CONSTRUCTION PLANNING AND PROGRESS MEETING
BROUGHT TO YOU BY INFRASTRUCTURE PLANNING AND FACILITIES
December 2017

Twitter hashtag #msuconstruction
PLEASE LET US KNOW HOW WE’RE DOING

• We want your thoughts and suggestions about the online version of Construction Junction, and what we might do to improve.

• Please leave any comments or suggestions in the feedback box on the Construction Junction webpage located at: http://ipf.msu.edu/construction/construction-junction/index.html.
Today’s agenda

MSU Board of Trustees updates

Informational
• Campus Snow Plan

New projects
• Water distribution – campus water system improvements
• Electrical distribution – Dairy Research Complex
• Jenison Fieldhouse – renovations
• Biochemistry – replace windows

Project updates
• Interdisciplinary Science and Technology – construct original building
• Business College Complex – Addition No. 2 – Pavilion
• Engineering Research – Hulett Rd. – Addition No. 2 – Food Processing Innovation Center
• Solar carports (electrical distribution – renewable energy)
• Engineering Research Complex – addition and renovations
Step 2: Authorization to proceed

- Student Services – replace windows and curtain wall
- Cook Hall – building renovation
- Wells Hall – replace induction units (phase two)

Step 3 – Bid and contract award

- Wilson Road – extension
Step 2: Authorization to proceed

• Electrical distribution – Dairy Research Complex
• International Center – revitalization
• Water distribution – campus water system improvements
• Service Road Field – restroom and storage – construct original building
• Demonstration Hall – alterations to multi-use court floor
• IM Sports-West – replacement of indoor turf surface in room 161
• IM Sports-East – renovations and resurface indoor track
• All-season rink – construct original building
• Biochemistry – replace windows

Step 3 – Bid and contract award

• Communication Arts and Sciences – replace roofs (2016-17 major maintenance)
• Olin Health Center – student health
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 in front of or behind snow-removal equipment. It is large, loud and difficult to stop quickly.

• Make eye contact with snow-removal equipment operator before crossing in front of them.
Salt and ice-melt compound

- Dial (517) 355-1855 to report icy spots on campus.
- Please remember that it takes time for the ice-melt compound to take effect.
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 sections of a lot that have not yet been cleared.
- Park where it’s been plowed or wait a few minutes for the driver to finish and then park 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 ContactMSU@ (517) 355-1855.

• 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
Why?

• In December 2016 the Board of Trustees authorized planning for improvements to the campus water system to improve the palatability and aesthetics of MSU’s water.

Project details

• Possible solutions evaluated included:
  o Iron filtration plant with an elevated storage tank
  o On-site water softening plant
  o Purchase of treated water from Lansing or East Lansing
• Analysis of each alternative concluded that the most cost effective option to address the primary concerns of the water’s appearance and taste was to construct an iron filtration plant with an elevated storage tank at an estimated cost of $21 million.
Possible sites for the plant included:

- Site 1 – West of the Engineering Building (near the existing reservoir)
- Site 2 – South of Trowbridge Road (near the Communication Arts and Sciences parking ramp)
- Site 3 – East of the T.B. Simon Power Plant on Service Road
- Sites 4 and 5 – East of Farm Lane near the Pavilion

Extensive analysis of each site’s pros and cons resulted in the selection of Site 3:

- Site is in the Campus Service District
- No impact on pedestrian traffic
- Good access to existing well water and water distribution lines
- Some additional costs are expected to deal with poor soil conditions
Schedule

• Construction start: July 2, 2018
• Construction completion: Nov. 6, 2019
Elevated Tank
Looking South on Red Cedar Road
Elevated Tank
Looking North on Farm Lane
Elevated Tank
Looking East on Service Road
Elevation - looking northeast
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Project Representative: Robert Nestle
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Water distribution – campus water system improvements

Water distribution - campus water system improvements
Project phase: Planning/Design

Project background
- MSU operates its own water system and draws water from wells in the agriculture district to provide approximately one billion gallons annually and service most buildings on the East Lansing Campus.
- The water meets all regulatory requirements. Routine water sampling for biological constituents such as coliform, inorganic materials such as copper and lead, and substances consistently fall well below any recommended and regulatory thresholds for safety. A complete analysis is included in the MSU Water Quality Report (2016) at:
  https://ipf.msu.edu/green/water/water-quality-report/
- Concerns remain however, that the overall water quality is not pleasing to users relative to color and taste. The raw water supply has high levels of turbidity, hardness, iron, and manganese. Periodic "red water events" occur, as do maintenance problems with local
Dairy Teaching and Research Center
Why?

