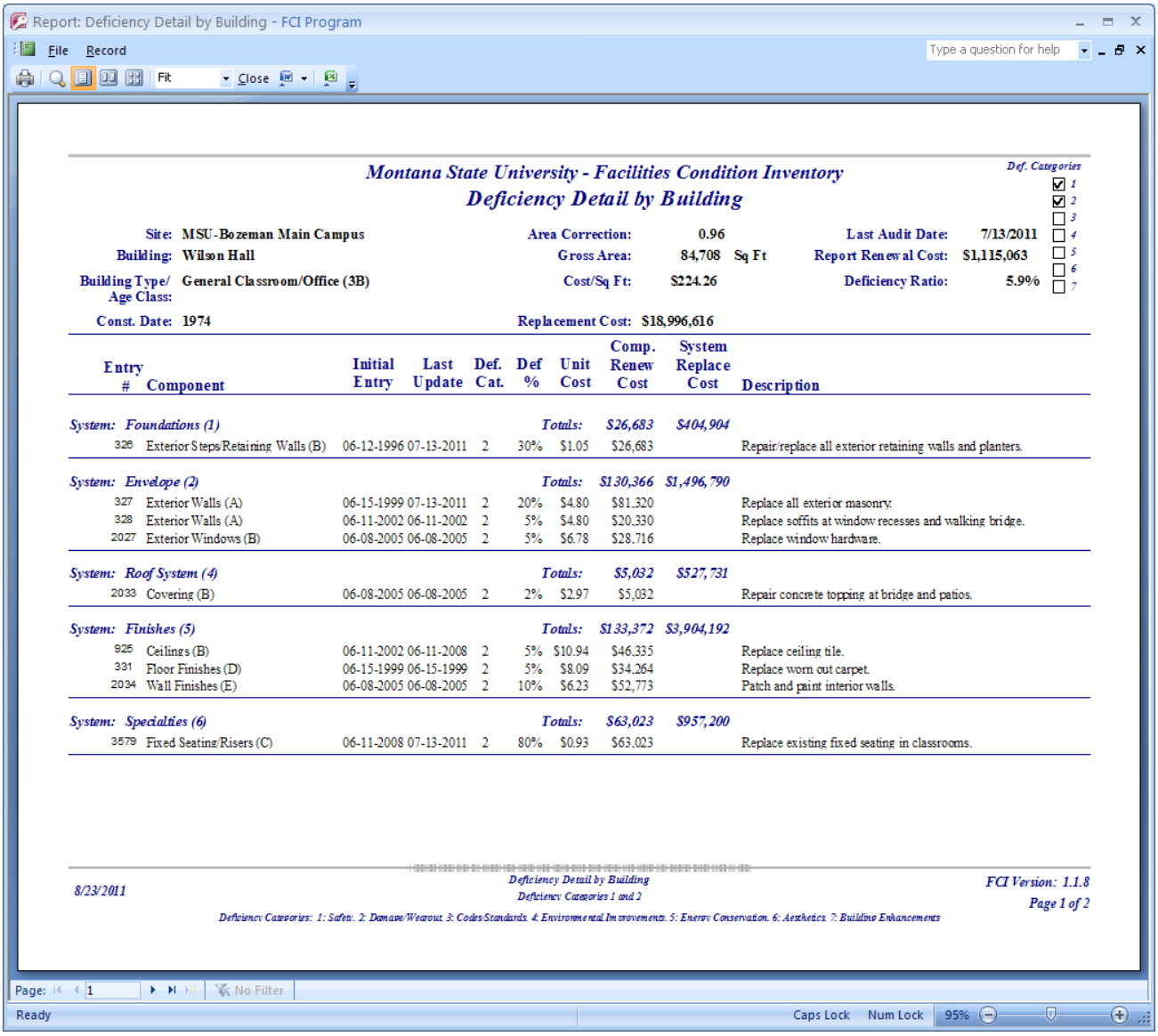
The screen shown at left appears when a user chooses **Deficiency Detail by Building…**, **Deficiency Detail by Building for Audit…**, or **Deficiency Detail by Building (Inactive)…** from the **Deficiency Detail Reports Menu**.

To build a customized report, make the following selections: site(s), building(s) and priorities.

Select site(s) to filter out buildings that are not related to the selected site(s). Not selecting a site allows users to choose buildings from among all sites in the database. The primary sort, grouping, and page breaks for comprehensive reports will be by site code. The secondary sort is alphabetical by Building Names.

Clicking on the down arrow for the Deficiency Category dropdown field allows a user to select from the resulting list.

An example of a Deficiency Detail by Building report is shown below.



Montana State University - Facilities Condition Inventory
Deficiency Detail by Building

Def. Categories: 1 2 3 4 5 6 7

Site: MSU-Bozeman Main Campus
Area Correction: 0.96
Last Audit Date: 7/13/2011

Building: Wilson Hall
Gross Area: 84,708 Sq Ft
Report Renewal Cost: $1,115,063

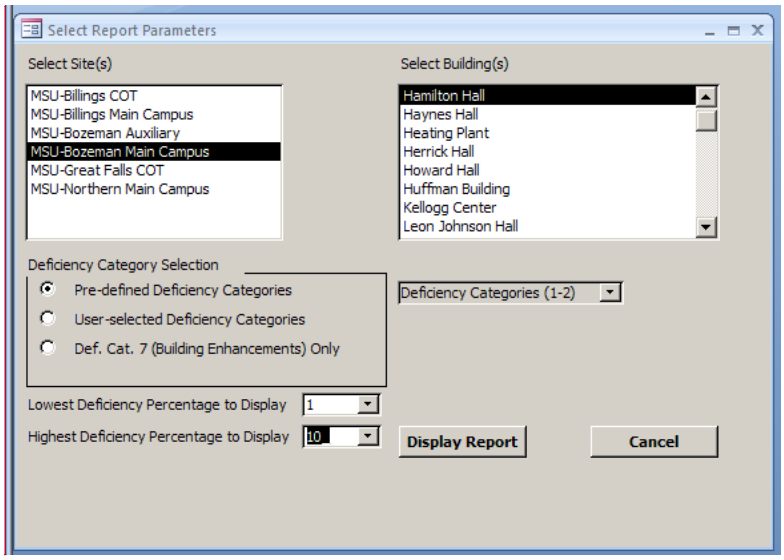
Building Type/ Age Class: General Classroom/Office (3B)
Cost/Sq Ft: $224.26
Deficiency Ratio: 5.9%

Const. Date: 1974
Replacement Cost: $18,996,616

Entry #	Component	Initial Entry	Last Update	Def. Cat.	Def %	Unit Cost	Comp. Renew Cost	System Replace Cost	Description
System: Foundations (1)						*Totals:*	*$26,683*	*$404,904*	
326	Exterior Steps/Retaining Walls (B)	06-12-1996	07-13-2011	2	30%	$1.05	$26,683		Repair/replace all exterior retaining walls and planters.
System: Envelope (2)						*Totals:*	*$130,366*	*$1,496,790*	
327	Exterior Walls (A)	06-15-1999	07-13-2011	2	20%	$4.80	$81,320		Replace all exterior masonry.
328	Exterior Walls (A)	06-11-2002	06-11-2002	2	5%	$4.80	$20,330		Replace soffits at window recesses and walking bridge.
2027	Exterior Windows (B)	06-08-2005	06-08-2005	2	5%	$6.78	$28,716		Replace window hardware.
System: Roof System (4)						*Totals:*	*$5,032*	*$527,731*	
2033	Covering (B)	06-08-2005	06-08-2005	2	2%	$2.97	$5,032		Repair concrete topping at bridge and patios.
System: Finishes (5)						*Totals:*	*$133,372*	*$3,904,192*	
925	Ceilings (B)	06-11-2002	06-11-2008	2	5%	$10.94	$46,335		Replace ceiling tile.
331	Floor Finishes (D)	06-15-1999	06-15-1999	2	5%	$8.09	$34,264		Replace worn out carpet.
2034	Wall Finishes (E)	06-08-2005	06-08-2005	2	10%	$6.23	$52,773		Patch and paint interior walls.
System: Specialties (6)						*Totals:*	*$63,023*	*$957,200*	
3579	Fixed Seating/Risers (C)	06-11-2008	07-13-2011	2	80%	$0.93	$63,023		Replace existing fixed seating in classrooms.

