Facilities Planning & Management Overview
University of Wisconsin – Madison

Bill Elvey, P.E., Associate Vice Chancellor
Facilities Planning & Management

• Introduction

• Learning Objectives
  • Who we are and what we do
  • Organizational overview
  • How and when to request services
Facilities Planning & Management
Who We Are and What We Do

• Full spectrum of facilities management activities
• 936-acre UW-Madison; 9,566 acres off-campus
• More than 1,000 employees
• Operating budget of approximately $200 million
• 420 buildings on campus
• 25 million gross square feet of space
• 2.2 million square feet of research lab space
• 0.5 million square feet of classroom space
• $2.3 billion in capital projects since 2000
• Two major utilities plants, plus Co-Gen facility
Facilities Planning & Management
Challenges & Opportunities

• Create a ‘people-first’ centered culture
• Create efficiencies and be effective
• Provide outstanding customer service
• Safety
• Sustainability
• Changing workforce demographics
• Create an engaged, inclusive, and diverse workforce
• Create a high-performing organization through clear HR practices, including identifying and nurturing talent that relies on teamwork and interdependence
• Reward individual, team, and organizational efforts
• Invest in training and continuous learning and innovation
• Improving our relationship with State government
Capital Planning and Development

**Major Duties**

**Capital Budget**
- Work with the AVC to navigate UW System and State approval process and other major project issues
  - Since 2000, $2.3 billion worth of capital projects have been completed

**University Architect**
- Review design for all major projects to ensure aesthetic intent of the campus master plan is met
  - Since 2005, the Design Review Board has held 95 reviews (39 separate projects)

**Project Managers**
- Work with customers and stakeholders through all phases of project
  - Approximately $692.4 M worth of projects currently in various phases of planning, design, and construction
Capital Planning and Development

Major Initiatives
Sustainability/LEED - Certified four campus LEED projects
• UW Medical Faculty Centennial Building – Gold Certified
• School of Education – Platinum Certified
• Wisconsin Institutes for Discovery – Gold Certified
• Union South – Gold Certified
• Currently tracking 14 other projects with LEED ratings of silver or higher

Internships and Capstone Course Collaboration
• Developing an internship program that challenges students and young professionals, providing experiences that reinforce classroom learning

Post-occupancy Surveys
• Developing measures to assess user satisfaction of completed projects
• Creating users’ evaluations of project teams
Campus Planning & Landscape Architecture

Staff Overview

• 3, professional, registered landscape architects
• 1, professional civil engineer/zoning coordinator
• 1, facilities access specialist
• 1, cultural & historic resources manager
• 3, Lakeshore Nature Preserve staff
• 3, student interns
Campus Planning & Landscape Architecture

Major Duties

• Develop, maintain and implement the comprehensive 20-year Campus Master Plan every 10 years

• Facilitate district, college and unit sub-master plans

• Facilitate all site & landscape architecture planning & design

• Facilitate all municipal zoning approvals

• Facilitate all neighborhood review processes for capital projects

• Coordinate all physical facilities access and ADA accommodations

• Promote universal design for all new & remodeled facilities
Major Duties

- Manage cultural and historic resources including public art

- Facilitate review and negotiate mitigation of impacts on historic resources with the Wisconsin Historical Society

- Facilitate Environmental Impact Statements/Assessments and review all projects to assure compliance with the Wisconsin Environmental Policy Act

- Provide field management and oversight of volunteer program in the 300-acre Lakeshore Nature Preserve

- Provide outreach activities and promote academic and research use within the Lakeshore Nature Preserve
Goals of the 2005 Campus Master Plan

1) **Sustainability**
   - Protect, enhance and celebrate our lakeside setting.
   - Develop sustainable design guidelines to build more “green” facilities - ”UW Builds Green”
   - Reduce our impact on the land.
   - Manage and reduce our overall energy consumption – “We Conserve”.

2) **Community, Academic & Research Connections**
   - Promote the Wisconsin Idea by enhancing our physical, academic and community connections.
   - Replace aging buildings, add research space and improve academic facilities - 34 completed major projects
     - 10 projects in construction
     - 12 projects in design/planning
   - Promote interdisciplinary learning and research with flexible facilities.

