National Institute of Standards and Technology
Gaithersburg, MD

Campus Master Plan

Public Information

May 11, 2017

United States Department of Commerce

Today's Discussion

- **Gaithersburg Campus Master Plan**
  - Context & Considerations
  - Development Alternatives
- **NEPA Process**
  - Approach
  - Public participation process

Participants:

National Institute of Standards & Technology

Kent Rochford, Acting NIST Director

Skip Vaughn, Chief Facilities Management Officer

Gail Porter, Director, Public Affairs Office

Michael Blackmon, Environmental Officer

Susan Cantilli, Project Manager

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Metropolitan Architects & Planners

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ERG – Environmental Consultants

Patrick Goodwin, Senior Environmental Scientist

National Institute of Standards and Technology

Mission: To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

- Founded in 1901 as National Bureau of Standards, NIST is a non-regulatory agency and Federal research laboratory in the US Department of Commerce
- Relocated from Washington DC to Gaithersburg in 1960's.
- 26 buildings were constructed between 1961 and 1969, and 73% of today's assignable space is in these buildings.

Diversity of NIST Research

- Acoustics
- Additive manufacturing
- Biochemistry
- Biology
- Biotechnology
- Chemistry & Chemical Engineering
- Computer science
- Dimensional metrology
- Engineering
- Fire Research
- Forensic Science
- Materials Science
- Mathematics and Statistics
- Mechanical Engineering
- Medical Physics
- Metallurgy
- Molecular Biology
- Nanotechnology
- Neutron Research
- Quantum Physics
- Robotics
- Structural Engineering
- Wireless Communications

Existing Campus

Area: *579 acres*

Buildings: *3.6 million GSF*

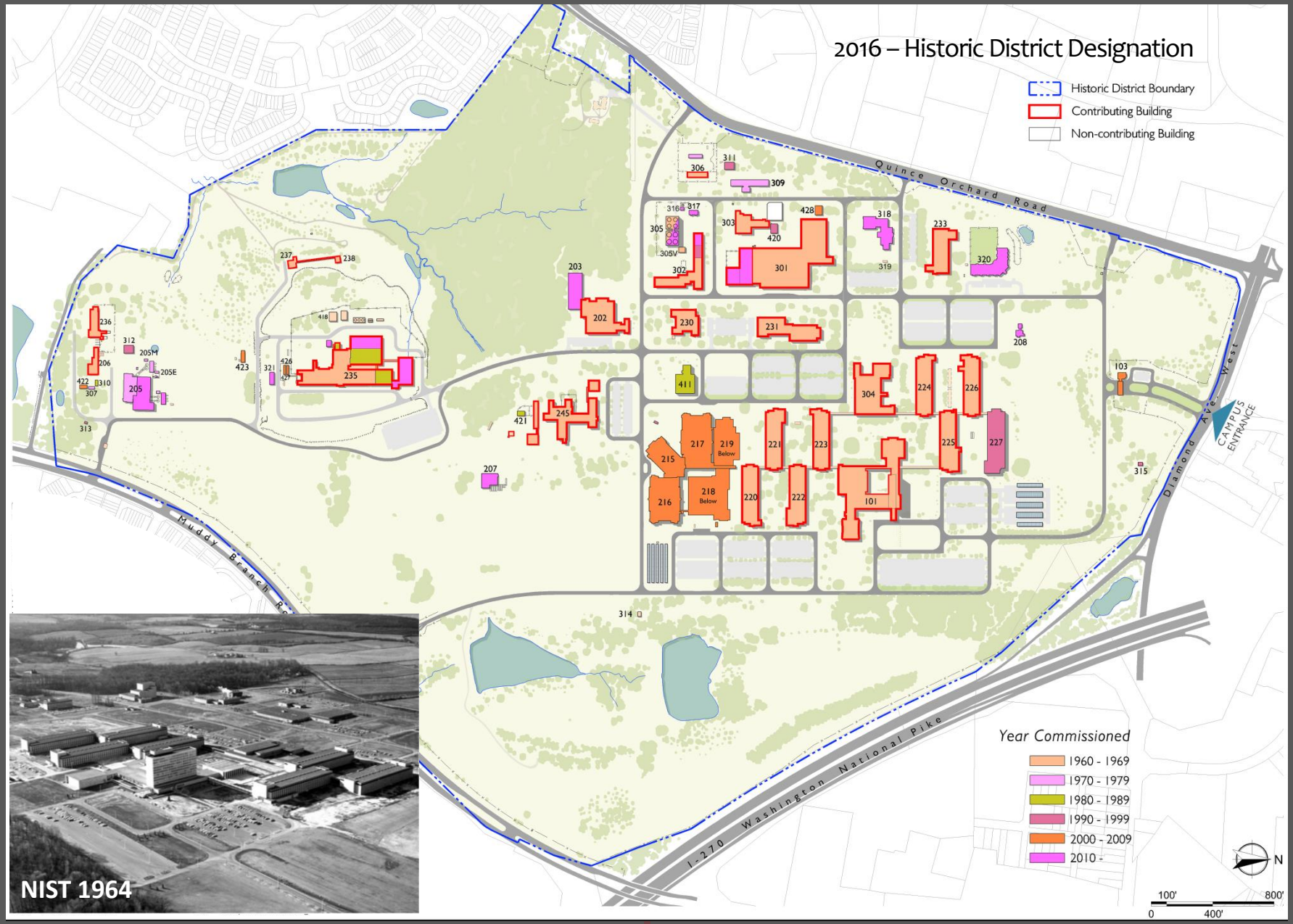
62 permanent or temporary buildings

Personnel: *Approx. 4,000 federal staff & associates*

Existing Campus

Google Earth

History of Campus Development



Representative Campus Buildings

Building 225: Typ.General Purpose Lab (1964)

