



Progress on the Stevens 10-Year Strategic Plan 2012-22

*Rationale and Need for
New Campus Development*

June 8, 2016

Beth McGrath, Chief of Staff & Director of
Community & State Relations
Office of the President





Key Messages

- Guided by a 10-year Strategic Plan, Stevens is on a steep upward trajectory: applications, career outcomes, financial stability, research, etc.
- Stevens contributes to a thriving Hoboken: economic impact, technology innovation, K-12 education, research aligned with Hoboken challenges
- Incremental growth is planned; campus infrastructure needs to keep pace
- We seek a collaborative process with the City to achieve goals of Strategic Plan and manage growth



Strategic Plan 2012-22: *The Future. Ours to Create.*



VISION: Stevens will become a premier student-centric technological research university

- Education and research programs to advance areas of significant societal need:
 - healthcare and medicine
 - sustainable energy
 - financial systems
 - defense, security and resilience
 - STEM education
- Stevens will grow in size and increase in selectivity, creating a solution-oriented, forward-looking and far-reaching institution with global impact

Plan is online at:
stevens.edu/about-stevens/strategic-plan



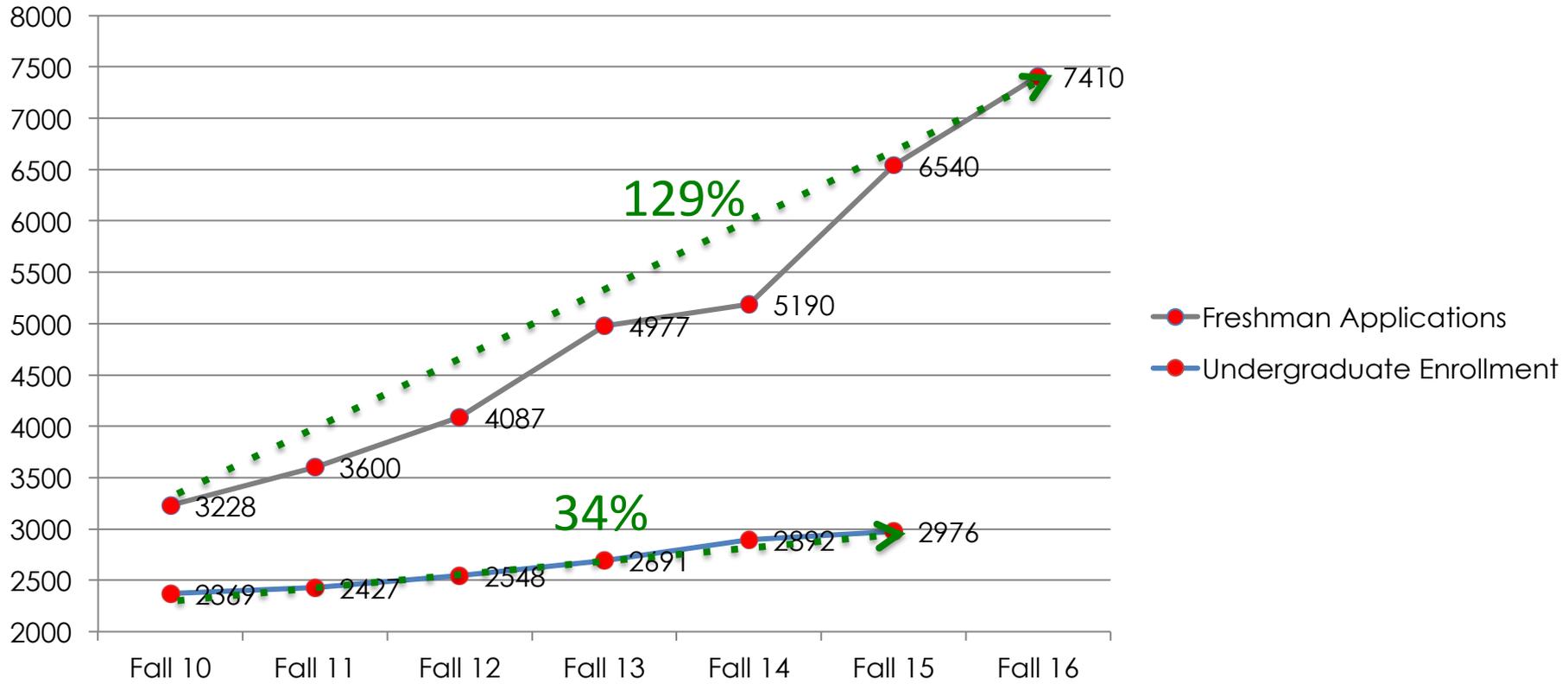
Key Statistics-Spring 2016

- Undergraduate Enrollment: ~3,000
- Graduate Enrollment: ~2,500 full-time equivalent (FTE) ~500 FTE online and off-site
- ~60% undergraduate and graduate students from New Jersey
- Faculty: ~300 full time
- Staff: ~500
- Annual Research: ~\$43 million
- Annual Operating Budget: ~\$225 million
- ~40,000 living alumni; 55% in New Jersey; ~700+ in Hoboken
- ~175 faculty and staff in Hoboken
- Fourth largest employer in Hoboken