8/23/2011
Deficiency Detail by Building
Deficiency Categories 1 and 2
FCI Version: 1.1.8
Page 1 of 2

Deficiency Categories: 1: Safety. 2: Damage/Wearout. 3: Codes/Standards. 4: Environmental Improvements. 5: Energy Conservation. 6: Aesthetics. 7: Building Enhancements



The screen shown at left appears when a user chooses **Deficiency Detail Report - Selected Deficiency Range** from the **Deficiency Detail Reports Menu**.

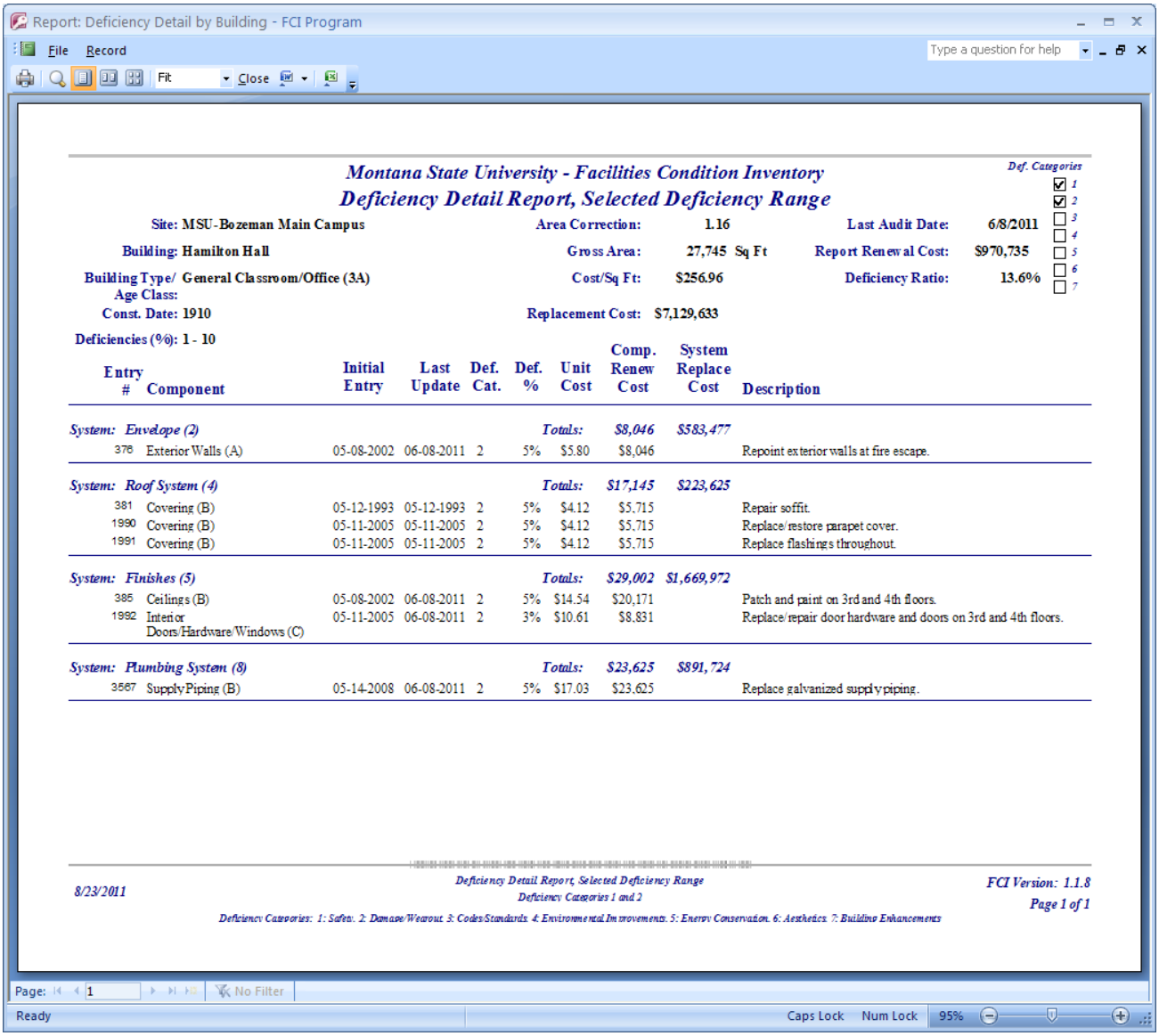
To build a customized report, make the following selections: site(s), building(s) and priorities.

Select site(s) to filter out buildings that are not related to the selected site(s). Not selecting a site allows users to choose buildings from among all sites in the database. The primary sort, grouping, and page breaks for comprehensive reports will be by site code. The secondary sort is alphabetical by Building Names.

Clicking on the down arrow for the Deficiency Category dropdown field allows a user to select from the resulting list.

Select the deficiency range by using the drop down list or entering values between 0 and 100. Only items whose deficiency falls into that range will display on the report.

An example of a Deficiency Detail Report - Selected Deficiency Range is shown below.



Report: Deficiency Detail by Building - FCI Program

File Record — Type a question for help — Fit — Close

Montana State University - Facilities Condition Inventory

Deficiency Detail Report, Selected Deficiency Range

Def. Categories 1 2 3 4 5 6 7

Site: MSU-Bozeman Main Campus — Area Correction: 1.16 — Last Audit Date: 6/8/2011

Building: Hamilton Hall — Gross Area: 27,745 Sq Ft — Report Renewal Cost: $970,735

Building Type/ Age Class: General Classroom/Office (3A) — Cost/Sq Ft: $256.96 — Deficiency Ratio: 13.6%

Const. Date: 1910 — Replacement Cost: $7,129,633

Deficiencies (%): 1 - 10

Entry #	Component	Initial Entry	Last Update	Def. Cat.	Def. %	Unit Cost	Comp. Renew Cost	System Replace Cost	Description
System: Envelope (2)						*Totals:*	*$8,046*	*$583,477*	
376	Exterior Walls (A)	05-08-2002	06-08-2011	2	5%	$5.80	$8,046		Repoint exterior walls at fire escape.
System: Roof System (4)						*Totals:*	*$17,145*	*$223,625*	
381	Covering (B)	05-12-1993	05-12-1993	2	5%	$4.12	$5,715		Repair soffit.
1990	Covering (B)	05-11-2005	05-11-2005	2	5%	$4.12	$5,715		Replace/restore parapet cover.
1991	Covering (B)	05-11-2005	05-11-2005	2	5%	$4.12	$5,715		Replace flashings throughout.
System: Finishes (5)						*Totals:*	*$29,002*	*$1,669,972*	
385	Ceilings (B)	05-08-2002	06-08-2011	2	5%	$14.54	$20,171		Patch and paint on 3rd and 4th floors.
1992	Interior Doors/Hardware/Windows (C)	05-11-2005	06-08-2011	2	3%	$10.61	$8,831		Replace/repair door hardware and doors on 3rd and 4th floors.
System: Plumbing System (8)						*Totals:*	*$23,625*	*$891,724*	
3567	Supply Piping (B)	05-14-2008	06-08-2011	2	5%	$17.03	$23,625		Replace galvanized supply piping.