• To increase electrical service reliability to all facilities within the Dairy Research Complex through the replacement of existing overhead utility, and below grade electrical services.
• To greatly reduce the number of annual service outages resulting from the existing infrastructure.
Project goals

- Remove service interruptions originating within the complex and improve site-wide electrical safety
- Simplify and improve standby power operations during electric utility outages
- Upgrade electrical service equipment where needed and improve system efficiency

Project scope

- Replacement of existing overhead primary power lines with underground electrical distribution infrastructure
- Upgrading/updating the electrical services to key facilities
- Remedying known points of future electrical service failures
- Establishment of a single point of connection for future standby power support during Consumers Energy outages
Impacts

• Brief power interruptions for all Dairy Research Complex facilities while temporary power is connected to loads affected by remediation and replacement work. This will also include the Anaerobic Digester and Well House No. 18.
• Normal paths of travel in and around the Dairy Research Complex will be impacted periodically during construction.

Schedule

• Construction start: Fall 2018
• Construction complete: by May 2019
Existing north complex overhead distribution

Consumers Energy power pole and point of service

Service point for the calf barn and main building
Existing multi-building service points

Service point for the silo shed, manure barn, and metabolism building

Service point for the slat barn, heifer barn, and milking parlor pump room

Service point for the feed barn and milking parlor panels
Additional facilities served within the complex

- Anaerobic digester
- Well house #18
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Jenison Fieldhouse – renovations (CP16103)
Why?

• Jenison Fieldhouse is currently home to the majority of scholarship Olympic sports teams at MSU.
• While the facility may have rich history; history is not what impresses today's division one athletes.
• In the last decade MSU’s revenue sports facilities have undergone major facelifts while the programs in Jenison are recruiting from a facility that cannot compare with those of competing Big Ten universities.
Project goals
• Create functional, flexible and collaborative spaces for the coaching staff and teams that reside in Jenison Fieldhouse
• Enhance recruiting
• Create an interactive entry that is both a public node and an identity for the building and an identifier for its occupants

Project scope
• Complete remodel of the second level (lobby)
• Partial renovations to portions of levels three and four
• Window replacement
  o Many of the existing windows are single pane, operable metal windows which are highly inefficient and counterproductive to the buildings recent mechanical system upgrades
• Improved wayfinding
• Improved security
Impacts

- Building occupancy will be maintained
- Temporary partitions to direct internal pedestrian traffic and allow continuous use of the elevator
- Significant construction fencing on the northeast corner of the building
- Minimal use of north end of south parking lot for construction trailer
- Temporary scheduled rerouting at building entrances
- Typical construction noise with dust control in place
- Necessary utility shutdowns will be coordinated and communicated in advance

Schedule

- Construction start: February 2018
- Ready for occupancy: January 2019
Existing second floor lobby and office wings
First floor plan

Aquatic Entry

- Construct barrier-free pool viewing on existing deck
  - Maintains approx. 8’ of deck depth
  - “Barrier” created by railing and curb

- Travel office to remain (alternate)
  - Update cpt / paint
  - Add drywall/insulation to deck

- Entry update
  - New doors
  - New windows
  (see elevations)
Third floor plan

- New mechanical ductwork
- (2) new unisex restrooms
- (1) housekeeping space
- Classroom 309 to remain
- Athletic team room
- Academic room (replaces 209)
- Electrical room (existing to remain)
Enlarged third floor classroom plan

projection per the request of academics. additional monitors to support athletic use TBD

academic room (replaces 209)

adjacent electrical room (existing to remain)
Overall second floor view
Potential lounge view
Typical office layout
Typical office layout
Potential team suite entry
Potential corridor view
Existing proposed entry/door changes
Project Representative:
Jeff Kasdorf  
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(517) 353–5141
Why?

• The windows in Biochemistry date to the building’s construction in 1964 and no longer provide adequate insulation or environmental protection.
Project goals

- Window replacement with efficient, thermally broken units to support occupant comfort without excessive condensation.
- Selection of units that respect the dimensions, proportions and finish of the original design.
- Replacement of existing solar screens on the south side of the building with gray tinted glass for an updated appearance.