Stevens Freshman Applications vs. Undergraduate Enrollment

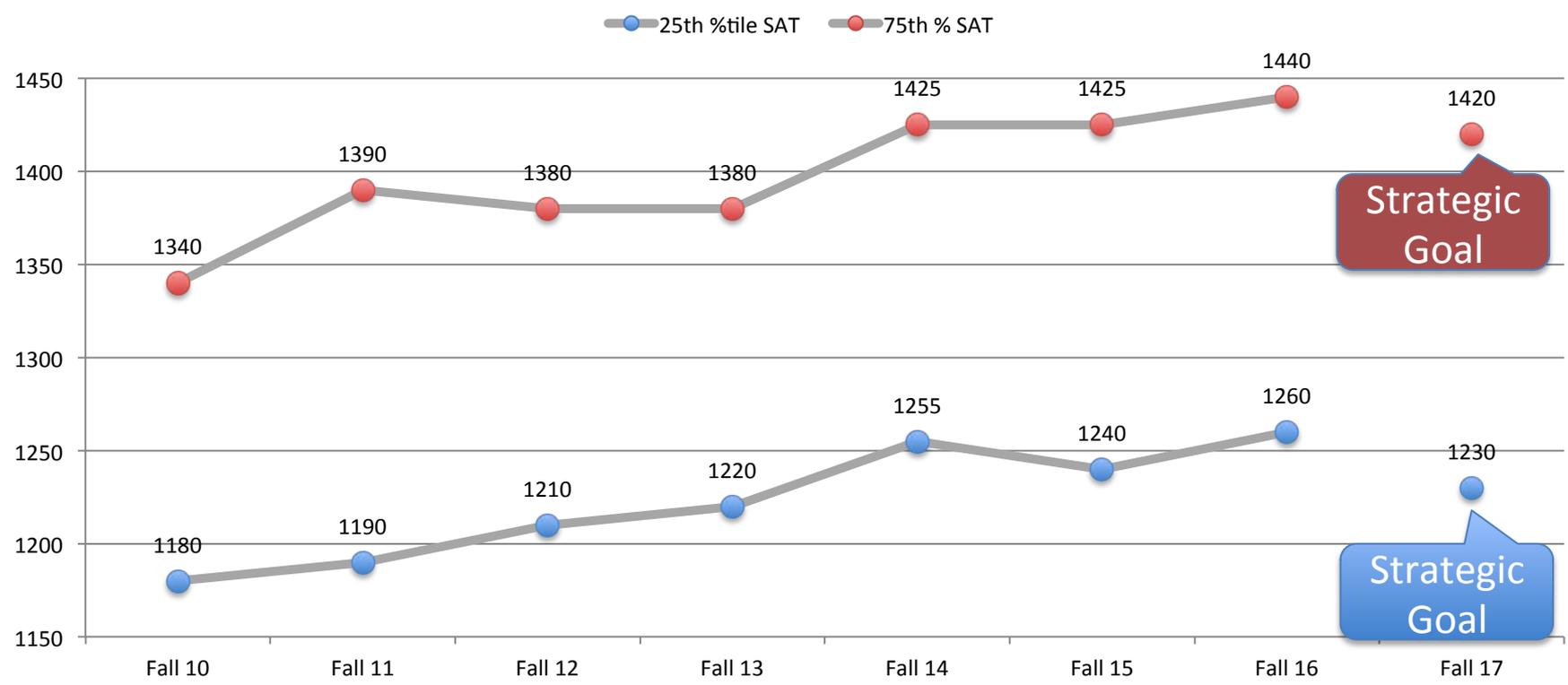
Demand for Stevens has surged
as 46% of U.S. colleges' enrollments declined





Stevens is attracting the “best & brightest”