8/23/2011

Deficiency Detail Report, Selected Deficiency Range

Deficiency Categories 1 and 2

Deficiency Categories: 1: Safety. 2: Damage/Wearout. 3: Codes/Standards. 4: Environmental Improvements. 5: Energy Conservation. 6: Aesthetics. 7: Building Enhancements

FCI Version: 1.1.8

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Page: 1 — No Filter

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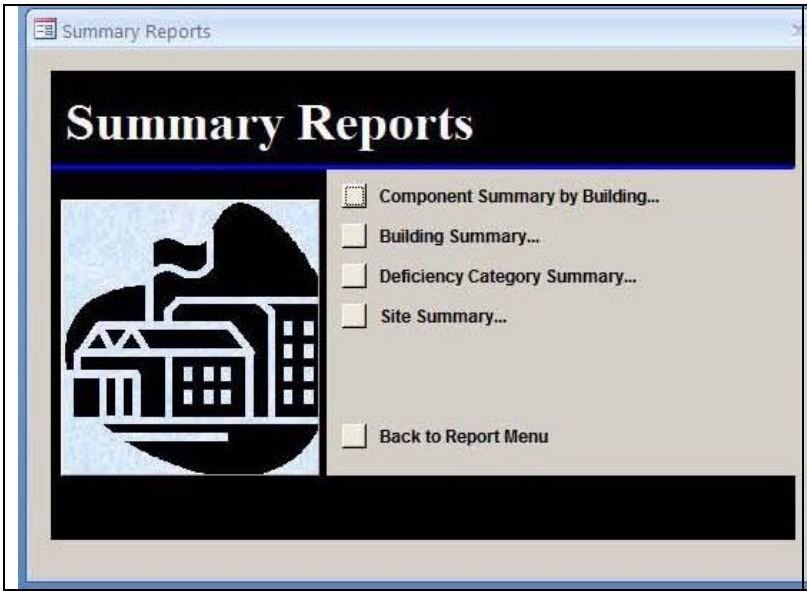
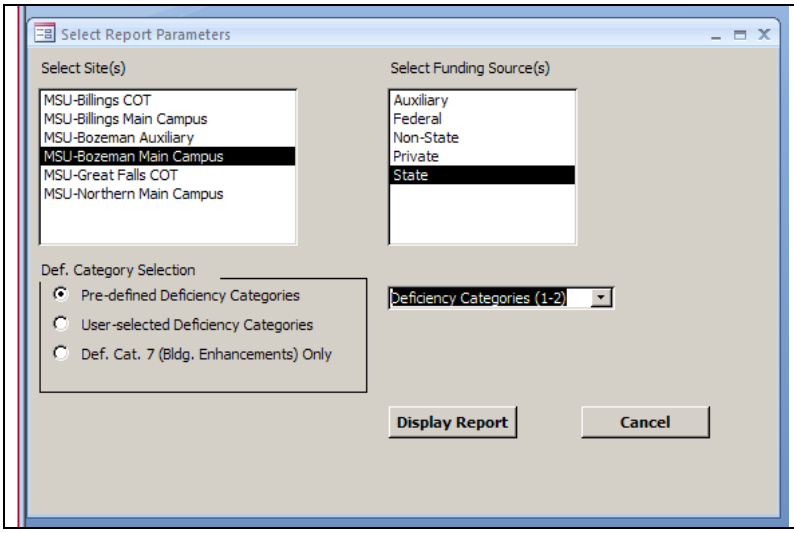
Summary Reports Menu and Related Selection Forms



The screen shown at left appears when a user chooses **Summary Reports** from the **Reports Menu**. These are the **Report Menu** options:

- Component Summary by Building…
- Building Summary…
- Deficiency Category Summary…
- Site Summary…

Back to Report Menu

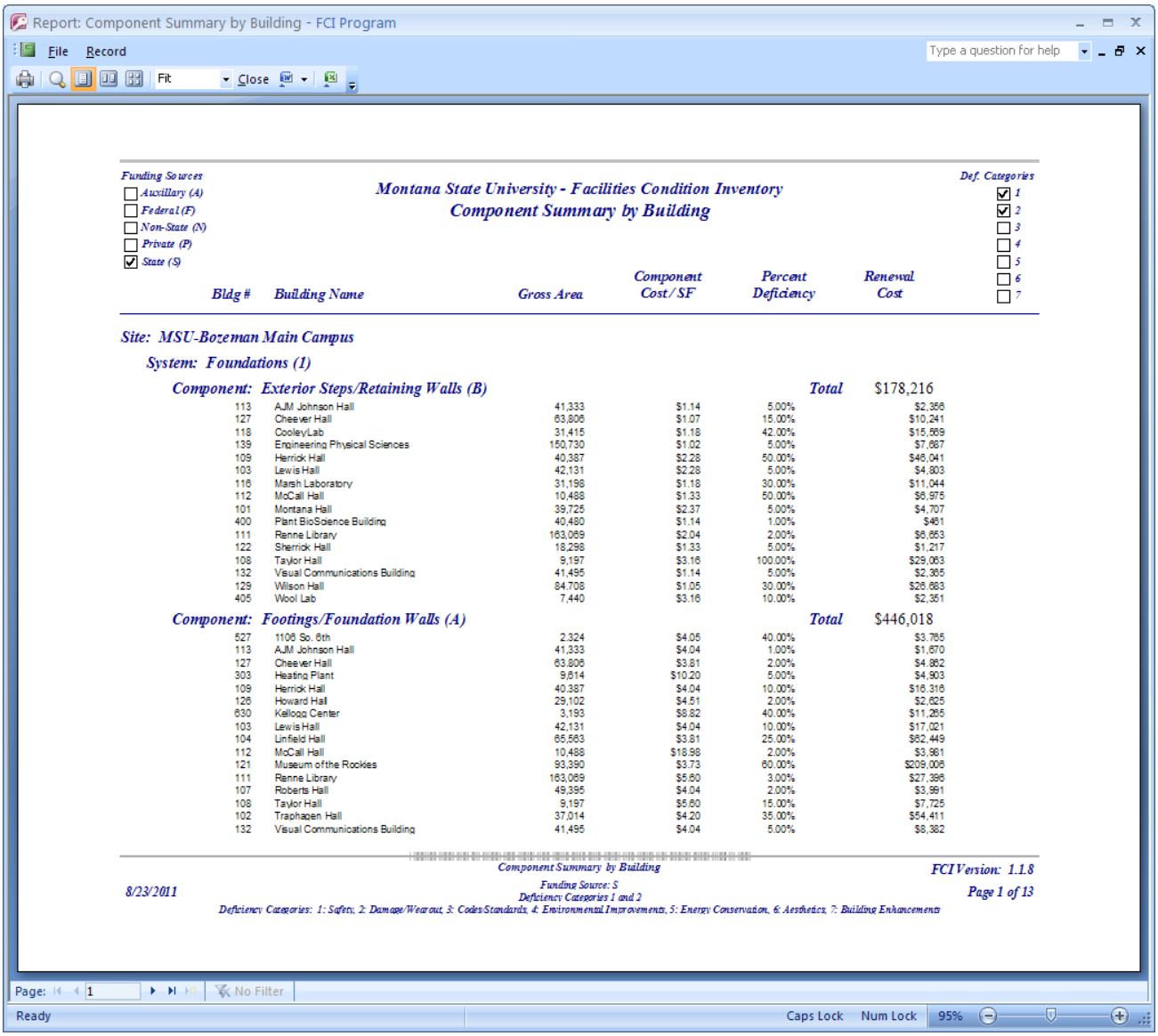


The screen shown at left appears when a user chooses **Component Summary by Building…**, **Building Summary…**, **Deficiency Category Summary…**, or **Site Summary…** from the **Summary Reports Menu**.

To build a customized report, make the following selections: site(s), funding source(s), and priorities (predefined or user-selected).

Clicking on a down arrow for a dropdown field allows a user to select from the resulting list.

An example of the Component Summary by Building report is shown below.



Report: Component Summary by Building - FCI Program

File Record Fit Close Type a question for help

Funding Sources
☐ Auxillary (A)
☐ Federal (F)
☐ Non-State (N)
☐ Private (P)
☑ State (S)

Def. Categories
☑ 1
☑ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7

Montana State University - Facilities Condition Inventory
Component Summary by Building

