

INFRASTRUCTURE UPDATE

PSC ALL-HANDS MEETING
APSUO / PUC MEETING

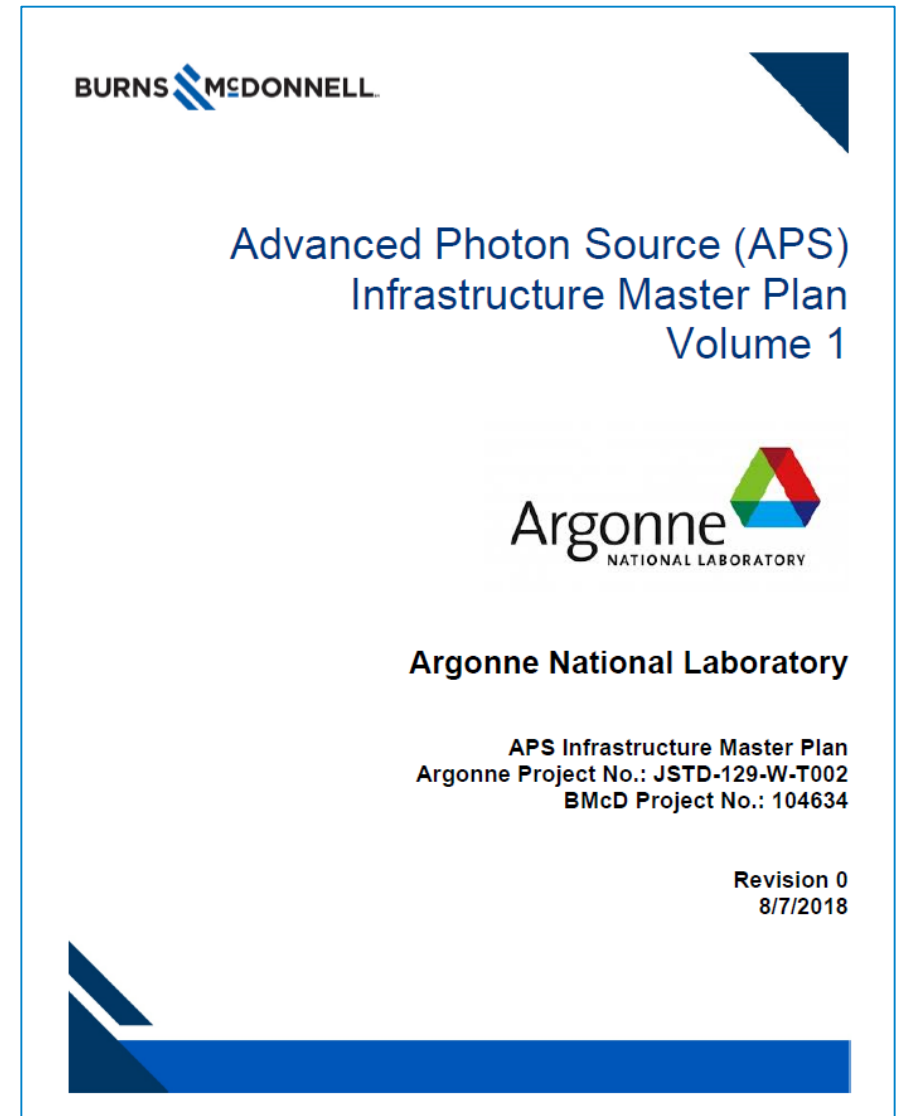


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October 24, 2018

APS (400-AREA) INFRASTRUCTURE MASTER PLAN

- APS: Groundbreaking in June 1990, operational as early as 1994
 - Some infrastructure in the range of 25+ years old
- For continued APS operating life, a formal assessment of infrastructure / utilities in the 400-area (APS) was performed
- Identified 113 projects
 - Mechanical Piping Projects (30), Architectural Projects (24)
 - Electrical Projects (19), Mechanical HVAC Projects (14)
 - Remaining categories for general, specialty systems, fire protection and IT
- Projects categorized by urgency timeline: Immediate to 3-5+ years out
- Working group of APS Site Operations (Infra Svcs), APS Operations, APS-U and other personnel reviewed content and provided comments on timing, phasing
 - Continue biweekly meetings with Infra Svcs on near-term tasks and larger project efforts
- Next steps: Integration of all projects into master timeline, dependent on funding availability
- Following slides are some of the highest priority / largest scope efforts.