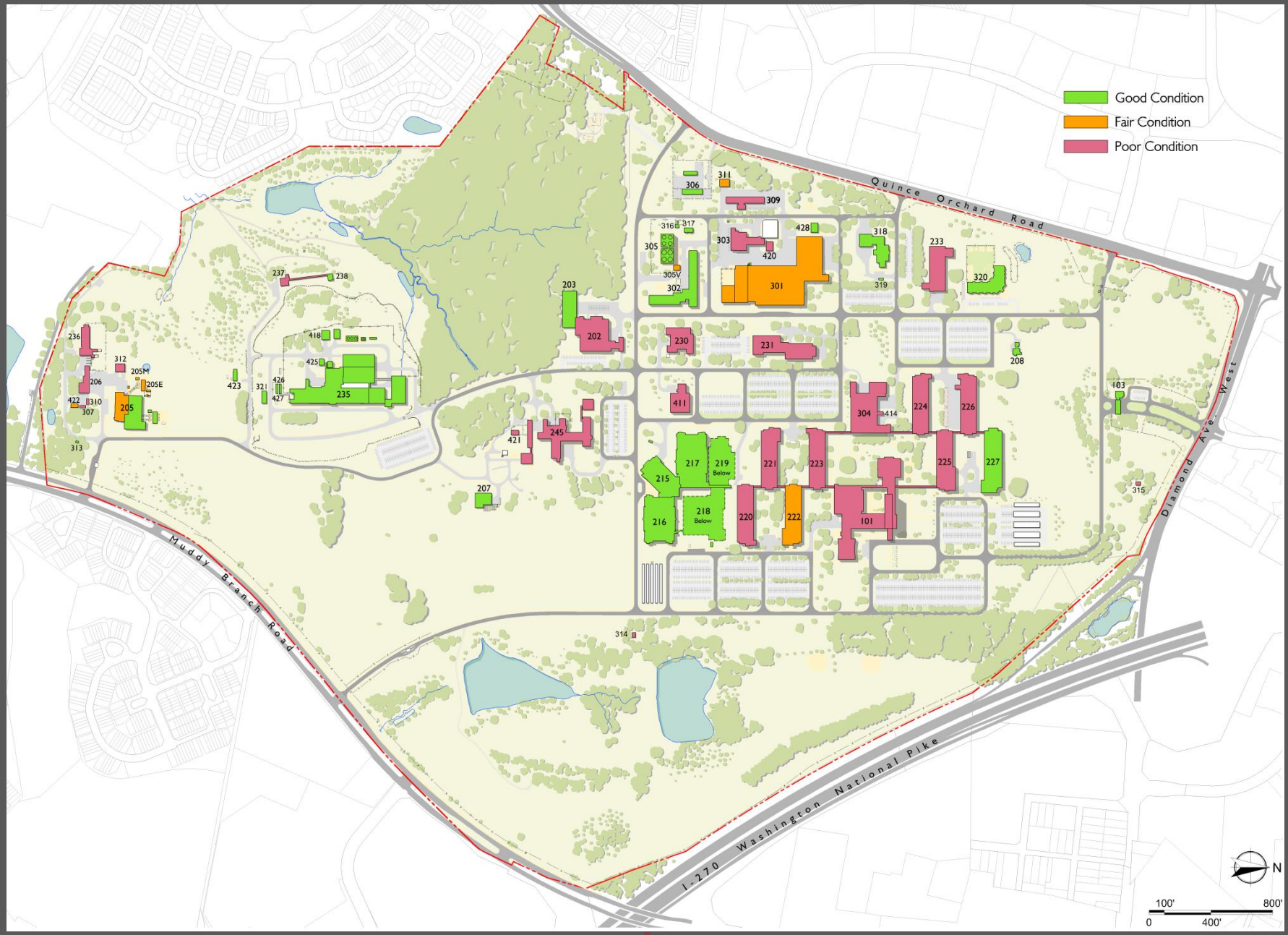
Building 101: Administration / Conference Center (1965)

Building 304: Shops (1964)

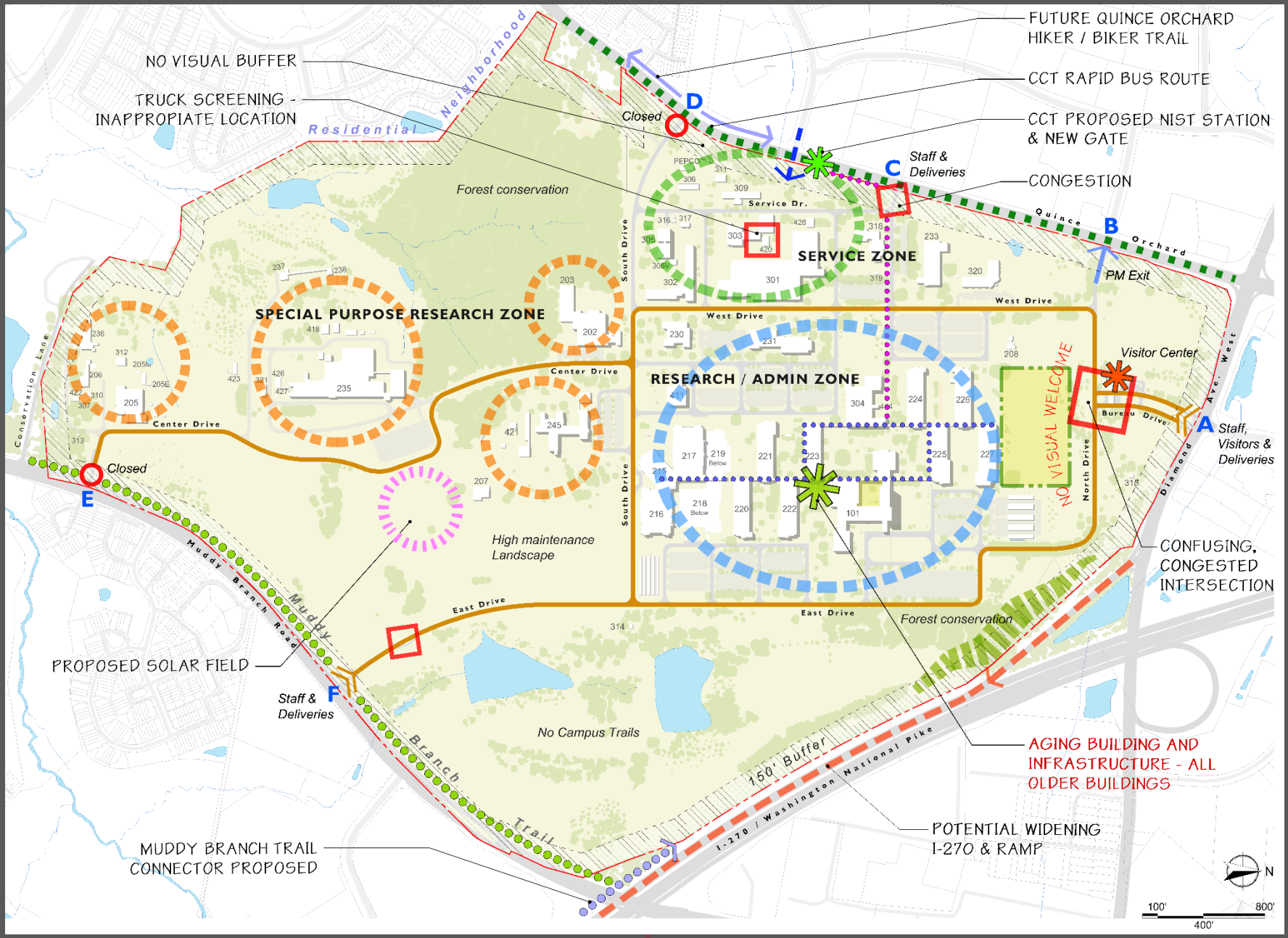
Building 320: Childcare (2012)

Building 215: Nano-Fabrication (2004)

Existing Building Conditions



Campus Issues



Consolidated Considerations for the Master Plan

- Poor Lab Environmental Controls, limiting current & future research
- Aging Buildings and Infrastructure
- Office Utilization Improvements
- Conference Center – Access & Improvements
- Historic District Context
- Stormwater Management
- Transit Linkages
- Campus Circulation & Parking
- Security Enhancement
- Pedestrian Connections
- Landscape - unity and maintenance
- Energy Efficiency & Sustainability