Bldg #	Building Name	Gross Area	Component Cost/SF	Percent Deficiency	Renewal Cost
Site: MSU-Bozeman Main Campus					
System: Foundations (1)					
Component: Exterior Steps/Retaining Walls (B)				Total	$178,216
113	AJM Johnson Hall	41,333	$1.14	5.00%	$2,356
127	Cheever Hall	63,806	$1.07	15.00%	$10,241
118	CooleyLab	31,415	$1.18	42.00%	$15,569
139	Engineering Physical Sciences	150,730	$1.02	5.00%	$7,687
109	Herrick Hall	40,387	$2.28	50.00%	$46,041
103	Lewis Hall	42,131	$2.28	5.00%	$4,803
116	Marsh Laboratory	31,198	$1.18	30.00%	$11,044
112	McCall Hall	10,488	$1.33	50.00%	$6,975
101	Montana Hall	39,725	$2.37	5.00%	$4,707
400	Plant BioScience Building	40,480	$1.14	1.00%	$461
111	Renne Library	163,069	$2.04	2.00%	$6,653
122	Sherrick Hall	18,298	$1.33	5.00%	$1,217
108	Taylor Hall	9,197	$3.16	100.00%	$29,063
132	Visual Communications Building	41,495	$1.14	5.00%	$2,365
129	Wilson Hall	84,708	$1.05	30.00%	$26,683
405	Wool Lab	7,440	$3.16	10.00%	$2,351
Component: Footings/Foundation Walls (A)				Total	$446,018
527	1106 So. 6th	2,324	$4.05	40.00%	$3,765
113	AJM Johnson Hall	41,333	$4.04	1.00%	$1,670
127	Cheever Hall	63,806	$3.81	2.00%	$4,862
303	Heating Plant	9,614	$10.20	5.00%	$4,903
109	Herrick Hall	40,387	$4.04	10.00%	$16,316
126	Howard Hall	29,102	$4.51	2.00%	$2,625
630	Kellogg Center	3,193	$8.82	40.00%	$11,265
103	Lewis Hall	42,131	$4.04	10.00%	$17,021
104	Linfield Hall	65,563	$3.81	25.00%	$62,449
112	McCall Hall	10,488	$18.98	2.00%	$3,981
121	Museum of the Rockies	93,390	$3.73	60.00%	$209,006
111	Renne Library	163,069	$5.60	3.00%	$27,396
107	Roberts Hall	49,395	$4.04	2.00%	$3,991
108	Taylor Hall	9,197	$5.60	15.00%	$7,725
102	Traphagen Hall	37,014	$4.20	35.00%	$54,411
132	Visual Communications Building	41,495	$4.04	5.00%	$8,382

Component Summary by Building
Funding Source: S
Deficiency Categories 1 and 2
Deficiency Categories: 1: Safety, 2: Damage/Wearout, 3: Codes/Standards, 4: Environmental Improvements, 5: Energy Conservation, 6: Aesthetics, 7: Building Enhancements

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Page: 1 No Filter

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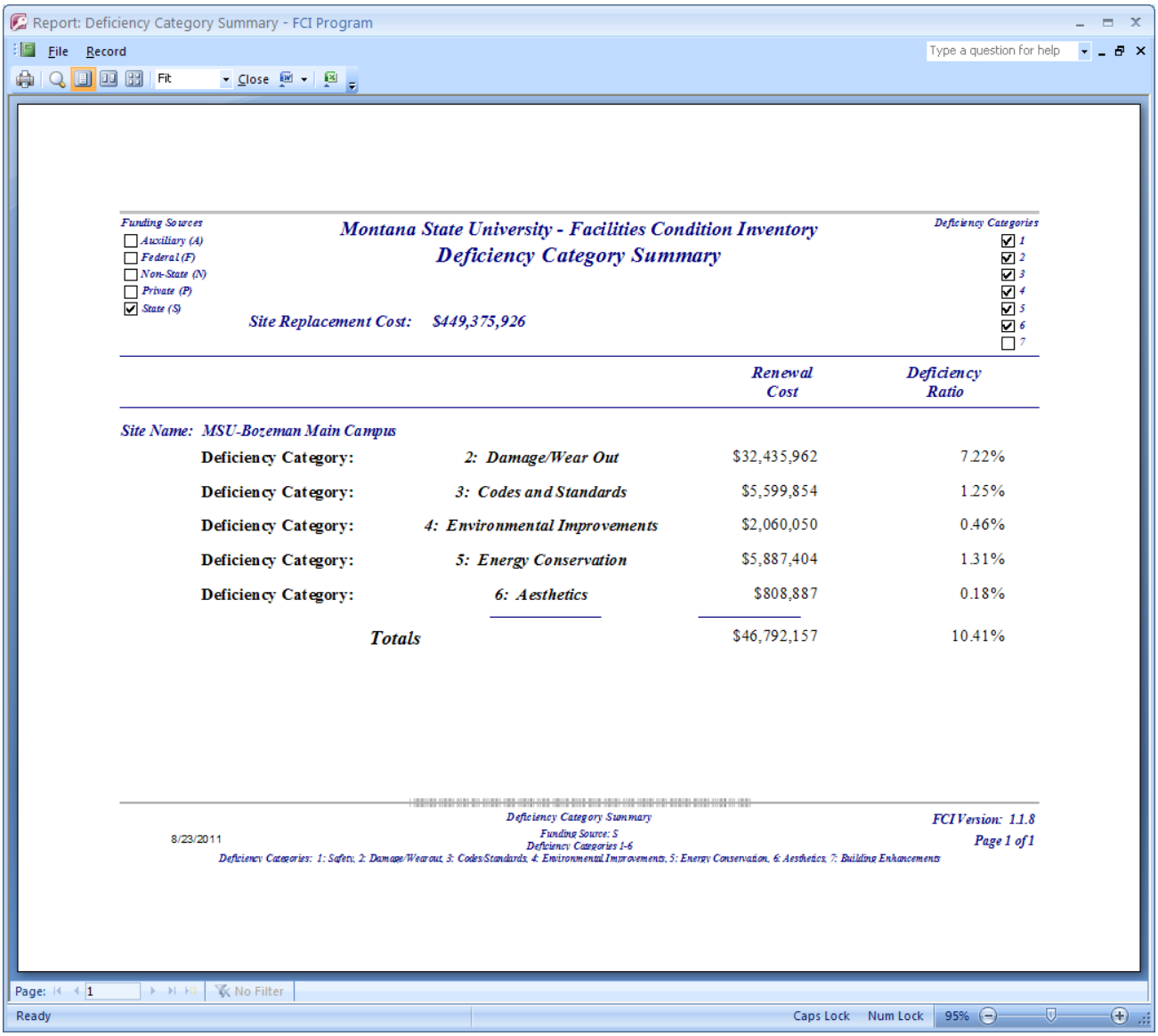
An example of a Deficiency Category Summary report is shown below.



Report: Deficiency Category Summary - FCI Program

File Record Type a question for help

Fit Close

Funding Sources
- [ ] Auxiliary (A)
- [ ] Federal (F)
- [ ] Non-State (N)
- [ ] Private (P)
- [x] State (S)

Deficiency Categories
- [x] 1
- [x] 2
- [x] 3
- [x] 4
- [x] 5
- [x] 6
- [ ] 7

Montana State University - Facilities Condition Inventory
Deficiency Category Summary