APS 401/402 PLAZA ENTRY RENOVATION



Current State



Future State

- Reduces maintenance by removal of significant square footage of concrete
- Promotion of a sustainable landscape and welcoming entry area
- Staff and user community input resulted in selection of alternative design
- Contract work synchronized with maintenance periods and Main Control Room due to vibration-causing work

APS 401/402 PLAZA ENTRY RENOVATION



July 18, 2018



September 4, 2018



September 19, 2018



October 4, 2018



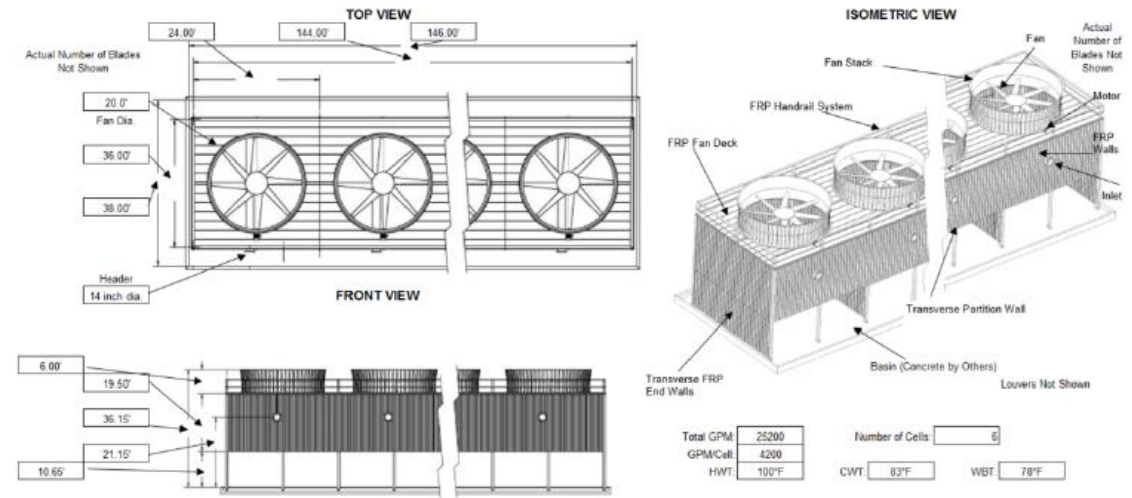
October 17, 2018

Renovation Schedule	
Task	Date
Bids received	July 12
Contract awarded	July 20
General Contractor mobilizes	August 22-24
Construction starts	August 27
Construction completed	November 17
Landscaping	Spring 2019

- Minor issues to date: De-tensioning cables, planter box drainage
- Remains on schedule, weather dependent
- Progress photos available at <https://www.aps.anl.gov/plaza-remodel>

APS COOLING TOWERS

- Scheduled for FY19 major repairs funding
- Scope includes:
 - Final vetting of replacement or repair scope
 - If repair, will include large portions of the support structure:
 - Tower vertical supports
 - Tower water piping from flange entering structure to inside
 - Tower drift eliminators
 - Tower components: End walls, partition walls, wind wall, louver supports, fan deck and upper structure
 - General maintenance (repainting of steel piping; paint and reseal of concrete basin)
 - Addition of variable frequency drives (VFDs)



APS CHILLED WATER (CHW) FLUSHING AND TREATMENT

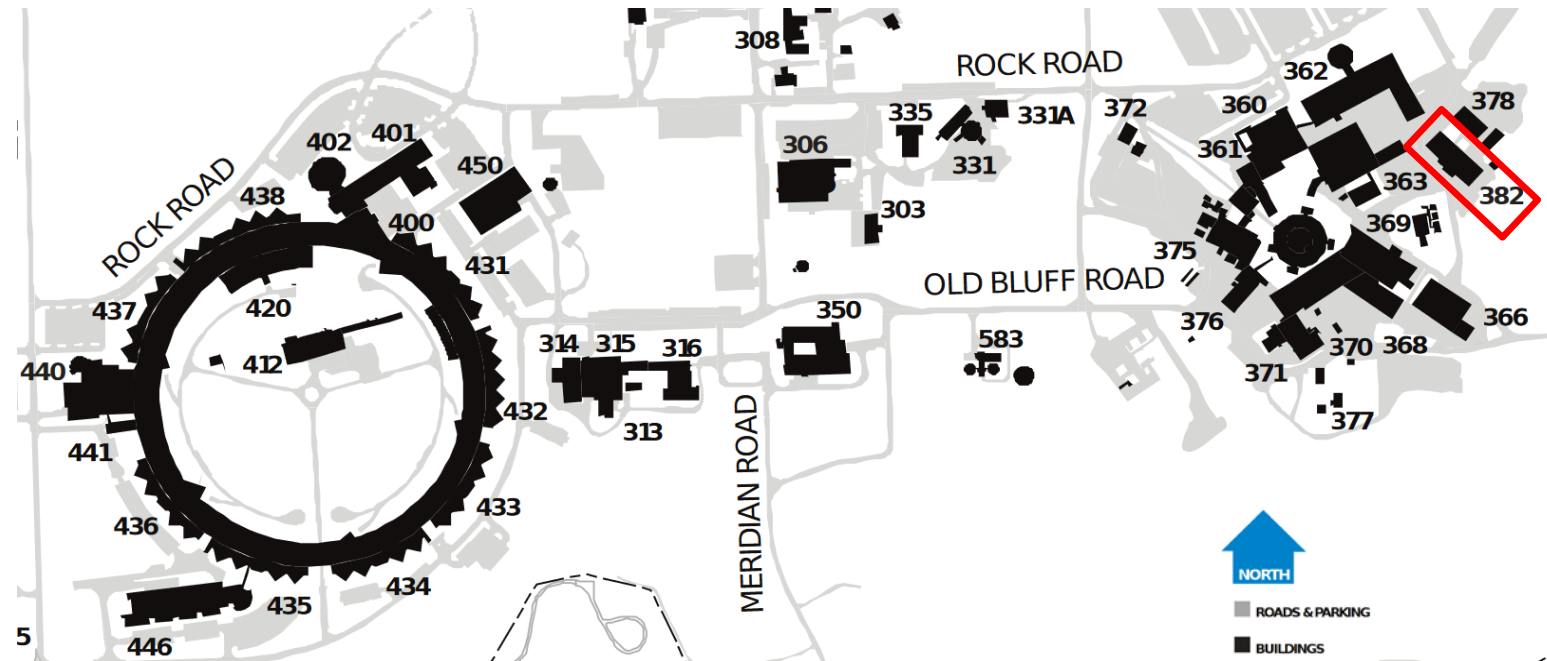
- Scheduled for FY19 major repairs funding
- Scope includes:
 - Identify loop segments, then clean, flush and passivate piping segments using portable pumping and filtering stations
 - Flushing is intended to remove fine sediment that has collected over time.
 - These fine particulates settle at low points and foul heat transfer surfaces at coils and heat exchangers.
 - Final step is to institute comprehensive chemical treatment and monitoring program.



