RESEARCH FACILITIES DEVELOPMENT AND MANAGEMENT

JOHN P. COULTER

SENIOR ASSOCIATE DEAN FOR RESEARCH
P.C. ROSSIN COLLEGE OF ENGINEERING AND APPLIED SCIENCE
LEHIGH UNIVERSITY, BETHLEHEM, PA 18015, U.S.A.
New Hire Research Lab Development:

- Faculty Search Process: 2015-1016
- Faculty Start Date: August, 2016  
  Research: Material Substrate Development and Growth
- Laboratory Location Identification:  
  Sept 2016 – Feb 2017
- Initial Laboratory Design:  
  March – June 2017
- Detailed Laboratory Design and Refinement:  
  July – September, 2017

Physical Renovation Started: October 2017

Promised Finish Date: June 2018

Cost: $990,000 (including contingency)
New Hire Research Lab Development:

- **June 2018**  “We’re almost done but need two more months to finish”
- **August 2018**  “We need one more month and went $70,000 over budget. It will not happen again”
- **Oct – Dec 2018**  “Finishing the punch list and only the gas cabinet is left”
- **January 2019**  “The gas cabinet as installed is not correct. They are redesigning it”
- **Feb – June 2019**  Gas cabinet redesign, $90,000 more
- **Summer 2019**  Weekly 1-2 hour meetings with entire project team including all contractors $150,000 more.
- **Fall 2019**  “Almost done but your PI has made changes. $120,000 more.
- **Dec 2019**  “It will be done by Feb 1 and we need more money. Do you want commissioning tests?”
- **Feb 2020**  Project Manager Replaced – they are finishing it soon for $30,000 more as final payment.
Lessons Learned:

• Faculty Search Process:
  Facility/Renovation Needs, Locations, and Costs MUST be considered in Detail

• Laboratory Design and Cost Estimating:
  Take the time to Do it Right the First Time

• Facility Construction or Renovation:
  Create a Culture of On Time and On Budget project completion

• Manage expectations throughout the project:
  Changes will happen, but handle them appropriately