3) **Student Life**
   - Renovate, restore and rebuild the Wisconsin Union facilities – Wisconsin Unions Master Plan.
   - Add to our on-campus housing capacity to meet demand of first year students – UW Housing Master Plan
   - Upgrade our recreational facilities – UW Recr Sports Master Plan – UW Athletics Master Plan
   - Create new outdoor spaces for more informal outdoor gatherings.
Goals of the 2005 Campus Master Plan

4) **Buildings & Design Guidelines**
   - Preserve significant historic buildings. *(Chamberlin, Washburn, Sterling, Education, Human Ecology...)*
   - Renovate existing buildings when possible and remove obsolete buildings.
   - Provide buildings that can be easily renovated or reprogrammed that last 100+ years.
   - Define existing neighborhoods of design and develop design guidelines for future buildings – **Design Guide.**

5) **Open Space**
   - Protect and enhance our existing open spaces and create new gathering areas.
   - Maintain Lakeshore Nature Preserve for teaching, research and outreach – **Lakeshore Preserve Master Plan.**
   - Protect and enhance known historic cultural resources, landscapes and quads – **Cultural Landscape Report.**

6) **Transportation & Utilities**
   - Provide attractive options to driving alone to, from and around campus – **Transportation Demand Mgmt Plan.**
   - Maintain existing parking capacity of 13,000 spaces – **Long Range Transportation Master Plan.**
   - Increase pedestrian safety, add bike lanes/paths and increase bicycle commuting facilities.
   - Plan for future commuter rail – **Transport 2020 Plan.**
   - Provide for a reliable utility network to meet current & future needs – **Utility Master Plan.**
Campus Planning & Landscape Architecture

Lakeshore Nature Preserve
Environment, Health and Safety
Paul Umbeck, Ph.D, Director
Why is safety important?
• Why is safety important?
• Who is responsible?
• When do I get involved?
• What do I need to do?
• How do I create a strong safety culture?
• Where do I find other resources?
Regulatory Agencies

Depending on the hazards in your workplace, various organizations may guide safety practice. Some examples include:

- Occupational Safety & Health Agency (OSHA)
- National Institutes of Health (NIH)
- American Association for Laboratory Animal Care (AALAC)
- Food & Drug Administration (FDA)
- Environmental Protection Agency (EPA)
- Centers for Disease Control & Prevention (CDC)
OSHA announce 'Top 10' violations of 2012 (2011)

- Fall Protection (1926.501) – 7,250 (7,139)
- Hazard Communication (1910.1200) – 4,696 (6,538)
- Scaffolding (1926.451) – 3,814 (7,069)
- Respiratory Protection (1910.134) – 2,371 (3,944)
- Ladders (1926.1053) – 2,310 (3,244)
- Machine Guarding (1910.212) – 2,097 (2,728)
- Powered Industrial Trucks (1910.178) – 1,993 (3,432)
- Electrical – Wiring Methods (1910.305) – 1,744 (3,584)
- Lockout/Tagout (1910.147) – 1,572 (3,639)
- Electrical – General Requirements (1910.303) – 1,332 (2,863)
How Does UW Compare?

• Between 2006-2011, the most common causes of serious injuries were:
  — Slips/trips/falls (276)
  — Being struck by or against other objects (222)
  — Lifting/moving/restraining loads (211)
  — Contact with sharp edges or needles (122)

• The direct cost of injuries to UW-Madison for the last five years is about $2,000,000/yr.

• More than 60% of all incidents reported each year involve employees in their first 3 years of employment.
Who is responsible?
"The primary purpose of the University of Wisconsin–Madison is to provide a learning environment in which faculty, staff and students can discover, examine critically, preserve and transmit the knowledge, wisdom and values that will help ensure the survival of this and future generations and improve the quality of life for all”

Every Safety Department has two objectives:
1. To protect people from harm; and,
2. To protect the institution from liability
Employer’s Duty

• It is an employer’s duty to provide a healthy and safe workplace (i.e. free from known hazards...)