Site Replacement Cost: $449,375,926

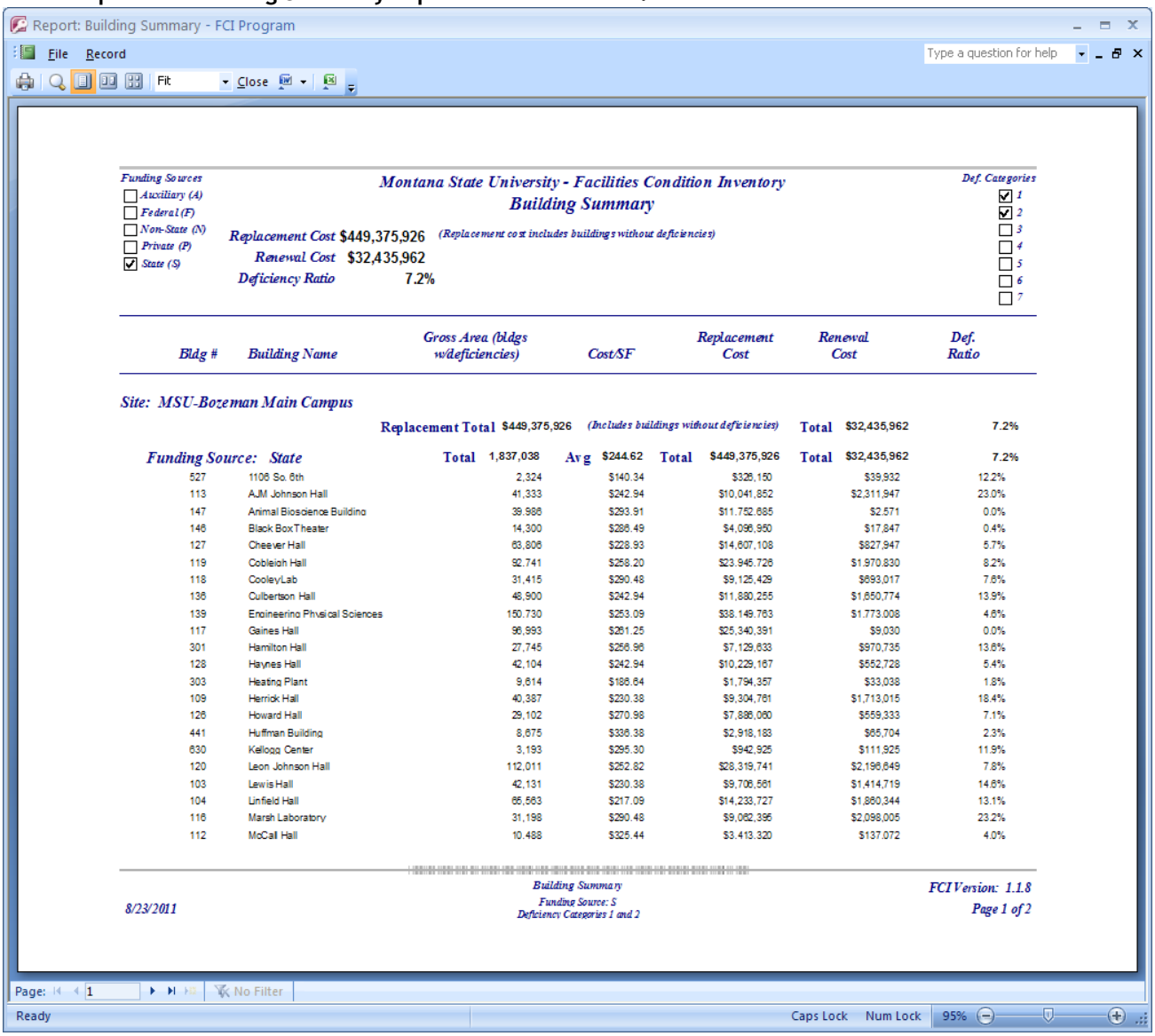
		Renewal Cost	Deficiency Ratio
Site Name: MSU-Bozeman Main Campus			
Deficiency Category:	2: Damage/Wear Out	$32,435,962	7.22%
Deficiency Category:	3: Codes and Standards	$5,599,854	1.25%
Deficiency Category:	4: Environmental Improvements	$2,060,050	0.46%
Deficiency Category:	5: Energy Conservation	$5,887,404	1.31%
Deficiency Category:	6: Aesthetics	$808,887	0.18%
Totals		$46,792,157	10.41%

8/23/2011
Deficiency Category Summary
Funding Source: S
Deficiency Categories 1-6
Deficiency Categories: 1: Safety, 2: Damage/Wearout, 3: Codes/Standards, 4: Environmental Improvements, 5: Energy Conservation, 6: Aesthetics, 7: Building Enhancements
FCI Version: 1.1.8
Page 1 of 1

Page: 1 No Filter

Ready Caps Lock Num Lock 95%

An example of a Building Summary report is shown below.



Report: Building Summary - FCI Program

File Record

Type a question for help

Fit Close

Funding Sources
- [ ] Auxiliary (A)
- [ ] Federal (F)
- [ ] Non-State (N)
- [ ] Private (P)
- [x] State (S)

Montana State University - Facilities Condition Inventory
Building Summary

Replacement Cost $449,375,926 (Replacement cost includes buildings without deficiencies)
Renewal Cost $32,435,962
Deficiency Ratio 7.2%

Def. Categories
- [x] 1
- [x] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7

Bldg #	Building Name	Gross Area (bldgs w/deficiencies)	Cost/SF	Replacement Cost	Renewal Cost	Def. Ratio
Site: MSU-Bozeman Main Campus						
	Replacement Total	**$449,375,926**	*(Includes buildings without deficiencies)*	**Total**	**$32,435,962**	**7.2%**
Funding Source: State		**Total 1,837,038**	**Avg $244.62**	**Total $449,375,926**	**Total $32,435,962**	**7.2%**
527	1106 So. 6th	2,324	$140.34	$326,150	$39,932	12.2%
113	AJM Johnson Hall	41,333	$242.94	$10,041,852	$2,311,947	23.0%
147	Animal Bioscience Building	39,986	$293.91	$11,752,685	$2,571	0.0%
146	Black Box Theater	14,300	$286.49	$4,096,950	$17,847	0.4%
127	Cheever Hall	63,806	$228.93	$14,607,108	$827,947	5.7%
119	Cobleigh Hall	92,741	$258.20	$23,946,726	$1,970,830	8.2%
118	CooleyLab	31,415	$290.48	$9,125,429	$693,017	7.6%
136	Culbertson Hall	48,900	$242.94	$11,880,255	$1,650,774	13.9%
139	Engineering Physical Sciences	150,730	$253.09	$38,149,763	$1,773,008	4.6%
117	Gaines Hall	96,993	$261.25	$25,340,391	$9,030	0.0%
301	Hamilton Hall	27,745	$256.96	$7,129,633	$970,735	13.6%
128	Haynes Hall	42,104	$242.94	$10,229,187	$552,728	5.4%
303	Heating Plant	9,614	$186.64	$1,794,357	$33,038	1.8%
109	Herrick Hall	40,387	$230.38	$9,304,761	$1,713,015	18.4%
126	Howard Hall	29,102	$270.98	$7,886,060	$559,333	7.1%
441	Huffman Building	8,675	$338.38	$2,918,183	$65,704	2.3%
630	Kellogg Center	3,193	$295.30	$942,925	$111,925	11.9%
120	Leon Johnson Hall	112,011	$252.82	$28,319,741	$2,196,849	7.8%
103	Lewis Hall	42,131	$230.38	$9,706,561	$1,414,719	14.6%
104	Linfield Hall	65,563	$217.09	$14,233,727	$1,860,344	13.1%
116	Marsh Laboratory	31,198	$290.48	$9,062,395	$2,098,005	23.2%
112	McCall Hall	10,488	$325.44	$3,413,320	$137,072	4.0%

8/23/2011

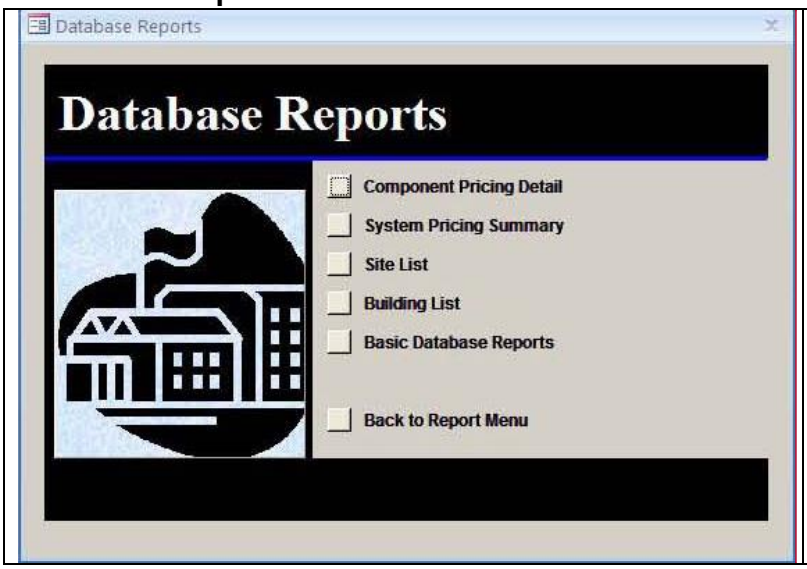
Building Summary
Funding Source: S
Deficiency Categories 1 and 2

