CONSTRUCTION PLANNING AND PROGRESS MEETING
BROUGHT TO YOU BY INFRASTRUCTURE PLANNING AND FACILITIES
Thursday, July 9, 2015

Twitter hashtag #msuconstruction
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

• New projects
  o Electrical distribution-upgrade northwest zone
  o Crop Science - storage building 2 - construct original building

• Project updates
  o Life Sciences - renovations - a wing
  o North campus infrastructure improvement - West Circle Drive 2015
  o Duffy Daugherty Football Building - renovate locker room and training room
  o Engineering Building - chiller replacement
Step 2: Authorization to proceed

- Food Processing and Innovation Center
- Electrical distribution – upgrade northwest zone
- T.B. Simon Power Plant – capacity and future needs
- Sheep Barn – addition 2 – Sheep Lambing and Research Facility
- Crop Science - storage building 2 – construct original building
Step 2: Authorization to proceed

- Breslin Student Events Center - Facility Upgrades
- Hubbard Hall - Exterior Masonry Repair
Electrical distribution – upgrade northwest zone

Project location
Why?

- As a result of multiple facility and building improvement projects, the electrical power utility circuits in the northwest area of campus have reached their capacity to provide reliable electrical power to buildings and infrastructure.
- An additional electrical power circuit pair from T.B. Simon Power Plant is required to allow for reliable electrical power, future needs, Breslin facility upgrades and the Special Housing project.
Scope

- Provide new electrical power circuit pair to the northwest zone of campus
- Buildings to remain on existing circuit pair: Breslin, Munn Ice Arena, Demonstration Hall, Jenison Field House, Old College Field, IM West, Spartan Stadium, Central Services, Shaw Power Plant and Wells Hall
- Buildings to be powered through new circuit pair: Special Housing, University Village Apartments, Brody Complex, Kellogg Center and Kellogg Center Ramp
- Work will be self-performed by IPF high voltage crew
Work scope

Electrical distribution – upgrade northwest zone

ELECTRICAL DISTRIBUTION UPGRADE NORTH WEST ZONE

LEGEND:

- **5.5 MVA**
- **4 MVA**
- NEW CIRCUIT FROM POWER PLANT TO MH 56

FUTURE SPECIAL HOUSING PROJECT

NEW CIRCUIT
Impacts

• All work will take place below grade, using existing manholes and duct bank structures
• Minimal traffic interruptions may occur for cable pulls

Timeline

• Construction start: Sept. 14, 2015
• Substantial completion: March 1, 2016
Design representative:
Jeff Bonk
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(517) 884-6746
Why?

- Transition away from the annual Ag Expo
- Significant loss of off-season storage
- Replacement storage space is essential
- Bring the storage into the operational area
- Eliminate transportation issues related to multiple storage sites

Scope

- Post-frame construction
- 66 x 216 (14,256 square feet)
- Site + Gravel Floor + Building (no utilities)
Impacts

- High Value Research Equipment Storage
- “Open Space” to be utilized
- No utility expansion
- On-site storage enhances security

Timeline

- Construction start: October 1
- Construction completion: December 1
Aerial view of Agronomy Farm location (and Ag Expo grounds)
Aerial view of Ag Expo grounds
Location of proposed storage building
Basic building elevations
Existing storage building no. 1 (new proposed storage building no. 2 to match)
Project representative:
Ben Darling
darlin21@msu.edu
(517) 927-8238
Why?

• Consolidate the College of Nursing program in Life Science
• Create a new Teaching Collaboration Lab and Media Lab

Project goals:

• Create efficient and appealing workspace
• Bring daylight into the space
• Create an up-to-date media lab for students
• Create a teaching lab for faculty to enhance collaboration
Timeline:

• Construction start: January 2015
• Begin Move In: July 9
Corridor work station
Main corridor
Media Lab
Construction representative:
Matthew Postma
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(517) 353-9223
North campus infrastructure improvements - West Circle Drive 2015
July 2015
Why?

• Replace existing structurally deteriorating arch steam tunnels from the North Campus Substation to Steam Vault 376 (northeast corner of Library building), some of which are 87 to 102 years old.
• Provide new steam services to Olds Hall and complete the north campus steam loop (which also includes steam distribution work in the NCS).
• Install new electrical duct bank from the NCS to north of Olds Hall and replace deteriorated electrical vault lid by Olds Hall.
• Road reconstruction of West Circle Drive (two 10-foot traffic lanes, one 4-foot bicycle lane) from the east side of the MSU Library to the west side of the Auditorium Road and West Circle Drive intersection. Improve pedestrian, vehicular and bicycle safety.
Why?

