NEW-AND-IMPROVED SURVEYS!
They are available on the table at the front of the room

- 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!
• Board of Trustee updates
• Campus Snow Plan
• Progress updates
  • West Circle Housing Complex – Infrastructure Improvements – 2014 (Phase 2 Of 2)
  • North Campus Infrastructure Improvements – West Circle Drive 2014
  • Chittenden Hall – Renovation
  • Anthony Hall – Energy Conservation Measures
• Construction Awareness Day preview
• New detour map demonstration
• Alerts feed on the IPF website
Step 1: Authorization to Plan

- Life Sciences – Renovation – A Wing

Step 2: Authorization to Proceed

- Facility for Rare Isotope Beams – Building Structure
- Veterinary Teaching Hospital – Nursing Care Unit Renovation
- Parking Lot 97 – (Engineering Research) Expansion

Step 3: Bid and Contract Award

- Bessey Hall – Renovate Third Floor
Step 2: Authorization to Proceed

- Kellogg Center – Replace Absorption Chilled Water System
- T. B. Simon Power Plant – Sorbent Injection for Boilers 1, 2, and 4

Step 3: Bid and Contract Award

- Parking Lot 97 – (Engineering Research) Expansion
- Well House 32 – New Campus Well
• 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
Meet one of our snow-removal experts: Matt Bailey
• **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.
Campus Snow Plan

Remember... your help is needed!

WALKWAY ICE MELT

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!

INFRASSTRUCTION PLANNING AND FACILITIES

WE KEEP MSU RUNNING
ipf.msu.edu • Call 353-1760
• **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 between 2 a.m. and 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.
Project scope:

- Second phase of a two-phase project
- New steam tunnel, electric service, communication ducts and water main replacing 50-year-old services
- Improved reliability for all utility services

Timeline:

- Some early start work in March
- Visible construction complete by August
- Continue electric cut-overs through December
Impacts:

• Some parking loss to Delta Court (West Circle Housing Complex planned to be vacant for summer)
• Maintain construction access to the Landon Hall construction site (via West Circle Drive)
• Delta Court closed east of the Wills House driveway
Utility layout
Construction detour plan (April 7 – April 21)
CONSTRUCTION.MSU.EDU

Design representative:
John LeFevre
lefevr20@ipf.msu.edu
517-884-6740

Construction representative:
Kevin Durkin
kdurkin@ipf.msu.edu
517-432-2153

West Circle Housing Complex – Infrastructure Improvements (Phase 2 of 2)

Project phase: Planning/Design

The infrastructure in the West Circle housing complex dates back to the 1940’s and is in need of replacement. Failures of the direct buried piping are common and have increased in recent years. The water main in this area needs to be increased in size for effective fire-fighting capability and reliability. The existing electrical duct bank is currently full and requires additional ducts to be installed for future electrical improvements to the region of campus.

The planning of this project is anticipated to include steam and condensate piping to Willis House, Yakely-Gilchrist, and Williams Hall, along with a new water main, communication lines, and electric ducts. Replacement of the primary electrical services to these buildings will be accomplished by installing a regional substation and pad mounted transformers. The east side of the complex infrastructure (serving Mary Mayo, Campbell and Landon Halls) was completed in 2009. This project will complete the infrastructure renewal for the West Circle Housing Complex.

This project is located in Northwest campus in the courtyard areas of Willis House, Yakely-Gilchrist, and Williams Hall in the residential district.
Project scope:

• This project is the third of a four-phase program to replace the deteriorating north campus arch steam tunnels. It involves:
  o removing and replacing existing steam tunnels and building service leads;
  o increasing the steam distribution mains to the region;
  o increasing line capacity for high-pressure steam distribution mains;
  o converting the condensate return from a vacuum system to a pressure return; and
  o upgrading the MSU Museum’s steam service to high-pressure steam and pressure condensate return.

Timeline:

• Construction start: November 19, 2013
• Planned construction end: Fall 2014
Impacts:

• During construction, all the buildings in the zone of influence will be converted to high-pressure steam and pressure-condensate return lines, improving energy efficiency.

• West Circle Drive will be replaced with two traffic lanes and one bike lane (one-way traffic), providing appropriate vehicular, pedestrian, and bicyclist safety improvements.

• Pedestrian detours are in effect around the project site.
View of vault 386 before the concrete lid is installed, west of Chittenden Hall
View of the completed concrete lid for vault 385, west of Morrill Hall of Agriculture
View of vault 389 wall forms and reinforcement, southwest corner of Chittenden Hall
View of north campus substation excavation, southwest of Morrill Hall of Agriculture
View of the new steam vault 386 site
Construction detour plan (March 7 – May 4)
Construction representative:
Andy Linebaugh
alinebau@ipf.msu.edu
517-432-7103
Project scope:

• This project involves a comprehensive renovation that respects the historical features of the exterior and interior of the building.

• Interior spaces to support the Graduate School program will drive the design and layout of these rooms.

• Renovations will include:
  o Building infrastructure
  o Just-in-time needs such as plumbing, heating ventilation and air conditioning, electrical, life safety and data
  o Building envelope and foundation
  o Accessibility, including addition of an elevator and restrooms.
Timeline:
- Construction start: Nov. 19, 2013
- Planned construction end: Fall 2014

Impacts:
- Lot 7 is partially closed for duration of project.
View of the existing building foundation and floor reconstruction
Temporary structural reinforcement for the first floor
View of Chittenden Hall basement
Rendering of completed plaza
Interior rendering
The Dairy Building Becomes Forestry

Posted on January 30, 2014

What is now known as Chittenden Hall was originally called the Dairy Building. The building housed dairy operations for over a decade beginning in 1900.