FCI Version: 1.1.8
Page 1 of 2

Page: 1 No Filter

Ready Caps Lock Num Lock 95%

Database Reports Menu



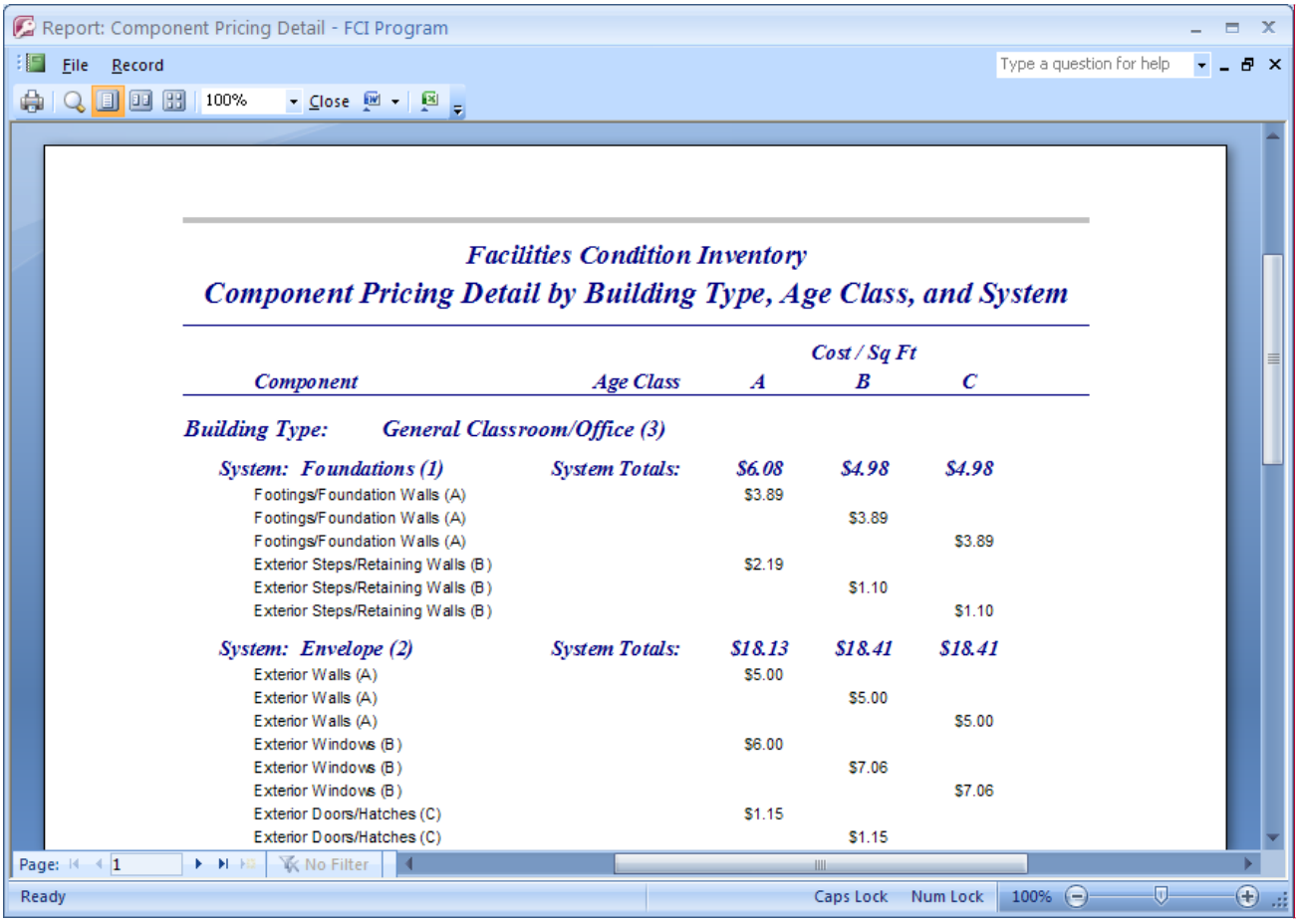
The screen shown at left appears when users choose **Database Reports** from the **Reports Menu**. These are the **Database Reports Menu** options:

- Component Pricing Detail
- System Pricing Summary
- Site List
- Building List
- Basic Database Reports

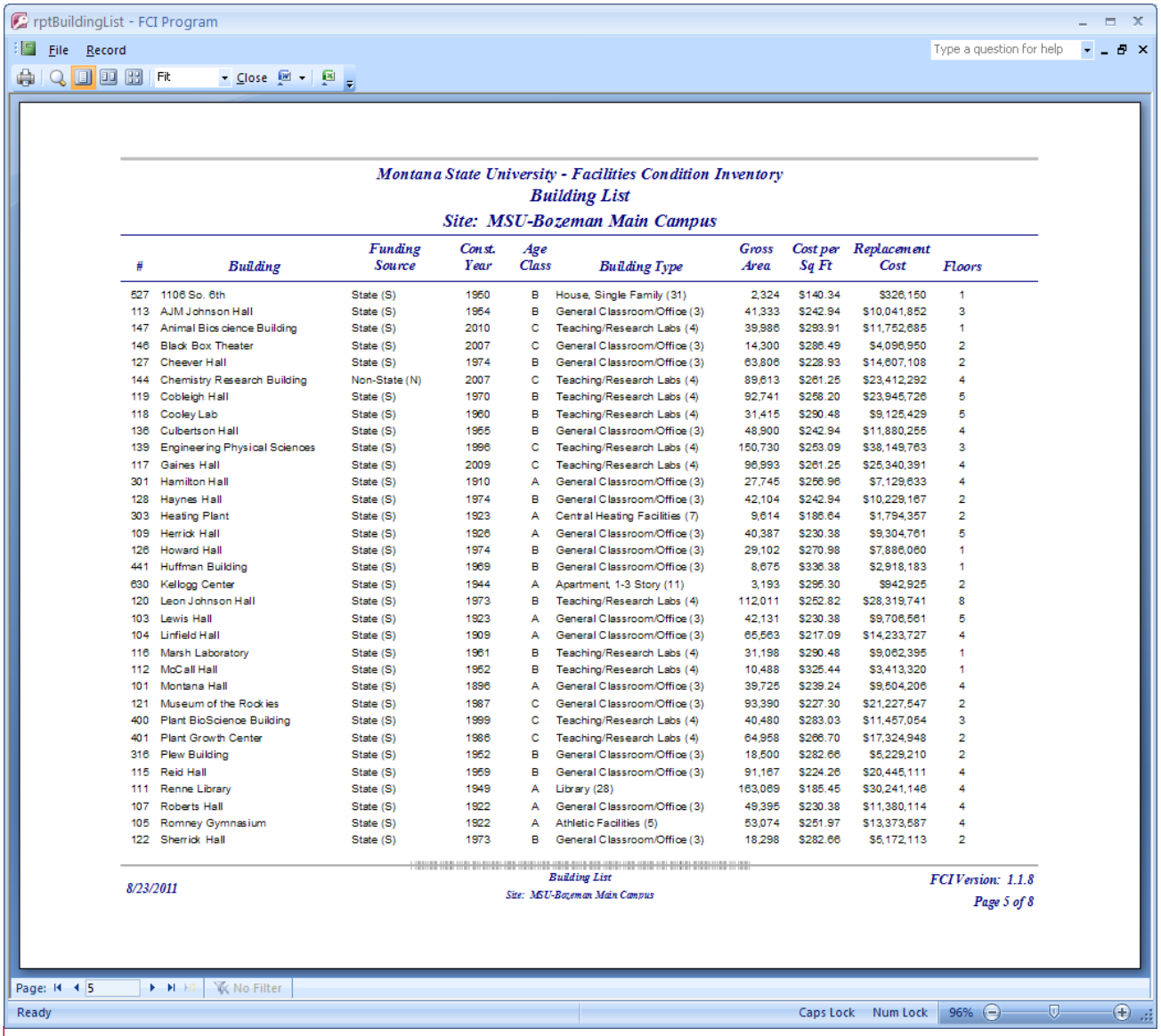
- Back to Report Menu

Users cannot make selections for Database Reports.

The Component Pricing Detail shows costs per square foot by Building Type, Class, and System. In addition to the cost per square foot for components, the detail includes the total cost per square foot for each system.



For the Building List, the primary sort, grouping, and page breaks are by site and the buildings are listed alphabetically by Building Name.



