PLEASE FILL OUT A SURVEY!

They are available at each table

• Please fill out your surveys and return them to the front table before you leave.
• We want your thoughts and suggestions about how you feel Construction Junction went, and what we could do to improve.
• Thank you in advance!
Today’s agenda

• MSU Board of Trustees updates

• Ken Dawson hikes Continental Divide to help urban youth

• Summer Circle Theater dedication

• 2014-15 campus snow communications

• Spartan Treasure Hunt

• Progress updates
  o Owen Graduate Hall - elevator replacement
  o Biomedical Physical Sciences - lab facility monitoring Aircuity Optinet System, implement energy conservation measures
  o Olin Health Center - alterations to rooms 216 and 217, restrooms B1 and B54
  o Kellogg Center - replace absorption chilled water system
  o Bio Engineering Facility
Step 2: Authorization to proceed

- Engineering Building - chiller replacement
- Saginaw Valley Research and Extension Center - agricultural education center
- Children’s Garden – restroom and sewer line

Step 3: Bid and contract award

- Parking – Lot 97 (Engineering Research) expansion
Step 2: Authorization to proceed

- MSU College of Law - north entrance site improvements
- Food Processing and Innovation Center
- Special Housing – construct original building
IPF’s Ken Dawson to hike 3,100 miles to raise funds for at-risk youth
Summer Circle Theater dedication

Welcome to Summer Circle Courtyard
Dedicated
September 18, 2014
- It’s snow season. Be snow safe!
  - Don’t rush – give yourself time to get to work
  - Drive carefully
  - Dress warmly
  - Wear sensible shoes
  - Watch where you are walking
  - Shorten the length of your stride while walking
  - Check the forecast before heading outside
• **Safety**
  
  • Do not dart out in front of or behind snow-removal equipment. It is large, loud and difficult to stop quickly.
  
  • Make eye contact with a snow-removal equipment operator before crossing in front of him/her.
• Salt and ice-melt compound
  • Dial 353-1760 to report icy spots on campus.
  • It takes time for the ice-melt compound to take effect.
Brine versus no brine
Brine versus no brine
Remember... your help is needed!

If you see an icy area, please sprinkle it with ice-melt compound.
Please help us keep walking surfaces clear of snow and ice this winter.

The ice-melt compound is an environmentally friendly alternative to salt that is provided by your Infrastructure Planning and Facilities partners in snow removal:
• Building Services–Custodial Services
• Landscape Services

Thank you for your help!
• **Sidewalks**
  - Do not park so close to the sidewalk that your car’s bumper hangs over it.
• **Parking lots**
  
  • Avoid parking in the part of a lot that has not yet been cleared.
  • Park where it’s plowed or wait a few minutes for the driver to finish and then park freely in the cleared lot.
• Residence hall parking loops
  
  • Parking is prohibited in residence hall loops from 2 to 6 a.m.
  
  • With 65 people plowing, 26,000+ spaces must be cleared before 6 a.m.
• To request services or to report dangerous spots on campus, call 353-1760.

• If you can’t call, tweet IPF (@MSUFacilities) to report snow concerns (and to send photos).

• For more information on MSU’s snow-removal plans, visit ipf.msu.edu.
  o Snow and ice removal services: http://ipf.msu.edu/services/snow-and-ice-removal.html
  o Green practices for snow removal: http://ipf.msu.edu/green/practices/snow-removal.html

• E-mail feedback, suggestions and comments to snowplan@ipf.msu.edu.
Why do a Spartan Treasure Hunt?

• Understand and improve how buildings work for user comfort and efficiency
• Build relationships between building residents and facilities staff
• Support MSU energy goals
MSU Goals – Energy Transition Plan

- Energy Transition Plan sets goals for sustainable energy use

- Reduce GHGs 30%
- Campus renewable portfolio 15%
**MSU Goals – Better Buildings Challenge**

- **Goal:** 20 percent reduction in energy use intensity by the year 2020 for main campus
  - More than halfway toward goal (15 percent reduction)
Spartan Treasure Hunt and Commissioning

Step 1: Prioritize buildings
Step 2: Gather building information and Spartan Treasure Hunt
Step 3a: Energy audit
Step 3b: Systems evaluation
Step 4: Implement findings
Step 5: Ongoing Commissioning activities
What is a treasure hunt?