The Michigan State Agricultural College Catalogue for the year 1901-1902 describes the Dairy Building as follows:

*The Dairy Building was erected in 1900, at a cost of $15,000. It contains a large room properly equipped with separators, churns, and workers of the latest and best types for instruction in butter-making. This room is 50*
Construction Detour Plan (Nov. 15, 2013 – Aug. 24)
Construction representative: 
Andy Linebaugh 
alinebau@ipf.msu.edu 
517-432-7103
Why?

• MSU’s showcase project in the U.S. Department of Energy’s Better Buildings Challenge program.
• To implement energy conservation measures, improve the facility and address maintenance and repair items.
• These efforts will:
  o enhance safety
  o reduce waste
  o increase occupant comfort
  o reduce greenhouse gas emissions
  o improve operations
  o improve energy-efficiency
Project updates:

• New variable frequency drives
• New motors
• New occupancy sensors for lights/HVAC
• Continuing with commissioning of systems
• Balancing of HVAC systems
• Calibration of controls
• Substantially completed by end of 2013. Balancing and commissioning continues.
Aircuity hardware installed at Anthony Hall. This system continuously monitors the air throughout the lab spaces and enables the HVAC to be reduced when appropriate.
Emergency purge button linked to the lab ventilation and the Aircuity system.
Updated digital controls and electronic components for heating, ventilating and cooling increase efficiency and response time.
Anthony Hall – Energy Conservation Measures
March 2014

http://www4.eere.energy.gov/challenge/partners/better-buildings/michigan-state-university

Energy Performance

Goal
20% Reduction in Energy Intensity by 2020

Commitment
20 Million Square Feet

Progress
10% Cumulative (vs Baseline)

Data
View Details on MSU's Progress to Date

Showcase Project

Anthony Hall - Advancing Energy Efficiency
East Lansing, MI

Implementation Model

Michigan State University's Playbook
Integrated Model For Long Term Campus Energy Planning
**Anthony Hall - Energy Conservation Measures**  
**March 2014**


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**Better Buildings CHALLENGE**  
U.S. DEPARTMENT OF ENERGY

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**Anthony Hall North View**

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**ANTHONY HALL-ADVANCING ENERGY EFFICIENCY**

**Showcase Project: Michigan State University**

- **Location**: East Lansing, MI
- **Project Size**: 317,200 Square Feet
- **Financial Overview**: Project Cost $5.1 Million

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**Annual Energy Use (Source EUI)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Expected (2014)</td>
<td>385 kBtu/sq. ft.</td>
</tr>
<tr>
<td>Actual</td>
<td>COMING SOON</td>
</tr>
</tbody>
</table>

**Expected Energy Savings**: 34%

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**Annual Energy Cost**

<table>
<thead>
<tr>
<th>Baseline (2010)</th>
<th>$1,604,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected (2014)</td>
<td>$1,068,000</td>
</tr>
<tr>
<td>Actual</td>
<td>COMING SOON</td>
</tr>
</tbody>
</table>

**Expected Savings**: $536,000
MICHIGAN STATE UNIVERSITY

Implementation Model: Integrated Model For Long Term Campus Energy Planning

ORGANIZATION TYPE
Public university

BARRIER
Lack of understanding of the impact of energy systems on the environment, campus resources, and the community

SOLUTION
The Integrated Energy Planning Model (IEPM) articulates the complex nature of energy use at a research institution, and the impacts to key metrics, such as utility costs, tuition, greenhouse gas emissions, debt capacity and more

OUTCOME
MSU administration make more informed decisions about how to best use MSU resources to meet campus sustainability goals; the first impact was a 5% increase in efficiency at the campus power plant
Construction representative:
Kevin Durkin
kdurkin@ipf.msu.edu
517-432-2153
New-and-improved detour information: https://ipf.msu.edu/construction/detours/index.html
Coming next month!

**ICE CREAM CONES AND CONSTRUCTION ZONES**

2014 summer construction roundup
Thursday, April 10, 2014
8:30 a.m.
MSU Union Ballroom
With breakfast treats provided by:

spartan signature catering

Trivia contests with prizes from:

eat at STATE

Ice cream from the:

MSU Dairy Store

And more fantastic surprises!
A visit from our old friend Captain Construction!
And a special appearance by a famous guest star!
New(ish) IPF website

- Alerts feed
- Construction
- Resources
- Listservs
- Much more!

www.ipf.msu.edu
Stay connected via social media

*New names to represent new IPF unit!*

For updates **on all things IPF** follow [MSUfacilities](https://twitter.com/MSUfacilities) on **twitter** and become a fan of our [facebook](https://www.facebook.com/MSUFacilities) page – [MSUFacilities](https://www.facebook.com/MSUFacilities). Also, check out our [YouTube](https://www.youtube.com/FacilitiesMSU) page at [www.youtube.com/FacilitiesMSU](https://www.youtube.com/FacilitiesMSU) for virtual tours of major projects on campus.
BEFORE YOU GO, VISIT THE CONSTRUCTION ‘SITE’:

CONSTRUCTION.MSU.EDU

Key features:
- Construction projects
  - Project info
  - Contact information
- Construction detours
- Construction Junctions
- Construction listserv
Construction Junctions continue monthly

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

- April 10 (Construction Awareness Day) – Union Ballroom
- May 8 – College of Law, room 343
- June 12 – College of Law, room 343

Please sign in and take a survey before you go!