Wisconsin Statutes 101.11 and Administrative Code Chapter COMM32
Wisconsin Department of Safety & Professional Services (formed on 6/30/11)
http://dpsw.wi.gov/
• Formerly, the Wisconsin Department of Commerce
• Combined the Department of Regulation & Licensing and parts of the DOC
Shared Responsibilities

Supervisor

Employee

Environment, Health and Safety
Supervisors are directly responsible for the safety of employees.
Supervisors are responsible for:

– Promoting proper safety attitudes among employees;
– Providing knowledge of safety procedures and personal protective equipment (PPE);
– Giving training to new employees and enforcing safe practices;
– Conducting planned observations and safety inspections and correct unsafe acts;
– Investigating unsafe ACTS and unsafe CONDITIONS (accidents) to prevent re-occurrence; and,
– Ensuring sufficient resources, direction, oversight, and leadership on health and safety issues.
Employees are responsible for:

- Knowing safety regulations and instructions applicable to themselves and their assigned duties;
- Complying with established safety standards;
- Reporting hazards and accidents in accordance with guidelines;
- Reporting workplace injuries and illnesses immediately to their supervisor; and,
- Asking questions if they do not know how to complete a task or assignment safely.
Environment, Health and Safety

- EH&S’s role is to provide education, training and customer service

  Biological, Chemical, and Radiological Safety
  Environmental Protection
  Fire Safety
  Lake Safety
  Occupational Health

- Provide assistance with understanding compliance with federal, state and local regulations, and generally accepted good work practices

- Provide routine and ad-hoc review and assessment of safety functions for campus
What do I need to do?
Check List

- Set the example
- Train employees
- Inspect for unsafe conditions
- Correct unsafe acts
- Prevent accidents
- Investigate accidents
- Enforce safety rules
- Consult on safety decisions
Set the Example
Inspect for Unsafe Conditions
Correct Unsafe Acts
Prevent Accidents
Enforce Safety Rules
How do I create a strong safety culture?
The Myth of the Safety Pyramid

- Almost all major accident investigations in recent years have shown that the **work system not worker behavior** is the cause of most accidents.

Since 1929, safety viewed the pyramid to suggest that “unsafe acts are the primary cause of accidents and that focusing on reducing accident frequency will equivalently reduce injury severity. It was also viewed that unsafe acts of workers were the principal causes of occupational accidents.”

Reviewing Heinrich: Dislodging Two Myths From the Practice of Safety by Fred A. Manuele, Professional Safety, October 2011
Safety Culture

• Multiple factors align to create safety culture

System
- Policies
- Procedures
- Management
- Resources

Work
- Process
- Facilities
- Equipment
- Materials

People
- Behavior
- Knowledge
- Skills
- Motivation
Benefits of a strong safety culture:

- fewer at-risk behaviors
- lower accident rates
- lower turn-over
- lower absenteeism
- higher productivity

• Organizations with a strong safety culture are also usually very successful in meeting their mission and vision
Communication

• In a strong safety culture, your employee feels comfortable being reminded to take special precautions for the hazard you identified in the beginning of this session.

• This behavior is not viewed as forward or over-zealous, but is valued by the organization.

• Likewise, coworkers routinely look out for one another and point out unsafe behaviors to each other to help prevent accidents.
Where do I find other resources?
Resources

• See the back cover of “The Really Handy Guide to Occupational Health and Safety at UW-Madison” for classified employees

• Visit [http://www.wisc.edu/safety](http://www.wisc.edu/safety) for
  – “Department Staff”
  – Program Support, Services, and Training
Space Planning and Analysis

Maintain official UW-Madison facility information:

• Collect, validate and distribute facility data
• Maintain and distribute accurate building floor plans
• Serve as source for official campus facility addresses
• Manage building and room naming processes
• Report facilities data to UW System, state and federal agencies, peer institutions
• Provide facilities data for emergency planning
Space Planning and Analysis

Support space planning:

• Evaluate requests, develop alternatives, negotiate and recommend space assignments
• Conduct space analyses
• Recommend policies/procedures to Space and Remodeling Policies Committee (SRPC)
• Manage space relocation planning
• Advise on physical relocations
Space Planning and Analysis

Conduct Facilities and Administration (F&A) space survey:

• Develop guidelines, process and schedule with the F&A Committee
• Train research staff regarding the on-line survey methodology
Real Estate and Leasing

Administer the University’s real estate portfolio:

• Coordinate real estate transactions
• Conduct property appraisals and environmental assessments
• Prepare and review easements, legal descriptions, deeds
• Manage special assessments and municipal payments
• Support strategic planning efforts
Real Estate and Leasing

Lease administration of privately owned spaces:

- Evaluate space needs
- Conduct RFP process to identify lease alternatives
- Represent UW-Madison in lease negotiations
- Manage new construction or tenant improvements
- Process monthly rent payments and lease-related invoices
- Resolve tenant-landlord disputes
Classroom Planning and Management

Responsible for the physical environment in general assignment classrooms:

• Manage maintenance, planning, remodeling and upgrades
• Evaluate, prioritize, plan renovation projects
• Coordinate maintenance activities
• Conduct classroom utilization analyses
Classroom Planning and Management

Responsible for the presentation technology in general assignment classrooms:

- Oversee the classroom modernization program
- Monitor technology use and performance, maintain and upgrade as required
- Provide training sessions on proper use of presentation technology
- Provide emergency response to faculty and instructors requiring assistance
Physical Plant – Shops & Programs
Faramarz Vakili, Associate Director

Over 270,000 hours of maintenance service provided in FY 12 for:

- Building space (~16 million GSF)
- Building systems (~330 major buildings)
- Campus exterior structures
- Campus roads (~12 miles)
- Campus sidewalks (~50 miles)
- Underground piping (~15 miles) including utility tunnels (~5 miles)

Maintenance services are funded centrally by the University.
Facilities Maintenance

Maintenance Programs:

• Pro-Active Maintenance
  • Preventive maintenance
  • FOCUS program (pilot in 10 buildings)

• Reactive Maintenance
  • Customers’ maintenance service calls (~30,000 per year)
  • Repairs & replacement jobs as needed

• Rehabilitative Maintenance
  • CURB Program (~4 million GSF reconditioned to-date)
  • Building retro-commissioning (~5 million GSF to date)

• Deferred Maintenance
  • State All Agency Funding program (~$10 million/year)
Departmental Service Requests

• Services to equipment or item in which its predominant purpose is to serve a specific research or programmatic activity, or to meet a special personal or departmental requirement is considered a “Departmental Service Request”

• Labor and material costs for Departmental Service Requests are charged to the customers

• Chargeback rates for shops’ labor are established annually to cover all costs on a not-for-profit basis

• Over 109,000 hours of service was provided to address departmental requests in FY12.
In-house Remodel Projects

• Over 38,000 hours of service was provided in FY12 to address customers’ remodeling and campus minor construction requests

• Prior approval from the Deans’ office is required for remodeling requests

• Over 45,000 hours was spent on energy conservation projects in FY12.

• Labor and material costs for most projects are charged to the customers. Chargeback rates for shops are established annually to cover all costs on a not-for-profit basis.
Customer Service Centers

Central Answering & Response Service (CARS) receives and processes maintenance and departmental service requests:

- Phone: 263-3333
- TTY# : 265-4550
- FAX : 265-3510
- Email : physical.plant.cars@fpm.wisc.ed
- Website: www.physicalplant.wisc.edu

Project Administration Center (PAC) receives and handles remodeling & special construction requests:

- Download a request form from our website www.physicalplant.wisc.edu
When PAC *not* CARS? (2/2)

Customer requests with the following characteristics require PAC administration:

- Modifications requiring significant multiple-trades coordination
- Modifications that affect exit paths
- Installation or removal of equipment connected to building systems
- Installation or removal of walls or partitions
- Special assignments, based on other criteria
Fleet Services

 Responsible for procurement and management of over 700 University owned vehicles

- Vehicle Rental
- Departmental owned vehicles
- Departmental vehicle leases

Fleet rental and lease fees are calculated to cover all associated costs on a not-for-profit basis.

Vehicle reservation requests are made through:
- www.physicalplant.wisc.edu
- Phone: 262-1307
Fleet Garage

• Full maintenance services are provided to University fleet vehicles and specialty equipment on a charge-back basis

• Garage chargeback fees are calculated to cover all associated costs on a not-for-profit basis.