Building 101, auditorium on the left

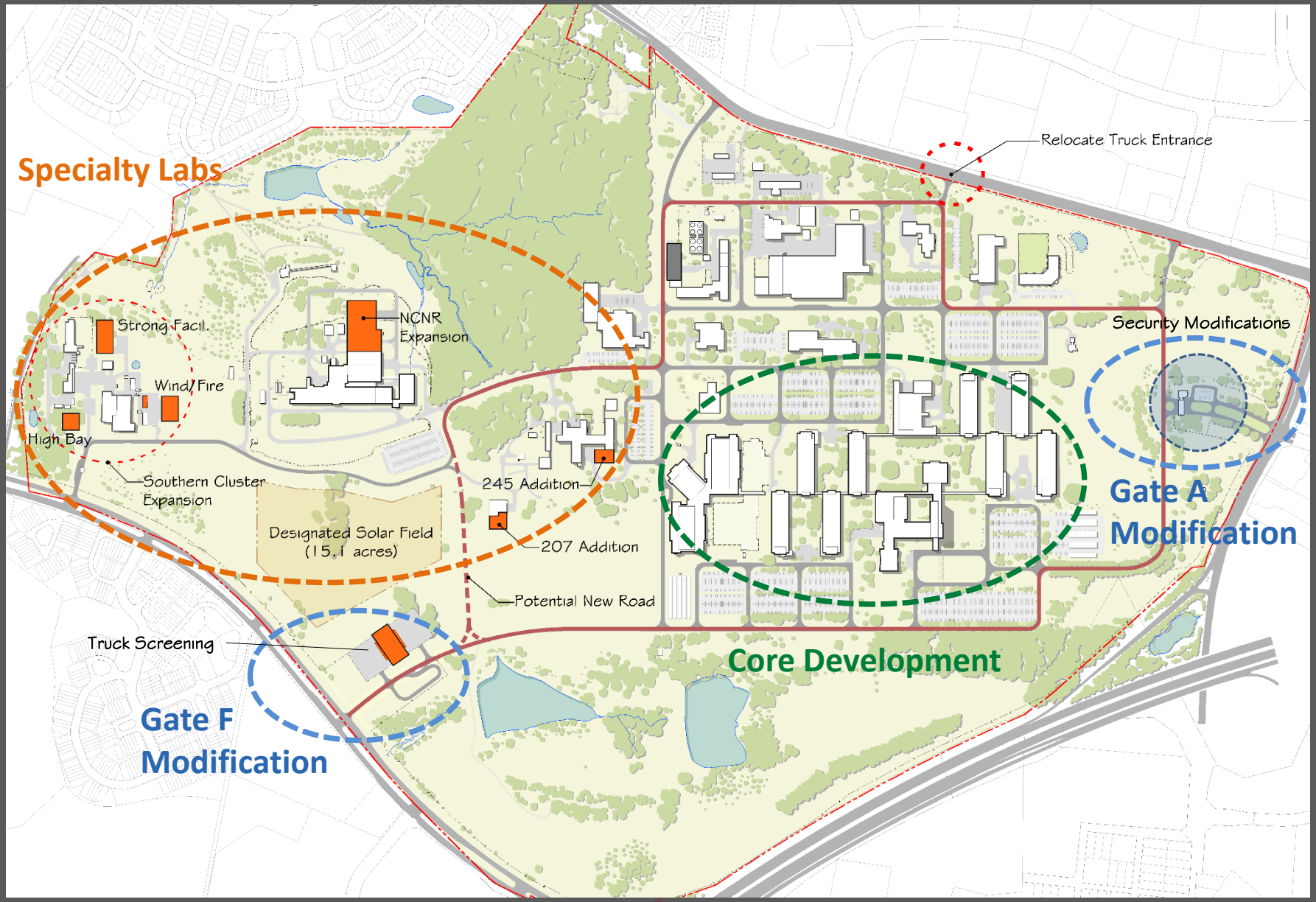
- Space Program represents current needs for upgrade & replacement as well as anticipated growth in research programs.
- Growth projections based on planned research programs by Laboratories, and related support by administrative organizations.
- Projections are in line with the historic growth patterns.

PROJECTED GROWTH	EXISTING		5-10 YEARS PROJECTIONS		20 YEAR PROJECTIONS		20 YEAR OVERALL DIFFERENCE	
ASF = Assignable Square Feet	People #	Space ASF	People #	Space ASF	People #	Space ASF	People #	Space ASF
People	4,007		4,515		5,096		1,089	
Office/ Office Support		615,463		764,830		863,600		248,137
Laboratories/Support/Special/		875,198		981,674		1,124,817		249,619
ADP		21,997		17,683		18,715		-3,282
Service and Support		313,044		313,644		313,644		600
Subtotal	4,007	1,825,702	4,515	2,077,831	5,096	2,320,776	1,089	495,074
ADDITIONAL FACILITY NEEDS								
Builidng Expansions/Screening				55,300		85,300		85,300
Total ASF		1,825,702		2,133,131		2,406,076		580,374
Total Gross Square Feet		3,640,067						± 1,200,000

Goals of the Master Plan

- Establish a framework for future development (20-year horizon)
- Meet near and long-term needs of the campus in support of NIST research mission
- Integrate recommendations from recent studies
- Maintain attractive campus environment
- Respect & embrace campus historic district designation
- Advance NIST and DoC sustainable design goals

Common Planning Approaches



Master Plan Components

- Modernization of aging, inadequate laboratories
- New laboratories and administrative office space in the campus core
- Truck screening relocation to Gate F, together with shipping & receiving
- Improvements to entrance and security of Gate A
- New and expanded specialty laboratory facilities on the southern campus
- Parking improvements/changes relating to chosen Alternative
- Landscape enhancement, low maintenance plantings, stormwater mgmt.
- Improved sidewalk connectivity – at entrances, possible CCT station, campus
- Sustainable design opportunities
  - PV power generation (new solar field, parking cover, on new buildings)
  - Energy efficient renovations and net-zero new (non-lab) buildings
  - Significant daylighting for new (non-lab) buildings

Gate A

Gate F

Concourse Connectors

Parking / Solar Cover

Core Alternatives:

B: Extending Connections

New buildings tie directly into the existing campus internal circulation spine, extending it both north and south.

C: Creating a New Precinct

A new cluster of buildings is established to the south of South Drive, with a mixture of facilities and amenities.

D: Capturing the Center

New buildings are concentrated in the center of campus, emphasizing proximity and assignment flexibility.