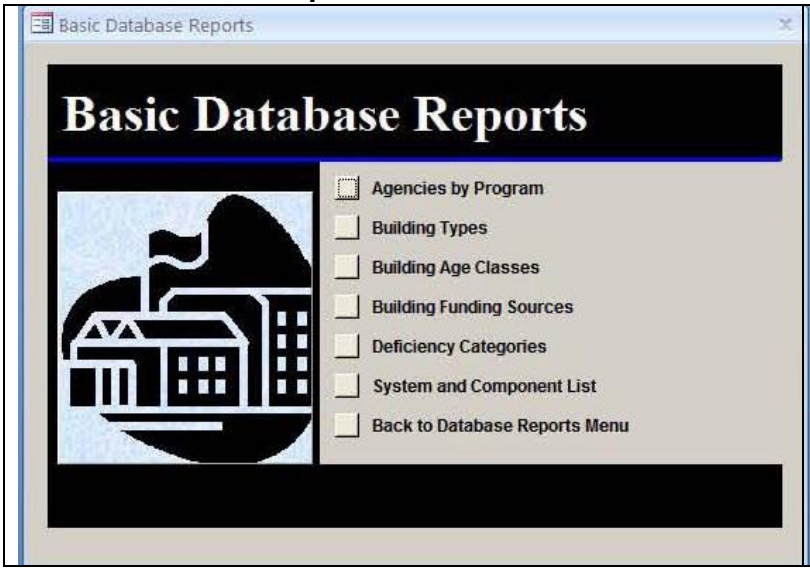
Montana State University - Facilities Condition Inventory

Building List

Site: MSU-Bozeman Main Campus

#	Building	Funding Source	Const. Year	Age Class	Building Type	Gross Area	Cost per Sq Ft	Replacement Cost	Floors
527	1106 So. 6th	State (S)	1950	B	House, Single Family (31)	2,324	$140.34	$326,150	1
113	AJM Johnson Hall	State (S)	1954	B	General Classroom/Office (3)	41,333	$242.94	$10,041,852	3
147	Animal Bioscience Building	State (S)	2010	C	Teaching/Research Labs (4)	39,986	$293.91	$11,752,685	1
146	Black Box Theater	State (S)	2007	C	General Classroom/Office (3)	14,300	$286.49	$4,096,950	2
127	Cheever Hall	State (S)	1974	B	General Classroom/Office (3)	63,806	$228.93	$14,607,108	2
144	Chemistry Research Building	Non-State (N)	2007	C	Teaching/Research Labs (4)	89,613	$261.25	$23,412,292	4
119	Cobleigh Hall	State (S)	1970	B	Teaching/Research Labs (4)	92,741	$258.20	$23,945,726	5
118	Cooley Lab	State (S)	1960	B	Teaching/Research Labs (4)	31,415	$290.48	$9,125,429	5
136	Culbertson Hall	State (S)	1955	B	General Classroom/Office (3)	48,900	$242.94	$11,880,255	4
139	Engineering Physical Sciences	State (S)	1996	C	Teaching/Research Labs (4)	150,730	$253.09	$38,149,763	3
117	Gaines Hall	State (S)	2009	C	Teaching/Research Labs (4)	96,993	$261.25	$25,340,391	4
301	Hamilton Hall	State (S)	1910	A	General Classroom/Office (3)	27,745	$256.96	$7,129,633	4
128	Haynes Hall	State (S)	1974	B	General Classroom/Office (3)	42,104	$242.94	$10,229,167	2
303	Heating Plant	State (S)	1923	A	Central Heating Facilities (7)	9,614	$186.64	$1,794,357	2
109	Herrick Hall	State (S)	1926	A	General Classroom/Office (3)	40,387	$230.38	$9,304,761	5
126	Howard Hall	State (S)	1974	B	General Classroom/Office (3)	29,102	$270.98	$7,886,060	1
441	Huffman Building	State (S)	1969	B	General Classroom/Office (3)	8,675	$336.38	$2,918,183	1
630	Kellogg Center	State (S)	1944	A	Apartment, 1-3 Story (11)	3,193	$295.30	$942,925	2
120	Leon Johnson Hall	State (S)	1973	B	Teaching/Research Labs (4)	112,011	$252.82	$28,319,741	8
103	Lewis Hall	State (S)	1923	A	General Classroom/Office (3)	42,131	$230.38	$9,706,561	5
104	Linfield Hall	State (S)	1909	A	General Classroom/Office (3)	65,563	$217.09	$14,233,727	4
116	Marsh Laboratory	State (S)	1961	B	Teaching/Research Labs (4)	31,198	$290.48	$9,062,395	1
112	McCall Hall	State (S)	1952	B	Teaching/Research Labs (4)	10,488	$325.44	$3,413,320	1
101	Montana Hall	State (S)	1896	A	General Classroom/Office (3)	39,725	$239.24	$9,504,206	4
121	Museum of the Rockies	State (S)	1987	C	General Classroom/Office (3)	93,390	$227.30	$21,227,547	2
400	Plant BioScience Building	State (S)	1999	C	Teaching/Research Labs (4)	40,480	$283.03	$11,457,054	3
401	Plant Growth Center	State (S)	1986	C	Teaching/Research Labs (4)	64,958	$266.70	$17,324,948	2
316	Plew Building	State (S)	1952	B	General Classroom/Office (3)	18,500	$282.66	$5,229,210	2
115	Reid Hall	State (S)	1959	B	General Classroom/Office (3)	91,167	$224.26	$20,445,111	4
111	Renne Library	State (S)	1949	A	Library (28)	163,069	$185.45	$30,241,146	4
107	Roberts Hall	State (S)	1922	A	General Classroom/Office (3)	49,395	$230.38	$11,380,114	4
105	Romney Gymnasium	State (S)	1922	A	Athletic Facilities (5)	53,074	$251.97	$13,373,587	4
122	Sherrick Hall	State (S)	1973	B	General Classroom/Office (3)	18,298	$282.66	$5,172,113	2

Basic Database Reports Menu

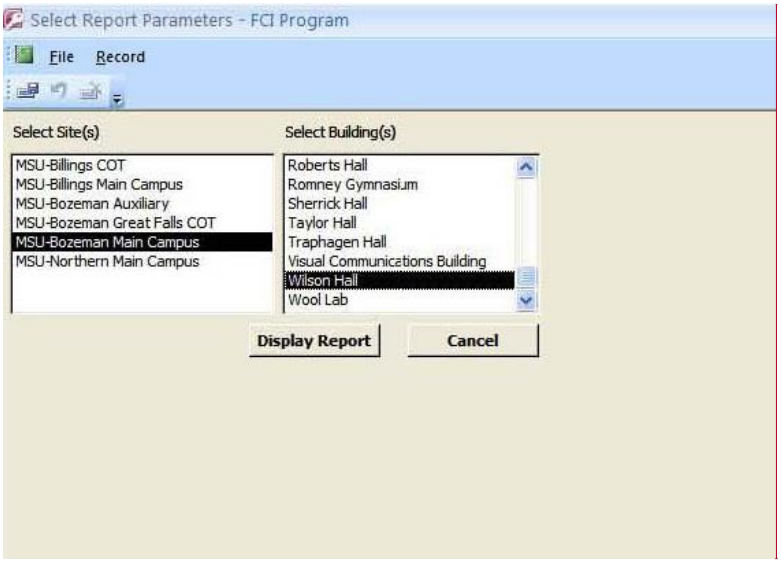


The screen shown at left appears when users choose **Basic Database Reports** from the **Database Reports Menu**.
These are the **Basic Database Reports Menu** options:

- Agencies by Program
- Building Categories
- Building Age Classes
- Building Funding Sources
- Deficiency Categories
- System and Component List
- Back to Database Reports Menu

Users cannot make selections for Basic Database Reports.

FCI Audit Form Menu…



The screen shown at left appears when users choose **FCI Audit Form (Paper Saver)…** from the **Report Menu**.