• Service appointments are made through:
  • Phone: 262-3555
  • Fax: 265-5948

• Fleet Garage is located at 27 N. Charter Street.
Utilities

Utilities Generation:

Charter Street & Walnut Street Heating/Cooling plants are owned and operated by UW. The West Campus Co-Generation plant is Jointly owned with MGE and operated by MGE. These plants produce:

- Steam (high & low pressure)
- Chilled water
- Electricity
- Compressed air
Utilities

Utilities purchases:

• Natural gas fuels boilers in all the plants.

• High voltage electricity is purchased from MGE through UW Substations.

  • ~15% of purchased electricity is from wind power
  • Some buildings’ electricity is fed directly by utility companies

• Water & sewer service is purchased from the City of Madison.
Utilities

Utilities distribution:

Throughout the campus, approximately 15 miles of underground piping distribute:

- Steam
- Chilled water
- Electricity
- Compressed air
- Condensate return
- Potable water
- Lake water
- Storm sewer
- Sanitary sewer
Utilities

Utilities costs:

• Annual cost of providing utilities to operate the campus facilities exceeds $71 million.

• UW provides utilities to some non-campus entities on a chargeback basis.

• Conservation efforts have reduced campus energy consumption per gross square foot by over 25% since 2005.
Physical Plant – Operations
Kris Ackerbauer, Assistant Director

- Campus Services
  - Campus Mail
  - Truck Service
  - Facility Repair Workers

- Custodial Services

- Grounds

- Pest Control

- Waste and Recycle
Campus Services

• Mail Service
  • Departmental (and some U.S. Mail)
  • 45 N. Charter
  • 1 full time sorter
  • East – West, A.M. – P.M.

• Truck Service
  • 12 employees
  • Deliver trades staff and materials
  • Haul boxes, bulk mailings, equipment, etc.
  • Pay for 5 or more boxes
Campus Services

• Facility Repair Workers

• 22 employees

• Window washers (frequency – 7 years)
• Assist trades
• Movers
• Snow removal
• Commencement setups
• Table and chair rentals (delivery and setup)
Custodial Services

• Approximately 450 custodians (57% 2\textsuperscript{nd} shift, 37% 3\textsuperscript{rd} shift, 6% days)

• English is not the primary language for about 1/3 of staff (custodians may not understand notes that are left for them)

• 26 first – level supervisors

• 3 shift supervisors

• 136 buildings

• 15.1 million gross square feet (GSF)
Custodial Services

• Office cleaning (once a week – place full baskets outside office door)

• Clean and stock restrooms

• Remove trash and recycling

• Shovel snow (first priority, may interrupt routine service)
Grounds (Environmental Services)

• Maintain 936 acres
  • Woody plants
    • 11,700 trees and countless shrubs
    • 8 employees

• Turf, flowers and greenhouse
  • 73 acres of lawn
  • 6 lawn employees
  • 30,000 plants
  • 5 greenhouse employees

• Concrete, paving and signage
  • 12 miles of streets, 50 miles of sidewalks,
    100 parking lots and structures
  • 6 construction/maintenance employees
Pest Control

• 1 employee – Richard (the Bug-man) Ness

• Removal of insects, pests, small animals

• Pesticide application notification
  • Environment, Health and Safety website
  • UW staff should notify ADA rep/CARS if extremely sensitive to pesticides
Waste and Recycle

• 21 employees

• Night time pick-up of trash and recyclables

• Empty outdoor trash receptacle (250 trash receptacles)

• Snow removal

• Litter pickup, clear light poles of posters

• Collect wood pallets, scrap metal/appliances from docks
  • Contact CARS 3-3333 for this service
Waste and Recycle

• Total annual rubbish – 5538 tons

• Total annual recycled – 2739 tons
  • 1058 tons mixed paper (cardboard, magazines)
  • 425 tons office paper
  • 430 tons glass/plastic/aluminum
  • 57 tons books
  • 165 tons food compost
  • 82 tons pallets
  • 485 tons scrap iron
  • 37 tons virgin wood
Transportation Services
Patrick Kass, Director
Transportation Services

Mission
Provide innovative transportation solutions that serve and support the university community

Objective
Sustain and strengthen our cutting-edge transportation programs
Strategic Priorities

• Customer Service
  – Easily accessible information and services
  – Positive and professional image
  – Balance needs of different customers
  – Increase partnerships
  – Enhance communication