• Reconfigure Parking Lots 6 and 11 to meet current parking standards.
• Replace deteriorated cast iron water mains and improve fire flow capacity.
• Decommission NCS electrical transformers.
• Repair/replace deteriorated sanitary and storm sewer mains.
Parking impacts

- Parking Lot 6 (MSU Museum parking lot) has been reconfigured to meet current parking standards and will result in a loss of eight (total count from 45 to 37) parking spaces.
- Parking Lot 11 (Hannah Administration, MSU Library and Olds Hall) has been reconfigured to meet current parking standards and pedestrian safety. The above improvements will result in a loss of 10 (total count from 127 to 117) parking spaces.
Timeline

• Construction early preparation: March – May
• Construction begins: May 11
• West Circle Drive and Parking Lot 6 reopened: July 12
• Parking Lot 11 and access drives reopened: August 14
Proposed - West Circle Drive - project area and phases

Phase 4 of 4
Proposed hardscape, utilities and vegetation
Construction phasing
Proposed construction sequence – phase 1 (May 11 – July 12)
Proposed construction sequence – phase 2 (July 12 – August 14)
MSU Museum drive and parking area in progress
Steam tunnel
New sidewalk in front of MSU Museum
Olds Hall pavement work
New steam vault
Construction representative:
Andy Linebaugh
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Duffy Daugherty Football Building – renovate locker room and training room

July 2015
Why?

- Training facilities were last updated in the mid-1990s.
- Major technological changes have occurred in training therapy delivery methods since then.
- The installation of modern equipment will necessitate reconfiguration of the existing space.
- The locker rooms in the building are in need of functional, spatial and aesthetic refurbishment, as they no longer reflect Big-Ten-level facilities.
Scope

• Training room
  o Install new therapy pools, reconfigure office area, reception/monitoring and treatment spaces.

• Locker room
  o Reconfigure locker arrangement for a more open layout and install new lockers.
  o Redistribute ventilation system.
  o Update furniture, finishes and technology.
Impacts

• Occasional road closures on Shaw Lane during portions of the project due to truck traffic.
• The building will remain open during the project, and alternate routes through the building will be provided for occupants.

Timeline

• Construction start: January 2015
• Ready for occupancy:
  • Locker room – June 1
  • Training room – July 17
Proposed new locker room perspective
Locker room – looking south to east entrance
Locker room center section – looking south
Proposed new training room perspective – therapy pools
Training room – looking northeast toward new reception desk
Training room – looking southwest
Construction representative:
Kevin Durkin
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Engineering Building – Chiller Replacement
July 2015
Why?

• Replace aging cooling equipment at the end of its useful service life.

• Implement a comprehensive, long-range plan to create a regional chilled water loop among six buildings:
  o Engineering Building
  o Anthony Hall
  o Food Science
  o Natural Resources
  o Packaging
  o Communication Arts and Sciences

• Create a chilled-water network serving the affected buildings as efficiently as possible.
Scope

• Chilled-water loop
  o Site excavation near Engineering Building south wing
  o Site excavation between Engineering’s Dow wing and Anthony Hall
  o New chilled-water main piping
• Equipment upgrades in satellite buildings (phase II)
  o Addition of pumps and controls in Natural Resources, Packaging and Communication Arts and Sciences
  o De-commission aging electric chiller at Communication Arts
• Chiller replacement at Engineering Building (phase II)
  o Replace steam absorption chillers with new electric chillers
  o Expand building electrical substation
  o New roof-mounted cooling towers
Energy and sustainability

• New chillers at the Engineering Building produce chilled water using 60% less energy than the absorption machines currently installed.
• New chillers will fit in the existing mechanical room, avoiding excessive site disturbance for a building addition.
• Engineering chillers will be large enough to be “base loaded” vs. Anthony and Food Science chillers.
  o Most efficient machines in the loop will meet cooling demand at all six buildings for majority of the year.
• Project will avoid investing in a chiller plant at both the Engineering Building and Communication Arts and Sciences.
Impacts

• Pedestrian detours will be clearly marked during site construction.
• Construction zones will be properly separated to prevent unauthorized access.
• Building crane lifts will be coordinated in advance.
• No adverse parking impacts.
• Site access will require contractor coordination and just-in-time deliveries.
• Pedestrian circulation on-site will be impacted in Summer 2015, with minimal impacts lasting until April 2016.
Timeline

• Construction start: May 2015
• Substantial completion of chiller system: April 2016
Map of site showing tentative detours and entrance closures phase II
Map of site showing tentative detours and entrance closures – Phase II

CHILLER REPLACEMENT (PHASE II) SITE DISTURBANCE ZONE (ALL BLDG ENTRANCES OPEN)
Before and after site excavation between Engineering Building and Anthony Hall
Jack-and-bore pit on southwest side of Engineering Building
Scaffolding for masonry screen wall demolition – south end of Engineering Building court yard
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IPF website

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Construction Junctions continue monthly

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

- August 13 (College of Law, room 471)
- September 10 (College of Law, room 343)
- October 8 (TBD)

Please sign in and take a survey before you go!