We have exceeded strategic goals





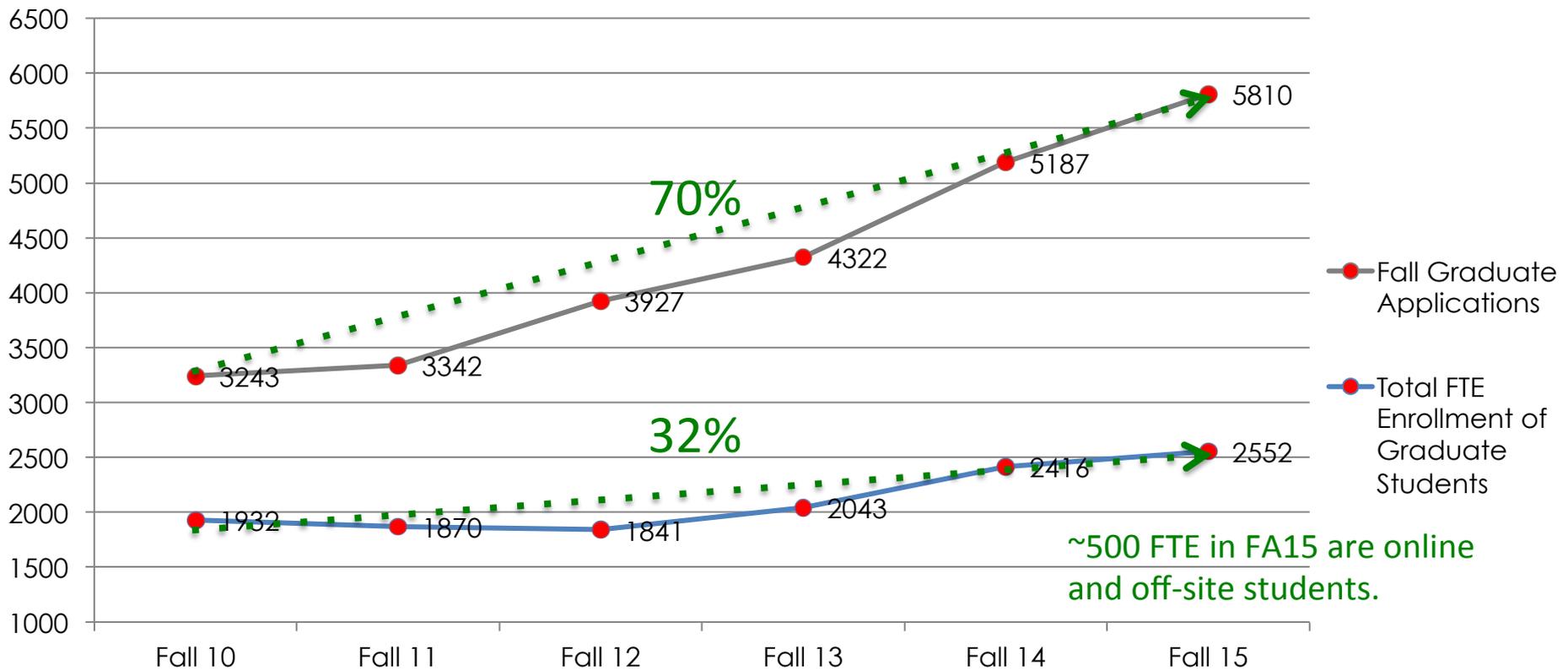
Student Success

- 95% of our students have secured a job or are in graduate school within 6 months of graduation; 78% finalize plans prior to graduation
- Average starting salary Class of '16 is \$68,000; highest salary is \$115,000
- Graduates employed in financial sector, aerospace, manufacturing, pharma, government, engineering consulting, telecommunications, etc.
- #6 in Forbes list of “Highest Salaries After Graduation” (2016)
- #5 in Georgetown CEW median earnings (2015)



Graduate Applications¹ vs. Total FTE Enrollment of Graduate Students²

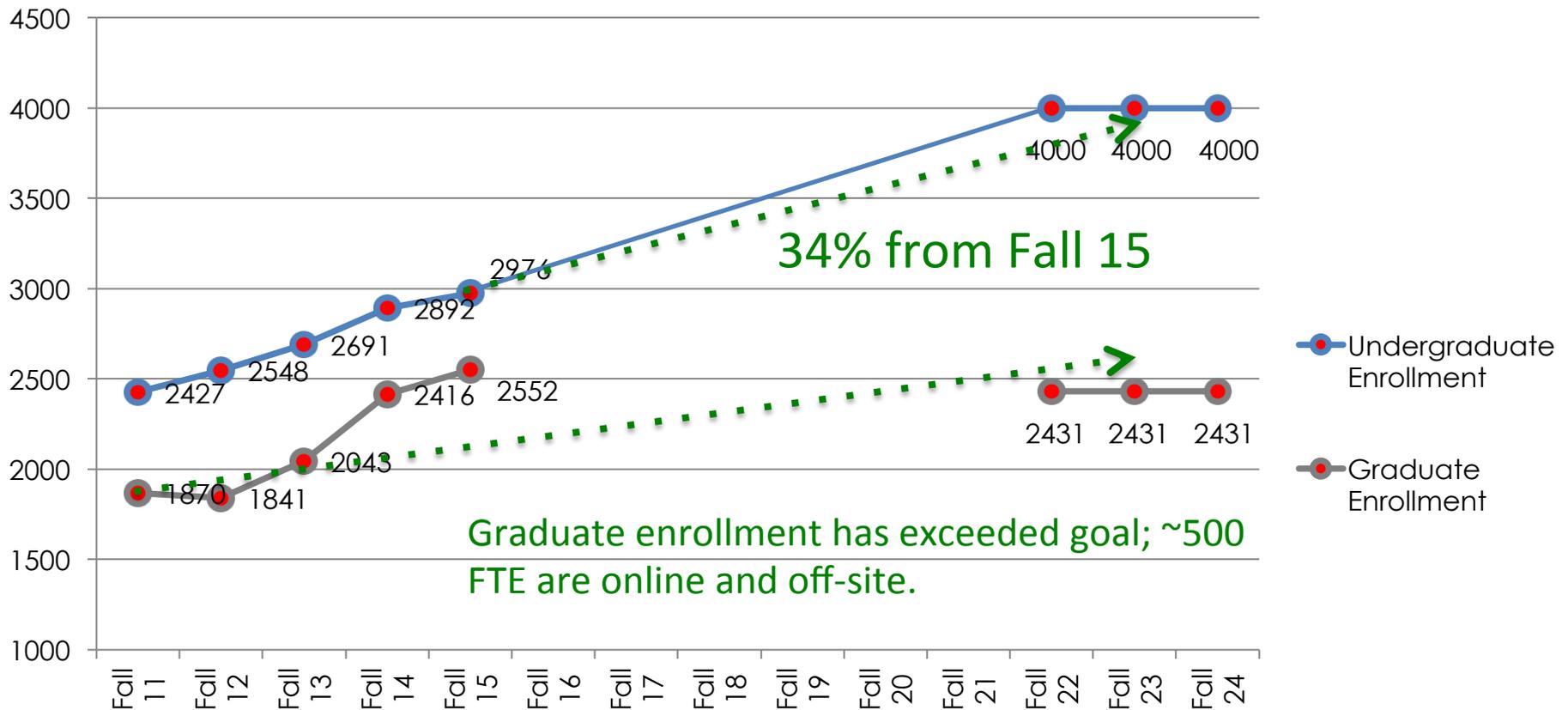
Graduate applications increase >70%; trend is very strong