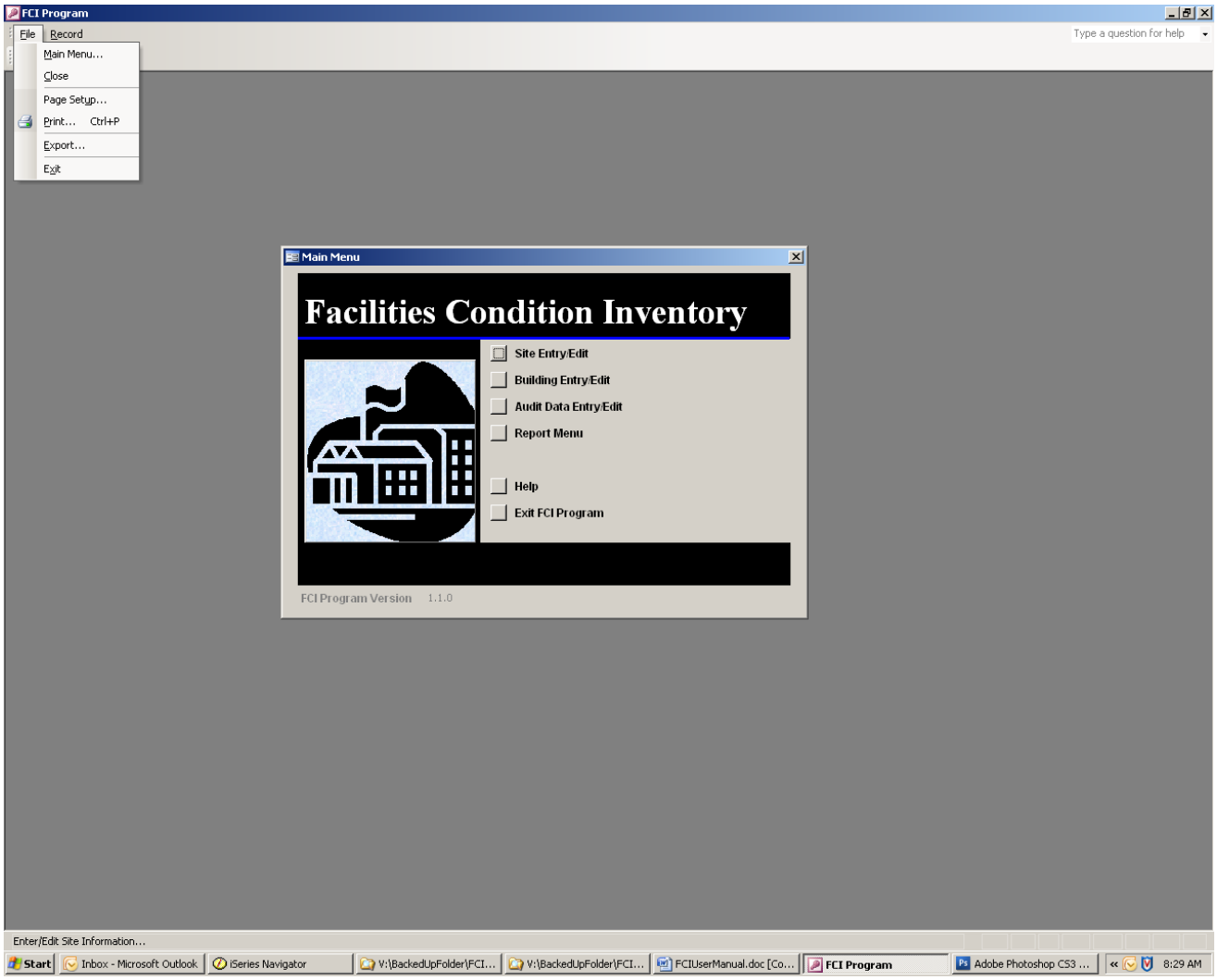
The program will generate a FCI Audit Form (as shown on page A-21) for each building that a user selects. The inspection team will record audit results on each of these forms. The program completes the following fields on each form: building name, Building Type, system, and building number. The user can print all or selected pages.

There is a second option labeled **FCI Audit Form** (11 pages) that may be useful when auditing a new building with many deficiencies. For this audit form, the program will generate 11 pages, one for each system. This form is on page A-22.

FCI Export…

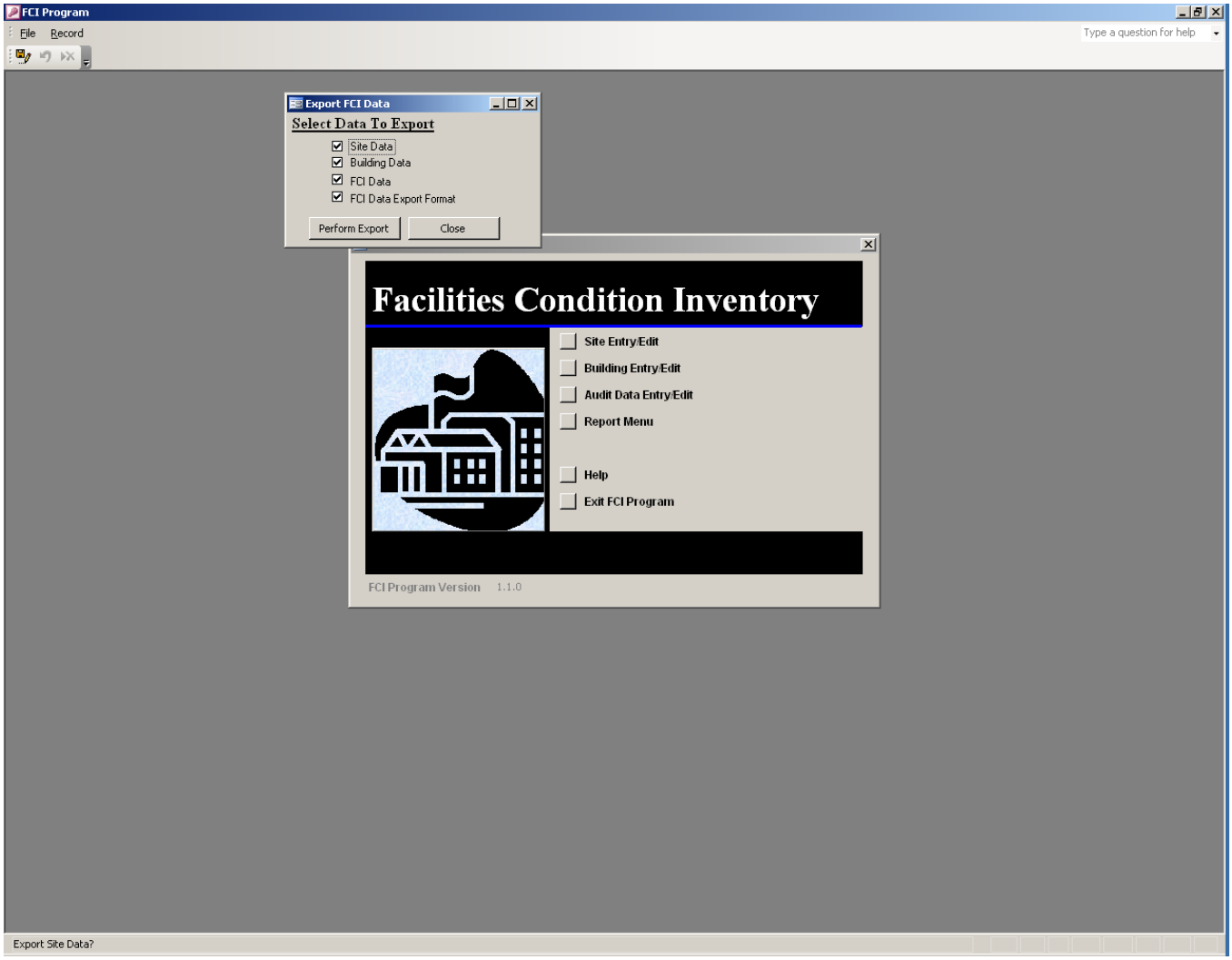
The FCI Application also provides a way to export the customer tables, plus an additional export-format table (containing additional values) to a variety of formats. For instance, data can be exported to an Excel spreadsheet, for situations where it would be beneficial to analyze or present the data in ways that may not be accommodated by the standard reports.

To export data from the FCI application, choose the File menu bar from any of the FCI menus. The Export… features appears on this menu bar.



(continued next page)

Once you choose Export… you will be prompted to select the data you would like to export. The first three options export the Site, Building, and FCI Data tables, in the same format as they appear in the application. The fourth option (FCI Data Export Format) contains data from all three of these customer tables, plus additional calculated pricing information. Once the Perform Export button is clicked, the application will prompt for the file format to be used for each selection, and the location and file name where the exports should be saved.



Thank you for taking the time to read through this manual. For more information and to download FCI program, visit www.facilities.montana.edu/pdc/planning/FCIDownload. Also, visit www.montana.edu for more information or additional resources from Montana State University.