Sample Water Treatment Station, not showing Lab Sink

APS BUILDING 382 REPAIRS / UPDATES

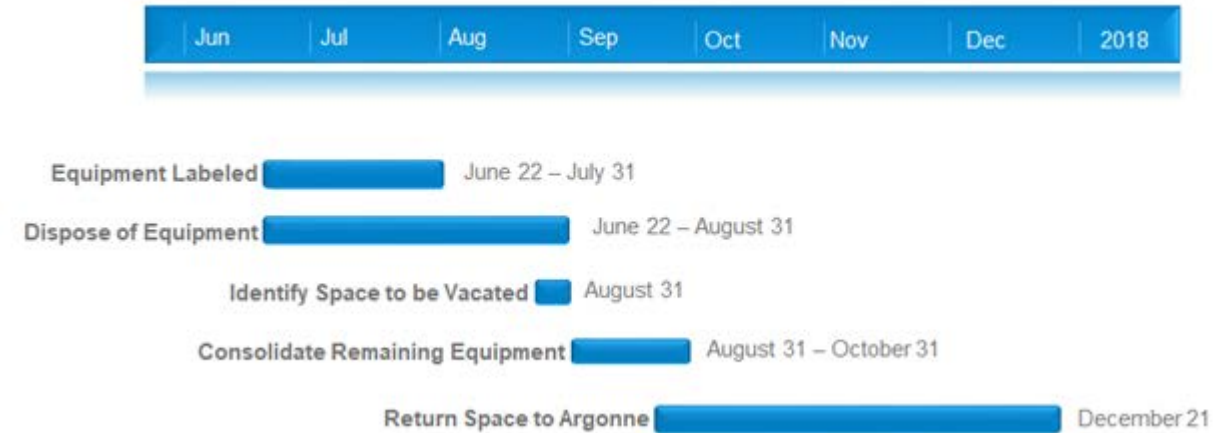
- Scheduled for FY19
 - HVAC replacement and upgrade
 - Will provide heating and cooling to complete building, since fully occupied
 - Lighting upgrade (started)
 - Restroom refurbishment
 - Other exterior repairs such as a corridor connection to Building 378



APS OPERATIONS STORAGE SPACE REDUCTION

- APS rents approximately 35,000 square feet of dedicated storage (non-high bay) space
- Annual cost: \$774,000
- Goal: Reduce storage space by 20% by end of 2018
- Annual savings: \$155,000
- Complementary to efforts with APS-U for identifying storage space needs

Phase 1: 300-Area Storage Space Reduction



Bldg 335 in Aug 2018: Represents ~3800 ft² for AES and ASD



Bldg 335 in Sept 2018 after storage reduction effort

SUMMARY

- Significant infrastructure updates and improvements are in process or planned for the APS
 - Only larger efforts shown as examples
- Projects are a result of a systematic look at APS infrastructure needs, from present, up to and including the APS Upgrade dark time and beyond
- Additional information will be forthcoming as project implementation detail is developed