¹Fall semester only; ²All graduate numbers include online and off-site (corporate).



Projected Growth: Undergraduate & Graduate Enrollment





Research Addresses NJ & National Priorities

Sponsored research increases sharply



Healthcare and Medicine



Financial Systems



Sustainable Energy

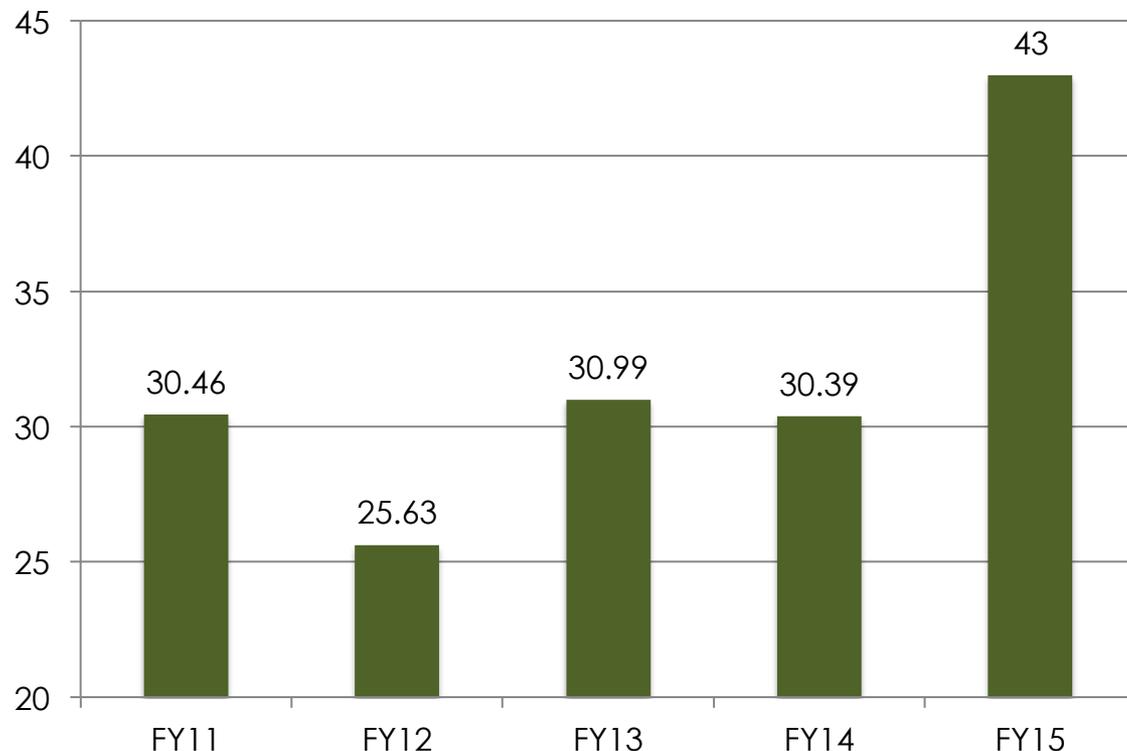


Defense, Security, Resilience



STEM Education

Research awards in million dollars





SU+RE House Wins 2015 Solar Decathlon

Inspired by Aftermath of Hurricane Sandy, SU+RE House Will Be on Permanent Exhibit at Liberty Science Center, Fall 2016



Sandy Flooding in Hoboken, NJ

A. Blumberg, L. Yin, N. Georgas, P. Orton, T. Herrington

Davidson Laboratory



This work is the culmination of our effort to predict and visualize the flood in Hoboken during Hurricane Sandy. The viewers can recognize their apartment buildings and offices in the map and see how deep the water was on the streets.