Project scope

- Replacement of 278 windows with new, fixed aluminum windows
- Abatement of PCB caulking
- Restoration of finish surface of plaster at windows as required
- Replacement of interior stone sills where broken
- Installation of new window blinds
Impacts
• Building to remain occupied during construction, except for brief scheduled phasing of individual rooms to complete the work
• Barrier-free entrance will have a temporary overhead structure constructed to allow continuous safe access during the north stairwell phase
• Temporary pedestrian walkway to be incorporated adjacent to existing path on north side of building during north stairwell phase
• Six parking spaces at south of building to be closed off for a limited phase of construction; will be coordinated with MSU Police Dept.
• Loading Dock to remain accessible throughout the project

Schedule
• Construction start: May 2018
• Completion of work: October 2018
South elevation existing windows
North elevation existing windows
Typical existing south windows
Typical existing window, shade, and plaster deterioration
Cracked soapstone sill
Example of new window shade
Biochemistry – replace windows (CP16202)

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Design Representative:
Kristin Pennock
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Project location
Project milestones *accomplishments/project phases completed during the past month*

- Steel erection is partially complete through the seventh floor
- Concrete decks have been poured

Impact updates *pedestrian, traffic, building occupant, facility impacts expected in the coming month*

- Construction traffic will continue to be heavy on Service Road
The beginning of basement masonry walls
Raising steel and pumping concrete to the third floor
Pouring the concrete floor
Installing tarps to enclose the building for winter work
Project webcam

https://app.oxblue.com/open/RockfordCon/InterdisciplinaryScience
Construction representative:
Carol Cool
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(517) 353-8619
Project milestones (accomplishments/project phases completed during the past month)

- Mass excavation is complete
- Foundation work has progressed on the north side
- South foundation wall construction has started

Impact updates (pedestrian, traffic, building occupant, facility impacts expected in the coming month)

- Sidewalks traveling north and south between Shaw Hall and Business College complex remain closed.
South foundation walls in construction
Backfilling at the south foundation
Installation of west wall rebar
Site logistics plan
Project webcam

https://app.oxblue.com/open/MSU/EliBroadPavilion
Construction representative:
Tony Rhodes
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Project Location – Off Campus
Project milestones

- Building has been enclosed
- Drywall and painting are complete
- Finish work has begun

Impact updates

- No additional impacts expected
Loading dock concrete approach is complete
Process prep room
Food prep room
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Solar Carports (Electrical distribution – renewable energy – CP15105)
Project milestones  (*accomplishments/project phases completed during the past month*)

- Completion of canopy erection; solar panel, wiring and equipment installation in lots 83, 89, 91, 92 and 100
- New lighting is complete in lots 89 and 92.
- Lighting in lots 83, 91 and 100 is partially energized with full completion expected by Dec. 8
- T.B. Simon Power Plant is receiving test energy from Lots 89, 92 and 100 at this time.
- Targeting Dec. 15 for completion of all lots initial commissioning and transitioning to full commercial power generation.

Impact updates  (*pedestrian, traffic, building occupant, facility impacts expected in the coming month*)

- All lots will have ongoing equipment yard fencing installations and restoration activities thru December.
- All lots phase closures for construction will reopen by Dec. 15
- All staging of materials and equipment will be removed from lots by the end of December
Solar Carports (Electrical distribution – renewable energy – CP15105)
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Engineering Research Complex – addition and renovations (CP16042)
Project milestones *(accomplishments/project phases completed during the past month)*

- The addition is enclosed with completion of steel siding installation
- The interior colored concrete floor is installed
- Mechanical and electrical piping in the addition has begun
- The existing front office has new carpet, paint and ceiling

Impact updates *(pedestrian, traffic, building occupant, facility impacts expected in the coming month)*

- Increased construction traffic on the east side of the building
Siding installed and temporary heat installation to allow work to continue inside the building
Mechanical and electrical systems are being installed
Pumps and piping for the new chiller to cool equipment in the new addition
Existing front office with new carpet, paint, and ceiling
One of the front offices that received new carpet, paint and ceiling
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Construction Junctions continue monthly

Presentations will be available on the Construction Junction website around the seventh of each month.

Thank you for your interest, and we hope you’ll visit us again soon!