• Based on lean manufacturing principles to reduce waste and save money

- Change for the better
- Use only what you need
- Listen, learn
- Go and see
- Small group activities
- Ask questions
- Implement, measure, verify
Kaizens

• ...”change for the better”...”improvement” or “to take apart and put back together in a better way”

• During the treasure hunt we will identify one issue with multiple opportunities for change or improvement
  • E.g. Too much light in the hallway
    • Kaizen 1 – turn off the lights
    • Kaizen 2 – remove the lights
    • Kaizen 3 – use an occupancy sensor
Genchi Genbutsu or “go see” principle

Go and see if systems are working as they are designed.
Ask questions – the five whys

Ask why until you get to the real root cause

Issue

Root cause
What is a Treasure Hunt?

• Building occupants and facilities experts in different teams (e.g. lighting, HVAC, special processes)
• Teams ask questions, make observations, and recommend solutions
• Observations and solutions are reviewed, quantified, and evaluated during the Commissioning process
What happens to what we find?

Treasure Hunt kaizens

- Implement low cost measures
- Funding request for large projects (facilities and department)
- Behavioral/occupant-based opportunities

Projects reviewed by EVP – approved projects are implemented

Eco-rep/steward review of kaizens and practices

Department implements kaizens as able

Full implementation may take up to 1 - 1 ½ years due to funding cycles
Past treasure hunt example:

Observation:
Elevator lights on 24/7  *(the “what”)*

Opportunity:
Find a way to shut them off during unoccupied periods which will conserve energy  *(the “why”)*

Suggested action plan:
Utilize an elevator energy optimization tool that shuts down car lights and the interior fan unit when the elevator is not in use  *(the “how”)*

Outcome:
Approved for funding:  Cost = $1,200   Savings = $310/year
Simple payback = 3.87 years
Additional benefits to the customer

- Knowledge of how the buildings works
- Understand the mechanism for problems to be addressed
- Collaborative approach to idea generation between customer and IPF - customer can help guide IPF to make sure solutions are realistic and have an impact
- Fast track critical observations for immediate attention
Questions?
Why?
• Replacement of aging controls and cars

Timeline:
• Project start: December 15, 2014
• Ready for use: March 31, 2015

Impacts:
• Periodic impacts to accessibility in east residence tower
• Cars are being replaced one at a time – impacts to accessibility should be minimal
Owen Graduate Hall – elevator replacement
February 2015

Construction representative:
Todd Wilson
tdwilson@ipf.msu.edu
(517) 432-4355
Biomedical Physical Sciences – lab facility monitoring Aircuity Optinet System, implement energy conservation measures

February 2015
Why?

• Building laboratory controls upgrades, and indoor air quality monitoring system installation, will facilitate energy conservation.
• Updating the controls will allow the building automation system to setback the air exchange rate within the building laboratories, to save energy when the indoor air quality system indicates that a safe environment is being maintained.

Timeline

• Project start: Aug. 1, 2014
• Project completion: Dec. 31, 2014
• Currently performing final testing and calibration of new system

Impacts

• Each lab is being taken offline for a three-day period while new equipment is installed and then turned back over to researchers.
Biomedical Physical Sciences – lab facility monitoring Aircuity Optinet System, implement energy conservation measures

February 2015

CONSTRUCTION.MSU.EDU

Construction representative:
Todd Wilson
tdwilson@ipf.msu.edu
(517) 432-4355
Why?