In the Davidson Laboratory, we model the flood. With the Stevens Estuarine and Coastal Ocean Model (sECOM), we are capable of creating flood surfaces based on physics, not only showing the past and the present, but also the future. Since Hurricane Sandy nearly continuous work has been done seeking to accurately simulate the flooding in Hoboken and Jersey City. The [modeling work](#) was published in the Journal of Atmospheric and Oceanic Technology in 2015. [A New York Times article](#) also highlighted the simulation of how Hoboken flooded and how the model can help to plan saving the city.

Links

SFAS: <http://hudson.dl.stevens-tech.edu/sfas/>

Paper:

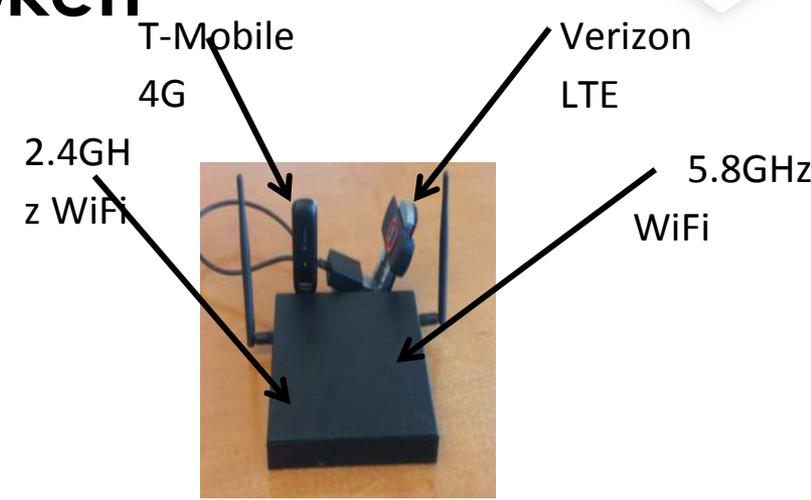
<http://journals.ametsoc.org/doi/pdf/10.1175/JTECH-D-14-00213.1>

NYT:

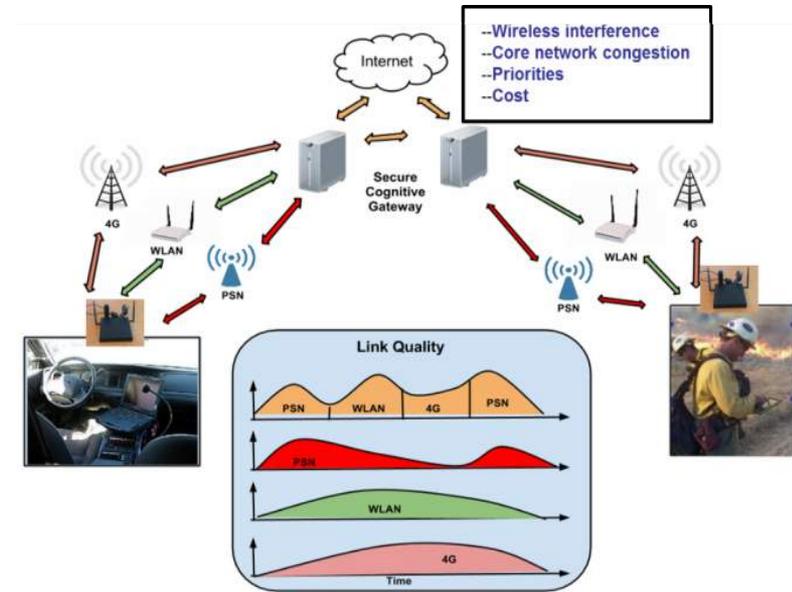
<http://www.nytimes.com/interactive/2016/02/08/nyregion/hoboken-flood-wall-maps.html>

Resilient Communications: Exploiting All Available Networks in Hoboken

- Catastrophic failure or sluggish performance of 4G LTE connections during emergencies
 - Super Storm Sandy, Boston marathon bombings
 - Public safety communications severely affected



- Our approach in Hoboken
 - Exploit Verizon, AT&T, T-Mobile, campus WiFi, Starbucks WiFi, McDonalds WiFi, etc.
 - Smart wireless router connects to **all** available wireless networks **simultaneously** to aggregated bandwidth, transparent fail over, priority for first response, etc.





Impact in Hoboken

Educational, cultural, economic contributions

- K-12 Programming
 - Camps, clinics, tutoring, scholarships, events, etc.
 - \$3 Million in scholarships to Hoboken HS students
 - 250+ teachers trained
- Intellectual/cultural/community events
 - President's Distinguished Lecture Series, DeBaun Auditorium Performances, Science/Tech lectures
- Local Partnerships
 - NJ Tech Meetup, Hoboken Historical Museum, Little City Books Authors, Ragamuffin Parade, etc.
- Economic/Community Impact
 - 4th largest employer in City of Hoboken
 - >700 alumni + >175 faculty and staff live in Hoboken
 - \$117.2 million in city-wide economic output (Appleseed Report, 2015)



Hoboken Collaborations

- Host annual State of the City, Police Recognition events, graduations, etc.
- City's emergency services antenna on Howe Building
- Initial sponsor/exhibitor at Propeller Fest
- Senior design projects focused on Hoboken issues: boat house design, parking app, 2nd place in 2015 U.S. EPA Campus Rainworks Challenge for storm water, etc.
- Collaborative research
 - SMART Hoboken synthesizes city data to improve city services and utilities
 - VIRTUAL Hoboken models storm surges for better prediction and planning
 - Green infrastructure