• Multimodal Transportation Initiatives
  – Maximize and manage resources effectively
  – Expand collaboration across campus to share resources
  – Promote alternative transportation modes
  – Heighten campus-wide perspective and shared ownership

• Advance Technology to Stay on the Cutting Edge
  – Expand new advances in transportation technology
  – Research and develop new technology
  – Use technology to increase efficiency
Major Services

- Permit management
- Parking enforcement
- Special event parking
- Travel Reduction Management
- Campus bus service
- Employee bus pass program
- Bicycling and pedestrian support
- Visitor parking
- Traffic planning
- Moped management
- Parking lot maintenance and infrastructure improvements
- Outreach and education
Informational Statistics

• 17,000 Faculty/Staff
• 42,000 Students
• 4.6 million annual visitors
• 13,000 vehicle parking spaces
  9,000 permit
  4,000 visitor and service
• 10,000 parking permits sold
• 15,000 bicycle parking spaces
• 16,000 bus passes distributed
  1.6 million rides
• 2.5 million passengers on campus bus routes
Customers

• Our customer is any person who is on or plans to come to the campus.
  – Faculty, staff, students
  – UW Health community
  – Permit holders
  – Daily parking customers
  – Alternative transportation commuters
  – Visitors
  – Special event hosts, attendees
Transportation Services Partners

- Unit Transportation Coordinators
- Campus Transportation Committee
- UWPD
- ASM
- UW Unions
- Fluno Center
- UW Health
- College of Engineering
- VIPS
- CALS
- Dean of Students
- UW Housing
- City of Madison, DOT, UW Systems
Campus Transportation Committee

- Provides advice and recommendations on policies and budget
- Ensures appropriate consultation of governance bodies
- Initiates and recommends projects for addressing campus transportation needs
- Provides representation on all building committees for transportation
Revenues and Expenses

Transportation Services Budget
2012-13 Revenues
$20,132,000

- Visitor Parking $6,418,300 / 31.9%
- Annual Permit Parking $9,771,500 / 48.5%
- Other Income $78,400 / 0.4%
- Meter Revenue $172,500 / 0.9%
- Citation Revenue $1,319,300 / 6.6%
- Special Events Revenue $100,500 / 0.5%
- Ath Dept Special Event Rev $677,000 / 3.4%
- Bus Program Revenue $361,400 / 1.8%
- Campus Bus Student Fees $937,300 / 4.7%
- Campus Bus Revenue $120,800 / 0.6%
- Safe Program Student Fees $121,000 / 0.6%
- Bike Program Revenue $5,900 / 0.0%
- Investment Earnings $48,100 / 0.2%
Revenues and Expenses

Transportation Services Budget
2012-13 Expenses
$19,127,700

- Capital/Depreciation and Interest Expense: $8,053,500 / 42.1%
- Salaries and Fringe Benefits: $3,748,200 / 19.6%
- Supplies and Services: $3,833,300 / 20.0%
- Madison Metro Campus Bus: $1,685,800 / 8.8%
- Madison Metro Employee Bus Pass: $1,806,900 / 9.4%
Recent Initiatives

• Installing new access and revenue equipment in campus garages
• Reconfiguration of the moped program to a lot specific parking model
• Evaluation of the campus bus service by a transportation consultant
• Review of lot designations, prices, and hours of control
• Conducting supply and demand analysis of vehicle and bicycle parking locations
• Improved communication
Campus Parking Options

- Hourly Parking in campus parking garages
  - $2/hr. first 2 hours, $1 thereafter $12 maximum
- Nightly Parking rate (After 4:30pm)
  - $1/hr. with a $5 nightly maximum
- Temporary Monthly $80 (Levels 1, 2)
- Temporary Monthly $115 (Level 3)
- Meters $1.50/hr.
- Park and Ride (Research Park) $250/yr.
- Annual Base lot Permit Rates
  - Three levels: $540, $790, $1130
- Vendor Annual Permit $1,500
- Reserved Meter (Bag) $15/day
Parking Hours of Control
Night Parking
Parking Citations

Purpose

- Improve compliance with policies
- Use parking resources efficiently
- Balance competing needs
- Everyone pays to park on campus
Questions?