• Creation of a new, updated reception area for primary care
• Update to staff locker and shower rooms

Timeline:

• Work began at end of Spring 2014 session
• Reception area completed: Aug. 18, 2014
• Remaining work completed: Dec. 31, 2014

Impacts:

• Minimalized by maintaining corridor access around the work area
New reception desk in Primary Care

Olin Health Center - alterations to rooms 216 and 217, restrooms B1 and B54
February 2015
Primary Care waiting area
View looking south toward the reception desk
East entrance to Primary Care reception
Olin Health Center - alterations to rooms 216 and 217, restrooms B1 and B54
February 2015

CONSTRUCTION.MSU.EDU

Construction representative:
Todd Wilson
tdwilson@ipf.msu.edu
(517) 432-4355
Why?

• Project goals
  o Replace existing steam-absorption chiller plant that has reached the end of its useful life.
  o Provide the Kellogg Center with a reliable and efficient chilled-water cooling system.

• Scope
  o Remove both 700-ton steam-absorption plants.
  o Install 680-ton modular chiller in existing mechanical room.
  o Replace cooling towers on roof (existing location to remain).
  o Kellogg Center must remain in operation throughout chiller plant replacement.

• Impacts
  o Harrison Road single-lane closures will be limited to evenings.
  o Closures will not occur during athletic events.
Schedule:

• Construction start: November 2014
• Chiller up and running: April 2015
Site plan (project will require night-time lane closures for cooling tower removal)
Two of the three new cooling towers
New chiller piping
New chiller
Construction representative:
Kevin Durkin
kdurkin@ipf.msu.edu
(517) 432-2153

Kellogg Center – Replace Absorption Chilled Water System
February 2015

The existing steam-absorption chiller serving the Kellogg Hotel and Conference Center has reached the end of its useful life. In order to maintain hotel, conference and academic operations this chiller must be replaced.

Project phase: Construction

Project details:
- This project includes removing the existing steam-absorption chiller and replacing it with a modular electric chiller in the existing mechanical room.
- It will include the removal of both 700-ton steam-absorption plants that are currently in place, and replacing them with one 680-ton modular chiller.
- The modular chiller consists of eight small chillers connected together. This allows for efficient cooling by turning on only enough of the chillers to accommodate the current cooling demands.
- The University Hazardous Materials Report for this building will be referenced for design.

The Kellogg Hotel and Conference Center is located on Harrison Road in the Residential District.
Why?

• This project involves a four–story research lab building that is designed to facilitate interdisciplinary research and interaction among all occupants.
• The building will be physically connected to the existing Clinical Center C-Wing and Life Science B-Wing, with proximity to the Radiology Building to facilitate the sharing of core research resources.

Timeline

• Construction start: September 2013
• Ready for occupancy: December 2015
Impacts

• The two east doors on the southeast side of Life Science are for emergency egress only (directional fencing in place).
• The north drive off of Service Road, east of the Life Science Building, will remain open for construction traffic and deliveries only.
• There will be increased construction traffic.
Workers waterproof the roof for the second-floor corridor (connecting BEF to Life Science)
A new underground duct bank composed of PVC piping is placed to provide building electricity.
Beams and metal decking are sprayed for fireproofing while duct work, piping and conduit are installed.

Road closed to the public. Construction and delivery use only.

Three – Way Stop
Construction Representative:
Ken Gottschalk
kjgottsc@ipf.msu.edu
(517) 353–7234

Bio Engineering Facility
Project phase: Construction

The construction of the Bio Engineering Facility will provide a unique opportunity to bring together research teams from engineering and biomedical research to promote the development of bio-engineering and engineering health sciences at Michigan State University. These emerging research areas have significant opportunities for increased federal research funding, as well as for technology transfer to the private sector, which can promote the development of a transformational bio-based economy in Michigan.
IPF website

- Alerts feed
- Construction
  - Detours
  - CJ info
  - Project info
  - Contact info
- Resources
- Listservs

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- “Like” IPF on Facebook: www.facebook.com/MSUFacilities
- Watch IPF videos on YouTube: www.youtube.com/FacilitiesMSU
Construction Junctions continue monthly

Meetings are at 8:30 a.m. the second Thursday of the month

- March 12 (College of Law, room 343)
- April 9 (College of Law, room 471)
- May 14 (College of Law, room 343)

Please sign in and take a survey before you go!