Fostering tech innovation and entrepreneurship



Stevens Venture Center opened in Pearson Building Spring 2016





Sound Fiscal Management; Improved University Finances

Fiscal discipline + positive enrollment outlook = financial stability

- Ranked 3.0 of 3.0 in USED's Financial Responsibility score
- BBB+ rating/positive outlook with Standard & Poor's (12/3/15)
- Baa2 rating/stable outlook with Moody's (1/20/15)
- Audited annually (current auditors are KPMG)
- External financial advisors verify debt capacity for capital projects currently contemplated



Philanthropic Support Increased 508% since FY11

On May 7, 2016 we announced the launch of a \$150M capital campaign; already raised \$85M

**THE
POWER OF
STEVENS**
OUR CAMPAIGN.
OUR IMPACT.





Alumni Success in NJ & Beyond

- Larry Babbio, '66, chairman emeritus of the Board of Trustees of Stevens Institute of Technology; former vice chairman and president of Verizon
- Virginia Ruesterholz, '83, chairman of the Board of Trustees of Stevens Institute of Technology; former executive vice president and president of Verizon Services Operations
- Ralph LaRossa, '90, president and chief operating officer, Public Service Electric & Gas Company (PSEG)
- John "Sean" Hanlon, '80, founder, chairman, CEO, and chief investment officers of Hanlon Investment Management
- Paul Von Autenried, '83, senior vice president, Enterprise Services and Chief Information Officer, Bristol-Myers Squibb
- John O'Donnell, '84, CEO, Zodiac Aerospace
- Rita Gurevich, '06, founder and president, SPHERE Technology Solutions
- Ed Amoroso, '86, senior vice president and chief security officer, AT&T
- Frank Semcer, '65, chairman and CEO, The Micro Stamping Corporation (MICRO)
- Daniel Hertz, '52, principal, Seals Eastern, Inc.
- Alfred Fielding, '39, co-inventor of Bubble Wrap
- Charles Stewart Mott, 1897, original U.S. partner in creation of General Motors Corporation
- Eugene McDermott, '19, co-founder, Texas Instruments
- Frederick Winslow Taylor, '83, known as the father of scientific management
- Alexander Calder, '19, American sculptor and inventor of the mobile art form
- Samuel Prescott Bush, 1884, American industrialist and patriarch of the Bush political family

Recent Rankings



#2  PayScale

NJ Colleges by Salary Potential

2015-16 College Salary Report

#5  PayScale

Engineering Schools by Salary Potential

2015-16 College Salary Report

#6 

Best Career Placement

2016 Colleges That Pay You Back

#7  USA TODAY
A GANNETT COMPANY

Top 10 Engineering Colleges

August 2015

#8  PayScale

Engineering Schools by Return on Investment

2015-16 College Salary Report



Named in the 2016 edition of *Colleges that Create Futures. 50 Schools That Launch Careers by Going Beyond the Classroom*

#9  USA TODAY
A GANNETT COMPANY

Top Colleges for Computer Science Degree

2016

#10  PayScale

For Mid-Career Salaries

2015-2016 College Salary Report



Named by Market Watch as one of the top schools in the nation for getting women into STEM careers (2016).



National Media Takes Note of Stevens



Forbes PayScale's Top 25 Return On Investment Colleges For 2015

THE CHRONICLE OF HIGHER EDUCATION
April 26, 2015



The New York Times

- "Dawn of Nuclear Arms, Declassified"

MarketWatch

- "Universities Increasing Programs for Data Scientists"

WallStreet & Technology

- "These Scents Will Make You Spend More"

THE HUFFINGTON POST

- "The Future of Plutonium"

The Atlantic

- "Shifting the Old Debate over Vaccines"

NEW YORK POST

- "How the US is losing the escalating cyberwar"



President's Report: Ahead of the Curve

Documenting progress toward ambitious goals of Strategic Plan: 2012-2015

Setting the Pace

Focusing on Tremendous Potential Through High-Impact Research

During the strategy planning process, more than 400 members of the Stevens community determined that Stevens should pursue a program of bold research agendas, building on our strengths with new focus, discipline and strategic investments in faculty, the university making a case for itself as a clear research leader with tremendous potential for significant impact.

- Health care and medicine
- Sustainable energy
- Financial systems
- Coding and security
- Coastal resiliency and sustainability
- Science, technology, engineering and mathematics (STEM) education

Better Data, Better For Stronger Infrastructure

Dr. George M. ...
Director of the ...