F: New Research Emphasis

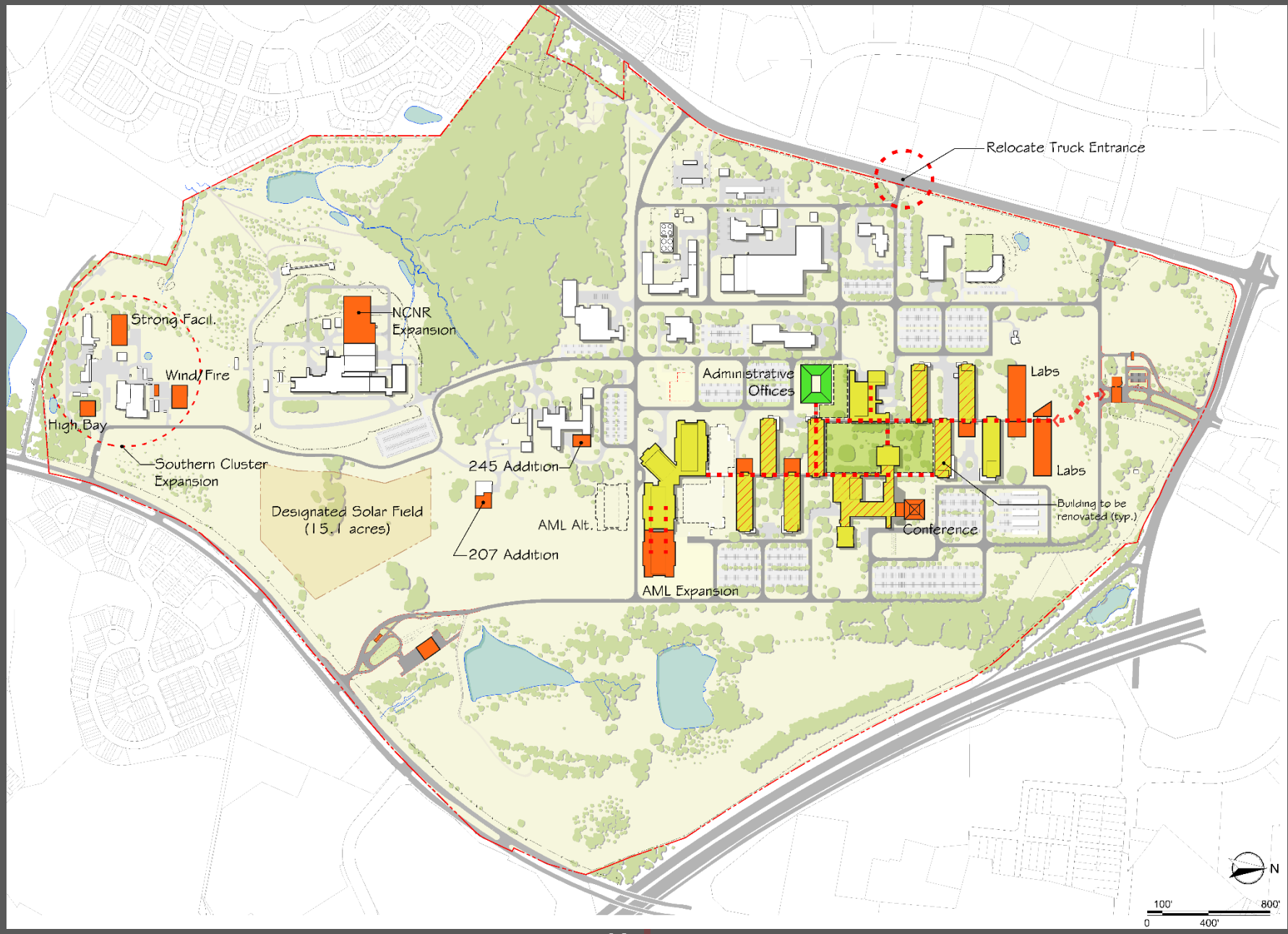
All new buildings are for research, with administrative growth and Building 411 replacement in GPLs.

Gate Alternatives

Security enhancements to Gate A, modification or replacement

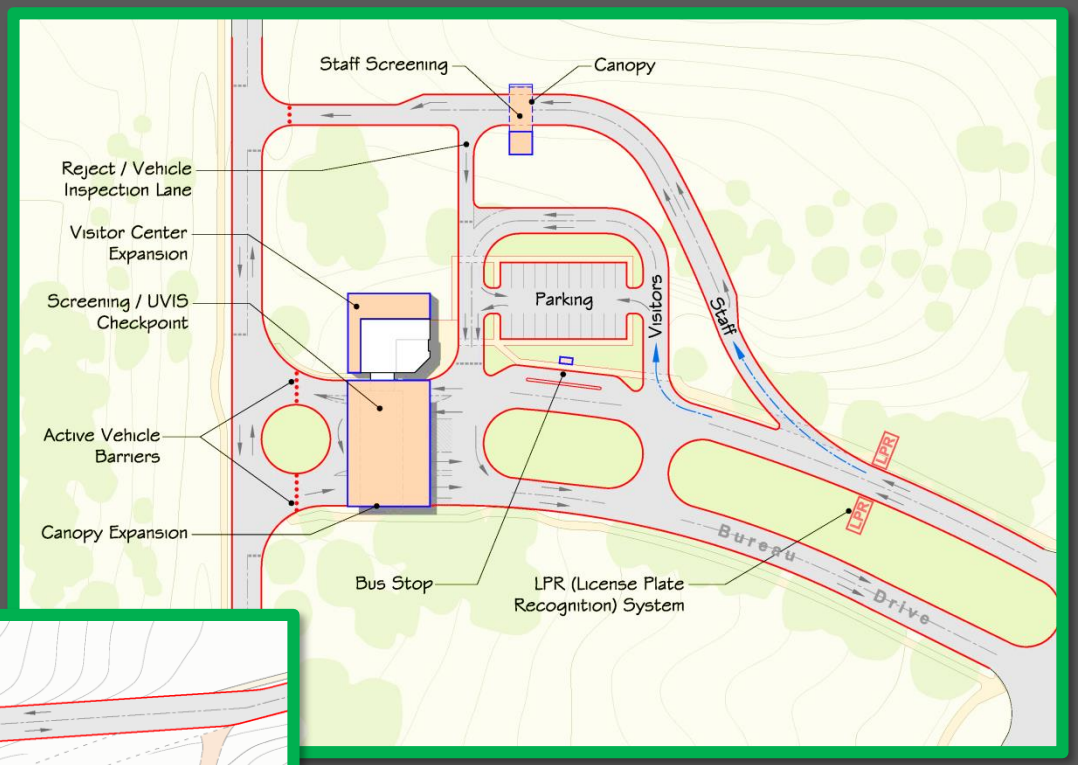
Truck Screening to Gate F, existing or new entrance