Key Objectives of Campus Planning Effort

- Expand and modernize academic and student housing/support infrastructure to remain competitive with top tier institutions
- Accommodate demand for more on campus housing
- Synchronize traffic demand management, parking, and alternate forms of transportation policies to reduce cars and Hoboken impacts
- Incorporate sustainability into all new projects
- Ensure legacy buildings are honored and preserved



Student Housing: A Closer Look

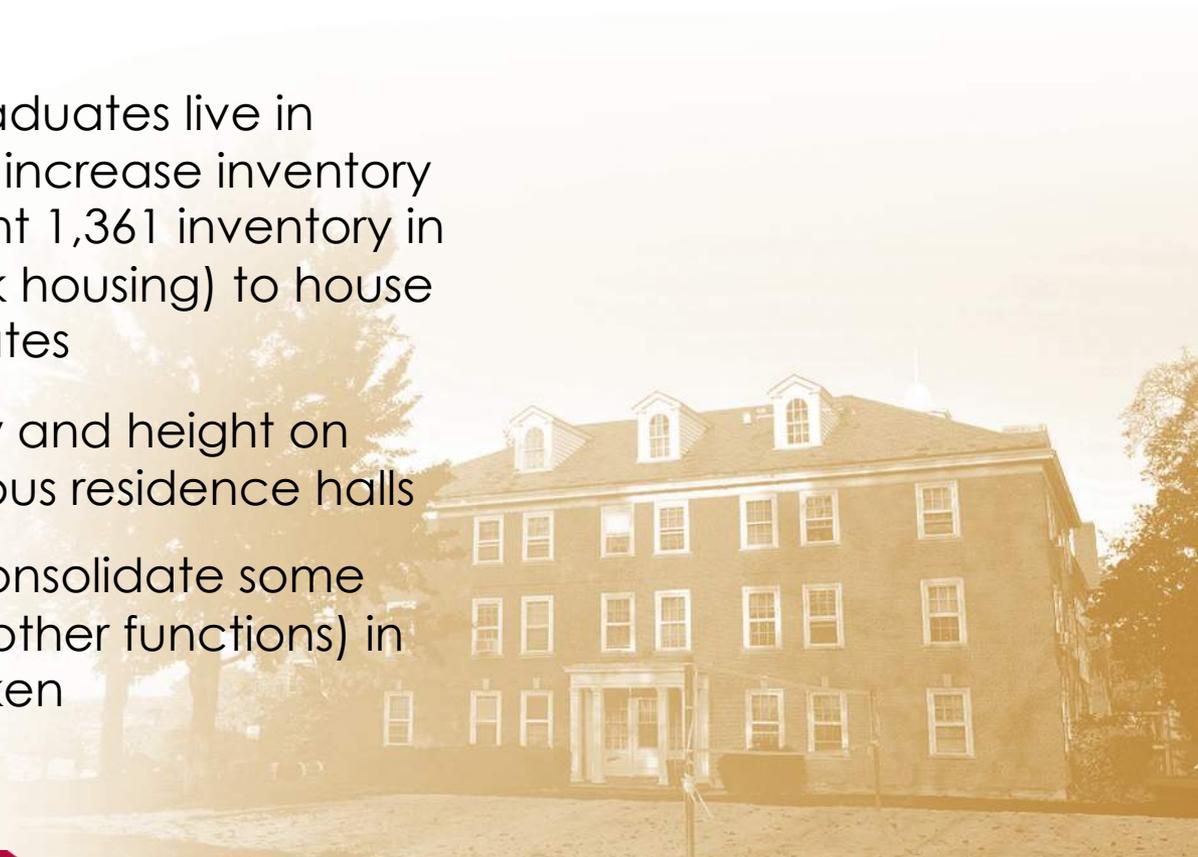
- 68% of undergraduates opt to live in university housing (Stevens-owned/leased) (2044 of 2976 in AY 2015-16); compares with ~64% nationally
- Remaining 32% secure their own housing or commute
- 67% of undergraduates who live in Stevens housing (1361 of 2044) live in campus housing or Greek housing
- 33% (683 of 2044) live in Stevens-leased housing in Hoboken in 2015-16
- In Fall 2016, Stevens will be leasing units in Weehawken for undergraduates





Student Housing-Future Needs

- Next highest campus development priority (after North building, an enabler for Gateway) is **to increase beds on campus, reduce beds in Hoboken**
- Assuming 68% of undergraduates live in campus housing, need to increase inventory by 1,359 beds (over current 1,361 inventory in campus dorms and Greek housing) to house 68% of 4,000 undergraduates
- Goal is to increase density and height on existing footprints of campus residence halls
- Also, explore options to consolidate some student housing (possibly other functions) in another location in Hoboken





In Parallel/Ongoing...

- Traffic Demand Management Program-1% reduction of parking requests concurrent with 10% growth of faculty/staff/students over 3 year period.
 - Growth of bike and car share
 - Additional bike racks
 - Review parking policies, etc.
- Shuttle Optimization Project-improve service and maintain safety of riders while reducing impact of shuttles
- Launch online education initiative-could accommodate growth in graduate demand
- Ensure success of Stevens Venture Center (currently in Pearson); may result in additional space needs for incubator for new technology startup companies
- Mid-point review of Stevens Strategic Plan in 2017



STEVENS
INSTITUTE of TECHNOLOGY
THE INNOVATION UNIVERSITY®

Campus Development Plan

June 8, 2016

Robert Maffia, PE
Vice President for Facilities & Campus
Operations





Campus Development Plans

Existing Conditions

- Housing
 - Our students prefer to live on campus; we presently cannot accommodate all of them
 - Currently 1,361 beds on campus; 683 in leased housing (in 2016-17, 588 in Hoboken + 95 in Weehawken)
 - Present housing inventory out of date; inconsistent with expectations of today's students and that of peer institutions
 - Shuttle system ensures safety of students; demanded by families
- Academic, Administrative and Athletic Space
 - Present shortage of academic and research space. Gateway and Wraparound building will not meet future needs.
 - Student growth brings a parallel need for faculty, administrative and athletic space



Campus Development Plans

Existing Conditions (cont.)

- Student Space
 - Shortage of student space for both individual and collaborative studying
 - Absence of a University Center, needed for studying and student activities (club space, student events and activities, food service, etc.)
- Traffic Demand Management (TDM)
 - Ninth Street access to campus is a pinch point
 - Bus access severely challenged
 - Parking requirement of 1 space/2 beds is inconsistent with the TDM goal of Stevens and Hoboken to reduce and inconsistent with our campus parking policies





Campus Development Plans

Existing Conditions (cont.)

- Zoning

- Current permitted uses do not expressly permit required university functions, e.g., parking decks, student lounges, cafes
- Height limitations for the campus are not reflective of today's academic building design requirements (i.e.: Academic, administrative and residential buildings all exceed 10 feet per story).
- Parking standards are incompatible with our usage, placing unnecessary demands on Stevens and Hoboken, and counter to responsible green infrastructure design.
- Current zoning would require relief from many zoning standards (building separation, façade, lot coverage, etc.) for most zoning applications
- Zoning ordinances outside of campus do not permit university use



Campus Development Plans

Objectives

- Housing
 - Increase number of beds on campus as much as possible by 2024
 - Reduce required leased beds in Hoboken; consolidate into fewer (or even one) locations
 - Simplify/reduce shuttle routes
- Academic/Administrative/Athletics Space
 - Expand and renovate instructional space and faculty offices space for future needs
 - Expand athletic facilities to alleviate overcrowding of locker rooms, training room, weight room, and gymnasium
- Student Space
 - Create additional space for individual and collaborative studying and student related activities (clubs, events, etc.)



Campus Development Plans

Objectives (cont.)

- Traffic Demand Management
 - Create new access point to campus to reduce traffic west of campus, provide better bus access, and improve traffic flow
 - Create a shuttle drop-off point at the Babbio Garage
 - Provide additional parking for cars and bikes
- Sustainability
 - Leverage our existing green infrastructure efforts to become even more of a model for sustainability (LEED accredited projects, stormwater management, electric vehicle charging stations, etc.)
- Open Space and View Lines
 - Add space while maintaining open space and not only preserving but *enhancing* view corridors



CONCEPTUAL DEVELOPMENT PROGRAM

Draft Campus Development Plan





Campus Development Plans

- North Building
 - Target occupancy: January 2017
 - Function: Swing space as we implement capital plan projects
- University Center / Student Housing
 - Target occupancy: Fall 2020
 - Function: Provide a much needed University Center, which will provide study space and other student support facilities
 - Replaces Jacobus and Hayden, two buildings on the east side of campus, parallel to the river.
 - Envision two towers atop a University Center, perpendicular to the river with enhanced view corridors
 - Height would be comparable to Howe Center (22 to 23 stories due to topography; approximately 60-65 beds per floor)





Campus Development Plans

- Replacement for Castle Point Apartments / Parking Garage
 - Target occupancy: 2022 - 2024
 - Function: Student Housing; Replacement of antiquated existing housing
 - Envision a housing tower (approximately 35-40 beds per floor) atop a two-story partially below grade parking garage.
 - Includes new access road from Sinatra Drive
- 5th & Sinatra Building
 - Target occupancy: post 2026
 - Function: TBD; will be clearer further into our growth plan. Possibly student housing, academic or administrative space.
 - Envision a height consistent with other buildings south of the campus along the waterfront (~13 stories)



CONCEPTUAL DEVELOPMENT PROGRAM

Draft Campus Development Plan



- 2016**
- ① **ABS Lab Renovation**
October 2016
Under Construction, 4,500 gsf
- 2017**
- ② **North Building**
January 2017
Filed with Planning Board, 17,000 gsf
- ③ **Babbio Garage Addition**
November 2017
Phase 1 - Approved by Zoning Board
4 Stories, 60,000 gsf
- 2019**
- ④ **Academic Gateway Building**
January 2019
Approved by Zoning Board & City Council
4 Stories, 91,000 gsf
- 2020**
- ⑤ **Replace Jacobus & Hayden**
June 2020
University center with (2) residential towers.
- 2022**
- ⑥ **Academic Wraparound Building**
July 2022
4 Stories, 48,500 gsf
- 2022 - 2024**
- ⑦ **Castle Point Apartments**
August 2024
Apartments above 2 story Garage
- ⑧ **Reconstruction of Castle Point Parking and New Road**
- 2026 -**
- ⑨ **5th & Sinatra Building**

WRT JUNE 2016

STEVENS INSTITUTE OF TECHNOLOGY