Alternative B: Extending Connections



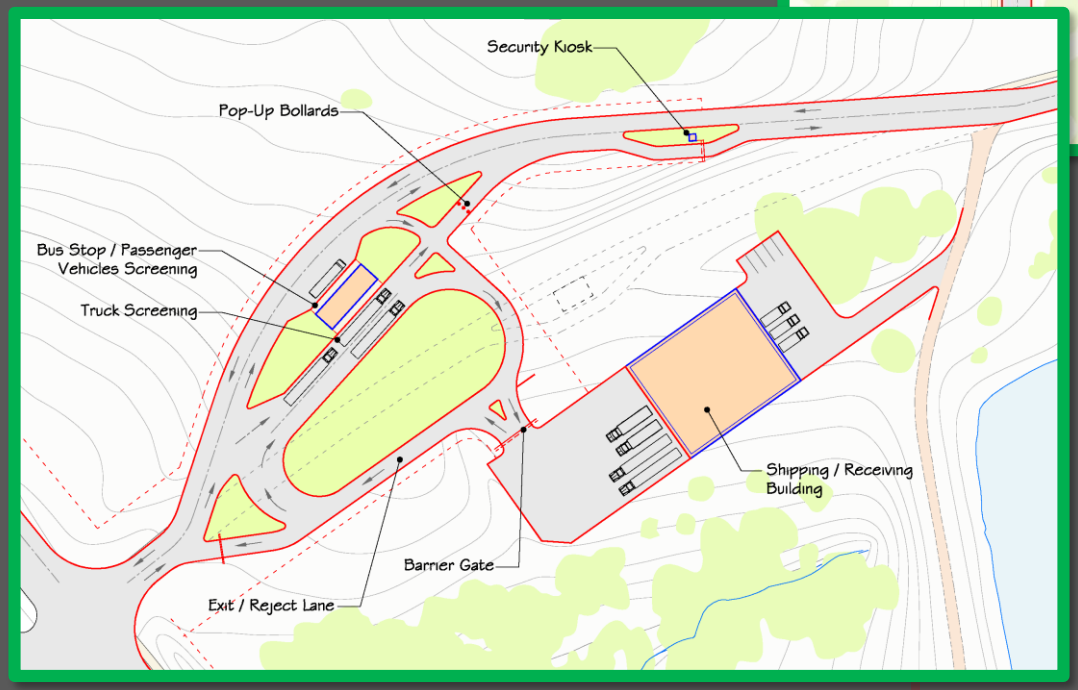
Alternative B: Extending Connections

Alternative B Gate Concepts

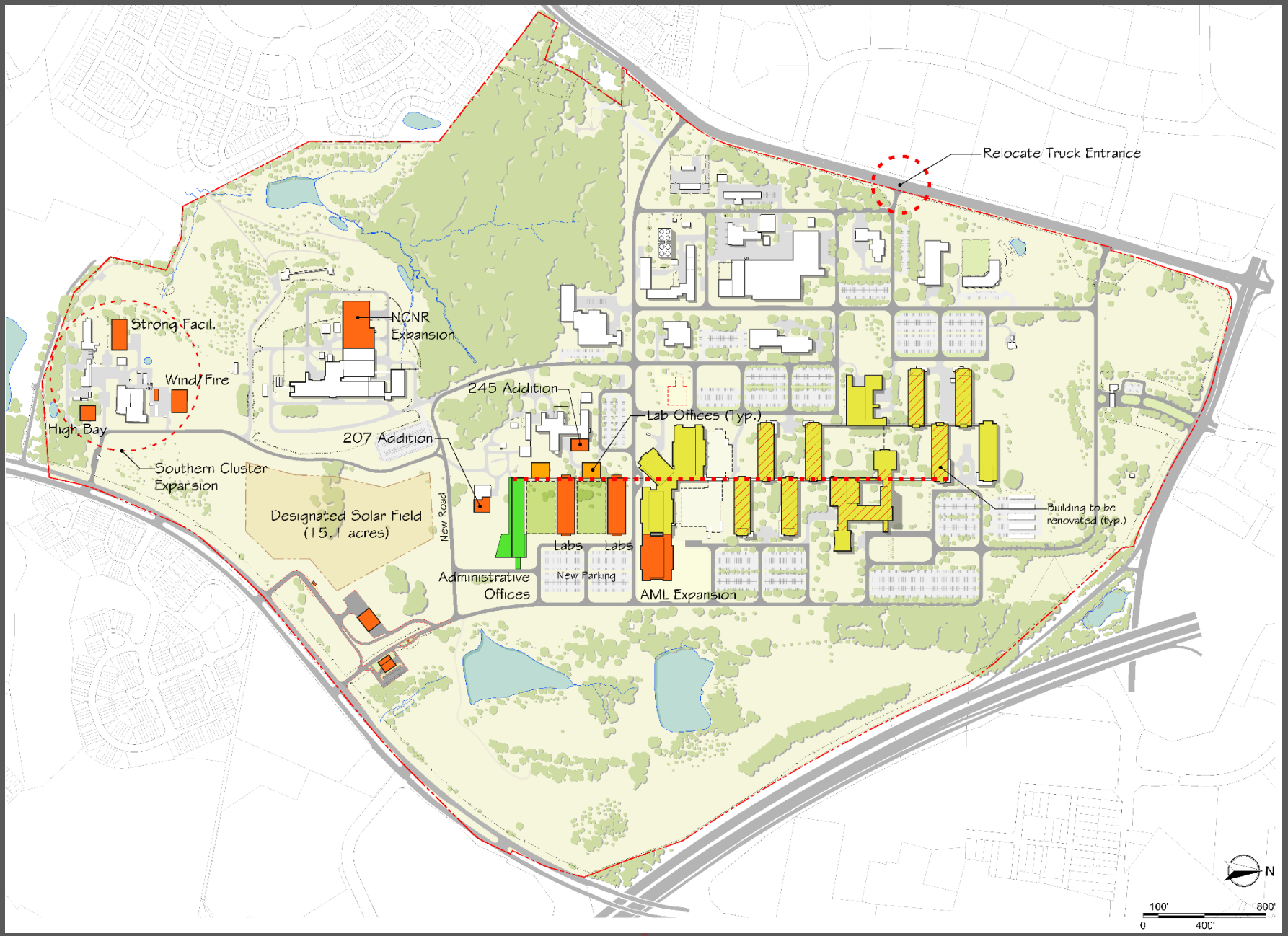


Gate A

Gate F



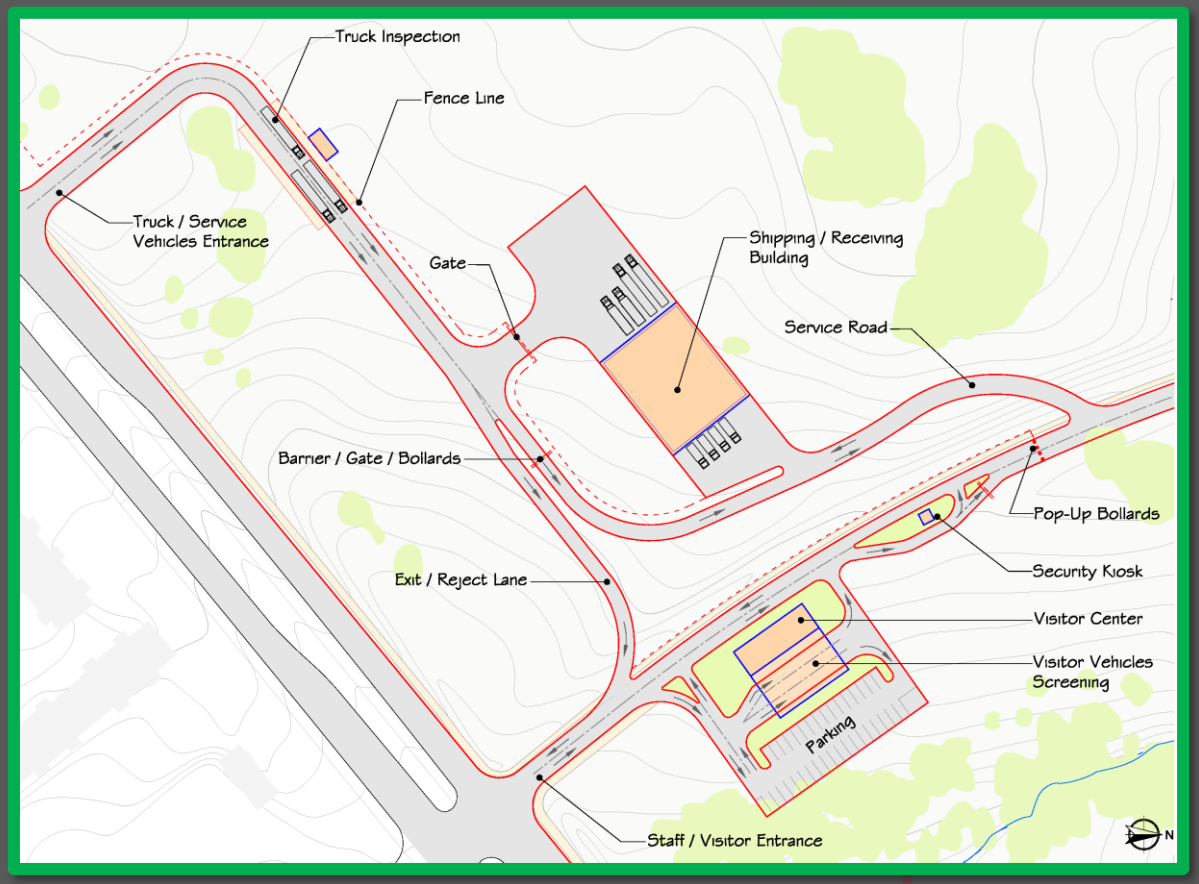
Alternative C: Creating a New Precinct



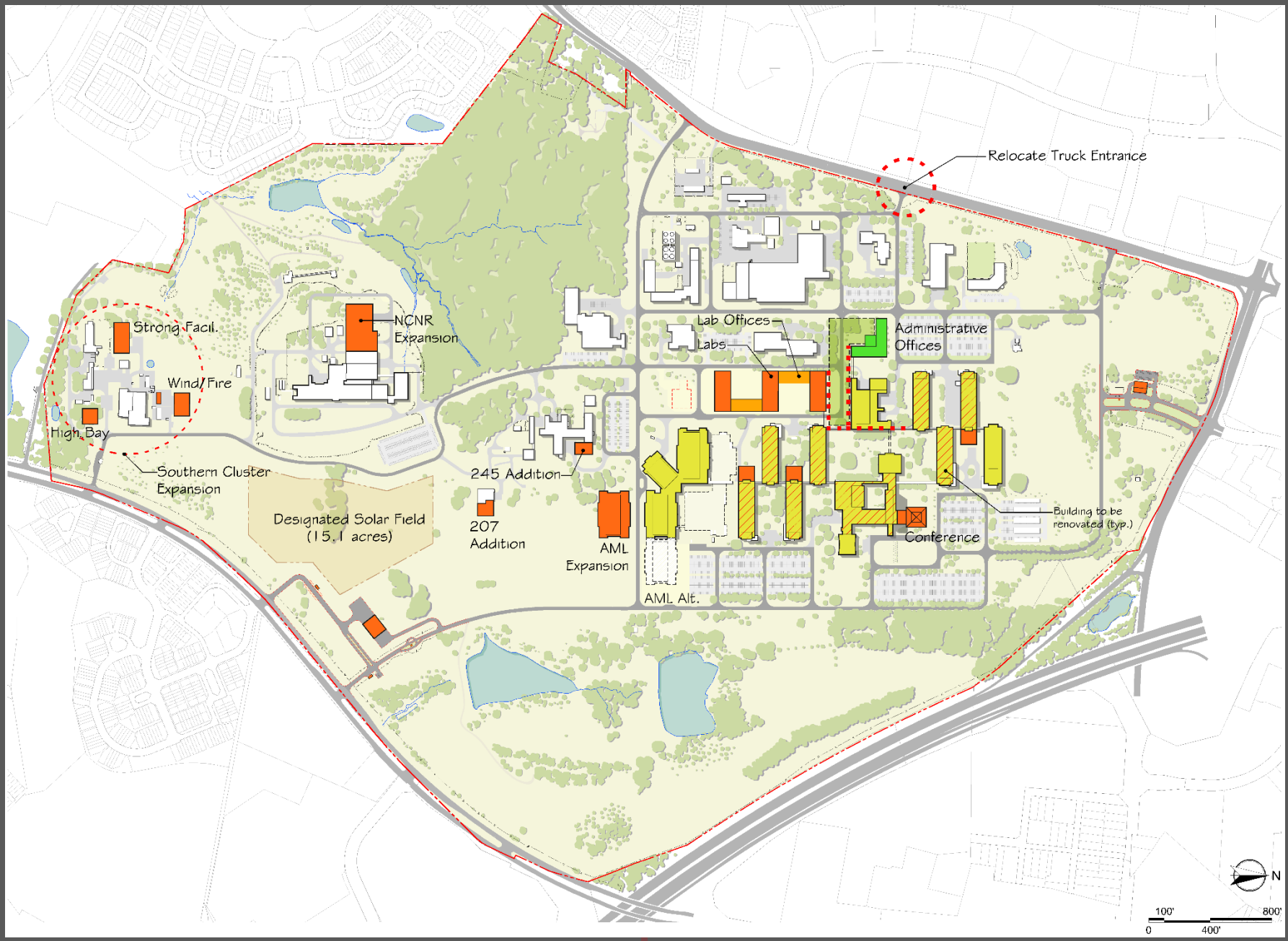
Alternative C Gate Concepts

Gate A Remains the same

Gate F

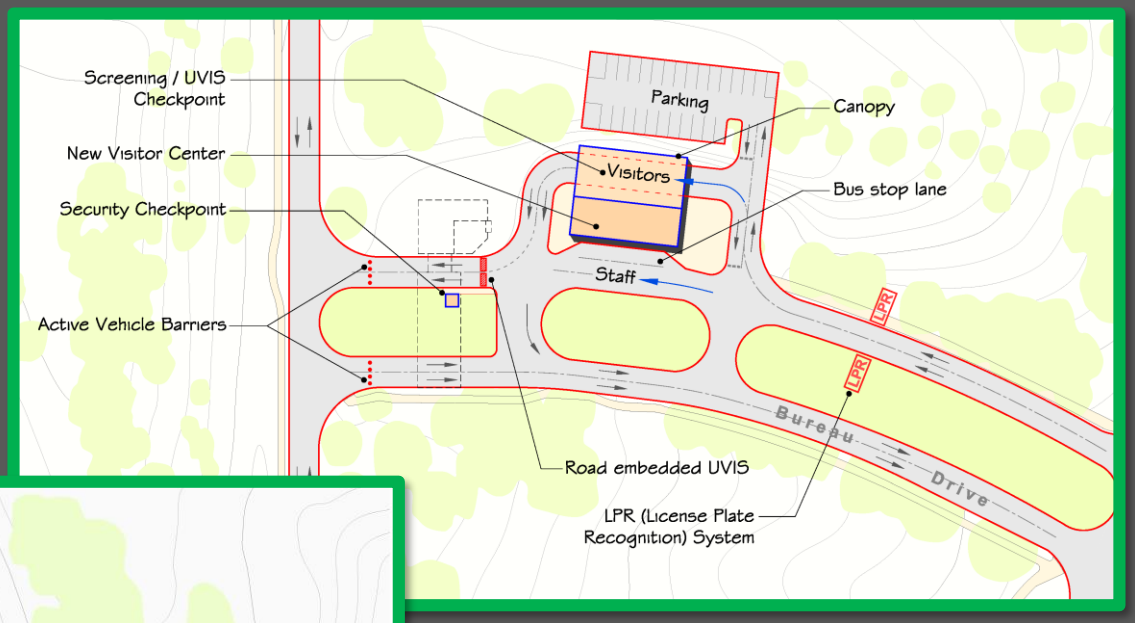


Alternative D: Capturing the Center



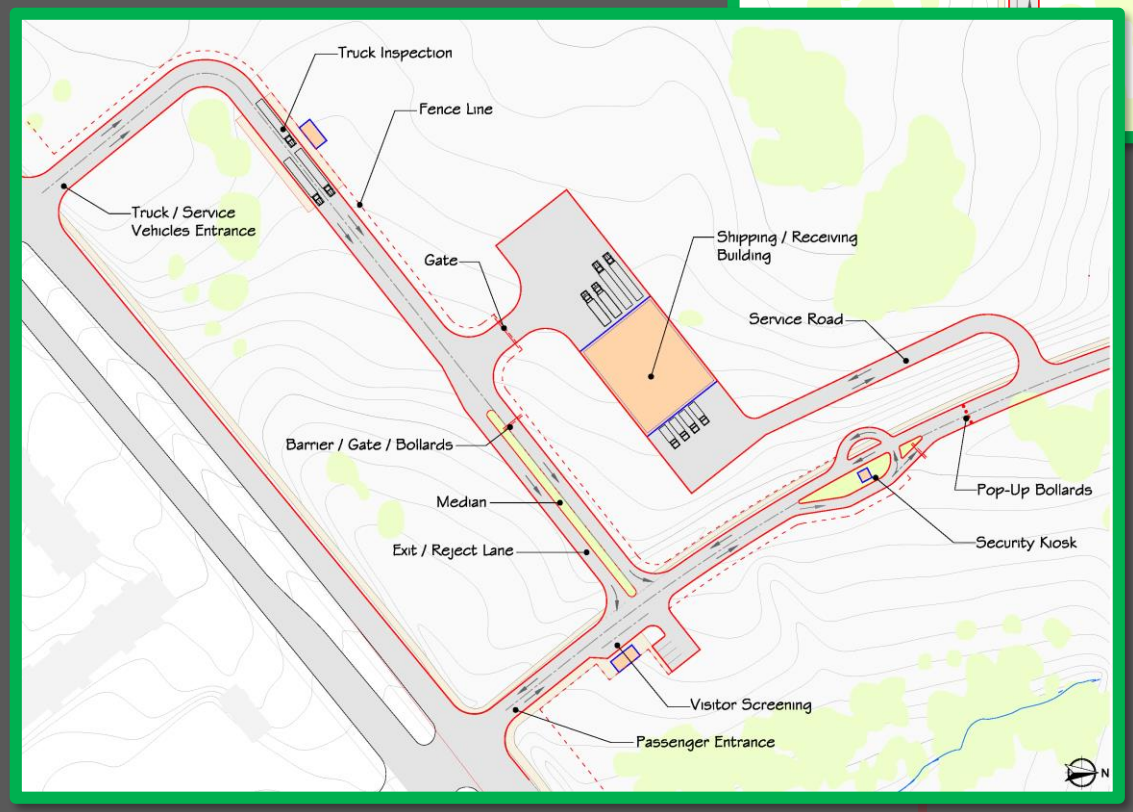
Alternative D: Capturing the Center

Alternative D Gate Concepts

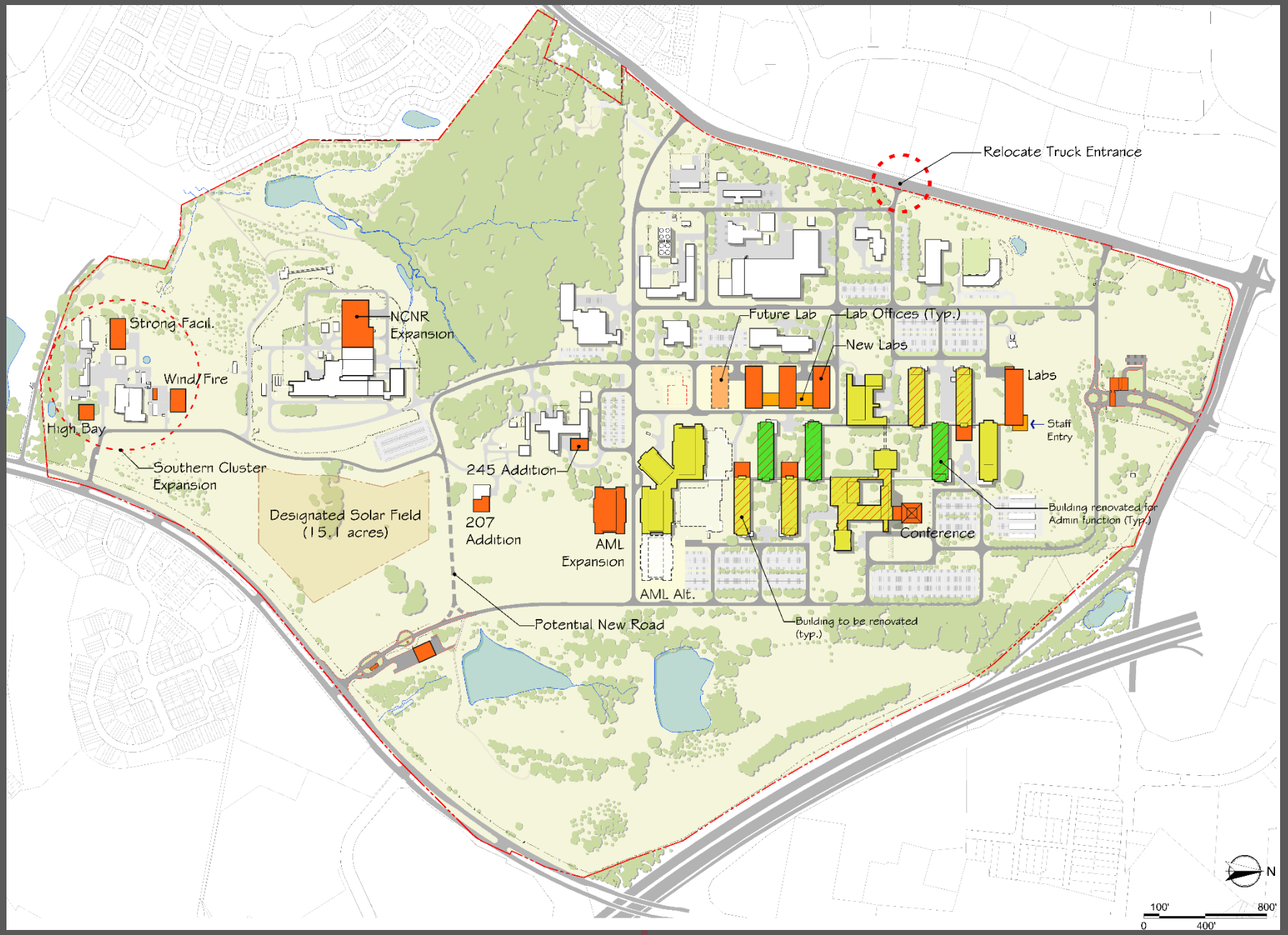


Gate A

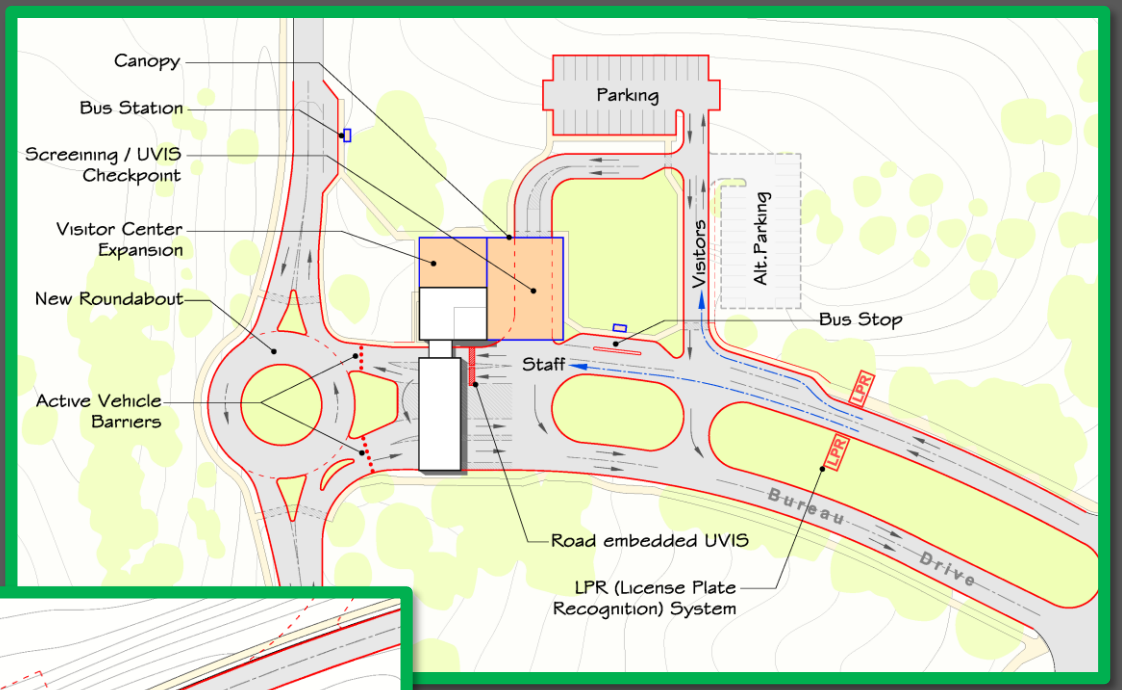
Gate F



Alternative F: New Research Emphasis

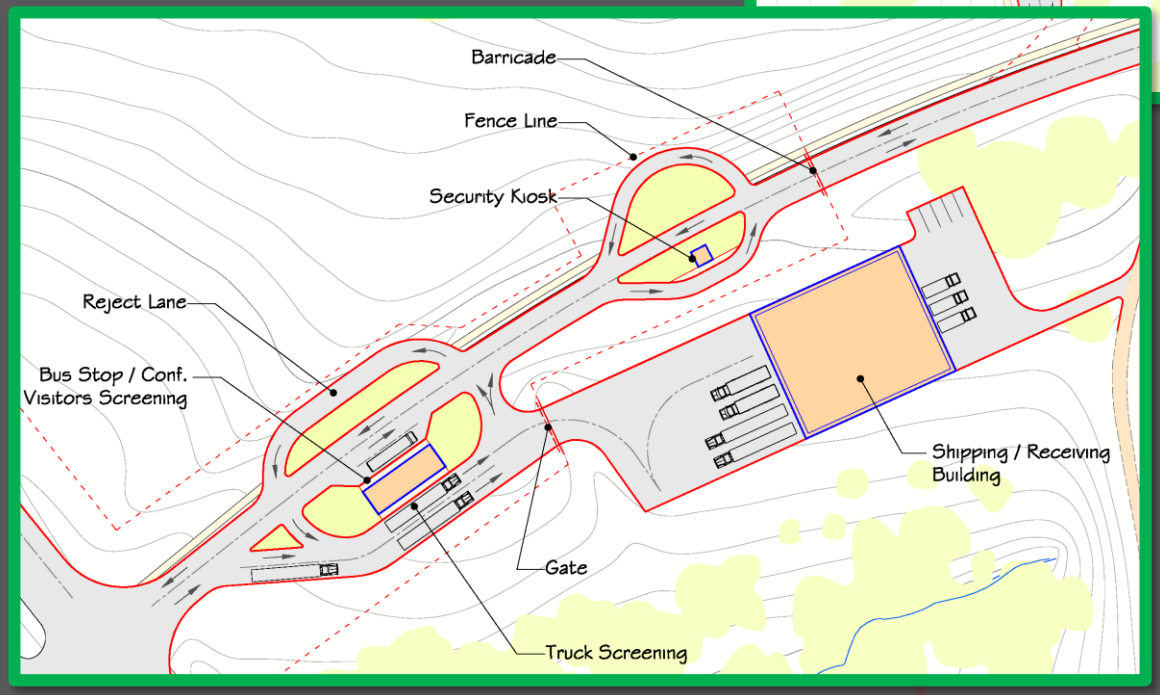


Alternative D Gate Concepts



Gate A

Gate F



Community Interface

- Respect Gaithersburg's initiatives and zoning
- Address access issues at all campus entrances
- Minimize/eliminate entrance queuing at Gate A
- Eliminate truck back-up at the Quince Orchard Road entrance
- Respect campus historic district designation
- Enhance conference visitor experience
- Optimize parking
- Advance NIST's sustainable design and energy efficiency strategies
- Make the Draft Master Plan document available for public review.

National Environmental Policy Act (NEPA) Overview

NEPA:

- Serves as the basic national charter for protection of the environment
- Ensures that environmental information is available to public officials and citizens **before** decisions are made
- Helps public officials:
  - Make **informed decisions** that are based on understanding of environmental consequences
  - Take actions that protect, restore, and enhance the environment
- Applies to actions of all Federal agencies

Three Tiers of NEPA Review

Categorical Exclusion (CE)

- Actions with no significant effect on human environment, individually or cumulatively
- Predefined categories of actions

NIST intends to prepare an EA

Environmental Assessment (EA)

- Actions that do not qualify for a CE
- EA determines if action would have significant impacts
  - If yes/maybe → Environmental Impact Statement
  - If no → Finding of No Significant Impact (FONSI)

Environmental Impact Statement (EIS)

- Actions with significant and/or highly controversial impacts
- Most detailed environmental review
- Most extensive public involvement, including comment response

Greater impacts = more review

Approach for NIST Gaithersburg Master Plan EA

1. **Conduct scoping**
   - Consider potentially affected environment when developing alternatives
   - Solicit input from stakeholders and public
   - Identify primary environmental topics of concern to evaluate in EA
2. **Develop Draft EA**
   - Objectively evaluate all reasonable Master Plan alternatives
   - Assess and discuss potential impacts

     Example topics of concern: Water resources, vegetation, air quality, cultural resources, transportation, and view shed
   - Identify mitigation measures to minimize impacts
   - Distribute to Federal, state, and local agencies for comments

Approach for NIST Gaithersburg Master Plan EA

3. Make Draft Master Plan and Draft EA publicly available for comment
4. Finalize consultations with Federal, state, and local agencies
5. Develop Final Master Plan & Final EA
6. Render a decision

Timeline for Master Plan and EA

Component	Expected Completion Date
Conduct Scoping	May 11 – June 15, 2017
Complete Draft Master Plan/EA	Autumn 2017
Complete Final Master Plan/EA	Spring 2018

You can make a difference

Comments may be the most important contribution from citizens.

Effective Comments:

- Are provided early in the NEPA process (i.e., this informational meeting)
- Are clear, concise and relevant to the analysis
- Are solution-oriented and provide specific examples
- Suggest additional alternatives or elements within the plan
- Suggest sources of relevant data or information for consideration

Providing Comments

Comments Today

- Please clearly state your name when coming up to comment,
- Please adhere to 3-minute time limit
- NIST will take comments into consideration when developing Master Plan and EA
- We are audio recording the comments for record purposes.

Comments Later

- Comment period ends Thursday, June 15
- Submit written comments to:

NIST Master Plan Comments
National Institute of Standards & Technology
100 Bureau Drive, MS-1900
Gaithersburg, MD 20899-1900

Or

nistMPcomments@nist.gov

A summary of this presentation will be available at:
https://www.nist.gov/ofpm/nist-gaithersburg-master-plan